



**ICED  
2018**

**INNOVATION  
EXPANDING  
OUR COMMUNITY  
& PERSPECTIVES**

**FINAL PROGRAM**

**APRIL 19-21, 2018**

**APRIL 18** Clinical Teaching Day/  
Research Training Day

CHICAGO MARRIOTT MAGNIFICENT MILE | CHICAGO, ILLINOIS, USA



# PRESIDENT'S WELCOME LETTER



Happy Birthday AED! 2018 marks the 25th birthday of the AED and we are so glad you are here with us to celebrate. In 1993 a small group of researchers and clinicians met in Oklahoma and agreed that there was a need “for an organization of eating disorders professionals that embodied excellence in education, treatment, and research that could advocate for patients with eating disorders, provide professional training and development and, in general, represent the field of eating disorders.” We’ve come a long way toward realizing

our vision of global access to knowledge, research, and best treatment practice for eating disorders – but of course we have a long way to go.

The theme of this 2018 International Conference on Eating Disorders (ICED) here in the windy city of Chicago is “Innovation: Expanding our community and perspectives.” Thanks to the excellent work of our Scientific Program Committee co-chaired by Kristin van Ranson and Phillippa Diedrichs, we can look forward to an exciting scientific program and a fantastic meeting. This year’s keynote entitled “Reducing the burdens of eating disorders: Beyond evidence-based interventions and their dissemination” will be delivered by Alan Kazdin (Yale University). Our plenary sessions will focus on “Strategic science to influence policy related to eating disorders,” the definition of “Eating disorder recovery,” the topic of “Engaging communities to advance eating disorders research and intervention,” and finally, “The role of the microbiome in eating disorders.” We also look forward to numerous presentations, workshops, and poster presentations covering a broad range of clinical topics and cutting edge research in the field. As in past years, we hope this year’s ICED will inspire and educate you, but that you will also find lots of time for collaboration, discussion, and personal dialogue with colleagues from around the world. Thank you for being here with us to say “Happy 25th Birthday” to the AED! I look forward to saying hello to you in person this week!

Sincerely,

A handwritten signature in blue ink that reads "S. Bauer".

**Stephanie Bauer, PhD**

*President*

# PRESIDENT ELECT'S WELCOME LETTER



Welcome to the International Conference on Eating Disorders (ICED), and welcome to Chicago! You're in the Land of Lincoln and the city of broad shoulders. This year's ICED is packed with an exceptional line-up

of presentations and speakers. Many thanks go to our conference co-chairs and planning committee!

By way of introduction, I was raised in South Holland, IL, about 3 miles (4.8km) south of Chicago, and spent my childhood on school field trips to the Field Museum, overnight sleep-overs at the Museum of Science and Industry (seriously!), beautiful summer days at baseball games or on the shores of lake Michigan, and nights taking in musical performances. Schooling and work eventually took me away, as they do to many of us, from the places we know best. I'm overjoyed that my work has brought me back, if only for a few days, to share this wonderful city with my esteemed colleagues. It is also at this homecoming that I will take the helm of the AED from President Steffi Bauer, who has led our organization with a steady hand and resolute commitment to furthering our mission. I am deeply grateful to her and Immediate Past-President Eva Trujillo for their guidance, encouragement, and trust.

Coming from a place pejoratively called "the second city" (second to New York), with lakefronts sometimes referred to as the "third coast" (the Atlantic and Pacific are the first two), I often wondered why Chicago was perceived as less important (I thought it was rather cool). Ironically, in the eating disorders field, we find ourselves in a similar state. These devastating disorders are frequently ignored by funding agencies, population-level assessments, and policy-makers despite their wide-ranging consequences for individuals, their families, and society and the sheer number of people they affect. In concert with eating disorder organizations from across the globe, the AED is making the case for eating disorders in a unified voice. We are more effective together than we are apart. At the same time, it is not enough to

talk about the work that must be done and ask others to do more; we must do our part to carry the load. To this end, the AED is growing in its capacity to directly fulfill its mission of improving eating disorder research, education, treatment, and prevention.

As you enjoy this year's ICED, absorbing the riches of scientific contributions, the wisdom in workshops, the passion of patient-carers, the inspiration of keynotes, and the cultural caldron of Chicago, I urge you to reflect on your role in the AED. If in the AED's mission you see your mission, join scores of your companions at this meeting who have put their time and efforts toward strengthening the AED. Be the next in line to make it an increasingly effective organization. Volunteer your skills, and help carry the load; it is lighter for us all when we bear it together. Ultimately, it is not fair to Chicago to compare it to New York or fair to Lake Michigan to compare it to the Atlantic. They are different and worthwhile in their own right. So it is with eating disorders and other problems; eating disorders are important enough to deserve our efforts in the absence of their standing relative to others. Most of the time, it is not a zero-sum game. Let us work to get eating disorders a seat at the table without worrying about who is loudest in the room.

Sincerely,

A handwritten signature in blue ink, appearing to read "Kyle DeYoung".

**Kyle DeYoung, PhD, FAED**

*President-Elect*

**ICED  
2018**

**AED**

Improving lives  
through research,  
education, treatment,  
and prevention  
for 25 years

The Academy for Eating Disorders gratefully acknowledges our 2018 Annual Partners and ICED 2018 sponsors. Thank you for supporting ICED and the eating disorders community!

## ANNUAL PARTNERS

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### **About The Academy for Eating Disorders**

The AED is the largest multi- disciplinary professional society in the eating disorders field. Founded on September 11, 1993, the AED has grown to include almost 1,700 members worldwide who are working to prevent and treat eating disorders such as anorexia nervosa, bulimia nervosa and binge eating disorder.

AED's membership is comprised of professionals and students working and studying in universities, hospitals, research centers and treatment facilities, and others committed to furthering empirical insight into diagnosing and treating eating disorders. Approximately 29% of AED members reside outside of the USA, representing 49 different countries.

The AED provides cutting-edge professional training and education; advances new developments in eating disorders research, prevention and clinical treatments; and advocates for the rights of people with eating disorders and their caregivers; and provides the field at large with a variety of services, resources and educational programs, including the invaluable support of a community of dedicated colleagues.

Since the organization was founded in 1993, the International Conference on Eating Disorders (ICED) has been AED's flagship activity and the

highlight of the AED year. The ICED is the primary gathering place for professionals and advocates engaged in research, treatment and prevention of eating disorders.

### **Specific Goals of the Academy for Eating Disorders**

- ▶ **Generate knowledge and integrate collective expertise about eating disorders.**
- ▶ **Provide platforms for the promotion of understanding, sharing of knowledge and research- practice integration in the field of eating disorders.**
- ▶ **Build capacity in the next generation of Eating Disorders professionals.**
- ▶ **Foster innovation and best practice by recognizing excellence in the field of eating disorders.**

Visit [www.aedweb.org](http://www.aedweb.org) for more information about AED



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## AED Executive Committee

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# 2018 AWARDS

The awardees below will be honored at the Awards Ceremony immediately following the Annual Business Meeting on Saturday, April 21, 2018, beginning at 7:45 am in the Chicago Ballroom, Fifth Floor. All ICED attendees are invited to attend.

## AED LIFETIME ACHIEVEMENT AWARD

**Ruth Weissman, PhD, FAED**

## AED LEADERSHIP AWARD FOR CLINICAL, ADMINISTRATIVE OR EDUCATIONAL SERVICE

**Stephen Wonderlich, PhD, FAED**

## AED LEADERSHIP AWARD FOR RESEARCH

**Anne E. Becker, MD, PhD, FAED**

## MEEHAN/HARTLEY AWARD FOR PUBLIC SERVICE AND ADVOCACY

**Claire Mysko**

## PAST AWARDS AND HONORS

### AED Lifetime Achievement Award

2017 | Marsha Marcus, PhD  
2016 | Walter H. Kaye, MD, FAED  
2015 | Christopher Fairburn, MD  
2014 | Janet Treasure, OBE, MD, FRCP, FAED  
2013 | Terry Wilson, PhD  
2012 | James Mitchell, MD  
2011 | Bryan Lask, FRCPPhysch  
2010 | Bob Palmer  
2007 | Francesca Brambillia, MD  
2004 | Peter Beumont, MD  
2000 | Paul Garfinkel, MD  
1998 | Katherine Halimi, MD  
1996 | Gerald Russell, MD

1996 | Arthur Crisp, MD  
1995 | Albert Stunkard, MD

### AED Leadership Award for Clinical, Administrative or Educational Service

2017 | Andreas Karwautz, MD  
2016 | Evelyn Attia, MD, FAED  
2015 | Eric van Furth, PhD, FAED  
2014 | Richard Kreipe, MD  
2013 | Debbie Katzman, MD  
2012 | Rachel Bryant-Waugh, DPhil, MSc  
2011 | Judy Banker, MA, LLP, FAED  
2010 | Howard Steiger, PhD  
2009 | Ulrike Schmidt, MRCPsych Dr. Med. Ph.D  
2008 | Ron Thompson, PhD, FAED  
2008 | Roberta Sherman, PhD, FAED  
2007 | Pat Fallon, PhD, FAED  
2006 | Michael Strober, PhD, FAED  
2005 | Robert Palmer, PhD

### AED Leadership Award in Research

2017 | C. Barr Taylor, MD  
2016 | Kelly L. Klump, PhD, FAED  
2015 | Fernando Fernández-Aranda, PhD, FAED  
2014 | Daniel Le Grange and Jim Lock, PhD, MD  
2013 | Susan Paxton, PhD  
2012 | Stephen Touyz, PhD, FAPS, FAED  
2011 | Hans Hoek, MD, PhD  
2010 | Dianne Neumark-Sztainer, PhD, MPH, RD  
2009 | Steve Wonderlich, PhD  
2008 | G. Terrence Wilson, PhD  
2007 | Manfred Fichter, MD, PhD  
2006 | Cynthia Bulik, PhD, FAED  
2005 | Ruth Striegel-Moore, PhD, FAED  
2004 | Janet Treasure, OBE, MD, FRCP, FAED  
2003 | B. Timothy Walsh, MD  
2002 | Christopher Fairburn, MD  
2000 | W. Stewart Agras, MD  
1998 | Walter Kaye, MD  
1995 | James Mitchell, MD

### AED Outstanding Clinician Award

2017 | Kelly Vitousek, PhD  
2013 | Lucene Wisniewski, PhD  
2012 | Phil Mehler, MD, CEDS, FACP, FAED  
2011 | Diane Mickley, MD  
2010 | Ivan Eisler, PhD  
2008 | Susan Willard, MSW, FAED  
2003 | Marsha D. Marcus, PhD  
2000 | Pauline Powers, MD  
1998 | Arnold Andersen, MD

### AED Meehan/Hartley Award for Public Service and/or Advocacy

2017 | Katrina Velasquez, JD, MA  
2016 | June Alexander, PhD  
2015 | Chevese Turner  
2014 | Laura Collins, MS  
2013 | Karine Berthou  
2012 | Mary Beth Krohel  
2011 | Cynthia Bulik, PhD, FAED  
2010 | Mary Tantillo, PhD, FAED  
2008 | Susan Ringwood, BA, FAED  
2007 | Kitty Westin, MA, LP & Claire Vickery  
2006 | Michael Levine, PhD, FAED  
2005 | David Herzog, MD  
2004 | Armando Barriguete, MD, PhD, FAED; Fabian Melamed; Ovidio Bermudez, MD, FAED; Paulo Machado PhD, FAED; and Fernando Ferndandez-Aranda, PhD, FAED  
2003 | Craig Johnson, PhD, CEDS, FAED  
2002 | Patricia Santucci, MD, FAED  
2000 | Patricia Santucci, MD, FAED  
1996 | Patricia Hartley, PhD  
1994 | Vivian Meehan, RN, DSc

### AED Distinguished Service Award

2015 | Annie Cox and Jacqueline Schweinzer, CMP  
2013 | Tim Walsh, MD  
2012 | Michael Strober, PhD  
2011 | Joe Ingram  
2002 | Joel Yager, MD  
1998 | Amy Baker Dennis, PhD

**AED Public Service Award**

2013 | Marisa Garcia, *MHA*  
 2011 | Beth Klarman  
 2000 | S. Kenneth Schonberg, *MD*  
 1995 | Susan Blumenthal, *MD*

**AED Mental Health Advocacy Award**

2007 | US Rep Patrick Kennedy

**AED Global Impact Award**

2008 | Judith Rodin

**AED Corporate Award**

2009 | Bos, International and Claude Carrier  
 2008 | Unilever

**AED Research Practice Partnership Award**

2012 | Michael Levine, *PhD*  
 2009 | Tri Delta International Fraternity and Carolyn Becker, *MD*

**FELLOWS CLASS OF 2018**

Congratulations to the AED Fellows class of 2018. These members will be inducted as Fellows during the Annual Business Meeting and Awards Ceremony on Saturday, April 21, 2018 beginning at 7:45 am

Daniela Gomez Aguirre, *MD*  
 Kelly Bhatnagar, *PhD*  
 Angela Celio Doyle, *PhD*  
 Kyle De Young, *PhD*  
 Suzanne Dooley-Hash, *MD*  
 Ilene Fishman, *MSW, LCSW, ACSW*  
 Juanita Gempeler Rueda, *CBT*  
 Kathleen Mammel, *MD, FSAHM, FAAP*  
 Michiko Nakazato, *MD, PhD*  
 Rachel Rodgers, *PhD*  
 Robyn Sysko, *PhD*  
 Warren Ward, *MBBS, FRANZCP*

**AWARD, FELLOWSHIP, GRANT AND SCHOLARSHIP HONOREES**

AED thanks members and friends who have made contributions to the Scholarship and General Funds. The Scholarship Fund provides funding to sponsor the research and clinician scholarships for the 2018 International Conference on Eating Disorders. The General Fund provides essential support to AED educational, research, clinical and outreach programs. Thank you to all who have so graciously contributed. Special thanks to the participants in the United States Combined Federal Campaign Program.

**AED Early Career Investigator Travel Scholarship**

Thanks to the generosity of AED members, AED is able to offer the AED Early Career Investigator Travel Scholarships. Eligible recipients are AED members who currently are in training or are less than three years out of training. Additionally, eligibility requires evidence of academic excellence. These awards support attendance at the AED International Conference on Eating Disorders.

**The AED Student/Early Career Investigator Travel Scholarship**

The 2018 Recipients are:  
 Britny Hildabrandt, *PhD*  
 Danielle MacDonald, *PhD*  
 Erin Reilly, *PhD*  
 Kathryn Kinasz, *MD*  
 Kathryn Smith, *PhD*  
 Nadia Craddock, *EdM, BSc*

**AED Clinician Scholarship**

AED is pleased to provide scholarships to support conference attendance to AED members who are clinical scholars from around the world.

The 2018 Recipients are:  
 Fiona Sutherland, *APD, RYT*  
 Jeanne Sansfacon, *MD*

Maria Florencia Duthu, *MSc*  
 Megan Winderbaum, *MSW*  
 Sebastian Soneira, *MD, Psychiatrist*  
 Svetlana Bronnikova, *PhD*

**AED Student Research Grant**

This award is to support innovative and cutting-edge research conducted by student members of AED.

The 2018 Recipients are:  
 Blair Burnette, *MS, Doctoral Student*  
 Catherine Byrne, *BA, Doctoral Student*

**AED Scholarship for Low and Middle Income Countries**

Thanks to the generosity of AED members, AED is able to offer the AED Scholarship for Low and Middle Income Countries. These awards support attendance at the AED International Conference on Eating Disorders.

The 2018 Recipients are:  
 German Bidacovich, *CPsych*  
 Karin Dunker, *Post Doc*  
 Melina Weinstein, *LP*  
 Norman David Nsereko, *PhD*  
 Rosanna Mauro Gomez, *MSc, CEDRD, RD*

**AED Patient Carer Travel Scholarships**

Thanks to the generosity of AED members, AED is able to offer AED Scholarships in the Patient Carer community. These awards support attendance at the AED International Conference on Eating Disorders

The 2018 Recipients are:  
 Christine Naismith, *B. Pharm*  
 Judy Krasna, *BA*  
 Mirjam Mainland, *MS*  
 Shannon Calvert

**HLA Chapter Scholarship Award**

The Hispano Latino American Chapter of the AED is a multidisciplinary group of therapists and researchers from Spanish- and Portuguese-speaking areas of the world. Each year the HLA Chapter awards a scholarship to attend ICED.

The 2018 Recipient is:  
Monteserrat Graell, MD, PhD

### Erin Riederer Memorial Scholarship Award

The Erin Riederer Foundation is a legacy foundation dedicated to improving eating disorder treatment in Wisconsin and across the globe. We support the development of professional interest in eating disorders through ICED scholarship to medical students and PhD candidates at the Medical College of Wisconsin, University of Wisconsin, Madison Medical Schools as well as University of Wisconsin, Milwaukee. In addition our mission supports credential advancement through IAEDP. Since inception we are proud to have presented ten scholarships to worthy candidates.

The 2018 Recipient is:  
Alexandra J. Dyer, MD expected May 2018  
Medical College of Wisconsin, Milwaukee, WI  
USA

### Alex DeVinny Memorial Scholarship Award

The Alex DeVinny Memorial Award is presented through a generous donation in loving memory by the DeVinny family for the top two abstracts submitted for ICED 2018, which investigate the overlap between eating disorders and obsessive-compulsive disorder and/or compulsive exercise. Only abstracts in which the first author is an early career investigator (i.e., not more than 5 years post terminal degree) are eligible.

The 2018 Recipients are:  
Megan Shea, BA  
Nicholas Farrell, PhD

### RSH Scholarship

Founded by Dr. Robin and Kathy Hawley, the RSH Scholarship provides support to graduate students pursuing a career related

to the prevention or treatment of eating disorders, as well as the amelioration of weight bias.

The 2018 Recipients are:  
Lauren Forrest, MA  
Anna Karam, MA  
Shelby Martin, MS  
Elizabeth Velkoff, MA

### The Willamette Nutrition Source Grant 2018 Award

The Willamette Nutrition Source, LLC educational fund, created and administered by Therese Waterhous, PhD, CEDRD, provides education to health care providers in the form of attendance at AED conferences and/or AED membership. Awardees are chosen based on several criteria, including licensure in a mental health or health care profession, service to the IHN-CCO population, successful completion of training provided by Tri-County Eating Disorders Professionals, a training paid for by a grant from the Inter-Community Health Network-Coordinated Care Organization, and participation as an Eating Disorder Health Navigator in Linn, Benton and Lincoln counties of Oregon.

The 2018 Recipients are:  
Ozge Akcali  
Deborah Bella, PhD, RDN, LC, CDE  
Melissa Grossman-Naples, LPC  
Kim Iszler, RD, LD  
Kelley Kendall  
Laura Luczkiw, MS, RD  
Alesha Orton, MS, RD  
Rosa Plascencia, MSW  
Therese Waterhous, PhD, CEDRD  
Cara Wheeler, PsyD

## INTERNATIONAL JOURNAL OF EATING DISORDERS AWARDS FOR OUTSTANDING SCIENTIFIC

## CONTRIBUTION AND BEST PAPER

Each year, two prizes are awarded by the International Journal of Eating Disorders for the previous year: the Outstanding Scientific Contribution Award and the Award for Best Paper by an Early Career Scholar.

The IJED editorial board members nominate candidates and the winners are then selected by the journal's Editor-in-Chief and Associate Editors. Winners are honored with a certificate and prize at the next International Conference on Eating Disorders (ICED), the annual meeting of the Academy for Eating Disorders (AED). This year's awardees are being recognized for their contributions in 2017.

The 2018 Awardees are:

### The IJED Outstanding Scientific Contribution in 2017 Award

Caroline Davis—for the paper entitled "Sex Differences in Subjective and Objective Responses to a Stimulant Medication (methylphenidate): Comparisons between Overweight/ Obese Adults with and without Binge-Eating Disorder" [IJED 2016, Vol. 49(5), pp. 473–481; DOI: 10.1002/eat.22493].

### The IJED Best Paper in 2017 Award

The Award for the Best Paper by an Early Career Scholar has been awarded jointly for 2017:

Ann F. Haynos—for the paper entitled "Comparison of Standardized Versus Individualized Caloric Prescriptions in the Nutritional Rehabilitation of Inpatients with Anorexia Nervosa" [IJED 2016, Vol. 49(1), pp. 50–58; DOI: 10.1002/eat.22469]  
Emilee E. Burgess—for the paper entitled "Effects of Transcranial Direct Current Stimulation (tDCS) on Binge-Eating Disorder" [IJED 2016, Vol. 49(10), pp. 930–936 DOI: 10.1002/eat.22554]

# ICED 2018

## Full Disclosure Policy Affecting CME Activities

CE Learning Systems and PeerPoint Medical Education require faculty and members of the planning committee to disclose whether or not they have any relevant commercial relationships or if they will be discussing unlabeled and/or investigational uses of any products, pharmaceuticals, or medical devices.

This MUST be made known in advance to the audience in accordance with the ACCME Standards of Commercial Support guidelines. Disclosures are located on page 320.

## SOLICITATIONS

Solicitations by unauthorized persons are strictly prohibited. Sales and promotional activities are restricted to exhibitors and must take place in their own exhibit booths. Unauthorized marketing items will be discarded.

## OFFICIAL ICED 2018 HOTEL

Chicago Marriott Downtown Magnificent Mile | 540 N  
Michigan Ave, Chicago, IL 60611

Tel: +1 312 836 0100 | Fax: +1 312 836 6139



## PRIMERA REUNIÓN DE ENTRENAMIENTO CLÍNICO DEL CAPÍTULO AED HLA

Miércoles, 18 de Abril, 2018

9:00 AM - 1:30 PM

### Conferencista: Dra. Adele Lafrance, Canadá

Psicóloga clínica y Profesora Asociada del Departamento de Psicología de la Universidad Laurantian, Ontario, Canadá. Es co-creadora de la Terapia Familiar Focalizada en la Emoción (TFFE) para trastornos alimentarios y otros temas de salud mental general; y creadora del Apoyo Escolar Focalizado en la Emoción. Lidera múltiples proyectos en las áreas de la TFFE y la salud mental, incluyendo los trastornos alimentarios.

### Descripción del taller

La Terapia Familiar Focalizada en la Emoción (TFFE) tiene sus bases en la teoría y ciencia de la neurobiología interpersonal. Su esencia consiste en apoyar a los cuidadores/padres de los pacientes a potenciar su rol en la recuperación de su hija/o con un trastorno alimentario. Esto se logra a través de aumentar el involucramiento de los padres en:

- 1) brindar apoyo durante las comidas e interrupción de síntomas
- 2) motivar al paciente a trabajar sobre las emociones que pueden estar incrementar pensamientos y síntomas de la conducta alimentaria,
- 3) conduciendo la reparación de los daños relacionales si es necesario.

A través del tratamiento también se busca transformar los “bloqueos emocionales” que puedan sufrir los cuidadores e interfieren para implementar intervenciones. La reciente investigación en TFFE ha revelado que esos cuidadores no están poco disponibles o carentes de motivación para actuar como agentes positivos de cambio, si no que están bloqueados por emociones, en particular, temor y culpa. Así, el clínico emplea técnicas específicas para

atender y procesar esos bloqueos emocionales de modo de aumentar la sensación de autoeficacia del cuidador y el apoyo focalizado en la recuperación de su hijo/a. Bloqueos emocionales como estos se identifican y procesan en los mismos clínicos durante el proceso de implementación de estas intervenciones.

El entrenamiento ofrecerá una panorámica del modelo con énfasis en el apoyo a los padres y cuidadores en transformar actitudes problemáticas y conductas interferentes en un modo compasivo, respetuoso y productivo.

La TFFE es una aproximación de ciclo vital, y sus módulos pueden ser integrados dentro de los modelos de tratamiento existentes.



**1ST AED HLA CHAPTER CLINICAL TRAINING MEETING****Wednesday, April 18, 2018**

9:00 AM - 1:30 PM

**Speaker: Dr. Adele Lafrance**

Clinical Psychologist and Associate Professor in the Psychology Department at Laurentian University. She is co-developer of Emotion-Focused Family Therapy and developer of Emotion-Focused School Support. She leads multiple research projects in the areas of EFFT and mental health, including eating disorders.

**Workshop Description**

Influenced by the theory and science of interpersonal neurobiology, the essence of Emotion-Focused Family Therapy (EFFT) is to support caregivers to increase their role in their loved one's recovery from an eating disorder. They do so by supporting parents and caregivers to increase

their involvement in:

- (1) meal support and symptom interruption
- (2) supporting their loved on to work through emotions that may be fuelling problematic ED thoughts and symptoms, and
- (3) leading the repair of relational injuries if applicable.

Throughout treatment, the EFFT clinician also seeks to transform "emotion blocks" in caregivers who struggle to implement interventions. Recent EFFT research has revealed that these caregivers are not unable or unmotivated to act as positive agents of change; rather, they are blocked by emotions, and in particular fear and self-blame. As such, the treating clinician employs specific

EFFT techniques to attend to and process these emotion blocks in order to increase caregiver self-efficacy and recovery-focused support. Such emotional blocks are also identified and processed in clinicians as they implement these interventions.

This training will provide an overview of the model with an emphasis on supporting parents and caregivers to transform problematic attitudes and obstructive behaviors in a manner that is compassionate, respectful, and productive. EFFT is a lifespan approach, modules of which can be integrated into existing care models.



**CLINICAL TEACHING DAY****Wednesday, April 18**

1:00 PM - 6:00 PM

*Fourth and Sixth Floor*

Participation in the AED Clinical Teaching Day on Wednesday, April 18, requires a separate registration fee. The 2018 ICED Clinical Teaching Day will feature five (5) sessions from which to choose, including one extended session (additional fee).

**CTD 1.1 Update On The Neurobiology Of Eating Disorders And Implications For Clinical Practice**

2:00 PM - 6:00 PM

*Addison Room, Fourth Floor***CTD 1.2 Best Practices For Assessing And Treating Adolescents With Atypical Anorexia Nervosa**

2:00 PM - 6:00 PM

*Armitage Room, Fourth Floor***CTD 1.3 Strategies For Managing Slow Progress In Adult And Adolescent Eating Disorders Clients**

2:00 PM - 6:00 PM

*Belmont Room, Fourth Floor***CTD 1.4 Nutrition Essentials For Clinicians Treating Eating Disorders**

2:00 PM - 6:00 PM

*Great America Room, Sixth Floor***CTD 1.5 Using Exposure To Treat Anxiety In The Context Of Eating Disorders: Petrified Patients And Anxious Clinicians**

1:00 PM - 6:00PM (extra fee applies)

*Clark Room, Fourth Floor***RESEARCH TRAINING DAY****Wednesday, April 18**

1:00 PM - 6:00 PM

*Great America Meeting Room, Sixth Floor*

Participation in the AED Research Training Day on Wednesday, April 18, requires a separate registration fee.

**AED MENTOR/MENTEE BREAKFAST****Thursday, April 19**

7:30 AM - 9:00 AM

*Halsted Meeting Room, Fourth Floor*

The AED is actively facilitating mentoring relationships for members as part of its Membership Recruitment and Retention Initiative. At ICED, interested AED trainee and early professional members will be paired with seasoned AED members at the Mentor/Mentee Breakfast on Thursday, April 19 from 7:30–9:00 am. The aim of this event is to provide an opportunity for members to receive short-term (and potentially lasting) mentorship from experienced AED members/leaders. Mentors may also benefit from interaction with up-and-coming professionals by networking and facilitating optimal training and retention of promising professionals who will be the future of the AED. Prospective mentees and mentors will be paired based on interests (for example, research, clinical, advocacy, genetics and epidemiology). Sign up to become a mentor or mentee during the ICED registration process.

**Mentee Eligibility:**

All AED members who are trainees, early career professionals and new AED members (less than five years out).

**Mentor Eligibility:**

All past Presidents of the AED

Fellows

Board Members (past and present)

Committee Chairs, SIG Chairs and Committee Members

Seasoned professionals with an advanced degree and five or more years of experience in the eating disorders field

All disciplines welcomed!

**WELCOME & KEYNOTE ADDRESS****Thursday, April 19**

9:00 AM – 10:45 AM

*Chicago Ballroom, Fifth Floor*

ICED Program Co-Chairs and AED President Stephanie Bauer, PhD, will welcome all attendees to the ICED, followed by our keynote address by Dr. Alan Kazdin.

**TWEET UP, TWEET OUT****Thursday, April 19**

10:45 AM - 11:15 AM

*Denver/Houston Meeting Room, Fifth Floor*

“I only play an extrovert online”

Curious about using Twitter for eating disorder awareness? Come to ICED's annual "TweetUp!" At the Tweet Up, chat with and learn from some of AED's most active Twitter users and social media volunteers as they tweet in real time. Volunteers will help you create your own account and send your first tweet. Meet the faces, and the thumbs, behind AED's online advocates!

### SPECIAL INTEREST GROUP (SIG) ANNUAL MEETINGS

**Thursday, April 19** and **Friday, April 20**

*Addison/Clark Meeting Rooms, Fourth Floor*

All attendees are invited to attend any of the SIG Annual Meetings scheduled during lunch on Thursday and Saturday during the meeting. Information on specific SIG meeting dates, times, and locations are available in the Schedule-at-a-Glance, and on signs throughout the Conference spaces.

### PARTNERS, CHAPTERS, AND AFFILIATES COMMITTEE (PCAC) GLOBAL LUNCH

**Thursday, April 19**

1:00 PM - 2:15 PM

*Addison/Clark Meeting Rooms, Fourth Floor*

The PCAC invites all AED members to attend its annual Global Lunch

on Thursday, April 19th. The Global Lunch is an opportunity to talk with colleagues about how eating disorders are diagnosed and treated, advocacy efforts, and other activities led by eating disorder organizations around the world. Registration is encouraged.

### OPENING RECEPTION AND POSTER SESSION I

The Academy invites all ICED delegates to our opening reception, being held from 5:45 PM - 7:15PM in the Exhibit Hall on the 7th floor. The reception is generously sponsored by the International Journal of Eating Disorders, and includes Poster Session I.

### AED NON-MEMBER MEET AND GREET

**Thursday, April 19**

5:45 PM - 7:15 PM

*AED Membership Desk outside the Exhibition Hall, Seventh Floor*

The Membership Recruitment and Retention Committee and the AED Special Interest Groups invite non-members to mingle with current AED members during the Opening Reception on Thursday, April 19th, at the MRRC both across from the Exhibitor Hall on the 7th floor, beginning at 5:45 pm. Students, junior investigators and professionals new to the field of eating disorders are encouraged to attend.

### MEET THE EXPERTS

**Saturday, April 21**

12:45 PM - 2:15 PM

*Clark Meeting Room, Fourth Floor*

The AED Fellows invite students, early career, and other members to join them for lunch to talk one-on-one about topics of interest during lunch on Saturday, April 21st. Registration is required.

Registration is required, and tickets can be obtained from the Registration desk on the fifth floor until 6PM on Friday.

### AED AWARDS CEREMONY & BUSINESS MEETING

**Saturday, April 21**

7:45 AM - 9:15 AM

*Chicago Ballroom, Fifth Floor*

The AED Awards Ceremony and Business Meeting is available to all registered attendees.

During this event, all AED members have the opportunity to hear annual reports from the Board, cast their vote for new Board members and members of the Nominations Committee, and ask questions of the Board. The annual AED awards are also presented during this event. Everyone is encouraged to attend.

## SPECIAL TOWN HALL EVENT

**Saturday, April 21**

9:30 AM - 11:00 AM

*Denver/Houston Meeting Rooms,  
Fifth Floor*

Gathering for Good: A Town Hall Event with the Eating Disorders Coalition for Research, Policy & Action

The primary mission of the Eating Disorders Coalition for Research, Policy & Action (EDC) is to advance the recognition of eating disorders as a public health priority throughout the United States. The EDC is proud to represent its members and stakeholders—including national organizations such as NEDA, AED, iaedp, REDC, and the Alliance for Eating Disorders Awareness—in vital dialogue with the legislative, executive, and judicial branches of the United States government, acting as a central conduit for federal advocacy on eating disorders.

In this town hall event, members of the EDC Board of Directors will briefly outline the recent work of the EDC, such as the successful inclusion of eating disorders policy in the 21st Century Cures Act—marking the first mention of eating disorders in the history of federal law.

A core belief of the EDC is that effective advocacy starts with effective listening. The central component of the town hall will be devoted to looking forward together, engaging

participants in conversation about policy and legislative issues of consequence to all whose lives are touched by eating disorders illness.

As an interactive session, participants are encouraged to bring and share ideas, perspectives, possibilities, and hopes with the EDC as it formulates priorities and critical pathways for federal advocacy on behalf of the field. Lend your voice and join the conversation—you are invited, and there's a place at the table for you!

## RESEARCH-PRACTICE GLOBAL THINK TANK

**Saturday, April 21**

4:15 PM - 6:00 PM

*Chicago Ballroom, Fifth Floor*

As the final event of the International Conference on Eating Disorders, the Research- Practice Global Think Tank provides an opportunity for reflection and discussion of issues that are critical to conference attendees.

## VIP RECEPTION & 25TH ANNIVERSARY FUNDRAISER

**Saturday, April 21**

6:00 PM - 7:00 PM

*Grand Ballroom, Seventh Floor*

Get an early start on the 25th anniversary celebration and mingle with the AED Board, past presidents, and many of the founding members of AED. The event is open to everyone, and takes place one hour before the

closing social event. Tickets can be purchased during the registration process, or at the registration desk at any time during ICED.

## CLOSING SOCIAL EVENT

**Saturday, April 21**

7:00 PM - 12:00 AM

*Grand Ballroom, Seventh Floor*

Join your colleagues on Saturday, April 21, for this year's festive closing social event celebrating the AED's 25th Anniversary with many of the founding members, videos, memorabilia, "Taste of Chicago" food stations, cash bar, and a few surprises. Your ticket to this event is included with full-conference registration. Additional tickets for guests can be obtained during the registration process or at the Registration Desk during ICED.

## ICED CONFERENCE SLIDESHOWS & AUDIO RECORDINGS

Cannot figure out how to be in two places at once? Want to bring the ICED home with you? Be sure to choose the Enhanced Registration option with your conference registration, or add it once you arrive. Enhanced registration provides attendees with the slideshows and audio recordings for most educational sessions during the conference. Visit the ICED Registration Desk for more information.

## REGISTRATION INFORMATION

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Participation in the 2018 ICED is limited to registered delegates. Your full registration includes:

Admission to all sessions (Thursday, April 19 through Saturday, April 21), excluding Clinical Teaching Day and Research Training Day (an additional fee is required for these workshops)

Access to all exhibits

Entry to poster sessions

Welcome Reception on

**Thursday, April 19**

Daily refreshment breaks

Closing Social Event on

**Saturday, April 21**

## SPOUSE/GUEST REGISTRATION

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This rate is applicable only to attendees outside of the eating disorders field and includes:

Admission to the keynote address

Exhibit Hall

Poster Sessions

Welcome Reception

Closing Social Event

## DETAILED PROGRAM INFORMATION

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The most current conference information can be found at:

[www.aedweb.org/index.php/conference/iced-2018/Final\\_Program](http://www.aedweb.org/index.php/conference/iced-2018/Final_Program)

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## ICED REGISTRATION DESK

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The registration desk, located on the fifth floor, will be open:

**Tuesday, April 17** | 8:00 am – 6:00 pm

**Wednesday, April 18** | 7:00 am – 6:00 pm

**Thursday, April 19** | 7:00 am – 6:00 pm

**Friday, April 20** | 7:00 am – 6:00 pm

**Saturday, April 21** | 7:00 am – 6:00 pm

## CONTINUING EDUCATION DESK

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The CE/CME desk, located near the registration desk, will be open during registration hours.

## SPEAKER READY ROOM

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The Speaker Ready Room will be available daily in the Illinois Meeting Room on the Fifth Floor as follows:

**Wednesday, April 18** | 8:00 am – 5:00 pm

**Thursday, April 19** | 8:00 am – 5:00 pm

**Friday, April 20** | 8:00 am – 5:00 pm

**Saturday, April 21** | 8:00 am – 5:00 pm

## EXHIBITS

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Vendor exhibits will be located in the Grand Ballroom, Seventh Floor. Exhibit hours are:

**Thursday, April 19** | 10:45 am – 7:15 pm

**Friday, April 20** | 10:45 am – 5:45 pm

**Saturday, April 21** | 9:45 am – 2:30 pm

Light snacks and beverages will be available in the exhibit hall during the refreshment breaks each day. A directory of exhibitors is included in this program on pages 324.

## POSTER SESSIONS

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Posters will be presented by authors during the conference and will be available for viewing on Thursday and Saturday. The poster presentations are located in the Grand Ballroom on the Seventh Floor next to the exhibits.

### Poster Session Schedule

#### Poster Session I: Thursday, April 19

*Grand Ballroom, Seventh Floor*

Set-Up | 7:00 am – 9:30 am

Viewing | 9:30 am – 7:15 pm (presenters need not be present)

Presentations | 5:45 pm – 7:15 pm (presenter attendance is required)

Dismantle | 7:15 pm – 8:00 pm (all posters must be removed)

#### Poster Session II: Saturday, April 21

*Grand Ballroom, Seventh Floor*

Set-Up | 7:00 am – 8:00 am

Viewing | 8:00 am – 5:45 pm (presenters need not be present)

Presentations | 12:45 pm – 2:15 pm (presenter attendance is required)

Dismantle | 5:45 pm – 7:15 pm (all posters must be removed)

Presenters are responsible for dismantling posters. Posters left behind at the close of the dismantling

period will be disposed of and are not the responsibility of AED or Chicago Marriott Downtown Magnificent Mile.

## MEETING EVALUATION

The ICED Scientific Program Committee needs your input to enhance future AED meetings.

You will receive an online meeting evaluation via email shortly after the conference. AED greatly appreciates your input.

## SPECIAL NEEDS

Notify AED staff members of any special needs by visiting the AED registration desk on the fifth floor.

## MEET THE EXPERTS SESSION

**Saturday, April 21** | 12:45 pm – 2:15 pm  
*Clark Meeting Room, Fourth Floor*

Do you have specific questions that you would like to discuss with established experts in your field? Are you looking for consultation on clinical cases, practice issues or ethical dilemmas? Are you interested in developing or evaluating an intervention to treat or prevent eating disorders? Do you want advice on writing a grant application or publishing your work? The Meet the Experts session offers an opportunity for informal discussions on these topics.

Attendance is limited, so sign up early. In order to attend this session, we ask that you sign up at the Registration Desk. Please sign up for this event by Friday at 8:30 am, or as long as space is available.

Submit your questions for the experts. If you have a specific question to be addressed by experts, complete a "Meet the Experts Question Form" at the Registration Desk on the Fifth Floor and deposit it in the basket on the table.



## QUESTIONS?

If you have questions regarding the program or registration, visit the **AED registration desk** on the **Fifth Floor**.

## **Important Dates to Remember**

**JUNE 1 - JULY 31, 2018** | Abstracts Open

**JULY 1 - AUGUST 31, 2018**

Applications for AED Fellowships,  
Grants, and Scholarships, and AED Fellow Status

**NOVEMBER 15, 2018** | Registration Opens

# **START SPREADING THE NEWS**

Education, Dissemination & the Science of Eating Disorders



## **ICED2019**

**MARCH 14-16**  
**NEW YORK, NY**

Clinical Teaching Day/Research Training Day | March 13

## **REDUCING THE BURDENS OF EATING DISORDERS: BEYOND EVIDENCE-BASED INTERVENTIONS AND THEIR DISSEMINATION**

Alan E. Kazdin, PhD is Sterling Professor of Psychology and Child Psychiatry at Yale University, and Director of the Yale Parenting Center, a service for children and families. Before coming to Yale, he was on the faculty of The Pennsylvania State University and the University of Pittsburgh School of Medicine. At Yale, he has been Chairman of the Psychology Department, Director and Chairman of the Yale Child Study Center at the School of Medicine, and Director of Child Psychiatric Services at Yale-New Haven Hospital.

Kazdin's research has focused primarily on developing interventions for child psychiatric dysfunction, particularly severe aggression and antisocial behavior. His work has been supported by the National Institute of Mental Health, the William T. Grant Foundation, The Robert Wood Johnson Foundation, John D. and Catherine T. MacArthur Foundation, Rivendell Foundation of America, the Humane Society of America, the Laura J. Niles Foundation, Leon Lowenstein Foundation, and Yale University. Kazdin's 750+ publications include 49 books that focus on methodology and research design, psychosocial interventions for children and adolescents, parenting and child rearing, cognitive-behavioral treatment, and interpersonal violence. His work on parenting and childrearing has been featured on NPR, PBS, BBC, and CNN and he has appeared on the

Today Show, Good Morning America, ABC News, 20/20, and Dr. Phil.

Kazdin has been Editor of six professional journals. He has received several of professional awards including the Outstanding Research Contribution by an Individual Award and Lifetime Achievement Awards (Association of Behavioral and Cognitive Therapies), Outstanding Lifetime Contributions to Psychology Award and Distinguished Scientific Award for the Applications of Psychology (American Psychological Association), and the James McKeen Cattell Award (Association for Psychological Science). In 2008, he was president of the American Psychological Association.

### **ABSTRACT:**

Progress has been made in developing evidence-based psychosocial interventions (EBPIs) for eating disorders and in disseminating these from controlled settings to clinical care. Even so, there is an enormous treatment gap. In developing and developed nations, most individuals in need of services receive no intervention. The ways in which most EBPIs are developed, studied, and delivered contribute directly to the failure of services to reach people in need. There are novel models of delivering interventions that could have enormous impact because they can be scaled and delivered to diverse segments of the population

without sacrificing effectiveness. These models can be used to deliver interventions directed to treatment or prevention. Several models of delivery will be highlighted (e.g., task shifting, disruptive innovations, best-buy interventions, use of social networks, use of the media). In addition, suggestions will be made to modify the now standard intervention research agenda (e.g., improving effect sizes, identifying moderators, comparing different interventions). These suggestions include more attention to low cost, highly scalable, and weak interventions as a first line of attack; integration of interventions into everyday settings and as administered by lay people; stepped care in both sequencing of interventions and models of delivery; and collaboration with other disciplines and areas of work (e.g., business, social policy, legislation). The proposed shifts in both the models of delivery and the research agenda are designed to focus directly on the goal of reducing the burdens of eating disorders for individuals, families, and society.

**ICED  
2018**

# ICED 2018

INNOVATION  
EXPANDING  
OUR COMMUNITY  
& PERSPECTIVES

## SCHEDULE AT-A-GLANCE

### PRE-CONFERENCE ACTIVITIES

#### Tuesday, April 17

8:00 AM – 6:00 PM

**ICED 2018 Registration Open** | Fifth Floor

#### Wednesday, April 18

7:00 AM – 6:00 PM

**ICED 2018 Registration Open** | Fifth Floor

9:00 AM – 1:30 PM

**Primera Jornada de Entrenamiento Clínico del AED Capítulo Hispano Latino Americano (HLA) | 1st AED HLA Chapter Clinical Training Meeting**

Denver/Houston Room, Fifth Floor  
*Speaker: Dr. Adele Lafrance*

8:30 AM – 5:00 PM

**AED Board Meeting** | O'Hare, Tenth Floor

1:00 PM – 6:00 PM

**CTD 1.5 Using Exposure To Treat Anxiety In The Context Of Eating Disorders: Petrified Patients And Anxious Clinicians**

*(extra fee apply)* | Clark Room, Fourth Floor

2:00 PM – 6:00 PM

**CTD 1.1 Update On The Neurobiology Of Eating Disorders And Implications For Clinical Practice**

Addison Room, Fourth Floor

*Laura A. Berner, PhD | Deborah R. Glasofer, PhD | Joanna E. Steinglass, MD | B. Timothy Walsh, MD, FAED*

#### **CTD 1.2 Best Practices For Assessing And Treating Adolescents With Atypical Anorexia Nervosa**

Armitage Room, Fourth Floor

*Gina Dimitropoulos, MSW, PhD, RSW | Elizabeth K Hughes, PhD | Katharine L Loeb, PhD | Andrea Garber, PhD | April S. Elliott, MD, FRCP(C), FSAHM | Ellie E. Vyver, MD, FRCPC, FAAP | Melissa Kimber, PhD, RSW | Daniel Le Grange, PhD, FAED*

#### **CTD 1.3 Strategies For Managing Slow Progress In Adult And Adolescent Eating Disorders Clients**

Belmont Room, Fourth Floor

*Lucene Wisniewski, PhD, FAED | Patricia Fallon, PhD, FAED | Kamryn T Eddy, PhD, FAED*

#### **CTD 1.4 Nutrition Essentials For Clinicians Treating Eating Disorders**

Great America Room, Sixth Floor

*Marcia Herrin, EdD, MPH, RD, FAED | Jillian Lampert, PhD, RD, MPH, FAED | Andrea Garber, PhD, RD | Leah Graves, RD, CEDRD, FAED | Maria Teresa Rivera, MS, RD, CEDS, CEDRD, FAED*

*Moderator: Dianne Neumark-Sztainer, PhD, MPH, RD, FAED*

#### **RTD 1.1 Conducting Quantitative Eating Disorder Research: From Planning To Publication**

Lincolnshire Room, Sixth Floor

*Stephen Wonderlich, PhD, FAED | Ross Crosby, PhD, FAED | Markus Moessner, PhD*

7:00 PM – 10:00 PM

**AED Board Dinner**

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## INTERNATIONAL CONFERENCE ON EATING DISORDERS

Thursday–Saturday, April 19–21

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### Thursday, April 19

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7:00 AM – 6:00 PM

**ICED 2018 Registration Open** | Fifth Floor

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7:30 AM – 9:00 AM

**Mentor/Mentee Breakfast**  
Addison/Clark Room, Fourth Floor

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8:00 AM – 9:00 AM

**AED Finance Committee Meeting**  
Miami/Scottsdale Room, Fifth Floor

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9:00 AM – 10:45 AM

**Welcome & Keynote Address**  
Chicago Ballroom, Fifth Floor  
*Speaker: Dr. Alan E. Kazdin*

*Simultaneously translated into Spanish*

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10:45AM – 11:15 AM

**Tweet Up/Tweet Out**  
Denver/Houston Meeting Room, Fifth Floor

**Refreshments with the Exhibitors**  
Grand Ballroom, Seventh Floor

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11:15AM – 1:00 PM

**PLENARY I** | Chicago Ballroom, Fifth Floor  
*Simultaneously translated into Spanish*

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1:00PM - 2:15PM

**Exhibit Hall Open** (*Light snacks provided*)

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1:00 PM – 2:00 PM

**PCAC Global Lunch**  
Addison/Clark Room, Fourth Floor

### **SIG ANNUAL MEETINGS Session I**

**Bariatric** | Kane, Third Floor

**Body Image and Prevention** | McHenry, Third Floor

**Family Based Treatment** | Armitage Room, Fourth Floor

**Genes & Environment** | Belmont Room, Fourth Floor

**Medical Care** | Miami/Scottsdale Room, Fifth Floor

**Psychodynamic & Integrated Psychotherapies**  
Great America Room, Sixth Floor

**Neuroimaging** | Indiana/Iowa Room, Sixth Floor

**Patient/Carer** | Michigan/Michigan State Room, Sixth Floor

**Somatic & Somatically Oriented Therapies**  
Northwestern/Ohio State Room, Sixth Floor

**Substance-Related & Addictive Disorders**  
Perdu/Wisconsin Room, Sixth Floor

**Technology & Innovations** | Denver/Houston Room, Fifth Floor

**Trauma** | Cook Room, Third Floor

**Universities** | Dupage, Third Floor

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2:15 PM – 3:45 PM

### **EDUCATIONAL SESSION 1**

**W1.1** | Chicago Ballroom, Fifth Floor

**Cognitive-Behavioral Therapy for Rumination Disorder (CBT-RD)**

*Simultaneously translated to Spanish*

*Helen Murray, BA | Jennifer Thomas, PhD, FAE*

**W1.2** | Armitage Room, Fourth Floor

**It Takes Two (or More): Developing Win-Win Collaborations to Solve “Big Problems” and Advance Our Field**

*Laura Eickman, PsyD | Jenny Lundgren, PhD*

**W1.3** | Belmont Room, Fourth Floor

**Best Practices in Eating Disorder Management for Transgender and Gender Non-binary Individuals**

*Mary Bowman, MSN, RN, WHNP-BC | Scout Bratt, MSE*

**W1.4** | Clark Room, Fourth Floor

**Multi Family Therapy: A Novel Approach for Working with Young Adults with Anorexia Nervosa**

*Ivan Eisler, PhD, FAED | Stephanie Knatz Peck, PhD | Gina Dimitropoulos, PhD*

**W1.5** | Chicago Ballroom, Fifth Floor

**Atypical Anorexia Nervosa in Adolescents - Not So Atypical!**

*Simultaneously translated into Spanish*

*Neville Golden, MD, FAED | Debbie Katzman, MD, FRCPC, FAED  
Andrea Garber, PhD, RD | Kara Fitzpatrick, PhD, FAED*

**W1.6** | Denver/Houston Room, Fifth Floor

**Regulation of Cues – A Novel Mechanistic Model for the Treatment of Obesity, Overeating and Binge Eating**

*Dawn Eichen, PhD | Kerri Boutelle, PhD*

**W1.7** | Miami/Scottsdale Room, Fifth Floor

**Exploring the Efficacy of Dietitians Using Family Based Treatment Practices**

*Marcia Herrin, MPH, EdD, RDN, FAED | Russell Marx, MD | Anna Oliver, BSc, BPhEd, PGDipDiet, RD | Joanna Wiese, PhD | Bryan Lian, MS, RDN | Hillary Coons, PhD | Sarah Forsberg, PsyD*

**P1.1** | Great America Room, Sixth Floor

**Treatment of Eating Disorders I (Child and Adolescent)**

**P1.2** | Indiana/Iowa Room, Sixth Floor

**Body Image**

**P1.3** | Michigan/Michigan State Room, Sixth Floor

**BED and Obesity**

**P1.4** | Northwestern/Ohio State Room, Sixth Floor

**Diagnosis, Classification, and Measurement**

**P1.5** | Purdue/Wisconsin Room, Sixth Floor

**Comorbidity**

**SP1.1** | Kane Room, Third Floor

**From Research to Practice: Evaluating and Eliminating Disparities in Disordered Eating Among LGBT and Gender Variant Youth**

*Natasha Schvey, PhD | Anne Claire Grammer, BA | S. Bryn Austin, ScD  
Jere Calzo, PhD | Allegra Gordon, MPH, ScD | Zachary McClain, MD  
Rebecka Peebles, MD*

**SP1.2** | McHenry Room, Third Floor

**To Meal Plan or not to Meal Plan: Using Science and Expert Practice in Meal Planning**

*Julia Cassidy, MS, RDN, CEDRDS | Melanie Jacob, RDN | Hilmar Wagner, MPH, RD, CD | Jillian Lampert, PhD, MPH, RD | Stephanie Brooks, MS, RD, CEDRD*

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3:45 PM – 4:15 PM

**Refreshments with the Exhibitors**

Grand Ballroom, Seventh Floor

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4:15 PM – 5:45 PM

**EDUCATIONAL SESSION 2**

**W2.1** | Addison Room, Fourth Floor

**The Influence of Persuasion and Coercion in the Treatment of Eating Disorders**

*Wayne Bowers, Ph. D, ABPP, FAED | Taylor Ford, MSW*

**W2.2** | Armitage Room, Fourth Floor

**Moving from Science Influencing Practice to Engaging in Scientific Practice: How to Make Discoveries in the Clinic and Get Them Published**

*Kyle De Young, PhD | Drew Anderson, PhD, FAED*

**W2.3** | Belmont Room, Fourth Floor

**Eating Disorders in Bariatric Surgery Populations: Assessment, Treatment and Special Considerations**

*Leslie Heinberg, PhD, FAED | James Mitchell, MD, FAED | Eva Conceição, PhD*

**W2.4** | Clark Room, Fourth Floor

**Treating Comorbid Suicidality and Non-suicidal Self-injury among Multi-problem Adolescents with Eating Disorders: A DBT Approach**

*Michelle Lupkin, PhD | Lucene Wisniewski, PhD, FAED*

**W2.5** | Chicago Ballroom, Fifth Floor

**Disordered Eating and Body Image in Middle-aged and Older Women: Research- and Evidence- based Approaches to Treatment**

*Simultaneously translated into Spanish*

*Niva Piran, PhD, FAED | Margo Maine, PhD FAED | Mary Tantillo, PhD, FAED*

**W2.6** | Denver/Houston Room, Fifth Floor

**The Challenge of Working Inter-culturally: Are We Sufficiently Considering Race, Culture and Ethnicity in the Treatment of Adolescent Eating Disorders? A Discussion from Three Continents**

*Elizabeth Dodge, MSc, CQSW | Gina Dimitropoulos, PhD, MSW, RSW | Martin Pradel, BSW, McFT*

**W2.7** | Miami/Scottsdale Room, Fifth Floor

**Incorporating Technology in Assessment and Treatment of Eating Disorders in Clinical Practice**

*Shiri Sadeh-Sharvit, PhD | Ellen Fitzsimmons-Craft, PhD | Denise Wilfley, PhD | C. Barr Taylor, MD*

**P2.1** | Great America Room, Sixth Floor

**Risk Factors For Eating Disorders**

**P2.2** | Indiana/Iowa Room, Sixth Floor

**Treatment of Eating Disorders II (Adult)**

**P2.3** | Michigan/Michigan State Room, Sixth Floor

**Prevention and Innovative Uses of Technology**

**P2.4** | Northwestern/Ohio State Room, Sixth Floor

**Biology and Medical Complications**

**P2.5** | Purdue/Wisconsin Room, Sixth Floor

**Avoidant and Restrictive Food Intake Disorder**

**SP2.1** | Kane Room, Third Floor

**How to Choose Your Yellow Brick Road: Exploring Diverse Career Paths and Using Personal Values to Inform Career Trajectories**

*Kathryn Coniglio, BA | Annie Haynos, PhD | Helen Murray, BA  
Linsey Utzinger, PsyD | Giovanni Castellini, MD, PhD | Daniel Le Grange, PhD, FAED | Renee Rienecke, PhD, FAED | Marian Tanofsky-Kraff, PhD, FAED | Heather Thompson-Brenner, PhD, FAED*

5:45 PM – 6:45 PM

**2019 ICED Scientific Committee Meeting**

Oldtown Room, Second Floor

5:45 PM – 7:15 PM

**Opening Reception** | Grand Ballroom, Seventh Floor

**POSTER SESSION I** | Grand Ballroom, Seventh Floor

**Friday, April 20**

7:00 AM – 5:00 PM

**ICED 2018 Registration Open** | Fifth Floor

7:30 AM - 9:00 AM

**Patient Carer Committee Meeting**

Addison Meeting Room, Fourth Floor

7:30 AM – 8:30 AM

**SIG Oversight Committee Meeting**

Clark Meeting Room, Fourth Floor

8:00 AM – 9:00 AM

**Past President's Breakfast**

President's Suite

9:00 AM – 10:45 AM

**PLENARY II** | Chicago Ballroom, Fifth Floor

*Simultaneously translated into Spanish*

10:45 AM – 11:15 AM

**Refreshments with the Exhibitors**

Grand Ballroom, Seventh Floor

11:15 AM – 12:45 PM

**EDUCATIONAL SESSION 3**

**W3.1** | Chicago Ballroom, Fifth Floor  
*Simultaneously translated into Spanish*

**Targeting Emotion in Eating Disorders Treatment: The Use of Behaviorally-Based Psychotherapy Techniques to Facilitate Emotion Regulation**

*Carol Peterson, PhD, FAED | Stephen Wonderlich, PhD, FAED  
Lucene Wisniewski, PhD, FAED | Emily Pisetsky, PhD*

**W3.2** | Addison Room, Fourth Floor

**Project ECHO® Eating Disorders: Connecting Primary Care, College Health, and Behavioral Health Providers to Eliminate Eating Disorders**

*Mary Tantillo, PhD, PMHCNS-BC, FAED | Richard Kreipe, MD, FAAP, FSAHM, FAED | Taylor Starr, DO, MPH, FAAP*

**W3.3** | Belmont Room, Fourth Floor

**Recovering Together: Approaching Eating Disorder Recovery from Multiple Perspectives**

*Beth McGilley, PhD, FAED, CEDS | Andrea Lamarre, PhD (ABD), MSc., BAHons | Judy Krasna, BA*

**W3.4** | Clark Room, Fourth Floor

**Clinical Practice and Research Opportunities. How is it to be an Eating Disorders Professional in Your Country?**

*Ashish Kumar, MD, Child Psychiatrist | Melanie Jacob, RDN | Gry Kjaersdam, Telleus, PhD | Bernou Melisse - Vernailen, MSc, Psychologist*

**W3.5** | Armitage Room, Fourth Floor

**Parent-Based Prevention for Parents with Eating Disorders**

*Shiri Sadeh-Sharvit, PhD | Cristin Runfola, PhD | Lilya Osipov, PhD | James Lock, MD, PhD*

**W3.6** | Denver/Houston Room, Fifth Floor

**When Family Therapy May Not Cut It Alone – Assessment, Formulation and Treatment Options**

**for Young People with Comorbid Eating Disorders and Self-harm**

*Keren Smith, DCLinPsy | Mima Simic, MRCPsych | Katrina Hunt, DCLinPsy | Rhian Parham, DCLinPsy | Lindsay Smith, DCLinPsy  
Elizabeth Godard, DCLinPSY | Julian Baudinet, DCLinPsy*

**W3.7** | Miami/Scottsdale Room, Fifth Floor

**Adults Only: Parent-Focused Treatment for Restrictive Eating Disorders in Youth**

*Katharine L. Loeb, PhD, FAED | Daniel Le Grange, PhD, FAED  
Martin Pradel, MCLinFT | Elizabeth Hughes, PhD*

**P3.1** | Great America Room, Sixth Floor

**Gender, Ethnicity, and Culture**

**P3.2** | Indiana/Iowa Room, Sixth Floor

**Treatment of Eating Disorders II (Adult) and Other**

**P3.3** | Michigan/Michigan State Room, Sixth Floor

**Bed and Obesity**

**P3.4** | Northwestern/Ohio State Room, Sixth Floor

**Comorbidity**

**P3.5** | Purdue/Wisconsin Room, Sixth Floor

**Children and Adolescents**

**SP3.1** | McHenry, Third Floor

**Incorporating Parents as Members of the Team in the Treatment of Children and Adolescents with Eating Disorders**

*Roxanne Rockwell, PhD | Stephanie Jacobs, PhD | Rebecka Peebles, MD | Erin Reeves, MS, RD | JD Ouellette, MS | Jocelyn Lebow, PhD | Mindy Soloman, PhD*

**SP3.2** | Kane Room, Third Floor

**Exploring Recovery through a Health at Every Size(R) and Fat Acceptance Lens: What We Can Learn from Recovered Professionals Who Identify as HAES(R)-Oriented and Fat Positive**

*Rachel Millner, PsyD, CEDS | Erin Harrop, MSW, CPP | Aaron Flores, RDN | Carmen Cool, MA, LPC | Mikalina Kirkpatrick, BS*

12:45 PM – 1:45 PM

**AED Committee Chairs Orientation**

Kane Meeting Room, Third Floor

**ICED/ANZAED 2020 Scientific Program Committee Meeting**

Dupage Room, Third Floor

12:45 PM – 2:00 PM

**Exhibit Hall Open** (*Light snacks provided*)

**SIG ANNUAL MEETINGS Session II**

**Assessment & Diagnosis** | McHenry Room, Third Floor

**Child & Adolescent** | Addison Room, Fourth Floor

**Dialectical Behavior Therapy** | Clark Room, Fourth Floor

**Early Career** | Armitage Room, Fourth Floor

**Epidemiology & Public Health** | Belmont Room, Fourth Floor

**Males & Eating Disorders** | Chicago Ballroom, Fifth Floor

**Neuropsychology** | Denver/Houston Room, Fifth Floor

**Nutrition** | Miami/Scottsdale Room, Fifth Floor

**Professionals & Recovery** | Great America Room, Sixth Floor

**Residential & Inpatient** | Indiana/Iowa Room, Sixth Floor

**Sport & Exercise** | Michigan/Michigan State Room, Sixth Floor

**Transcultural** | Northwestern/Ohio State Room, Sixth Floor

**Weight Stigma and Social Justice** | Purdue/Wisconsin Room, Sixth Floor

2:00 PM – 3:30 PM

**EDUCATIONAL SESSION 4**

**W4.1** | Addison Room, Fourth Floor

**Dialectical Behavior Therapy Guided Self-Help for Binge Eating Disorder**

*Jacqueline C. Carter, DPhil, FAED | Debra L. Safer, MD | Therese E. Kenny, MSc | Christopher W. Singleton, BA (Hons)*

**W4.2** | Armitage Room, Fourth Floor

**Developing Research-Practice Integration of Trauma/PTSD Focused Treatments in an Eating Disorders Program**

*Douglas Bunnell, PhD, FAED, CEDS | Melissa Coffin, PsyD, CEDS | Timothy Brewerton, MD, DFAPA, FAED, DFAACAP, HCEDS*

**W4.3** | Belmont Room, Fourth Floor

**When Diversity of Opinion Leads to Gridlock: Why the Eating Disorders World Struggles to Find a Common Voice**

*Laura Collins Lyster-Mensh, MS | Carolyn Costin, MA, Med, LMFT, CEDS, FAED | Stephanie Bauer, PhD | Eric van Furth, PhD | Carolyn Black Becker, PhD, FAED*

**W4.4** | Clark Room, Fourth Floor

**The Interplay of Chronic Health Conditions and Eating Disorders: Identification and Treatment Implications**

*Deborah Glasofer, PhD | Karen Rosewater, MD | Laurel Mayer, MD | Matthew Shear, MD | Janet Schebendach, PhD, RD | Evelyn Attia, MD*

**W4.5** | Miami/Scottsdale Room, Fourth Floor

**Optimizing Voluntary Engagement in Eating-Disorder Treatment: Autonomy Support, Mindfulness and Compassion in Action**

*Howard Steiger, PhD, FAED | Josie Geller, PhD, RPsych, FAED*

**W4.6** | Denver/Houston Room, Fifth Floor

**15 Years of the Australian and New Zealand Academy of Eating Disorders. Reflections on**

**Successfully Mobilizing the Australian and New Zealand Eating Disorder Community to Bringing Eating Disorders into the Public Consciousness**

*Sloane Madden, MBBS (Hons), PhD, FAED | Phillipa Hay, PhD, FAED | Anthea Fursland, PhD | Chris Thornton, PhD*

**W4.7** | Addison Room, Fourth Floor

**Outpatient Medical Considerations in Anorexia Nervosa, Bulimia Nervosa, and Binge Eating Disorder: Best Practices for the Measurable, the Unmeasurable, and All Points in Between**

*Jennifer Gaudiani, MD, CEDS, FAED*

**P4.1** | Great America Room, Sixth Floor

**Stigma**

**P4.2** | Indiana/Iowa Room, Sixth Floor

**Treatment of Eating Disorders I (Child and Adolescents)**

**P4.3** | Michigan/Michigan State Room, Sixth Floor

**Diagnosis, Classification, and Measurement**

**P4.4** | Northwestern/Ohio State Room, Sixth Floor

**Risk Factors For Eating Disorders**

**P4.5** | Purdue/Wisconsin Room, Sixth Floor

**Neuroscience and Neuroimaging**

**SP4.1** | Kane Room, Third Floor

**Safety as an Outpatient: Assessment, Conceptualization and Treatment of Suicidal and Self-injurious Behaviors in Adolescents and Adults with Eating Disorders Across Levels of Care**

*Loren Prado, MS, LPC-S | Ellen Astrachan-Fletcher, PhD, CEDS  
Anne Cusack, PsyD | Mindy Solomon, PhD | Michelle Lupkin, PhD*

**SP4.2** | McHenry Room, Third Floor

**International Forum on Integrated Treatment for Eating Disorder Patients with Co-morbid Substance Use Disorders: Service Delivery and Access to Care**

*Amy Baker Dennis, PhD, FAED | Tamara Pryor, PhD, FAED  
Umberto Nizzoli, MPH, PhD*

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3:30 PM – 4:00 PM

**Refreshments with the Exhibitors**  
Grand Ballroom, Seventh Floor

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4:00 PM – 5:45 PM

**PLENARY III** | Chicago Ballroom, Fifth Floor  
*Simultaneously translated to Spanish*

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6:00 PM – 7:00 PM

**Partners, Chapters, & Affiliates Committee Meeting** | Chicago Ballroom, Fifth Floor

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6:00 PM – 7:00 PM

**HLA Annual Meeting**  
Clark Meeting Room, Fourth Floor

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**Saturday, April 21**

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7:00 AM – 5:30 PM

**ICED 2018 Registration Open** | Fifth Floor

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7:45 AM – 9:15 AM

**AED Business Meeting & Awards Ceremony**  
*(Continental breakfast served)*  
Chicago Ballroom, Fifth Floor

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9:15 AM – 2:30 PM

**Exhibits Open**

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9:15 AM – 9:30 AM

**Refreshments with the Exhibitors**  
Grand Ballroom, Seventh Floor

9:30 AM – 11:00 AM

**SPECIAL TOWN HALL EVENT & EDUCATIONAL SESSION 5**

**Townhall Event** | Denver/Houston Room, Fifth Floor

**Gathering for Good: A Town Hall Event with the Eating Disorders Coalition for Research, Policy & Action**

*Chase Bannister, MDiv, MSW, LCSW, CEDS | Jillian Lampert, PhD, MPH, RD, LD, FAED*

**W5.1** | Addison Room, Fourth Floor

**Incorporating Mindfulness into Eating Disorder Research and Treatment.**

*Margarita Sala, MA | Irina Vanzhula, MA | Adrienne Juarascio, PhD | Kristine Vazzano, PhD | Cheri Levinson, PhD*

**W5.2** | Armitage Room, Fourth Floor

**Why Go It Alone? How Family-based Treatment of Young Adults with Anorexia is Possible and Productive in Reaching a Full Recovery**

*Rebecka Peebles, MD | Therese Waterhous, PhD, RDN, CEDRD | Tabitha Farrar, BSc | Rachel Millner, PsyD, CEDS*

**W5.3** | Chicago Ballroom, Fifth Floor

*Simultaneously translated to Spanish*

**From Clinical Practice to Brain Research and Back – Anxiety in the Assessment and Treatment of Eating Disorders**

*Walter Kaye, MD | Heather Hower, MSW, LICSW, QCSW, ACSW | Guido Frank, MD*

**W5.4** | Clark Room, Fourth Floor

**#EDHack: Social Media and Start up Thinking and Strategies for Clinicians, Research, and Knowledge Translation**

*Zali Yager, PhD*

**W5.5** | Belmont Room, Fourth Floor

**Examining Evidence for Medication Efficacy for Children and Adolescents with Eating Disorders – An Essential Update for Clinicians**

*Wendy Spettigue, MD, FRCP(C) | Mark Norris, MD, FRCP(C) | Jennifer Couturier, MD, FRCP(C) | Leanna Isserlin, MD, FRCP(C)*

**P5.1** | Miami/Scottsdale Room, Fourth Floor

**Prevention**

**P5.2** | Great America Room, Sixth Floor

**Treatment of Eating Disorders I (Child and Adolescents)**

**P5.3** | Indiana/Iowa Room, Sixth Floor

**Bed and Obesity**

**P5.4** | Michigan/Michigan State Room, Sixth Floor

**Personality and Cognition**

**P5.5** | Northwestern/Ohio State Room, Sixth Floor

**Diagnosis, Classification, and Measurement**

**P5.6** | Purdue/Wisconsin Room, Sixth Floor

**Gender, Ethnicity, and Culture**

**SP5.1** | Kane Room, Third Floor

**Biological Research on Eating Disorders: Moving the Field Forward**

*Karen Mitchell, PhD | Zeynep Yilmaz, PhD | Laura Berner, PhD | Katharine Dunlop, BSc | Sarah Fischer, PhD | Jessica Baker, PhD | Christina Wierenga, PhD*

**SP5.2** | McHenry Room, Third Floor

**Standardized Assessment in Residential and Partial Hospital Eating Disorder Programs: How Are We Doing and How Should We Measure It?**

*Heather Thompson-Brenner, PhD, FAED | Evelyn Attia, MD, FAED | Kelly Bhatnagar, PhD | Scott Crow, MD, FAED | Hallie Espel-Huyhn, MS | Angela Guarda, MD, FAED | Michael Lowe, PhD | Douglas Bunnell, PhD, FAED*

11:00 AM – 11:15 AM

**Refreshments with the Exhibitors**

Grand Ballroom, Seventh Floor

11:15 AM – 12:45 PM

**EDUCATIONAL SESSION 6**

**W6.1** | Addison Room, Fourth Floor

**Learning How to Apply Compassion Focused Therapy for Eating Disorders (CFT-E) in an Outpatient Group Setting**

*Clodagh Dowling, MSC, DClin Psych, SC | Jillian Doyle, MSC, DClin Psych*

**W6.2** | Armitage Room, Fourth Floor

**Stakeholders United: Tools for Promoting Productive Partnerships between Professionals, Patients, and Carers Based on the AED’s World Eating Disorders Healthcare Rights**

*Dasha Nicholls, MD, FAED, MBBS, MRC(Psych) | Judy Krasna, BA | Ashley Solomon, PsyD | Mirjam Mainland, MS*

**W6.3** | Belmont Room, Fourth Floor

**Unraveling the Enigma of Male Eating Disorders: Conceptualization, Assessment, and Intervention**

*Stuart Murray, DClinPsych, PhD | Jason Lavender, PhD*

**W6.4** | Clark Room, Fourth Floor

**Food Exposure: Three Different Approaches in the Treatment of Eating Disorders**

*Heather Thompson-Brenner, PhD, FAED | Julia Cassidy, MS, RDN, CEDRD-S | Deborah Glashofer, PhD*

**W6.5** | Chicago Ballroom, Fifth Floor

*Simultaneously translated to Spanish*

**FBT-ARFID for Younger Patients: Lessons from a Randomized Controlled Trial**

*Shiri Sadeh-Sharvit, PhD | Athena Robinson, PhD | James Lock, MD, PhD*

**W6.6** | Denver/Houston Room, Fifth Floor

**“But What If My Patient Gets Fat?”: Research and Clinical Implications of Weight Stigma in Treating Higher-weight Patients with Eating Disorders**

*Erin Harrop, MSW | Julie Church, RDN, CD, CEDRD | Hilary Kinavey, MS, LPC, CDWF | Andrea LaMarre, PhC, MSc | Janell Mensinger, PhD | Chevese Turner, BA*

**P6.1** | Miami/Scottsdale Room, Fourth Floor

**Epidemiology**

**P6.2** | Great America Room, Sixth Floor

**Treatment of Eating Disorders II (Adult)**

**P6.3** | Indiana/Iowa Room, Sixth Floor

**Children and Adolescents**

**P6.4** | Michigan/Michigan State Room, Sixth Floor

**Biology and Medical Complications**

**P6.5** | Northwestern/Ohio State Room, Sixth Floor

**Innovative Uses of Technology**

**P6.6** | Purdue/Wisconsin Room, Sixth Floor

**Risk Factors for Eating Disorders**

**SP6.1** | Kane Room, Third Floor

**Exercise and Neuropsychological Function in Eating Disorders**

*Laura Moretti, MS, RD, CSSD, LDN | Amy Harrison, PhD | Lisa Smith - Kilpela, BA, MA, PhD | Carrie J McAdams, MD, PhD | Sharon Chirban, PhD | Kathryn Ackerman, MD, MPH, FACSM*

12:45 PM – 2:15 PM

**Exhibit Hall Open (Light snacks provided)**

**POSTER SESSION II**

Grand Ballroom, Seventh Floor

1:00 PM – 2:15 PM

**European Chapter Meeting**

McHenry Meeting Room, Third Floor

**IJED Editorial Board Luncheon (Invitation Only)**

Addison Meeting Room, Fourth Floor

**Meet the Experts**

Clark Meeting Room, Fourth Floor

**SIG Chairs Meeting**

Great America Meeting Room, Sixth Floor

**Lunch (on your own)**

## SCHEDULE AT-A-GLANCE | CONTINUED

2:15 PM – 4:00 PM

**PLENARY IV** | Chicago Ballroom, Fifth Floor

*Simultaneously translated to Spanish*

4:15 PM – 6:00 PM

**Research Practice Global Think Tank**

**“The Clinical Perspective on Eating Disorders Research: A Symbiotic Relationship”**

Chicago Ballroom, Fifth Floor

*Simultaneously translated into Spanish*

6:00 PM – 7:00 PM

**25th Anniversary VIP Fundraising Reception** (*Ticket Required*) | Grand Ballroom, Seventh Floor

7:00 PM – Midnight

**Closing Social Event – Celebrating AED’s 25th Anniversary with a Taste of Chicago**  
Grand Ballroom, Seventh Floor



# SESSION ABSTRACT

**WEDNESDAY, APRIL 18**

**2:00 PM - 6:00 PM**

**Clinical Teaching Day**

## **CTD 1.1**

### **UPDATE ON THE NEUROBIOLOGY OF EATING DISORDERS AND IMPLICATIONS FOR CLINICAL PRACTICE**

*Addison Meeting Room, Fourth Floor*

**Laura A. Berner, PhD<sup>1</sup>**

**Deborah R. Glasofer, PhD<sup>2</sup>**

**Joanna E. Steinglass, MD<sup>2</sup>**

**B. Timothy Walsh, MD, FAED<sup>2,3</sup>**

<sup>1</sup> University of California, San Diego, CA, USA

<sup>2</sup> Columbia University College of Physicians & Surgeons, New York, NY, USA

<sup>3</sup> New York State Psychiatric Institute, New York, NY, USA

Neuroscience offers the possibility of advancing treatment of psychiatric illnesses through improved understanding of pathophysiology. Specifically, current work in neuroscience yields promising new avenues for understanding the biology of anorexia nervosa and bulimia nervosa. By understanding the brain activity that underlies decisions about eating (i.e., choosing what to eat) and the control of behavior, we have learned that there are important neurobiological differences that are present during the course of illness. Neural circuits guiding behavior are different in the ill state. Intervention strategies that take this neurobiology into account may be useful. Based on these findings, treatment tools that focus on the habitual nature of eating disorder behaviors have been developed and tested in anorexia nervosa, and targeted treatment approaches are being developed and tested in bulimia nervosa. After providing an overview of neuroimaging updates, and specifically the data that related to maladaptive eating patterns, neuroscience-based interventions for anorexia nervosa and bulimia nervosa will be presented and practiced. Presentations will emphasize 1) recent understandings of restrictive eating and related treatment approaches for anorexia nervosa; 2) altered self-regulatory control circuits in bulimia nervosa. We will provide examples of how to convey this science to patients and their families, and describe how this neurobiological framework can be used to guide novel interventions.

*Learning Objectives:*

Following this session, attendee will be able to:

- 1) Describe the neuroimaging data that link brain mechanisms with behavioral symptoms in eating disorders.

- 2) Implement treatment strategies based on neurobiological models for patients with anorexia nervosa.

- 3) Apply neuroimaging findings to the treatment of patients with bulimia nervosa.

## **CTD 1.2**

### **BEST PRACTICES FOR ASSESSING AND TREATING ADOLESCENTS WITH ATYPICAL ANOREXIA NERVOSA**

*Armitage Meeting Room, Fourth Floor*

**Gina Dimitropoulos, MSW, PhD, RSW<sup>1</sup>**

**Elizabeth K Hughes, DPhil<sup>2</sup>**

**Katharine L Loeb, PhD, FAED<sup>3</sup>**

**Andrea Garber, PhD<sup>4</sup>**

**April S. Elliott MD, FRCP(C), FSAHM<sup>5</sup>**

**Ellie E. Vyver, MD, FRCPC, FAAP<sup>6</sup>**

**Melissa Kimber, PhD, RSW<sup>6</sup>**

**Daniel Le Grange, PhD, FAED<sup>7</sup>**

<sup>1</sup> University of Calgary, Calgary, Alberta, Canada

<sup>2</sup> Centre for Adolescent Health, Royal Children's Hospital, Parkville, Victoria, Australia

<sup>3</sup> School of Psychology, Fairleigh Dickinson University, Teaneck, NJ, USA

<sup>4</sup> University of California School of Medicine, San Francisco, CA, USA

<sup>5</sup> Alberta Children's Hospital, Calgary, Alberta, Canada

<sup>6</sup> Offord Centre for Child Studies, McMaster University, Hamilton, Ontario, Canada

<sup>7</sup> University of California, San Francisco, CA and University of Chicago, Chicago, IL, USA

A growing number of young people are presenting with Atypical Anorexia Nervosa (AN). Atypical AN has been to shown to be psychologically, medically and socially impairing. Yet, atypical AN is less likely than typical AN to be identified as warranting medical and psychiatric attention. Although weight loss is often extreme, adolescents with atypical AN are not likely to receive timely health and mental health services because they may have started at a higher weight or present at a weight that is not typically as low as those with AN. The first aim of this workshop is to provide a comprehensive overview of how to conduct diagnostic, nutritional and medical assessments of adolescents with atypical AN. The second aim of this workshop is to present different treatment approaches available for young people and their families. A brief overview of published literature on different physiological and psychological presentations between typical and atypical AN in adolescents will be provided. A discussion of diagnostic assessments used to accurately determine and differentiate atypical AN from typical AN and from other eating disorders will be conducted. Assessment protocols for determining malnutrition and medical complications associated with

atypical AN will be illustrated using various vignettes. This workshop will describe different clinical approaches including an adapted version of Family based treatment for atypical AN. A discussion of how to engage and sustain parental (and team) involvement in treatment when the restrictive eating behaviors appear transient and the degree of weight loss less alarming because the young person is not "underweight" will be discussed. Special emphasis will be placed on strategies for strengthening collaboration between pediatricians and clinicians to engage adolescents whose weight loss may have been encouraged or positively reinforced by others including some health care providers.

*Learning Objectives:*

At the end of this session participants will have gained knowledge in:

- ▶ best practices for conducting psychological assessments for atypical AN
- ▶ how to undertake medical and nutritional assessments
- ▶ various treatment approaches including adaptations to Family Based Therapy for atypical AN

### CTD 1.3 STRATEGIES FOR MANAGING SLOW PROGRESS IN ADULT AND ADOLESCENT EATING DISORDERS CLIENTS

*Belmont Meeting Room, Fourth Floor*

**Lucene Wisniewski, PhD, FAED<sup>1</sup>**  
**Patricia Fallon, PhD, FAED<sup>2</sup>**  
**Kamryn T. Eddy, PhD, FAED<sup>3</sup>**

<sup>1</sup> Shaker Heights, OH, USA

<sup>2</sup> University of Washington, Seattle, WA, USA

<sup>3</sup> Massachusetts General Hospital, Boston, MA, USA

Existing evidence based treatments (EBTs) result in recovery in approximately half of individuals with bulimia nervosa and binge eating disorder, and even fewer in individuals with anorexia nervosa. Furthermore, standardized EBTs do not exist for patients who have not responded to treatment over an extended period of time. This conundrum is true for adults as well as adolescents and children who experience eating disorders. Clinicians are nonetheless faced with the daunting task of trying to help patients suffering from psychiatry's most lethal illness, and to figure out next steps when a client does not respond to initial interventions. The current workshop highlights how experienced therapists can systematically employ variety of EBT techniques for adult, adolescent and children with severe, long-term eating disorder and its co-morbidities within a model of attachment and collaboration. Through case presentations, didactic information and group discussion, this workshop will help make the participant aware of the practice of utilizing a wide variety of EBT techniques in a systematic manner guided by clinical

expertise and supported by a therapy relationship of collaboration and attachment. Attendees should have some familiarity with CBT, DBT, FBT, exposure techniques for anxiety, and behavioral activation.

*Learning Objectives:*

Following this session, participants will be able to:

- ▶ list and describe at least 3 evidence-based treatments for issues commonly co-morbid to those suffering from an eating disorder
- ▶ identify strategies to increase and maintain motivation for treatment in both the patient and the therapist
- ▶ describe therapist and patient roadblocks to effective treatment with chronically ill patients

### CTD 1.4 NUTRITION ESSENTIALS FOR CLINICIANS TREATING EATING DISORDERS

*Great America Meeting Room, Sixth Floor*

**Marcia Herrin, EdD, MPH, RD, FAED<sup>1</sup>**  
**Jillian Lampert, PhD, RD, MPH, FAED<sup>2</sup>**  
**Andrea Garber, PhD, RD<sup>3</sup>**  
**Leah Graves, RD, CEDRD, FAED<sup>4</sup>**  
**Maria Teresa Rivera, MS, RD, CEDS, CEDRD, FAED<sup>5</sup>**

*Moderator:*

**Dianne Neumark-Sztainer, PhD, MPH, RD, FAED<sup>6</sup>**

<sup>1</sup> Lebanon, NH, USA

<sup>2</sup> University of Minnesota, Minneapolis, MN, USA

<sup>3</sup> School of Medicine, University of California, San Francisco, CA, USA

<sup>4</sup> Veritas Collaborative LLC, Durham, NC, USA

<sup>5</sup> Eating Recovery Center, Dallas, TX, USA

<sup>6</sup> School of Public Health, University of Minnesota, Minneapolis, MN, USA

Clinicians working in eating disorders require a fundamental understanding of nutrition principles and interventions. Nevertheless, medical providers, psychologists, psychiatrists, and non-specialist dietitians do not necessarily have knowledge of the nutrition issues relevant to eating disorders. In treatment approaches that do not include a defined role for dietitians, [e.g., family-based treatment (FBT)], dietary and nutritional issues are considered core clinical skills for all practitioners. Yet, the lack of knowledge of nutrition and dietetic interventions has interfered with implementation of FBT by mental health providers. For interdisciplinary teams that do include dietitians, it is crucial for all providers to have common understanding of the role of dietitian and nutrition in recovery. For those that do not, lack of this expertise and knowledge must be addressed. This teaching day, designed for a variety of treatment providers (e.g., dietitians, psychotherapists, psychiatrists, physicians, and primary care providers), will provide

a comprehensive overview malnutrition and the skills needed to assess nutritional status and promote nutritional rehabilitation for patients with eating disorders. The faculty will describe evidence-based approaches and their own clinically-refined tools for managing food and weight-related issues. Nutrition counseling interventions derived from cognitive behavioral therapy, dialectical behavioral therapy, and family-based treatment techniques will be demonstrated. State of the art nutrition and weight assessment guidelines, growth trajectories and energy needs, micronutrient deficiencies and requirements, practical clinical techniques for managing refeeding, weight restoration, bingeing, purging, exercise, special nutritional needs (e.g. diabetes, allergies, etc.) as well as food guidance approaches will be summarized. Nutrition issues specific to different levels of care will be examined and gaps in research will be identified. Audience members will participate in case discussions throughout the day.

*Learning Objectives:*

Following this session, participants will be able to:

- ▶ describe nutritional rehabilitation guidelines and practices in various treatment settings.
- ▶ discuss nutrition counseling interventions derived from cognitive behavioral therapy, dialectical behavioral therapy, family-based treatment, and motivational interviewing techniques.
- ▶ integrate three advanced nutrition counseling techniques into practice.

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## WEDNESDAY, APRIL 18

1:00 PM – 6:00 PM

### Clinical Teaching Day Session 1.5

**CTD 1.5** (Additional Fee Applies)

#### USING EXPOSURE TO TREAT ANXIETY IN THE CONTEXT OF EATING DISORDERS: PETRIFIED PATIENTS AND ANXIOUS CLINICIANS

*Clark Meeting Room, Fourth Floor*

**Carolyn Black Becker, PhD, FAED<sup>1</sup>**  
**Glenn Waller, DPhil, FAED<sup>2</sup>**  
**Kelly Vitousek, PhD<sup>3</sup>**

<sup>1</sup>Trinity University, San Antonio, TX, USA

<sup>2</sup>Sheffield University, Sheffield, UK

<sup>3</sup>University of Hawaii, Honolulu, HI, USA

Exposure therapy is a key component of evidence-based treatment for both eating disorders (EDs) and anxiety-based disorders (AbD: including PTSD and OCD), which often co-occur. Successful treatment of EDs sometimes yields remission of comorbid anxiety, but not always. In

these cases, ED therapists need to be prepared to treat anxiety directly. Although exposure is widely recognized to be highly effective at reducing anxiety, be it in the context of an ED, AbD, or both, remarkably few clinicians use exposure. Exposure can be delivered in everyday practice; yet it often is delivered in ways that omit key elements, which reduces effectiveness. One common reason for this omission is clinicians' fear of distressing patients. This workshop will detail the rationale for exposure in ED and AbD treatment, how it works, and why it requires both patients and therapists tolerating their own anxiety and overcoming safety and avoidance behaviors. Case examples will be used throughout the workshop.

*Learning Objectives:*

Following this session, attendee will be able to:

- ▶ Describe key steps in implementing exposure
- ▶ Identify patients' safety and avoidance behaviors
- ▶ Identify clinicians' safety and avoidance behaviors and how they interact with those of patients

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## WEDNESDAY, APRIL 18

1:00 PM – 6:00 PM

### Research Training Day

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#### CONDUCTING QUANTITATIVE EATING DISORDER RESEARCH: FROM PLANNING TO PUBLICATION

*Great America, Sixth Floor*

**Stephen Wonderlich, PhD, FAED<sup>1</sup>**  
**Ross Crosby, PhD, FAED<sup>1</sup>**  
**Markus Moessner, PhD<sup>2</sup>**

<sup>1</sup>Neuropsychiatric Research Institute, Fargo, ND, USA

<sup>2</sup>Center for Psychotherapy Research, University Hospital, Heidelberg, Germany

The aim of this workshop is to provide a comprehensive review of the critical steps involved in the planning, preparation, conduct, and publication of quantitative eating disorders research. The topics to be addressed in this workshop include: (1) formulating research questions; (2) designing your research study; (3) choosing assessment measures for your study; (4) regulatory issues, including dealing with Institutional Review Boards, (5) data collection and management; (6) statistical analysis and interpretation; and (7) manuscript preparation. The presenters will provide overviews of each of the areas, as well as supplemental materials with additional information. Ample time will be provided for question and answer sessions. Attendees will be encouraged to discuss their own research projects.

# PLENARY

**THURSDAY, APRIL 19**

11:15 AM - 1:00 PM

## Plenary I

Chicago Ballroom, Fifth Floor

Simultaneously translated to Spanish

### Strategic Science to Influence Policy Related to Eating Disorders

Co-Chairs:

**Sigrun Danielsdottir, Cand.Psych/M.Sc, FAED Marisol Perez, PhD  
Zali Yager, PhD**

Most professionals in the eating disorder field are not trained to influence policy. Thus, a research-policy gap has formed where the communication of science largely stays within the science. The aim of strategic science is to fill these gaps in knowledge by creating greater connections between researchers, policy-makers, and community advocates at all phases of research, especially in the design phase. Strategic science is the design of research whose findings are useful to policymakers and communities for creating health behavior change. Attendees will learn how policy-related research can provide the data needed for catalyzing action from policymakers and be inspired by recent success stories of the full journey from advocacy to the adoption of governmental policy. Implications for the development of eating disorder research, activism and advocacy will be discussed with the aim of generating successful action for the prevention and quality treatment of eating disorders.

Learning Objectives:

- Participants will be introduced to strategic science as an effective, evidence-based approach to improving eating disorder policy development
- Participants will learn about the real-life steps involved in successful policy making from advocacy to legislation
- Participants will acquire hands-on knowledge on how to implement strategic science to their own research, advocacy and activism

### A Model of Strategic Science to Advance Policy Action for Eating Disorders

**S. Bryn Austin, ScD, FAED**

Harvard T.H. Chan School of Public Health  
and Boston Children's Hospital. Boston, MA, USA

This talk will introduce the concept of strategic science as a way both to catalyze policy action on society's health and mental health challenges that have been identified through research and also to help ensure that policy responses to these challenges will be evidence based. Central to strategic science is ongoing, tri-directional communication among scientists, policymakers, and community stakeholders to craft research questions that can produce timely, policy-relevant evidence. The audience will then be introduced to the triggers-to-action framework of strategic science, which identifies evidentiary base, legal considerations, and political will as crucial pillars for catalyzing policy change. The framework can serve as a practical guide to scientists as to how to design, conduct, and communicate about research to maximize potential impact on policy.

### Strategic Science for Eating Disorders Research & Policy Impact

**Christina A. Roberto, PhD**

Perelman School of Medicine  
University of Pennsylvania, Philadelphia, PA, USA

Scientific research often fails to have relevance and impact because scientists do not engage policy makers and influencers in the process of identifying information needs and generating high priority questions. In this talk, I will present a model of Strategic Science that I use in my work to address this scholarship-policy gap. This research approach involves working with policy makers and influencers to craft research questions that will answer important and timely policy-related questions. The goal is to create tighter links between research and policy and ensure findings are communicated efficiently to change agents best positioned to apply the research to policy debates. In the talk, I will provide examples of Strategic Science from my own research on food policy and obesity and describe how this approach may help advance policy research and action for eating disorders.

### Developing a Research Agenda to Influence Policies and Practices of Relevance to Eating Disorders: Strategies, Advantages, and Disadvantages of Linking to Obesity

**Dianne Neumark-Sztainer PhD, MPH, FAED**

School of Public Health. University of Minnesota,  
Minneapolis, MN, USA

It is crucial to influence policies and practices likely to decrease the prevalence of eating disorders. Support from funders, policy-makers, and clinicians for addressing eating disorders may be lower than support for addressing obesity. Through greater linking of eating disorders and obesity, the eating disorders field may be more successful

in gaining support for the important work that needs to be done. The presenter will describe strategies that she has utilized for obtaining funding, analyzing data, developing interventions, and sharing data with policy-makers.

The potential advantages and disadvantages of such an integrated approach will be presented. Advantages include a greater likelihood for obtaining funding and for implementing helpful policies and practices (and avoiding harmful ones). However, disadvantages may include an increased focus on weight and difficulties in getting the message right. Discussion with conference participants about if and how to discuss weight within the eating disorders field will be encouraged.

## Stories from the Frontline on Influencing Eating Disorder Related Policy

### Kitty Westin

Eating Disorders Coalition  
and the Anna Westin Foundation

The eating disorders community in the United States has been working on getting the attention of policy makers for many years. It has been a long and often frustrating journey but advocates including people who struggle with eating disorders, family and friends, treatment providers, researchers, and prevention specialists refused to give up. Their persistence paid off when eating disorder-specific legislation, the Anna Westin Act, was passed and signed into law in December 2016. Only a handful of bills that are introduced ever make it through the system and become law. During the 114th Congress (January 2015 – January 2017) there were 12,063 bills introduced and only 3% or 329 become law. This session will explore the process of turning a good idea into meaningful legislation. We will also discuss lessons learned through the eyes of grassroots advocates and the next steps necessary to continue using legislation to improve the treatment and prevention of eating disorders.

## FRIDAY, APRIL 20

9:00 AM – 10:45 AM

### Plenary II

Chicago Ballroom, Fifth Floor

Simultaneously translated to Spanish

## Recovery from an Eating Disorder: How Do We Define It? What Does It Look Like? And Should It Always Be the Focus?

Co-Chairs:

Ellen Fitzsimmons-Craft, PhD  
Allison Kelly, PhD

Plenary Abstract:

Recovery is typically the end goal of eating disorders treatment, yet the field lacks a consensus definition of

“recovery.” This lack of consensus greatly limits our ability to make important clinical decisions, refine interventions, classify treatments as effective, summarize information on recovery rates, identify reliable predictors of recovery, and collapse knowledge across studies. This plenary will explore multiple perspectives on eating disorder recovery, including researcher, patient, and clinician viewpoints. This plenary aims to assist the eating disorder community in coming to a consensus on how recovery should be defined for eating disorders across the diagnostic spectrum and when it should be emphasized versus de-emphasized, with direct implications for researchers, practitioners, and patients.

*Learning Objectives:*

Participants will be able to:

- ▶ Explore the utility of a more standardized and comprehensive definition of eating disorder recovery that goes beyond behavioral and physical indices only.
- ▶ Assess the contexts in which improved quality of life and greater well-being may valuable treatment goals in their own right.
- ▶ Identify the commonalities and differences in patients' experiences of recovery.

## What Are the Essential Components of Recovery from an Eating Disorder?

### Anna Bardone-Cone, PhD, FAED

University of North Carolina at Chapel Hill, Chapel Hill, NC, USA

The eating disorder field has a history of focusing on physical indices of recovery, such as body mass index, and behavioral indices, such as absence of binge eating, purging, and fasting. These are the indices that are typically used when making a determination of “recovery” in different treatment settings and treatment outcomes studies and in engaging in research on “recovered” individuals. Psychological indices, such as cognitions related to eating, weight, and shape, are much less frequently included in operationalizations of recovery. The glaring absence of psychological/cognitive features in most operationalizations of recovery results in clinicians and researchers considering a heterogeneous group of individuals to be “recovered” even though their risk for relapse and need for further treatment may differ significantly from one another. Developing a standardized and comprehensive definition of recovery is critical to advancing our understanding of what recovery can look like which, in turn, would help researchers and clinicians to predict who attains such recovery, to develop interventions that might best facilitate the attainment of recovery, and to make important clinical decisions about treatment termination. This presentation will provide an overview of varying definitions used for eating disorder recovery, highlight problems related to this lack of consensus, and propose a comprehensive definition and operationalization of recovery that may be applied transdiagnostically, which has practical implications given diagnostic migration in the eating disorders. Preliminary data will be

presented related to this definition in various samples, cross-sectionally and longitudinally.

### Should “Recovery” Always Be the Focus of Treatment? How and When Should it be De-emphasized?

**Phillipa Hay, MBBS**

School of Medicine, Western Sydney University, Sydney, Australia

Recovery is a complex conceptualization and never more so than when applied to individuals with anorexia nervosa. A recent review commented that there are almost as “many definitions of relapse, remission, and recovery [in anorexia nervosa] as there are studies of them”. However, most definitions use varying composites of physical (weight regain most notably), behavioural (e.g. binge eating abstinence), and psychological (reduced symptoms such as weight and shape concerns) domains, and require such improvements to be sustained over time. Rarely do they encompass attainment of mental health as in the WHO definition of “a state of well-being in which every individual realizes his or her own potential, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to her or his community”. For those with severe and enduring anorexia nervosa such a state of improved psychosocial function may appear more attainable and less fearful than weight regain or absence of eating disorder symptoms. This presentation will review research suggesting that clinical programs that prioritize quality of life and improved mental health wellbeing over weight regain as the primary goal may be more successful in retaining people with longstanding eating disorders in treatment and, paradoxically may be associated with improved longer term outcomes and rates of recovery. Whilst this shift in focus may challenge current practices, it may also facilitate a more collaborative and person-centered approach that has the capacity to improve the therapeutic experience for all involved.

### Lifelong Path or Finish Line? A Clinician’s Journey of Recovery

**Amy Pershing, LMSW, ACSW**

Bodywise, Ann Arbor, MI, USA

Both “in recovery” and “recovered” are terms used in the patient and clinical communities to describe the ultimate hope of treatment. For some, recovery is an ongoing process, increasing in resiliency over time but never “completed”. For others, using the term “recovered” is a critical step in identifying having moved on from the confines of their eating disorder. Behaviorally, recovery for some may mean a lessening of symptom frequency/severity over time, others may continue to experience a recurrence in times of stress, and for still others there is almost complete abatement. In this brief overview, using her own journey of recovery and thirty years as a

clinician for individuals with binge eating disorder, the presenter will explore some of the essential commonalities that make for a “successful” recovery process. The presentation will consider that how the term “recovery” is used is a personal decision, for some a clinically critical one, but that ultimately it is the work of healing shame, building healthy attachments, learning body trust and recognizing the sociocultural impact of weight stigma and intersectionality that determine the client’s ability to move toward continued growth and resiliency to relapse.

*Discussant:*

### Now What? Coming to a Shared Definition of Recovery and Its Implications for Treatment Research and Outcome

**Anna Keski-Rahkonen, MD, PhD, MPH**

University of Helsinki, Helsinki, Finland

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## FRIDAY, APRIL 20

4:00 PM - 5:45 PM

### Plenary III

*Chicago Ballroom, Fifth Floor*

*Simultaneously translated to Spanish*

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### Engaging Communities to Advance Eating Disorders Research and Intervention

*Co-Chairs:*

**Jerel P. Calzo, PhD, MPH**  
**Mirjam (Roelink) Mainland, MS**

Traditional research operates under a hierarchical power structure in which the researcher or clinician controls the research agenda and the participant or patient provides data. By contrast, community-based participatory research (CBPR) approaches engage the populations studied as equal partners in the research process. In doing so, CBPR studies may mitigate community sentiments regarding academic or medical mistrust, facilitate co-learning, and expedite the implementation of findings and interventions that are responsive to community needs. CBPR approaches have led to rapid innovations in research and intervention development in nutrition, physical activity, and other health conditions, but have been applied less in advancing research and treatment of eating disorders. In the spirit of the 2018 conference theme, “Innovation: Expanding Our Community and Perspectives,” this plenary will expose attendees to the myriad ways in which community partnerships can spark necessary advances in our field.

*Learning Objectives*

By the end of this plenary, attendees will be able to:

- ▶ Explain basic components of community-based participatory research approaches (CBPR), and their focus

on benefiting scientific goals and community interests, facilitating co-learning, and expediting the implementation of findings in the community.

- ▶ Describe at least three examples of the implementation of CBPR in eating disorders research and research in other related fields.
- ▶ Identify opportunities for the implementation of CBPR approaches in eating disorders research and intervention work.
- ▶ Evaluate the relevance and challenges of applying CBPR in eating disorders research and intervention work.

## The Synergy of Partnerships: The Value of Community-Based Participatory Research

**Jennifer Falbe, ScD, MPH**

Department of Human Ecology  
at the University of California, Davis, CA, USA  
The complexity of many public health issues, together with community demands for authentic partnership in research, have advanced a collaborative research orientation called community-based participatory research (CBPR). Unlike traditional research that is driven by outside “experts” in a top-down manner, CBPR encompasses approaches that seek to equitably involve all affected partners in each step of the research process, address an issue of genuine community importance, and combine knowledge and action to improve community health. A key strength of CBPR is the synthesis of community partners’ real-world knowledge and first-hand experience with researchers’ theoretical and methodological expertise. The value added can be tremendous, such as generating better-informed hypotheses, developing more effective and innovative interventions, improving treatment outcomes, and enhancing translation of research into sustainable change, among others.

This talk will provide a general overview of CBPR, including ways in which it can enhance research, as well as challenges that may arise in CBPR. Concepts will be illustrated through a multi-method case study of a CBPR partnership to promote food justice and tobacco control in San Francisco “food swamps,” in which the issue is not lack of food, but rather, lack of access to healthy food. This talk will describe how a community-led coalition in San Francisco’s Tenderloin District identified an issue of community importance, collaborated with the health department and university partners to study the issue, engaged and empowered community members throughout the research process, and ultimately translated research into action, resulting in improvements to the built environment and shaping of local policy.

## Opportunities and Lessons Learned from Engaging Communities in Health Research and Prevention Science

**Erin Michalak, PhD**

University of British Columbia, Vancouver, BC, Canada

Community engagement in research and care transformation is no passing fad. One model of engagement that has seen wide international application is Community-Based Participatory Research (CBPR), which emphasizes a collaborative, co-learning, mutually beneficial, and community-partnered approach to research. Unique aspects of this model include viewing community members as equal partners in non-hierarchical teams, and working together in a strengths-based, action-oriented research process. CBPR approaches offer many previously untapped opportunities. For those with lived experience of eating disorders, engagement in research can support empowerment and recovery, and address internalized and social stigma. Patient inclusion in research appropriately challenges the idea that research leadership must be limited to those with a traditional academic background, acknowledging lived experience as a valid and valuable form of expertise. For researchers, authentic community engagement can shape more pragmatic research questions, enrich the understanding of the research team, strengthen funding proposals, and mobilize research knowledge more effectively.

In this talk, specific examples of successful CBPR projects conducted within the Canadian ‘Collaborative REsearch Team to study psychosocial issues in Bipolar Disorder’ (CREST.BD, [www.crestbd.ca](http://www.crestbd.ca)) network will be shared. CREST.BD focuses upon optimizing the health and quality of life (QoL) of people with BD and empowering communities to engage in BD research, specializing in CBPR. The network’s priority areas for research (QoL, self-management and psychosocial interventions and stigma) were selected on the basis of community consultation. Pragmatic examples of CBPR projects using diverse methodological approaches (e.g., RCT, qualitative, eHealth, arts-based) will be described. Potential gains (as well as challenges and mitigation strategies) of engaging communities in research will also be discussed.

## Jumping in Together: Can Community-Based Approaches Advance Work in Eating Disorders?

**Gail McVey, PhD, C.Psych, FAED**

University of Toronto Dalla Lana School of Public Health and the Ontario Community Outreach Program for Eating Disorders, ON, Canada

Dr. McVey’s presentation will provide an overview of lessons learned from her 17-year community-based intervention research, with suggestions for how researchers and clinicians can incorporate community engagement in various stages of the research and prevention approach process. Specifically, the presentation will focus on how the community engagement and partnership development process enhanced the work that was carried out in the context of randomized controlled trials (RCTs). Contributions beyond the trial include changes/enhancements to the provincial education curriculum, integration of best practices into routine public health service delivery in schools, and integration of eating disorder prevention research findings

into policy and practice related to obesity prevention / healthy weights promotion.

*Discussant:*

### Is CBPR for Everyone? Stepping Up to the Challenge

**Carolyn Becker, PhD, FAED**

Trinity University, San Antonio, TX, USA

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## SATURDAY, APRIL 21

2:15 PM – 4:00 PM

### Plenary IV

*Chicago Ballroom, Fifth Floor*

*Simultaneously translated to Spanish*

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### Listening to the Gut: The Role of the Microbiome in Eating Disorders

*Co-Chairs:*

**Melissa Munn-Chernoff, PhD**  
**Marcia Herrin, EdD, MPH, RD, FAED**  
**Jenny Lundgren, PhD, FAED**

*Plenary Abstract:*

Intense research focus on the microbiome has piqued the interest of treatment professionals, the public, and the marketplace. Patients ask: “Should I take prebiotics and probiotics?” This plenary provides a basic overview of the microbiome-gut-brain axis and its role in physical and behavioral health. Speakers will review animal and human studies showing how the gut microbiota is involved in gastrointestinal health and how it is altered across the weight continuum; it will conclude with a review of microbiome work in the context of eating disorders. The discussant will offer a critical analysis of the state of the research, particularly with regard its potential to inform clinical care.

*Learning Objectives:*

Following this Plenary Session, participants will be able to:

- 1 Describe the role of gut microbes on body weight across a range of nutritional statuses and caloric intakes.
- 2 Summarize emerging research about associations between the gut microbiome and eating disorders.
- 3 Evaluate the relevance of the microbiome to clinical care for eating disorders.

### Understanding the Microbiome: The State of the Science

**Ian Carroll, PhD**

University of North Carolina at Chapel Hill, Chapel Hill, NC, USA

This talk will provide an educational overview of the rapidly developing body of research investigating the human microbiome and its impact on physical and behavioral health. This talk is designed to provide the audience with a basic understanding of the structure and function of the microbiome, as well as the terminology and methodology used in microbiome research. It will integrate examples from research on the microbiome and gastrointestinal health.

### The Gut Microbiome across the Weight Continuum

**Lee Kaplan, MD, PhD**

Massachusetts General Hospital, Boston, MA, USA

Gut microbes have the potential to affect body weight across a range of nutritional statuses, ranging from undernutrition to excessive calorie intake will be reviewed. This presentation will highlight recent advances in understanding the interaction of diet with the gut microbiome in malnutrition and obesity. In addition, the speaker will discuss the extent to which the gut microbiome interacts with genetics to influence body weight.

### The Gut Microbiome and Eating Disorders

**Cynthia Bulik, PhD, FAED**

University of North Carolina at Chapel Hill, Chapel Hill, NC, USA and Karolinska Institutet, Stockholm, Sweden

This talk will describe emerging research about associations between the gut microbiome and eating disorders. This presentation will review studies that have focused primarily on anorexia nervosa and how findings may extend to other eating disorders. Specifically, this presentation will emphasize what information we can and cannot take away from the current research on gut microbiome and health to inform our understanding and treatment of eating disorders.

*Discussant:*

**Philip Mehler, MD, CEDS, FACP, FAED**

Eating Recovery Center, Denver, CO, USA

The discussant will critically evaluate research findings across the gut microbiome and eating and related disorders, as well as their utility in a clinical setting. This presentation will discuss research and critically evaluate the extent to which findings can be readily applicable in treatment contexts.

# EDUCATIONAL SESSION I

In this session, attendees have **14 different options** to choose from: **7 Workshops**, **5 Paper Sessions**, and **2 SIG Panels**

**THURSDAY, APRIL 19**

**2:15 PM - 3:45 PM**

## EDUCATIONAL SESSION I Workshop Session 1

### W1.1

#### Cognitive-Behavioral Therapy for Rumination Disorder (CBT-RD)

*Simultaneously translated to Spanish*

**Helen Murray, BA<sup>1</sup>**

**Jennifer Thomas, PhD, FAED<sup>2</sup>**

<sup>1</sup>Drexel University, Philadelphia, PA, USA

<sup>2</sup>Massachusetts General Hospital/Harvard Medical School, Boston, MA, USA

Rumination disorder (RD) is characterized by effortless, repeated regurgitation with subsequent re-chewing, re-swallowing, or spitting out of recently ingested food material. RD can occur alone or be comorbid with other eating disorders, particularly disorders characterized by self-induced vomiting. A wide variety of strategies have been reported for the treatment of RD, but no evidence-based treatment protocol exists. We recently developed and manualized a novel, brief treatment—Cognitive Behavioral Therapy for RD (CBT-RD)—which we are testing in an open trial at Drexel University and Massachusetts General Hospital. CBT-RD is offered in individual or family-supported format over 5 to 8 sessions and comprises four components: (1) psychoeducation and self-monitoring; (2) diaphragmatic breathing as a habit reversal strategy; (3) addressing maintaining mechanisms of residual RD episodes (e.g., rumination urge management, behavioral experimentation for learned associations with foods); and (4) relapse prevention. We recently published a case report describing the successful treatment of a patient with RD and comorbid binge eating in the *International Journal of Eating Disorders*. Although we are still testing CBT-RD formally for efficacy, we have achieved promising results in clinical practice, and our workshop will fulfill the critical need of clinicians who are already seeing such patients and have no resources on which to base treatment plans. Our interactive workshop will begin with a brief didactic description of the rationale for and goals of CBT-RD and detailed case examples drawn from a heterogeneous group of children and adults who have benefitted from this treatment (35 minutes). We will use role-plays and experiential exercises (e.g., creating a timeline of rumination, diaphragmatic breathing instruction and practice) to demonstrate CBT-RD techniques (40 minutes). We will leave ample time for

questions and discussion at the workshop's conclusion (15 minutes).

*Learning Objectives:*

- 1 Describe the basic structure, goals, and session format of CBT-RD for children, adolescents, and adults with RD.
- 2 Implement the four core strategies of CBT-RD including (1) psychoeducation and self-monitoring; (2) diaphragmatic breathing; (3) strategies for maintenance mechanisms to target residual episodes; and (4) relapse prevention
- 3 Tailor CBT-RD to a patient's unique RD presentation by implementing additional strategies to target maintaining mechanisms of residual episodes (e.g., urge management, behavioral experimentation) as needed.

### W1.2

#### It Takes Two (or More): Developing Win-Win Collaborations to Solve “Big Problems” and Advance Our Field

**Laura Eickman, PsyD<sup>1</sup>**

**Jennifer Lundgren, PhD, FAED<sup>2</sup>**

<sup>1</sup>REbeL Peer Education, Kansas City, KS, USA

<sup>2</sup>University of Missouri-Kansas City, Kansas City, MO, USA

Our field faces “big problems,” defined as those involving universal concerns and requiring collaboration from multiple disciplines and stakeholders. Global access to care and the amelioration of stigma and discrimination are examples of such “big problems” our field faces. Simultaneously, recent ICEDs have highlighted emerging and long-entrenched differences in world views, such as difficult conversations across the eating disorder and obesity disciplines and the research-practice gap. In order to create change in our field, we have to change our approach from one based on competition and silos to one of collaboration. Collaboration, involving multiple and diverse voices and experiences, has the potential to empower and invigorate our field to take significant strides in our shared goals of understanding, preventing, and treating eating disorders. Using their successful experience as community and academic collaborators as a model, Drs. Laura Eickman (Founder of REbeL Peer Education, a non-profit eating disorder prevention organization) and Jenny Lundgren (Professor of Psychology at the University of Missouri-Kansas City) will encourage workshop participants (e.g., clinicians, researchers, advocates) to discuss their apprehension about collaborating with professionals whose focus or worldview is different from their own, work in groups to brainstorm ways in which “big problems” in our field can be approached through collaboration, discuss ways in

which participants can take action toward increasing collaboration in their own communities, and solicit ideas about ways in which the AED as an organization can foster such collaborations.

*Learning Objectives:*

- ▶ Describe the value in cultivating win-win collaborations among diverse groups as a model for solving “big problems” in our field
- ▶ Navigate the logistics, barriers, and facilitators of effective collaboration among individuals and organizations with multiple world views
- ▶ Identify ways in which collaboration can be facilitated through the AED

### W1.3 Best Practices in Eating Disorder Management for Transgender and Gender Non-Binary Individuals

**Mary Bowman, MSN, RN, WHNP-BC**  
**Scout Bratt, MSE**

Chicago Women’s Health Center, Chicago, IL, USA

This workshop will outline important terminology and concepts related to gender identity (15 minutes), review the existing research on management of eating disorders in the transgender population (10 minutes), establish current best practices for gender-affirming eating disorder management (15 minutes), and aid in the development of gender-inclusive clinical practice changes for participants to apply in their practice settings (50 minutes). The workshop will include collaborative activities between participants and the presenters in each portion of the workshop with the bulk of the time spent identifying improvement areas and strategies for participants’ practice setting through guided individual reflections, small group discussion, and role-playing. Participants will have the opportunity to explore questions regarding client interactions and provide one another with feedback. There are no established guidelines for the management of eating disorders in the transgender and gender non-binary populations. The limited research available suggests that transgender people may suffer disproportionately from body dysmorphia and disordered eating compared to the cisgender population. Broad health disparities exist for the transgender community, and the attempted suicide rate among trans individuals is five-to-ten times greater than the general population. As eating disorders have the highest mortality rate of any mental illness, a transgender person with an eating disorder is at extreme mortal risk. The presenters will incorporate their professional experiences with transgender individuals as a primary care provider and an adolescent sexual health educator to inform the content of the workshop with the goal of creating more gender-inclusive and transgender-friendly eating disorder management practices for participants.

*Learning Objectives:*

- ▶ Define and identify the differences between gender identity, gender presentation and sex assignment

- ▶ Recognize and assess specialized needs of the transgender population in eating disorder management
- ▶ Integrate clinical practice changes for gender-inclusive and gender-affirming care

### W1.4 Multi Family Therapy: A Novel Approach for Working with Young Adults with Anorexia Nervosa

**Ivan Eisler, PhD, FAED<sup>1</sup>**  
**Stephanie Knatz Peck, PhD<sup>2</sup>**  
**Gina Dimitropoulos, PhD<sup>3</sup>**

<sup>1</sup> Child and Adolescent ED Service, South London and Maudsley NHS Foundation Trust, London, UK

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<sup>3</sup> Faculty of Social Work and Department of Psychiatry, University of Calgary, AB, Canada

Multi-family therapy (MFT) has been shown to be an effective therapy and is now recommended as a key treatment for adolescent AN alongside single family therapy (FT-AN) (NICE 2017). Empirical support for MFT comes from a recent multi-center RCT (Eisler et al 2017) and a number of smaller quantitative and qualitative studies. These have shown that MFT has specific benefits compared to FT-AN including improved outcomes, scalability and the potential to improve access for a greater number of patients and families. In qualitative studies families describe the strengths of MFT to include eliciting new perspectives and insights, enabling constructive behaviors, overcoming isolation and stigmatization, opening up family communication and instilling hope. A recent Maudsley Hospital and UCSD collaboration and parallel work in Alberta is showing that age-adapted MFT-AN can be used in the treatment of young adults (YAs) with promising initial findings. Implementing family interventions with YAs faces a key challenge: Prescribing a strong supportive parental role, which aims to both facilitate initial change in ED behaviors and ultimately foster independence, may at first feel developmentally inappropriate to families—parents fear that their wish to help will be seen by the YA as intrusive, while the YA may both want support but worries that their independent voice will not be heard. Feedback from families taking part in YA-MFT emphasize the role of MFT in helping to overcome these obstacles with parents encouraging each other to take greater risks in continuing to offer assistance to their offspring, while being respectful of the YAs independent voice, both of which are strengthened by being part of a group “chorus”. This clinical skills workshop will focus on how to conduct ED-focused MFT with YAs. A brief overview of the empirical evidence for MFT (10 minutes) and key theoretical MFT principles (15 minutes) will be followed by a description of the specific modifications required to make the treatment applicable to families with YAs (15 minutes). The central part of the workshop will concentrate on the practical aspects of running MFT using experiential exercises of MFT group activities with active audience involvement

(35 minutes), followed by a clinical discussion focused on implementation in participants' own service contexts (15 minutes).

*Learning Objectives:*

- ▶ Describe key theoretical principles and practices governing multi-family therapy with young adults.
- ▶ Deliver 1-2 MFT exercises to YAs with AN and their family members.
- ▶ Apply 1-2 key MFT techniques to successfully orchestrate an MFT group for YA with AN.

### W1.5

#### Atypical Anorexia Nervosa in Adolescents — Not So Atypical!

*Simultaneously translated to Spanish*

**Neville Golden, MD, FAED<sup>1</sup>**

**Debbie Katzman, MD, FRCPC, FAED<sup>2</sup>**

**Andrea Garber, PhD, RD<sup>3</sup>**

**Kara Fitzpatrick, PhD, FAED<sup>1</sup>**

<sup>1</sup>Stanford University School of Medicine, Palo Alto, CA, USA

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Atypical anorexia nervosa (AAN) is a new diagnosis in the DSM-5 and is defined by symptoms of anorexia nervosa (AN) in the presence of "significant weight loss" in individuals who are within or above the normal weight range at presentation. On average, patients with AAN have lost more weight than those with AN and may also present with serious medical complications. Studies have reported that the number of patients with AAN requiring hospitalization for medical instability grew five-fold in six years and comprised one-third of the inpatient population. The care of these adolescents presents a number of challenges. First, the diagnosis is often missed by primary care providers, which may contribute to delayed referral for care. Second, the assessment of malnutrition may require additional evaluation since those relied upon for AN, provide little utility in AAN. Finally, there is no established definition of clinical remission or recovery in adolescents with AAN. Using case-based discussion by a multidisciplinary team, we will address these challenges. Specifically, we will use the best evidence in conjunction with clinical expertise and scientific principles to discuss growth (e.g., population reference and height velocity), weight suppression (e.g., metabolic rate and leptin), malnutrition and starvation, and recovery markers (e.g., resumption of menses and cognitive/behavioral markers) in formulating healthcare decisions. Together, the group will discuss controversies in diagnosis and varied approaches to clinical management. Active audience participation will be encouraged and we anticipate a very lively session.

*Learning Objectives:*

- ▶ Explain the major difference between atypical anorexia nervosa and anorexia nervosa
- ▶ Name two research findings pertaining to adolescents with atypical anorexia nervosa
- ▶ Understand cognitive and behavioral markers for recovery in adolescents with atypical anorexia nervosa

### W1.6

#### Regulation of Cues — A Novel Mechanistic Model for the Treatment of Obesity, Overeating and Binge Eating

**Dawn Eichen, PhD**

**Kerri Boutelle, PhD**

University of California, San Diego, CA, USA

Current behavioral treatments of obesity result in clinical significant weight loss for approximately 50% of patients and binge eating treatments result in significant decreases in binge eating in 40-60% of patients. Targeting underlying mechanisms of overeating and binge eating could improve current treatment and maintenance outcomes. Schachter's externality theory of obesity suggests that individuals who overeat are less sensitive to internal hunger and satiety signals and more sensitive to external environmental cues to eat. We developed the Regulation of Cues (ROC) program which these two underlying mechanisms of overeating. ROC integrates appetite awareness training to target satiety responsiveness and cue exposure treatment to target food cue responsiveness and utilizes in vivo training with food. We have utilized this treatment with success with overweight adults who binge eat and overweight children and their parent. This workshop will a) outline the key components of the ROC program; b) present findings from published and current studies that utilize ROC; c) demonstrate how to implement ROC using case examples, role-plays and audience participation; d) discuss common challenges with the implementation of ROC. Upon completion, workshop participants will appreciate the rationale for the ROC program, learn about the data supporting ROC, and develop the basic knowledge and skills to deliver the ROC program in clinical settings. Workshop attendees will partake in an appetite awareness training exercise and a cue exposure treatment exercise to gain a first-hand experience of what the ROC treatment entails. Accordingly, the majority of the workshop will be spent in experiential learning of the treatment components and preparing attendees to be equipped to deliver the treatment in clinical practice.

*Learning Objectives:*

- ▶ Acquire the theoretical basis for the Regulation of Cues (ROC) intervention for Obesity and Binge Eating
- ▶ Evaluate the efficacy data for ROC in children and adults

- › Deliver the critical elements of ROC treatment in clinical practice

### W1.7

#### Exploring the Efficacy of Dietitians Using Family Based Treatment Practices

**Marcia Herrin, MPH, EdD, RDN, FAED<sup>1</sup>**  
**Russell Marx, MD<sup>2</sup>**  
**Anna Oliver, BSc, BPhEd, PGDipDiet, RD<sup>3</sup>**  
**Joanna Wiese, PhD<sup>4</sup>**  
**Bryan Lian, MS, RDN<sup>5</sup>**  
**Hillary Coons, PhD<sup>6</sup>**  
**Sarah Forsberg, PsyD<sup>7</sup>**

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<sup>6</sup>Department of Psychiatry, Dartmouth Geisel School of Medicine, Hanover, NH, USA

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Eating disorder clinicians are encouraged to employ evidence-based practice (EBP). EBP is established from research on efficacy and effectiveness of interventions that evolve from evidence-based treatments (EBT), like Family Based Treatment (FBT). The distinction between EBT and EBP has implications for the use of treatment manuals outside of research settings. FBT is treatment of choice for anorexia nervosa in children and adolescents, yet dissemination of FBT is hampered by many barriers. One barrier is that FBT requires engagement in tasks outside of the usual scope of practice for therapists. Dietitians experienced in eating disorder treatment and who have studied FBT are a potential untapped resource for expanding delivery of EBP based on FBT. The workshop, moderated by a psychiatrist, includes presenters from dietetics and mental health discussing the pros and cons of involving dietitians in EBP based on FBT. Discussion will focus on ways dietitians can enhance FBT: collaborative use of dietitians as consultants for parents, therapists, and the multidisciplinary team; dietitians leading the refeeding aspect of treatment in conjunction with a therapist who focuses on family dynamics and developmental and emotional issues; and dietitians using modified versions of FBT to treat eating disorders. Additionally, panelists will address whether dietitians have the training to manage escalating crises of emotion and interpersonal conflict that can occur. UK's national eating disorder team training on anorexia-nervosa-focused family therapy (FT-AN) and bulimia nervosa- focused family therapy (FT-BN) will also be presented, with particular focus on the implications for dietetic practice. This workshop is intended for dietitians, mental health providers, and physicians. Guidelines for dietitians using FBT will be discussed and demonstrated

with case studies. Lesson Plan: Introduction 5 min.; Content 40 min.; Small Group Discussion 15 min.; General Discussion 30 min.

*Learning Objectives:*

- › Evaluate the pro and cons of delivery of FBT techniques by dietitians in the treatment of child and adolescent eating disorders.
- › Describe key features of the guidelines for dietitians treating eating disorders using an FBT approach.
- › Discuss solutions to increase the adoption and implementation of FBT by eating disorder treatment providers.

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## THURSDAY, APRIL 19

### 2:15 PM - 3:45 PM

## EDUCATIONAL SESSION I

### Paper Session 1

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#### P1.1

#### TREATMENT OF EATING DISORDERS I (CHILD AND ADOLESCENT)

*Co-Chairs:*

**Dasha Nicholls, MBBS, MD, FAED**

**Andrea Goldschmidt, PhD, FAED**

##### P1.1.1

#### Parent Education and Skills Workshop - An Adjunct to FBT Aimed at Enhancing Early Response to Treatment for Adolescent Anorexia Nervosa

**Martin Pradel, McFT, BSW<sup>1</sup>**

**Maria Ganci, MCAP, BSW<sup>1</sup>**

**Elizabeth Hughes, PhD<sup>2</sup>**

<sup>1</sup>Royal Children's Hospital, Adolescent Medicine Department - Eating Disorders Service, Melbourne, Australia

<sup>2</sup>University of Melbourne, MCRI, Royal Children's Hospital, Melbourne, Australia

Family-based treatment (FBT) is an efficacious treatment for adolescents with anorexia nervosa (AN); however, a large portion of adolescents remain unremitted at end of treatment. Improving parental self-efficacy, particularly in the early stages of treatment, may be a key factor to improving outcomes. The Melbourne Royal Children's Hospital Eating Disorders Service, Australia, developed a 3-hour education and skills workshop to be attended by all parents within the first month of commencing FBT. The workshop aimed to increase parent self-efficacy and, in

turn, adolescent weight gain. To evaluate the effectiveness of the workshop, we compared 45 families who had at least one parent attend the workshop to a matched control sample of 45 families who did FBT before the adjunct workshop was introduced into the service. Each workshop ranged in size from 4 to 10 parents ( $M = 7.4$ ,  $SD = 2.1$ ), and 85% of eligible families had at least one parent attend a workshop. Parents who attended the workshop reported a high level of satisfaction with the workshop and significant improvements in knowledge and confidence regarding AN and FBT. At week 4 of treatment, adolescents whose parents attended the workshop gained more weight ( $M = 90.84\%$  median BMI) compared to adolescents in the control sample ( $M = 88.54\%$  mBMI,  $p < .05$ ). However, there were no significant differences in weight at week 12 or at end of treatment, and parent self-efficacy, as measured by the Parent Versus Anorexia Scale, did not differ between groups. Overall, the study demonstrated that the workshop had a significant positive effect on early response to FBT, and provides support for the capacity of peer-based interventions to enhance the effectiveness of treatment. Additional interventions may, however, be needed to achieve sustained effects and improve longer-term outcomes.

*Learning Objectives:*

- ▶ Describe the format and implementation of the parent education and skills workshop
- ▶ Explain the study's findings and implications for FBT treatment.
- ▶ Explain the strengths of the parent education and skills workshop intervention, and its contribution to peer interventions for adolescent anorexia

### P1.1.2

#### The Importance of Fathers in Family-Based Treatment for Adolescent Eating Disorders

Elizabeth Hughes, PhD<sup>1</sup>  
 Claire Burton, DPsych<sup>2</sup>  
 Daniel Le Grange, PhD, FAED<sup>3</sup>  
 Susan Sawyer, MD<sup>1</sup>

<sup>1</sup>University of Melbourne, MCRI, Royal Children's Hospital, Melbourne, Australia

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Parental unity is considered a key component of family-based treatment (FBT) for adolescent eating disorders. As such, when two parents are available, both are expected to attend treatment sessions. However, research into family therapy for other forms of child psychopathology shows that fathers are much less likely to be involved than are mothers. To date, there has been no research demonstrating the level of involvement of fathers in FBT sessions and what impact this has on treatment outcomes. To examine this, paternal attendance and its relation to patient outcomes was investigated in a

sample of 175 families who engaged in FBT at a specialist paediatric eating disorder service. The results indicated that 95% of fathers attended at least one treatment session, but just 33% attended every session. On average, fathers attended 73% of FBT sessions, with fathers from intact families attending significantly more sessions than fathers from non-intact families (78% vs. 56%,  $p < .001$ ). Of importance, greater attendance by fathers predicted better patient outcomes as measured by % median BMI (%mBMI) and Eating Disorder Examination (EDE) Global Score, after controlling for baseline levels and family structure ( $p < .05$ ). Fathers of adolescents who were remitted at end of treatment (i.e.,  $\geq 95\%$ mBMI and EDE in the normal range) attended significantly more treatment sessions than did fathers of adolescents who were not remitted (81% vs 69%,  $p < .05$ ). The findings highlight the need for healthcare providers to implement therapeutic and service strategies that encourage and enable fathers to be involved in FBT.

*Learning Objectives:*

- ▶ Describe the role of parent unity in family-based treatment (FBT) for adolescent anorexia nervosa
- ▶ Evaluate the involvement of fathers in FBT with regard to treatment attendance, and how this relates to patient outcomes
- ▶ Consider factors that might influence fathers' involvement in FBT and how to overcome barriers to their involvement

### P1.1.3

#### Tackling Mixed Messages: Therapists Reflections, Challenges and Strategies for Working with Adolescents with Atypical Anorexia and their Families

Melissa Kimber, PhD, MSW, RSW<sup>1</sup>  
 Gina Dimitropoulos, PhD, MSW, RSW<sup>2</sup>  
 Katharine Loeb, PhD<sup>3</sup>  
 Elizabeth Hughes, PhD<sup>4</sup>  
 Andrea Garber, PhD<sup>5</sup>  
 April Elliott, MD, FRCP(C), FSAHM<sup>6</sup>  
 Ellie Vyver, MD, FRCPC, FAAP<sup>6</sup>  
 Daniel Le Grange, PhD, FAED<sup>5</sup>

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Emerging literature points to conspicuous differences in the presentation and treatment outcomes of atypical versus typical anorexia nervosa (AN) among adolescents. To date, however, none of this work has explored these differences from the perspective of front-line clinicians. Informed by the principles of interpretive description, the objectives of this qualitative

study were to describe clinicians' perceptions of the characteristics differentiating adolescents with atypical versus typical AN, as well as clinician experiences with treating these populations. A purposeful sample of 23 clinicians certified in Family-Based Treatment (FBT) for Adolescent AN completed a one-on-one, semi-structured interview. Conventional content analysis guided the development of initial codes and categories, whereas constant comparison techniques were used to compare and contrast clinicians' experiences of working with adolescents with atypical versus typical AN. Analysis revealed patterns of perception and experience that were similar across this international sample. Clinicians described characteristics differentiating atypical AN adolescents from the typical AN population, including higher pre-morbid weight and higher rates of weight-based teasing. Clinicians also articulated challenges specific to working with adolescents with atypical AN which impacted buy-in and duration of FBT treatment. These challenges included identifying a goal weight; addressing conflicting messages about weight-loss; a legitimate fear of weight-gain; and increased risk of parental and therapist collusion with the eating disorder. Strategies to address these challenges included leveraging the medical implications of weight loss, collaborating more closely with medical and dietetic colleagues, as well as being more thoughtful about the language utilized in FBT sessions. Findings have implications for tailoring intervention approaches to the distinct needs of the adolescents seeking care for atypical AN.

*Learning Objectives:*

- ▶ Participants will be able to summarize the research focusing on the medical, psychiatric and body image experiences of adolescents with atypical versus typical anorexia.
- ▶ Participants will be able to articulate the specific challenges that certified FBT therapists have encountered when working with adolescents presenting with atypical anorexia.
- ▶ Participants will be able to articulate the strategies that certified FBT therapists have used to overcome the unique challenges of working with adolescents with atypical anorexia and their families.

**P1.1.4**  
**Stay the Course: Therapist Reflections on Implementing Family-Based Treatment with Adolescents with Atypical Anorexia**

Gina Dimitropoulos, PhD, MSW, RSW<sup>1</sup>  
 Melissa Kimber, PhD MSW, RSW<sup>2</sup>  
 Katharine Loeb, PhD<sup>3</sup>  
 Elizabeth Hughes, PhD<sup>4</sup>  
 Andrea Garber, PhD<sup>5</sup>  
 April Elliott, MD, FRCP(C), FSAHM<sup>6</sup>  
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Atypical anorexia nervosa (AN) represents a growing proportion of youth with eating disorders presenting to intervention services. A recent case series documented the potential utility of Family-Based Treatment (FBT) to support the recovery of youth with atypical AN. Yet, it is unclear whether or not adaptations to the FBT model are necessary to realize its effects for these patients. The objectives of this study were to describe clinicians' experiences of utilizing FBT to treat youth with atypical AN and to understand how and under what conditions, clinicians adapt FBT when working with this patient group. A purposeful sample of 23 certified FBT clinicians completed an in-depth qualitative interview. Conventional content analysis and the constant comparison technique were used to contrast therapist experiences of using FBT with atypical and typical AN youth. Summative content analysis provided counts of codes within and across research participants. Clinicians were unequivocal in their perception that FBT can be utilized to effectively treat youth diagnosed with atypical AN. The family meal and externalization of the eating disorder remained critical components to the intervention approach. All clinicians reported weighing patients throughout treatment, but differed in how they graphed and discussed the weight with the patient and their parents. Some clinicians graph individual weight trajectories, some graph based on population norms, and others omit the graph as well as any discussion of the weight from their clinical encounters. Clinicians varied on their flexibility for patients' continued exercise during treatment and reported less concern about the reintroduction of exercise when working with atypical AN youth. These findings speak to the need for robust evaluations capable of assessing the impact of FBT model components and their adaptations on recovery outcomes among youth with atypical AN.

*Learning Objectives:*

- ▶ Participants will learn about how FBT clinicians have typically defined or diagnosed atypical anorexia among adolescents.
- ▶ Participants will learn about clinicians' experiences of implementing the various phases of FBT with adolescents diagnosed with atypical anorexia.
- ▶ Participants will learn about the adaptations that clinicians have made to the externalization, weight-charting, and family meal processes of the FBT model.

### P1.1.5 Examining Early Weight Gain in a Family-Based Partial Hospitalization Program

Jessica VanHuyse, PhD<sup>1</sup>  
Renee Rienecke, PhD, FAED<sup>2</sup>

<sup>1</sup>University of Michigan, Ann Arbor, MI, USA

<sup>2</sup>Medical University of South Carolina, University of Michigan, Charleston, SC, USA

Early weight gain in outpatient family-based treatment (FBT) for anorexia nervosa (AN) is a strong predictor of remission at the end of treatment. Based on prior research, a benchmark of gaining approximately four pounds within the first four weeks of treatment is often referenced as a predictor of good outcome. Since FBT has increasingly been adapted for intensive treatment programs, it is important to examine if this rate of gain predicts positive outcome in intensive treatment settings. The current study examined early weight gain in 110 patients (M age = 16.25 years, SD = 3.32) who were enrolled in an FBT-based partial hospitalization program (PHP). Participants met criteria for AN (72%) or another eating disorder requiring weight restoration (other specified feeding/eating disorder [21%], avoidant/restrictive food intake disorder [7%]). Response to treatment was assessed using percent expected body weight (EBW), with positive response defined as achieving 95% EBW at discharge. Most patients (76%) gained four pounds within the first four weeks of treatment, and this rate of gain was not predictive of treatment response ( $c2(1) = 0.44, p = .51$ ). However, gaining four pounds within the first two weeks of treatment, which occurred in 48% of patients, predicted positive treatment response ( $c2(1) = 7.91, p < .01$ ). Of patients who gained four pounds in two weeks, 67% reached 95% EBW at discharge compared to only 38% of those who did not gain four pounds in two weeks. These findings suggest that the rate of weight gain considered predictive of remission at the outpatient level of care does not differentiate good versus poor treatment responders at the PHP level of care, as more rapid weight gain is needed to identify good responders to intensive treatment. Future research should examine longitudinal weight trajectories during FBT-based intensive treatment to identify the timing and amount of weight gain that is most predictive of positive treatment response.

#### *Learning Objectives:*

- 】 Describe differences between outpatient family-based treatment and family-based partial hospitalization programs.
- 】 Understand why rates of weight gain may differ across differing treatment intensities.
- 】 Describe rates of weight gain that may be predictive of positive treatment response in a family-based partial hospitalization program.

### P1.1.6

### Themes Arising During Implementation Consultation Sessions with Teams Applying Family-Based Treatment

Jennifer Couturier, MD, FAED<sup>1</sup>  
Melissa Kimber, PhD<sup>1</sup>  
Melanie Barwick, PhD<sup>2</sup>  
Tracy Woodford, MSc<sup>1</sup>  
Gail McVey, PhD<sup>2</sup>  
Sheri Findlay, MD<sup>1</sup>  
Cheryl Webb, MSW<sup>1</sup>  
Alison Niccols, PhD<sup>1</sup>  
James Lock, MD, PhD, FAED<sup>3</sup>

<sup>1</sup>McMaster University, Hamilton, Canada

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This study describes themes arising during implementation consultation with newly trained teams applying Family-Based Treatment (FBT) with fidelity for adolescents with eating disorders. Participants were implementation teams (one lead therapist, one medical practitioner and one administrator) at four sites. These teams agreed to support the implementation of FBT, through training and ongoing consultation with an external FBT expert, and participated in monthly implementation consultation phone calls, co-led by external FBT and implementation experts. These calls were audio-recorded, transcribed verbatim and coded for themes. Twenty percent of the transcripts were double-coded to ensure consistency. Fundamental qualitative description guided the sampling and data collection. Twenty-five (average per site = 6) transcripts were coded using thematic content analysis. Seven major themes emerged: 1) system barriers and facilitators 2) the role of the medical practitioner, 3) research implementation, 4) appropriate cases, 5) communication, 6) program impact, and 7) fidelity. Implementation themes align with previous research examining the adoption of FBT, and provide further insight for clinical programs seeking to implement FBT, particularly with respect to the paramount importance of role clarity, and team communication within this treatment model.

#### *Learning Objectives:*

- 】 Discuss the challenges teams face when attempting to implement Family-Based Treatment.
- 】 Discuss the facilitating factors for teams implementing Family-Based Treatment.
- 】 Describe the issues arising when attempting to study the implementation of Family-Based Treatment with fidelity.

### P1.2 BODY IMAGE

*Co-Chairs:*

Zali Yager, PhD and Marisol Perez, PhD

### P1.2.1 - Bidirectional Associations between Body Dissatisfaction and Depressive Symptoms from Adolescence through Early Adulthood

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 Praveetha Patalay, PhD<sup>2</sup>  
 Tse-Hwei Choo, MPH<sup>3</sup>  
 Melanie Wall, PhD<sup>3</sup>  
 Susan M. Mason, PhD<sup>4</sup>  
 Andrea B. Goldschmidt, PhD, FAED<sup>5</sup>  
 Dianne Neumark-Sztainer, MPH, PhD, RD, FAED<sup>4</sup>

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Body dissatisfaction and depressive symptoms are commonly experienced during adolescence and both increase the risk of adverse health outcomes, especially eating disorders. However, the dominant temporal association between these two experiences (i.e. whether one is a risk factor for the other, or the two are mutually reinforcing) has yet to be fully explored. We examined the associations between body dissatisfaction and depressive symptoms assessed at baseline (Time 1) and 5- (Time 2) and 10-year follow up (Time 3) in two cohorts from Project EAT. One cohort involved younger adolescents ( $n = 577$ ,  $\text{mage} = 12.9$  years at baseline,  $\text{SD} = 0.7$  years, 56% female) and the other older adolescents ( $n = 1325$ ,  $\text{mage} = 15.9$  years at baseline,  $\text{SD} = 0.8$  years, 57% female). Associations between body dissatisfaction and depressive symptoms were examined using cross-lagged models, controlling for key demographic characteristics and changes in BMI. For both younger and older females, the dominant directionality was for body dissatisfaction to predict later depressive symptoms. For males, the picture was more complex, with developmentally sensitive associations in which depressive symptoms predicted later body dissatisfaction in early adolescence and early adulthood, but the reverse association was dominant during mid-adolescence. These findings suggest that interventions should be tailored to dynamic risk profiles that shift over adolescence and early adulthood, and that targeting body dissatisfaction at key periods during development may have downstream impacts on depressive symptoms.

#### *Learning Objectives:*

- 】 Review what is known about the interplay between body dissatisfaction and depressive symptoms
- 】 Examine the bidirectional associations between body dissatisfaction and depressive symptoms over a ten-year period from adolescence to early adulthood.
- 】 Consider the implications of this for targeting prevention effects in a developmentally sensitive manner.

### P1.2.2 Breastfeeding self-efficacy and Eating Disorder Symptoms after Childbirth: The Role of Body Dissatisfaction

Rachel F Rodgers, PhD<sup>1</sup>  
 Jennifer L O'Flynn, MS<sup>1</sup>  
 Althea Bourdeau, MS<sup>2</sup>  
 Emily Zimmerman, PhD<sup>2</sup>

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The postpartum period is known to be a vulnerable time for maternal shape and weight concerns and disordered eating patterns. While body image concerns have been suggested to be associated with lower levels of self-confidence surrounding breastfeeding, the impact of eating disorder symptoms is not well known. The current study aimed to examine the relationships among eating disorder symptoms, body dissatisfaction, and breastfeeding self-efficacy among a sample of postpartum women. A sample of  $n = 213$  women of mean (SD) age 33 (4.27) years old who had given birth within the past 9 months, completed an online survey assessing current and target weight, body dissatisfaction, breastfeeding self-efficacy, and eating disorder symptoms. Findings revealed that higher levels of both body dissatisfaction and eating disorder symptoms were associated with lower levels of breastfeeding self-efficacy ( $r = -.29$ ,  $p < .001$  and  $r = -.26$ ,  $p < .001$ ). In addition, women further from their target post-pregnancy weight reported higher body dissatisfaction and eating disorder symptoms ( $r = .32$ ,  $p < .001$  and  $r = .21$ ,  $p = .005$ ). Bootstrapping mediation analyses revealed a significant indirect effect between distance from target weight and breastfeeding self-efficacy via body dissatisfaction, coefficient =  $-.07$ , 95% CI  $[-.14; -.02]$ . A similar indirect effect via body dissatisfaction was found between distance to target weight and breastfeeding self-efficacy, coefficient =  $.09$ , 95% CI  $[.04; .18]$ . Findings suggest that mothers who experience a heightened drive to lose weight following childbirth may also report body image concerns, weight-loss oriented disordered eating behaviors, and lower levels of breastfeeding self-efficacy. Some women may be at risk for a constellation of preoccupations and behaviors in the postpartum period that are associated with poorer outcomes for the mother-child dyad, and may benefit from supportive interventions.

#### *Learning Objectives:*

- 】 To recognize the postpartum period as a vulnerable time for body image and eating concerns.
- 】 To describe the relationship between eating disorder symptoms and body dissatisfaction and lower breastfeeding self-efficacy.
- 】 To discuss the usefulness of developing interventions targeting the postpartum period.

**P1.2.3****Feeling Good about your Body: Body Fulfillment, Body Dissatisfaction and Well-being**

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Ada Zohar, Prof.  
Rachel Bachner-Melman, Dr.

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Negative body image is a symptom of eating disorders, as well as a result and a cause of disordered eating, helping to maintain a positive feedback loop. In the current study, we extended the concept of body perception beyond the negative features that usually underlie body dissatisfaction – like/dislike of size, shape and weight. We examined the contribution of positive body experiences, including vitality, sexual fulfillment, positive narcissism, body acceptance, and physical contact, to satisfaction with life. An online survey was completed by 552 community adult volunteers, including the Dresdner Körperbildfragebogen (DKB-35), EAT-26, EDI-2 Drive-for-Thinness subscale, Satisfaction With Life Scale (SWLS). They also reported height and weight. Linear hierarchical regression predicting SWLS scores from EDI-2 and EAT-26 scores, and then the 5 subscales of the DKB-35 was conducted. The EDI-2 and the EAT-26 both negatively predicted SWLS ( $\beta = -.41$ ,  $p < .001$  and  $-.20$ ,  $p < .01$ , respectively) and explained 23% of the variance. However, entering DKB-35 vitality, sexual fulfillment, positive narcissism, body acceptance, and physical contact subscale scores mediated the effect of the negative body perception and disordered eating on SWLS scores. Satisfaction with life was predicted positively by vitality ( $\beta = .29$ ,  $p < .001$ ), body acceptance ( $\beta = .19$ ,  $p < .05$ ) and sexual fulfillment ( $\beta = .21$ ,  $p < .001$ ), which fully mediated the association between satisfaction with life and disordered eating / body dissatisfaction, while contributing another 17.6% to the explained variance. BMI was not significantly associated with SWLS scores. These results support the importance of expanding measures of body image and suggest that the negative effects of an unhealthy drive for thinness, that permeates our culture and encourages disordered eating and eating disorders, may be attenuated by emphasizing positive aspects of body perception. BMI does not contribute to satisfaction with life, belying the common and destructive myth that thin people are more satisfied with their lives than fat people.

*Learning Objectives:*

- ▶ Following the training, participants will be able to discuss positive body experiences.
- ▶ Following the training, participants will be able to discuss the effects of negative vs. positive body experiences on psychological well being.
- ▶ Following the training, participants will know the psychometric properties of the DKB-35.

**P1.2.4****Identifying Sociocultural Influences and Psychological Processes that Influence the Body Image of Women in Midlife: Evaluation of the Tripartite Influence Model to Inform Eating Disorder Prevention Efforts**

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Most research on disordered eating has focused on child, adolescent, and young adult populations, consequently precluding knowledge on its prevalence and risk factors later in life. However, there is increasing recognition of a prolonged risk for disordered eating among women in midlife, thus highlighting the importance of identifying contributory factors which may constitute targets for prevention efforts. The “Tripartite Influence Model” postulates that beauty ideals are transmitted and reinforced by three sociocultural influences: media, parents and peers, and that these lead to body dissatisfaction through two psychological processes: internalisation of the thin ideal, and appearance comparisons. The theory contends that female beauty standards emphasizing excessive and unattainable thinness can lead women to feel dissatisfied with their own bodies, and consequently engage in disordered eating in an attempt to meet the “thin ideal”. Whilst the model has received substantial support among younger groups, it is yet to be evaluated among women in midlife. This study therefore sought to evaluate a modified Tripartite Influence Model among this group, in order to inform the development of eating disorder prevention programmes. 323 women in midlife (M age = 47.6 years) completed an online questionnaire assessing media, partner, family and peer influences, internalisation of the thin ideal, appearance comparisons, and body image. Structural equation modelling indicated the Tripartite Influence Model was a satisfactory fit to the data ( $\chi^2(44) = 108.24$ ,  $p < .001$ ; CFI = .97, RMSEA = .08; SRMR = .02). Media had indirect effects on body image, through internalisation of the thin ideal and appearance comparisons, whilst friends had a direct effect on body image. Overall, findings indicate that the sociocultural influences of media and friends, and psychological processes of internalisation of the thin ideal and appearance comparisons, affect women’s body image and may provide fruitful targets for eating disorder prevention interventions among women in midlife.

*Learning Objectives:*

- ▶ Understand the sociocultural influences of media, family, friends and the psychological processes of

internationalisation of the thin ideal and appearance comparisons upon the body image of women in midlife.

- ▶ Understand the relevance of the Tripartite Influence Model to conceptualize body image concerns among women in midlife.
- ▶ Identify modifiable and targetable risk factors to inform the development of eating disorder prevention interventions for women in midlife.

### P1.2.5 Understanding Positive Body Image to Inform Prevention Efforts: A Longitudinal Study of Developmental Trajectories among Early Adolescents

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Positive body image, operationalised as body appreciation, is a distinct construct from the body satisfaction-dissatisfaction continuum and captures feelings of love, respect, appreciation and acceptance held for one's body. Significantly, body appreciation is associated with greater intuitive eating, self-esteem, self-compassion, as well as reduced drive for thinness and eating disorder symptomatology, so therefore appears a salient construct in eating disorder prevention. However, longitudinal designs and adolescent samples are scant in the positive body image literature, thereby limiting understanding of how positive body image might usefully be addressed in eating disorder prevention and early intervention efforts. In this study, two cohorts of British adolescents (N = 1,189; UK 52% girls) were followed over 2-years. Body appreciation and associated risk factors were assessed at six time-points. The average age for the two cohorts was 11.5 and 13.5 years respectively. Growth models were fitted to the data and indicated that girls' body appreciation declined during early adolescence, from 11.5 years to 13.5 years, and this was associated with greater internalisation of the thin ideal, appearance comparisons, and perceived appearance pressures from parents, peers and the media. Between the ages of 13.5 to 15.5 years, girls' body appreciation scores declined slightly before stabilising. Boys reported higher body appreciation than girls at all time-points, with self-esteem and perceived appearance pressures predictive of later body appreciation. Body appreciation declined for both cohorts of boys over the first 6 months and then stabilised, but this change was not associated with the measured risk factors. Overall, findings suggest that targeting positive body image in interventions may be most useful among girls between 11.5-13.5 in an effort to counter the decline in body appreciation that occurs during this period.

Further research is needed to understand the role of positive body image in eating disorder development and prevention.

*Learning Objectives:*

- ▶ Understand the relevance of body appreciation to eating disorder and body dissatisfaction prevention work.
- ▶ Describe the trajectory for body appreciation among UK adolescents.
- ▶ Identify risk factors for boys and girls associated with a decline in positive body image.

### P1.2.6 Utilizing the Social Relations Model to Understand Peer Perceptions of Body-Related Conversation

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Studies of peer influences and body-related conversations often rely on the subjective report of the social environment. It is unknown how these self-reports may be biased and reflect the rater's own body image concerns. Using an extension of the Social Relations Model, the current study explores the relationship among women's self-reported body comparisons, friend's self-reported body comparisons, and perceptions of friends' body talk within a social sorority. In doing so, the study builds upon traditional social network analysis by examining individuals (ego) and their friends (alters). Ninety-two members of a 168-member sorority nominated friends within the sorority. Egos reported their own tendency to engage in body comparisons, their own drive for thinness, and perceptions of their nominated alters' body talk about friends. Using the social relations model, variance in perceptions of alters' body talk was decomposed into three components: variance associated with attributes of the ego, variance associated with attributes of the alter, and variance associated with the dyad (ego and alter relationship). Unique to this study, missing round-robin data were accommodated using Bayesian data augmentation. Ratings of alters' perceived body talk was associated with ego's self-reported body comparison tendencies and drive for thinness ( $p$ 's < .05). The alters' own self-reported body comparison tendencies and drive for thinness were not associated with egos' ratings of alters' body talk ( $p$ 's > .05). Findings suggest that perceptions of body talk are not accurate measures of peer behaviors but rather tap into raters' own attitudes. Measures of peer influence rated by participants may be detecting participants' own attitudes rather than those held by the social environment. Further work on peer influences would benefit from "objective" measures of peer attitudes using a social network approach.

*Learning Objectives:*

- ▶ Define the social relations model.
- ▶ Identify how perceptions of peers are related to the perceivers' self-reported attitudes.
- ▶ Discuss relevant measurement concerns in assessing peer influences.

### **P1.3 BINGE EATING DISORDER AND OBESITY**

*Co-Chairs:*

**Chevese Turner, BA and James Mitchell, MD, FAED**

#### **P1.3.1 - The Diagnostic Value of Overvaluation of Shape or Weight in DSM-5 Binge Eating Disorder: Results from a National Sample of U.S. Adults**

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There exist few population-based data on associated features and psychosocial functioning of eating disorders (ED). This represents a critical need because of recent changes to ED diagnoses in the DSM-5, including the formal addition of binge-eating disorder (BED), which like bulimia nervosa (BN) is characterized by recurrent binge-eating. A pressing question remains whether BED, like BN, should require overvaluation of shape/weight or whether it should serve as a diagnostic specifier as suggested by recent clinic-based studies. This study compared three ED groups (BED with overvaluation (n=88), BED without overvaluation (n=73), and BN (n=44)) using the 2012-2013 National Epidemiologic Survey Alcohol and Related Conditions (NERSAC-III), a national sample of 36,306 adults assessed using structured diagnostic interviews. Mean BMI was significantly lower in BED with overvaluation ( $33.1 \pm 7.8$ ) than BED without overvaluation ( $36.9 \pm 9.8$ ), but significantly higher than BN ( $27.3 \pm 5.4$ ). BED, regardless of the presence of overvaluation, was associated with longer duration of current episode than BN. Significantly greater percentage of BED with overvaluation reported "impairment in normal activities" than BED without overvaluation and BN (64%, 43%, 55%, respectively). BED with overvaluation was significantly more likely to report "serious problems doing daily tasks" than in BED without overvaluation (32% vs 12%) but did not differ significantly from BN (43%). The three ED groups differed significantly on several SF-12 scales. These findings for DSM-5-defined BN and BED subcategorized by overvaluation of shape/weight, based on the largest national sample of U.S. adults, document substantial psychosocial functional impairment associated with these EDs. These findings also provide strong support

for the consideration of overvaluation of shape/weight as a diagnostic severity specifier for BED as it provides important information about severity.

*Learning Objectives:*

- ▶ Compare clinical characteristics of individuals with bulimia nervosa and binge eating disorder with and without the overvaluation of shape and weight in an epidemiological sample.
- ▶ Recognize differences and similarities in psychosocial impairment between binge eating disorder with and without the overvaluation of shape and weight.
- ▶ Appreciate possible clinical values of incorporating overvaluation as a diagnostic severity specifier for binge eating disorder.

#### **P1.3.2 Disordered Eating Behaviors among Overweight/ Obese Young Adults and Future Cardiometabolic Risk in the National Longitudinal Study of Adolescent to Adult Health**

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Jennifer Tabler, PhD<sup>2</sup>  
Stuart Murray, PhD<sup>1</sup>  
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The objectives of this study were to determine the prevalence of disordered eating behaviors (DEBs) and eating disorders (EDs) and to identify their association with cardiometabolic risk at seven-year follow-up using a nationally representative sample of overweight/obese young adults. We used longitudinal cohort data from Wave III (18-24 years old) and Wave IV (24-32 years old) of the National Longitudinal Study of Adolescent to Adult Health. We analyzed anthropometric data (height, weight, BMI), ED (ED diagnosis by a doctor), and DEB (self-reported binge eating and unhealthy weight control behavior including vomiting, fasting/skipping meals, or laxative/diuretic use to lose weight) data at Wave III to estimate the prevalence of EDs/DEBs in young adulthood. We used anthropometric and laboratory (hemoglobin A1c) data at Wave IV to determine cardiometabolic risk at seven-year follow-up. Of the 15,197 young adults aged 18-24 years old, 48.6% were overweight or obese. Although 20.8% of overweight/obese young adults reported DEBs, only 1.4% were diagnosed with an ED. Overweight/obese young adults with EDs/DEBs had higher BMI ( $35.24$  vs  $33.36$  kg/m<sup>2</sup>,  $p < 0.001$ ) and greater weight gain ( $7.39$  vs  $6.51$  kg,  $p < 0.001$ ) at seven-year follow-up than those without EDs/DEBs. In multivariate regression models, unhealthy weight control behavior in young adulthood was associated with incident diabetes (AOR 1.32, 95% CI 1.01-1.71) and greater BMI ( $B = 0.48$ ,  $p < 0.001$ ) at seven-year follow-up, adjusting for age, sex, race/ethnicity, and household income. The AOR for the association between unhealthy weight control behavior and incident diabetes decreased

from 1.32 to 1.17 after accounting for BMI change, suggesting that the relationship may be mediated by BMI. The striking under-detection of ED psychopathology in overweight/obese young adults is cause for concern, particularly as the non-detection of these behaviors portends demonstrably greater diabetes risk at seven-year follow-up, a risk that may be explained by weight gain. The significantly higher risk for increased BMI and diabetes incidence in these young adults underscores the need to screen for EDs/DEBs in this population and provide referrals and tailored interventions as appropriate.

*Learning Objectives:*

- ▶ Describe the epidemiology of disordered eating behaviors in overweight/obese young adults
- ▶ Identify risk factors for disordered eating behaviors in young adult subpopulations.
- ▶ Assess the medical consequences of disordered eating behaviors in overweight/obese young adults including weight gain and diabetes incidence.

### P1.3.3 Overvaluation of Weight or Shape among Patients with Loss-of-Control Eating Following Sleeve Gastrectomy

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The purpose of this study was to examine overvaluation of weight/shape among post-operative sleeve gastrectomy surgery patients with loss-of-control (LOC) eating. Participants were 126 individuals who underwent sleeve gastrectomy surgery within the previous 4-9 months (M=6.1, SD=2.2) and reported LOC eating at least once weekly during the previous 28 days. Overvaluation of weight/shape, LOC eating, and eating-disorder psychopathology were assessed using the Eating Disorder Examination Interview - Bariatric Surgery Version (EDE-BSV) and depressive symptoms were assessed by the Beck Depression Inventory (BDI-II). Current mean age, body mass index (BMI), and percent excess weight loss were 45.7 (SD=11.2) years, 38.0 (SD=7.3) kg/m<sup>2</sup>, and 45.3 (SD=17.6), respectively. Overvaluation of weight/shape was significantly positively correlated with the EDE-BSV global score, all EDE-BSV subscales, and the BDI-II. Two groups, Clinical Overvaluation (n=42, 33.3%) and Subclinical Overvaluation (n=84, 66.7%), were created based on EDE-BSV guidelines. Relative to the Subclinical Overvaluation group, the Clinical Overvaluation group reported significantly greater frequency of LOC eating episodes, higher EDE-II global and subscale scores, and higher BDI-II scores (all p<.01), and were more likely to meet criteria for lifetime binge-eating disorder (p=.032). The two groups, however, did not differ significantly in BMI (p=.413) or percent excess weight lost (p=.065) post-

surgery. Our findings regarding the negative prognostic significance of overvaluation of shape/weight for patients with LOC eating 4-9 months following bariatric surgery (sleeve gastrectomy) are similar to those previously reported for binge-eating disorder. Post-operatively, overvaluation of weight/shape was associated with greater eating-disorder psychopathology, including more frequent LOC eating, and depression, but not with either BMI or weight-loss. Longer-term follow-up is needed to ascertain potential effects on weight loss.

*Learning Objectives:*

- ▶ To examine rates of overvaluation of weight/shape among patients with loss-of-control eating following sleeve gastrectomy.
- ▶ To compare weight loss outcomes between patients with and without clinical levels of overvaluation following sleeve gastrectomy.
- ▶ To compare eating-disorder psychopathology and depression between patients with and without clinical levels of overvaluation following sleeve gastrectomy.

### P1.3.4 Symptoms of “Food Addiction” in a Community Sample of Individuals with Binge Eating Disorder

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There has been substantial debate about whether applying an addiction model could advance our understanding and treatment of compulsive overeating. While an addiction model does not adequately address all of the core clinical features of binge eating disorder (BED), this perspective may be useful in furthering understanding and treatment of a subgroup of individuals with BED. The present study compared a community sample of adults meeting DSM 5 criteria for BED and a community sample of individuals with no history of an eating disorder (NED) in terms of symptoms of “food addiction”. Participants with BED (n=72) and NED (n=79) completed the following self-report measures: Yale Food Addiction Scale 2.0 (YFAS-2; Gearhardt et al., 2016), Eating Disorder Examination Questionnaire (EDE-Q; Fairburn & Beglin, 2008), and the Brief Symptom Inventory (BSI; Derogatis & Melisaratos, 1983). Consistent with previous studies, individuals in the BED group reported significantly more “food addiction” symptoms compared to the NED group after controlling for age, BMI, mood, and weight and shape overvaluation. In addition, individuals with BED (91.7%) were significantly more likely to meet the YFAS-2 criteria for “food addiction” compared to individuals in the NED group (6.3%). In order to determine whether YFAS-2 scores predicted binge frequency (based on EDE interview), a linear regression analysis was conducted. The model included BMI, age, mood, weight and shape

overvaluation, and “food addiction” symptoms as the predictor variables and binge frequency as the criterion. The number of food addiction symptoms was a significant predictor of binge frequency above and beyond the other variables. The present findings add to growing evidence of certain similarities between BED and substance use disorders. Understanding these similarities may be useful in understanding and treating a subgroup of individuals with BED.

*Learning Objectives:*

- ▶ Describe the construct of “food addiction” and its relevance to compulsive overeating and binge eating disorder (BED).
- ▶ Report results of a comparison of 72 individuals with BED and 79 individuals with no history of an eating disorder in terms of “food addiction” symptoms.
- ▶ Discuss the implications of the findings for understanding and treating compulsive overeating and BED.

### **P1.3.5 - Clinically Supervised Strict or Moderate Dieting Both Reduce Binge Eating: A 12-Month Randomized Controlled Trial in Postmenopausal Women with Obesity**

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 Stephen Touyz, PhD, FAED<sup>1</sup>  
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 Alice Gibson, PhD<sup>1</sup>  
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 Janet Franklin, PhD<sup>3</sup>  
 Tania Markovic, MBBS, PhD, FRACP<sup>1</sup>  
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Strict (restrictive) dieting is considered a major predisposing and perpetuating factor for eating disorders (EDs), but few clinical trials of dietary obesity treatments assess ED outcomes. We aimed to investigate objective binge eating (OBE) and other ED symptoms in women participating in an obesity trial. Participants ( $n=76$ ; BMI 30-40 kg/m<sup>2</sup>) were interviewed with the Eating Disorder Examination (EDE) and completed the Loss of Control over Eating Scale (LOCES) and were randomized to clinically-supervised slow weight loss (24-33% restriction of energy intake) for 12 months, or to fast weight loss (60-69% energy restriction, achieved by replacing all meals with meal replacement shakes) for 4 months followed by slow weight loss for 8 months (The TEMPO Diet Trial – Type of Energy Manipulation for Promoting optimum metabolic health and body composition in

Obesity – ANZCTR 12612000651886). Assessments were performed at baseline, and at 7 and 12 months after the treatments commenced. The mean global EDE scores fell from 1.58 (SD 0.77) at baseline to 1.19 (SD 0.88) at 7 months and 1.17 (SD 0.81) at 12 months. At least one OBE in the past 28 days was reported by 38 (50%) of participants at baseline, and this fell to 17 (22.3%) at week 29 and 10 (13.1%) at 12 months. Mean LOCES scores fell from 2.1 (SD 0.77) at baseline to 1.54 (SD 0.62) at 7 months and 1.61 (SD 0.54) at 12 months. There were no statistically significant differences between treatment groups for these ED outcomes at any time point. Thus clinically supervised dieting to induce either fast or slow weight loss reduced binge eating and other eating disorder features over 12 months.

*Learning Objectives:*

- ▶ Following the training, participants will be able to understand the effects of different types of dieting on binge eating and other eating disorder symptoms.
- ▶ Following the training, participants will be able to understand the potential risks and benefits of dieting in individuals with obesity.
- ▶ Following the training, participants will be aware of the latest research on the relationship between dieting and binge eating.

### **P1.3.6 - Grazing in Children: The Role of Children’s Psychological Correlates and Parental Feeding Practices.**

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 Sónia Gonçalves, PhD  
 Sofia Ramalho, MSc  
 Renata Costa, MSc  
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The aim of this study is to investigate children and parental feeding practices in relation to grazing. Participants of this cross-sectional study included 330 primary school students and their parents. Parents of each student completed a set of self-report measures: i) Family Eating and Activity Habits Questionnaire; ii) Child Behaviour Checklist (isolation and depression/anxiety scales); iii) Repetitive Eating Questionnaire for grazing; iv) Child Feeding Questionnaire. Children completed the Collins Silhouettes, for body satisfaction, with their parent’s help. The children’s weight and height were measured onsite by the researcher. Significant predictors of grazing in children included: i) worst children eating habits, = .207,  $t = 1.756$ ,  $p = .082$ ; ii) more depression/anxiety, = .237,  $t = 2.342$ ,  $p = .021$ ; more isolation, = .303,  $t = 3.244$ ,  $p = .002$ ; more controlling feeding practices of parents, = .390,  $t = 4.281$ ,  $p \leq .001$ ; and greater body image dissatisfaction, = .344,  $t = 3.712$ ,  $p = .023$ .  $F(9, 105) = 5.64$ ,  $p \leq .001$ , explaining 32.6% of their variance,  $R^2 = .326$ ,  $R^2_{adj} = .268$ . Path analysis confirming these associations, showed excellent fit: ( $\chi^2 = 15.002$ ,  $df$

= 10,  $p = .132$ ). CFI = 0.983, TLI = 0.952, e IFI = 0.984, RMSEA = .039. This is the first study to explore correlated of grazing in children. Our results highlight the role of parental feeding practices for children's grazing behavior.

*Learning Objectives:*

- ▶ To screen for grazing in children.
- ▶ To identify parental feeding practices associated with grazing.
- ▶ To assess children's psychological features associated with grazing.

## P1.4 DIAGNOSIS, CLASSIFICATION, AND MEASUREMENT

*Co-Chairs:*

**Kelsie Foubush, PhD and Drew Anderson, PhD FAED**

### P1.4.1 Evaluating Patterns of Discrepant and Missing Data on the Eating Disorders Examination- Questionnaire in a Sample of Treatment-Seeking Adults and Adolescents

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Michelle D. Jones, PhD  
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Systematic patterns in missing or discrepant data on psychological assessments pose a critical threat to the conclusions that can be made in clinical research. Better characterizing these response patterns in common measures of eating pathology, such as the Eating Disorder Examination-Questionnaire (EDE-Q), may aid in revising existing measurements to maximize reliability and validity. However, empirical work evaluating missing and discrepant data on common measures of eating pathology, including the EDE-Q, is limited. The current study evaluated missing and discrepant responding on the EDE-Q within a treatment-seeking sample of adolescents and adults ( $N = 622$ ) with eating disorders. Results suggested that 12.5% of the sample failed to provide complete responses on the EDE-Q and 14.8% of participants inconsistently responded to behavioral frequency items of the EDE-Q. Independent sample t-tests suggested that participants providing discrepant data were older,  $t(93.40) = -2.38$ ,  $p = .019$  and had higher mean EDE-Q global scores,  $t(138.32) = -2.67$ ,  $p = .008$ , EDE-Q eating concern scores,  $t(141.94) = -3.20$ ,  $p = .002$ , EDE-Q shape concern scores,  $t(138.70) = -2.61$ ,  $p = .010$ , and EDE-Q weight concern scores,  $t(132.82) = -2.02$ ,  $p = .045$ . Chi-square analyses indicated that non-white,  $c(1) = 3.87$ ,  $p = .049$ , and Hispanic,  $c(1) = 4.79$ ,  $p =$

$.029$ , patients were more likely to provide discrepant data. Finally, after removing items only relevant to females (e.g., menstrual status), males were more likely to provide missing data,  $c(1) = 13.82$ ,  $p = .000$ . Findings are consistent with some prior work suggesting inconsistent responding among individuals with higher levels of eating pathology. Results highlighting systematic patterns in missing and discrepant data among non-white and male participants suggest that revision of assessments for these populations may be important in maximizing validity. It is essential that future research replicate the findings of the current study and evaluate what factors or processes may contribute to the observed effects.

*Learning Objectives:*

- ▶ Provide attendees with an overview of the consequences of systematic missing and discrepant data
- ▶ Summarize findings regarding patterns in missing and discrepant data among a treatment-seeking sample of individuals with eating disorders.
- ▶ Foster scientific discussion regarding the processes that might contribute to systematic patterns of missing or discrepant data and how researchers and clinicians can better address these issues in future study.

### P1.4.2 A Novel, Behavioral Task for Measuring Social- Stressor-Induced Changes in Consumption of Palatable Food

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Meghan Reilly, BA  
Chris Perriello, BA, BS  
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Stressful events ("stressors") can predict a variety of eating-related behaviors, from extreme restriction to objective binge-eating episodes. Valid, within-person measures are needed to advance understanding of how stressors differentially affect eating behavior across individuals. Thus, we describe a novel behavioral task for objectively assessing stressor-induced changes in food intake, and we present preliminary results for the task. The laboratory-based task is designed to measure how social exclusion, a clinically-relevant interpersonal stressor, affects consumption of palatable food. Participants engage in a computerized throwing game involving an equal number of inclusion and exclusion rounds, and consume a participant-determined amount of milkshake during breaks between rounds. Affective responses during the game are assessed via repeated self-report measures and continuously recorded facial expressions. Participants in the validation sample ( $n = 20$  to date) are

women aged 18-30 years, selected on the basis of high or low levels of self-reported emotional eating on the Dutch Eating Behaviour Questionnaire. Exclusion (vs. inclusion) rounds produced the expected changes in both implicit and explicit affect, and milkshake intake varied during initial rounds, although it was generally minimal thereafter. Condition (exclusion vs. inclusion) and self-reported emotional eating did not interact significantly in their effect on milkshake consumption during initial rounds. However, condition and past month binge-eating episodes (from the Eating Disorder Examination 16.0D) yielded a significant interaction ( $p = 0.04$ ), due to greater milkshake intake after exclusion (vs. inclusion) for individuals with more binge-eating episodes. Results suggest that behavior during this novel task may capture important information about how individuals who engage in binge eating respond to stressors, beyond what is captured by self-reported emotional eating.

*Learning Objectives:*

- ▶ Understand limitations of self-report for assessing how stressors and emotions influence eating behavior
- ▶ Understand advantages and disadvantages of objective measures for assessing how stressors and emotions influence eating behavior.
- ▶ Describe how self-report (of stressor- or emotion-induced changes in eating behavior) relates to objective measures.

### P1.4.3 Identifying Prebariatric Patients with Relatively Low Eating Pathology Using the Adult Eating Behavior Questionnaire: A Latent Class Analysis

Andrea Rigby, PsyD  
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While bariatric surgery produces significant and sustained weight loss in individuals with extreme obesity, up to 25% of patients fail to lose or regain weight. Certain psychological variables, including binge eating, emotional eating, grazing, anxiety, and symptoms of depression, appear to be related to poor surgical outcome. However, research exploring the degree to which these variables predict poor outcome has yielded inconsistent results. One method to address the difficulty of identifying risk for poor outcome is latent class analysis (LCA), which empirically groups patients according to multiple variables. The present study grouped 244 patients using the Adult Eating Behavior Questionnaire (AEBQ), a measure of normative, nonpathological food approach and avoidance traits that was adapted from the widely used Child Eating Behavior Questionnaire. LCA generated two prebariatric eating profiles in the present sample.

Most (class 1; 82.3%) were characterized by high scores on scales measuring over- and under-eating in response to negative affect and moderately high scores on eating in response to external cues and hunger. A smaller group (class 2; 17.7%) differed from class 1, as they exhibited low scores on emotional over- and under-eating, and moderately low scores on external eating. Classes differed in depression and health-related quality of life, with class 2 reporting better functioning. Approximately 30% of participants in class 1 met criteria for binge-eating disorder, compared to just 11.4% of participants in class 2 ( $p < .05$ ). The AEBQ may be a useful measure for identifying groups of prebariatric candidates who differ according to risk for binge eating disorder and poor psychological functioning.

*Learning Objectives:*

- ▶ Discuss the use of latent class analysis to group participants empirically based on multiple behaviors, traits, or symptoms.
- ▶ Learn about predictors of success and failure in bariatric surgery.
- ▶ Become familiar with the adult eating behavior questionnaire (AEBQ), a measure of normative and nonpathological eating behavior traits with utility in clinical populations with obesity.

### P1.4.4 Screening for Eating Disorders on College Campuses: Reach, Level of Pathology, and Differences across Risk Status Groups at 28 U.S. Colleges

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Dawn Eichen, PhD<sup>3</sup>  
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The Healthy Body Image (HBI) Program, which uses online screening to identify individuals at risk for or with an eating

disorder (ED) and then directs users to tailored online/mobile or in-person interventions to address risk status, was deployed at 28 U.S. colleges as part of a randomized controlled trial. The purpose of this study is to report on: 1) reach of HBI; 2) screen results; and 3) differences across risk status groups on key variables. First, the screen was completed 4,894 times, with an average of 1.9% of undergraduate females on each campus taking the screen. Second, 40.3% screened as low risk for an ED; 35.7% as high risk for an ED; 20.3% as positive for a clinical/subclinical ED (with the exception of anorexia nervosa [AN]); and 3.7% as positive for AN. Risk groups differed on recruitment method ( $p < .001$ ). Email was the highest yielding method across all groups, particularly for the low- and high-risk groups. Recruitment via referral from the counseling center or from a website link to HBI was more common in the ED and AN groups than in the low- and high-risk groups. Third, findings highlight differences across ED risk status groups. Groups differed on age and BMI ( $ps < .002$ ); the AN group was the youngest, and the low-risk group had a lower mean BMI than the high-risk or ED groups. All ED pathology indices, including weight/shape concerns, ED symptom frequencies, and ED clinical impairment differed across groups ( $ps < .001$ ), as did psychiatric comorbidity (i.e., alcohol use, depression, anxiety, insomnia,  $ps < .036$ ) and ED risk factors (i.e., social comparison, thin-ideal internalization, body talk,  $ps < .001$ ). These constructs generally increased incrementally by risk level. Groups did not differ on % White or % non-Hispanic ( $ps > .209$ ). Findings suggest efforts are needed to increase reach of programs like HBI. Results also demonstrate the high pathology in the high-risk group and the need for timely screening and intervention to prevent onset of clinical EDs.

#### *Learning Objectives:*

- ▶ Demonstrate an understanding of the problem of eating disorders on college campuses and the need for online screening, prevention, and intervention programs.
- ▶ Demonstrate an understanding of differences in key variables across eating disorder risk status groups.
- ▶ Acquire an understanding of the implications of study findings for reducing the incidence and prevalence of eating disorders on college campuses.

#### **P1.4.5 Comparing Core Psychopathology between Anorexia Nervosa and Bulimia Nervosa versus Binge-Eating Disorder**

Lauren Forrest, MA  
April Smith, PhD  
Shelby Ortiz, BA  
Dorian Dodd, MA  
Elizabeth Velkoff, BA

Miami University, Oxford, OH, USA

Shape and weight overvaluation are theorized to be the core psychopathology of anorexia nervosa (AN), bulimia nervosa (BN), and binge-eating disorder (BED).

However, evidence supporting the transdiagnostic centrality of shape and weight overvaluation to eating disorder (ED) psychopathology—and especially to BED psychopathology—is sparse. Informed by the enhanced cognitive-behavioral model of EDs, this study used network analysis (i.e., modeled how symptoms are inter-related) to compare symptom networks in AN/BN versus BED. Data came from the National Comorbidity Survey Replication Adolescent Supplement. Adolescents who met criteria for AN ( $n=34$ ), BN ( $n=86$ ), and BED ( $n=161$ ) were included. Fifteen variables from the Composite International Diagnostic Interview assessing ED diagnostic criteria were included as network symptoms. Networks were estimated in R's *IsingFit* and *NetworkComparisonTest* packages. Centrality was indicated by symptoms connecting to other symptoms, symptoms being closer in space to other symptoms, and the strength of symptom connections. In both networks, indicators of shape and weight overvaluation had the highest centrality. However, network connectivity comparisons indicated that AN/BN connectivity was stronger than BED connectivity (25.90 vs. 8.92,  $p = .03$ ). This suggests that while core psychopathology is similar, symptom inter-connections within ED types are distinct. Indicators of shape and weight overvaluation were core symptoms in AN/BN and BED networks. Results confirm that shape and weight overvaluation are meaningful AN and BN diagnostic criteria, and suggest that shape and weight overvaluation may also be meaningful BED specifiers. Further evaluation of unique symptom connections within ED types may advance ED nosology and treatment.

#### *Learning Objectives:*

- ▶ Describe the application of network analysis to eating disorders nosology.
- ▶ Identify core symptoms of anorexia nervosa, bulimia nervosa, and binge-eating disorder.
- ▶ Explain commonalities and differences in anorexia nervosa, bulimia nervosa, and binge-eating disorder symptom networks.

#### **P1.4.6 Negative Affect and Binge Eating: Assessing the Unique Trajectories of Negative Affect Before and After Binge Episodes across Diagnostic Classifications.**

Joseph Wonderlich, MA<sup>1</sup>  
Lauren Breithaupt, MA<sup>1</sup>  
Ross Crosby, PhD, FAED<sup>2</sup>  
Scott Engel, PhD<sup>2</sup>  
Carol Peterson, PhD<sup>3</sup>  
Scott Crow, MD, FAED<sup>3</sup>  
Daniel LeGrange, PhD, FAED<sup>4</sup>  
Stephen Wonderlich, PhD<sup>2</sup>  
Sarah Fischer, PhD<sup>1</sup>

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<sup>4</sup>University of California, San Francisco, CA, USA

Several studies utilizing ecological momentary assessment (EMA) have examined the relation between changes in affect and binge eating across various eating disorder diagnostic groups. These studies have shown women with anorexia nervosa, bulimia nervosa, and binge eating disorder, all experience increased negative affect (NA) before binge eating episode, subsequently followed by decreased NA. However, it is unclear whether the trajectory of NA is the same across diagnostic groups or if specific changes in affect are unique to the diagnostic category. The study examined the moderating effect of diagnostic category on the trajectory of negative affect before and after binge eating. Women with eating disorders (AN=118, BN=133, BED=18) completed a 2-week EMA where they recorded binge eating and negative affect several times throughout the day. Generalized estimating equation (GEE) analyses were used to model the trajectories of NA before and after binge eating episodes. For the sample as a whole, the linear trajectory of NA significantly increased before binge eating ( $B = 0.044, p < 0.000$ ) and decreased following the binge episode ( $B = -0.054, p < 0.000$ ). However, diagnosis moderated this trajectory, suggesting that diagnostic categories may uniquely differentiate the degree of change in NA surrounding binge eating episodes. Specifically, women with BN had a much greater change in linear trajectories of NA before ( $B = 2.305, p < 0.000$ ) and after ( $B = -4.149, p < 0.000$ ) binges compared to women with either AN or BED. These findings suggest BN may be more strongly associated with NA than AN or BED.

*Learning Objectives:*

- ▶ Describe the relation between negative affect and binge eating for individuals with AN, BN, and BED.
- ▶ Examine the temporal trajectory of negative affect before and after binge episodes.
- ▶ Assess how the trajectory of negative affect before and after binge eating may be moderated by diagnostic classification.

## P1.5 COMORBIDITY

*Co-chairs:*

**Stephen Wonderlich, PhD, FAED and Kyle De Young, PhD, FAED**

### P1.5.1 Bridging Eating Disorder Symptoms and Suicidal Ideation: A Network Analysis

**Lauren Forrest, MA  
April Smith, PhD  
Shelby Ortiz, BA**

**Dorian Dodd, MA  
Elizabeth Velkoff, BA**

Miami University, Oxford, OH, USA

Grounded in contemporary theories linking eating disorders (ED) and suicide, this study used network analysis to identify interrelations among eating disorder symptoms, the determinants of suicidal ideation—burdensomeness and low belongingness—and suicidal ideation itself. We sought to identify the network nodes (i.e., symptoms) that most strongly reinforced other network nodes (i.e., nodes with the highest centrality). Data came from adults with DSM-5 EDs ( $N = 191$ ). Network nodes included items from: the Eating Disorder Inventory–Drive for Thinness, Bulimia, and Body Dissatisfaction subscales; the Eating Disorder Examination–Questionnaire assessing the frequency of ED behaviors; the Interpersonal Needs Questionnaire assessing burdensomeness and low belongingness; and the Depression Symptom Inventory–Suicidality Subscale assessing suicidal ideation severity. The network was estimated in R's qgraph package. Centrality was indicated primarily by the strength of symptom connections (strength), though auxiliary centrality indicators were the number of symptom connections (betweenness) and symptoms being closer in space to other symptoms (closeness). Feeling that others would be better off without the respondent (1.42; burdensomeness) and fear of gaining weight (1.39) had the highest strength. Feeling that the respondent makes things worse for others (burdensomeness) had the highest betweenness (3.16) while the frequency of laxative abuse had the highest closeness (2.03). Network accuracy was estimated using R's bootnet package. Most edges (i.e., symptom connections) were estimated reliably, as indicated by non-overlapping 95% bootstrapped confidence intervals. Further, node strength was the most reliable centrality measure and most bootstrapped node strength estimates significantly differed from one another. Overall, these results suggest that the network was stable. Fear of gaining weight and feeling like others would be better off without the respondent most strongly reinforced other symptoms in the ED and suicidal ideation network. These results support contemporary theoretical models of ED psychopathology (e.g., cognitive behavioral theory of EDs) and theories explaining suicide in people with EDs (e.g., Interpersonal–Psychological Theory of Suicide).

*Learning Objectives:*

- ▶ Describe the application of network analysis to advance research on eating disorders and comorbid psychopathology.
- ▶ Identify symptoms linking eating disorders and suicidal ideation.
- ▶ Provide theoretically-grounded explanations for why fear of weight gain and burdensomeness may reinforce other eating disorder symptoms and suicidal ideation.

### P1.5.2

#### Real-Time Occurrence of Binge-Eating, Purging, and Nonsuicidal Self-Injurious Behaviors: Results from two Ecological Momentary Assessment Studies

Shirley Wang, BA  
Kathryn Fox, MA  
Evan Kleiman, PhD  
Matthew Nock, PhD

Harvard University, Cambridge, MA, USA

Disordered eating is highly comorbid with nonsuicidal self-injury (NSSI). This comorbidity may be related to common mechanisms underlying both behaviors, including emotion dysregulation and self-criticism. However, whether co-occurrence of these behaviors more effectively regulates emotions than NSSI alone is unknown, and whether self-criticism is differentially associated with disordered eating and NSSI is unclear. Importantly, the majority of research on these behaviors has relied on retrospective self-report, which may not accurately reflect the emotional context of their real-time occurrence. The current studies used ecological momentary assessment to examine changes in affect and self-critical thoughts in NSSI episodes with or without binge eating and purging (BP). In Study 1 (N=22), multilevel modeling found no interaction between episode type (NSSI vs. NSSI/BP) and change in negative affect; however, there was a main effect showing significant decrease in negative affect ( $B = -9.23$ ,  $p < .001$ ). No effects were detected for positive affect. In Study 2 (N=27), chi-square analyses with Bonferroni-adjusted pairwise comparisons found greater self-hate in BP/NSSI episodes than BP, but not NSSI, episodes ( $\chi^2(2) = 11.05$ ,  $p = .004$ ). NSSI episodes were associated with greater self-directed anger than BP, but not BP/NSSI, episodes ( $\chi^2(2) = 14.54$ ,  $p = .001$ ). Findings indicate that both BP and NSSI regulate negative affect, but that their co-occurrence does not serve a stronger emotion regulation function than NSSI alone. Self-directed hatred and anger may be more strongly linked to NSSI than BP, at least within a self-injurious sample. Given the extent of BP and BP/NSSI episodes, healthcare providers should regularly screen for disordered eating among individuals with histories of NSSI. Continued examination of mechanisms underlying disordered eating and NSSI can inform early intervention efforts and assist in identifying individuals at highest risk for these maladaptive behaviors.

#### Learning Objectives:

- 1 Describe the comorbidity of disordered eating and nonsuicidal self-injury
- 2 Explain both the emotion regulation function and role of self-criticism in disordered eating and nonsuicidal self-injury
- 3 Identify the potential clinical benefits to assessment of disordered eating among individuals who engage in nonsuicidal self-injury

### P1.5.3

#### Two Birds with One Stone: Effectively Using Exposure and Response Prevention in the Concurrent Treatment of Eating Disorders and Obsessive-Compulsive Disorder

Nicholas Farrell, PhD

Rogers Memorial Hospital, Oconomowoc, WI, USA

There is significant comorbidity and conceptual overlap between eating disorders (EDs) and obsessive-compulsive disorder (OCD); however, the current literature offers little guidance in the concurrent treatment of these two conditions. The objective of the present research was to examine the effectiveness of an exposure and response prevention (ERP) treatment approach adapted to simultaneously address ED and OCD symptoms. Research participants (N = 68) included adult patients who met diagnostic criteria for both an ED and OCD and were treated in a specialty residential program designed to address EDs and anxiety-related disorders concurrently between September, 2015 and August, 2017. Patient demographics were as follows: M age = 24.6 years, SD = 6.7; M body mass index = 19.0, SD = 1.9; 79.4% female; 86.8% Caucasian. Consistent with previous research, a substantial majority of patients (n = 58; 85.3%) reported that their OCD symptoms predated the onset of ED symptoms. All patients worked with an ERP therapist who provided psychoeducation on the use of ERP, guided the development of a fear hierarchy containing ERP activities addressing ED and OCD-related concerns, and facilitated the completion of ERP activities for a minimum of three hours daily. Average length of stay in the program was 56.4 days (SD = 19.2). Primary outcome variables that were assessed at pre and posttreatment were the Eating Disorders Examination-Questionnaire (EDE-Q), the Yale-Brown Obsessive Compulsive Scale (Y-BOCS), and the Quick Inventory of Depressive Symptomatology (QIDS). Results showed significant reductions in symptom severity across each outcome variable (all  $ps < .01$ ), including all four EDE-Q component scales (restraint, eating concern, shape concern, and weight concern). Percentage of the fear hierarchy completed and pretreatment OCD severity both emerged as significant predictors of treatment response; greater hierarchy completion percentage was associated with more robust symptom relief ( $p = .002$ ), and less severe pretreatment OCD symptoms was also predictive of better treatment response ( $p = .04$ ). Given the considerable comorbidity and conceptual overlap between EDs and OCD, the present findings are very encouraging. ERP appears to be a highly effective treatment for the concurrent presentation of ED and OCD symptoms.

#### Learning Objectives:

- 1 Explain the significant comorbidity between eating disorders and obsessive-compulsive disorder as well as the conceptual and phenomenological overlap.

- 】 Design and implement an exposure and response prevention treatment intervention with patients diagnosed with both eating disorders and obsessive-compulsive disorder.
- 】 Describe the effectiveness of using exposure and response prevention in treatment of comorbid eating disorders and obsessive-compulsive disorder.

#### P1.5.4 An Investigation of the Latent Structure of Eating Disorder Psychopathology and Non-Suicidal Self-Injury (NSSI)

Erica Goodman, MA<sup>1</sup>  
Kyle De Young, PhD<sup>2</sup>

<sup>1</sup>University of North Dakota, Grand Forks, ND, USA  
<sup>2</sup>University of Wyoming, Laramie, WY, USA

Non-suicidal self-injury (NSSI; deliberate harm to the self) and eating disorders (EDs) frequently co-occur, and both place an individual at increased risk for suicide. Individuals who report NSSI are similar to those that report ED behaviors on emotion regulation, impulsivity, and pain tolerance. Thus, the current study aimed to investigate how the relationship between NSSI and ED behaviors is best understood, based on the intent of the behavior (e.g., “to hurt myself”) or the function (e.g., “I became less angry”). Participants were 493 undergraduate students (80% female; 90% white) who completed an online survey regarding lifetime NSSI and ED behaviors. Structural Equation Modeling (SEM) was used to test whether a model based on function of NSSI and ED psychopathology would fit data better than a model based on intent. Both the final intent and function models yielded an excellent fit; the models were not statistically different from one another ( $\chi^2(3) = 5.90, p = .12$ ). The intent model accounted for 95% of the variance in ED psychopathology and 62% in NSSI, while the function model accounted for 87% of the variance in ED psychopathology and 51% in NSSI. Internal emotion regulation was the strongest predictor of NSSI in the intent model and the strongest predictor of ED psychopathology in the function model. In both models, ED and NSSI psychopathology were positively associated with one another. These findings are consistent with previous literature in terms of emotion regulation being a function of both NSSI and ED psychopathology; however, other interesting differences emerged. For example, in the function model, external emotion regulation and appearance change predicted ED but not NSSI psychopathology. This study sheds light on the complex nature of empirically derived categories or continua; these behaviors may lie on a continuum of emotion regulation while also having distinct features, such as appearance change, which may inform treatments.

##### *Learning Objectives:*

- 】 Participants will become aware of ED and NSSI psychopathology as latent constructs and what factors best predict them in an SEM model.

- 】 Participants will discover how ED and NSSI psychopathology are related and what variables are unique to each.
- 】 Participants will acquire knowledge on how modeling can be used to test the categorical versus continuous nature of ED and NSSI psychopathology and be able to critique these techniques.

#### P1.5.5 Are Treatment Results for Eating Disorders Affected by ADHD-symptoms? A One Year Follow-Up of Adult Females.

Nils Erik Svedlund, MD<sup>1</sup>  
Yvonne vonHauswollf-Juhlin, MD, PhD<sup>1</sup>  
Claes Norring, PhD<sup>1</sup>  
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<sup>1</sup>Stockholm Centre for Eating Disorders, Stockholm, Sweden

<sup>2</sup>Department of Medical Epidemiology and Biostatistics, Stockholm, Sweden

We explored the influence of self-reported Attention Deficit Hyperactivity Disorder (ADHD) symptoms on recovery rate at one-year follow-up in an unselected group of patients in a specialized eating disorder (ED) clinic. 443 adult females with an ED were assessed with the WHO ADHD Self-Rating Scale for Adults (ASRS-screener), and for demographic variables and ED symptoms. Recovery was registered at one-year follow-up. A high degree of ADHD symptoms at baseline was significantly associated with non-recovery of bingeing/purging ED at one-year follow-up. The presence of inattentive, but not hyperactive, ADHD symptoms was associated with a worse outcome. We concluded that a high degree of ADHD symptoms may have a negative impact on recovery in bingeing/purging ED. Screening/diagnostic evaluation of ADHD in all bingeing/purging ED patients and studies of the effect of implementing ADHD treatment strategies in this patient group are recommended.

##### *Learning Objectives:*

- 】 Describe the comorbidity between Eating disorders and Attention Deficit Hyperactivity Disorder.
- 】 Describe the associations between Bulimia Nervosa and Attention Deficit Hyperactivity Disorder.
- 】 Understand the possible clinical implications of the comorbidity between Bulimia Nervosa and Attention Deficit Hyperactivity Disorder.

#### P1.5.6 Body Trust as a Moderator of Exercise Dependence Symptoms and Suicidality

Mary Duffy, BA  
Megan Rogers, MS  
Thomas Joiner, PhD

The purpose of the study was to test body trust as a moderator of exercise dependence and suicidality. Participants were 540 individuals (55.6% female, 44.3% male) ranging from 18 to 71 years of age ( $M = 35.94$ ,  $SD = 11.41$ ) who were recruited using MTurk. Participants reported their suicide attempt history and completed the: Exercise Dependence Scale (Hausenblas & Symons Downs, 2002), Multidimensional Assessment of Interoceptive Awareness (Mehling et al., 2012), and Beck Scale for Suicide Ideation (Beck & Steer, 1991) online. Moderation analyses were conducted using the PROCESS macro (Hayes, 2013). Exercise dependence facets served as the predictor variables, body trust (BT) as the moderator variable, and suicidal ideation (SI)/ presence of a past suicide attempt (SA) as the outcome variables. Ideation: The interaction between continuance in exercise despite adverse consequences and BT was related to current SI ( $B = -.02$ ,  $SE = .01$ ,  $p = .010$ ) and strongest at low ( $B = .08$ ,  $SE = .02$ ,  $p < .001$ ) levels of BT. The overall model explained 17.6% of the variance in SI. The interaction between lack of control over exercise and BT was related to current SI ( $B = -.02$ ,  $SE = .01$ ,  $p = .010$ ) and strongest at low ( $B = .10$ ,  $SE = .02$ ,  $p < .001$ ) levels of BT. The overall model explained 20.3% of the variance in SI. The interaction between reductions in other activities and BT was related to current SI ( $B = -.03$ ,  $SE = .01$ ,  $p = .001$ ) and strongest at low ( $B = .11$ ,  $SE = .02$ ,  $p < .001$ ) levels of BT. The overall model explained 21.2% of the variance in SI. Attempts: The interaction between continuance and BT was unrelated to the presence of past SA ( $p = .358$ ), but was significant at low ( $B = .18$ ,  $SE = .05$ ,  $p < .001$ ), not high ( $p = .104$ ), levels of BT. The interaction between lack of control and BT was unrelated to the presence of past SA ( $p = .068$ ), but was significant at low ( $B = .10$ ,  $SE = .04$ ,  $p < .020$ ), not high ( $p = .668$ ), levels of BT. of the variance in the presence of past SA. The interaction between reductions and BT was unrelated to the presence of past SA ( $p = .078$ ), but was significant at low ( $B = .16$ ,  $SE = .05$ ,  $p = .002$ ), not high ( $p = .972$ ), levels of BT. The findings of this study provide evidence that exercise dependence symptoms and low body trust are associated with SI and SA. The experience of feeling unsafe and not at home in one's own body may exacerbate suicide risk in vulnerable individuals.

*Learning Objectives:*

- 1 Identify exercise dependence as a risk factor for suicidality.
- 2 Recognize low body trust as a risk factor for suicidality.
- 3 Describe the interaction between low levels of body trust and exercise dependence in elevating risk for suicide ideation and suicide attempts.

**THURSDAY, APRIL 19**

**2:15 PM - 3:45 PM**

**EDUCATIONAL SESSION I  
SIG Panels**

**SP1.1**

**From Research to Practice: Evaluating and Eliminating Disparities in Disordered Eating Among LGBT and Gender Variant Youth**

Presented by the following AED SIGs:  
**Child & Adolescent Eating Disorders  
Body Image & Prevention  
Transcultural  
Males & Eating Disorders**

**Natasha Schvey, PhD<sup>1</sup>  
Anne Claire Grammer, BA<sup>2</sup>  
S. Bryn Austin, ScD, FAED<sup>3</sup>  
Jerel Calzo, PhD<sup>4</sup>  
Allegra Gordon, MPH, ScD<sup>5</sup>  
Zachary McClain, MD<sup>6</sup>  
Rebecka Peebles, MD<sup>6</sup>**

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LGBT and gender variant youth are at increased risk for eating disorders, maladaptive weight and shape control behaviors, body dissatisfaction, and impaired psychosocial functioning compared to cisgender, heterosexual youth. Importantly, there are many sociocultural and psychological factors unique to LGBT and gender variant youth that may exacerbate their vulnerability and risk. For example, weight and shape control behaviors may be used to disrupt pubertal development (e.g., losing weight to avoid the onset of menstruation and breast development; gaining weight to alter the appearance of primary and secondary sex characteristics) and prolonged abstention from eating and drinking may be employed to avoid using the restroom during the school day. Moreover, LGBT and gender variant youth are disproportionately affected by bullying, rejection, social stress, and depression and anxiety, all of which may contribute to the onset and maintenance of disordered eating behaviors. Considering the prevalence and deleterious effects of adolescent disordered eating, it is imperative to identify subgroups of youth that are at elevated risk, understand the specific factors that

contribute to their vulnerability, and provide appropriate care. The goal of the proposed panel, therefore, is to elucidate the risk factors and mechanisms for eating pathology among LGBT and gender variant youth and offer perspectives on developing and providing culturally competent care. We propose to discuss the following: 1) risk factors for, and sociocultural determinants of, body dissatisfaction and eating disturbances among LGBT and gender variant youth; 2) considerations for designing culturally sensitive interventions; and 3) best practices for assessing and treating LGBT and gender variant youth in clinical care.

*Learning Objectives:*

- ▶ Describe the ways in which LGBT and gender variant youth are at elevated risk for body dissatisfaction, maladaptive weight and shape control behaviors, and disordered eating.
- ▶ Identify unique mechanisms that contribute to and exacerbate disordered eating and impaired psychosocial functioning among LGBT and gender variant youth, such as stigma, victimization, and stress.
- ▶ Recognize the importance of providing culturally competent care for LGBT and gender variant youth and gain familiarity with best practices for addressing eating and weight concerns within this population.

## SP1.2

### To Meal Plan or not to Meal Plan: Using Science and Expert Practice in Meal Planning

Presented by the AED Nutrition SIG

Julia Cassidy, MS, RDN, CEDRDS<sup>1</sup>

Melanie Jacob, RDN<sup>2</sup>

Hilmar Wagner, MPH, RD, CD<sup>3</sup>

Jillian Lampert, PhD, MPH, RD<sup>4</sup>

Stephanie Brooks, MS, RD, CEDRD<sup>5</sup>

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The language of nutrition therapy has evolved from the exclusive use of exchange based meals plans to a variety of nutrition support provided across the spectrum of eating disorder diagnosis, age, treatment and recovery phase of patients. This panel will describe the strengths, limitations and contraindications of many types of nutrition support including: exchange lists, plate model, sample meal plans, calorie counting, family based nutrition model and mindful or intuitive eating. Nutrition therapy language should match the skill and knowledge of the patients/ care givers and flex during over the course of treatment to support patients in their recovery. Nutrition therapy interventions should also be informed by on-going results of research into the neurobiology of anorexia nervosa, bulimia nervosa, and binge eating disorder, particularly as it relates to reward processing and reaction to food related stimulus across ill and well states. Ideally, the goal is normalized eating, however, given emerging research, those recovering from anorexia nervosa may require more structured nutrition support until later into recovery when they can explore internally-directed eating. Those recovering from bulimia nervosa and binge eating disorder may need particular structure in response to cue modulation and food reward sensitivity early on in recovery. This session will weave together science, expert practice and individual level clinical interventions into a useful, applicable toolkit of nutrition rehabilitation techniques across the range of eating disorder diagnosis, for use by a broad swath of practitioners.

*Learning Objectives:*

- ▶ Describe the strengths, limitations and contraindications of different types of nutrition support including: exchanges lists, plate model, sample meal plans, family based nutrition, calorie counting and mindful or intuitive
- ▶ Apply best practices of how to design an individualized nutrition support plan based on spectrum of eating disorder diagnosis, age, treatment and recovery phase
- ▶ Restate the potential impact of findings from neuroimaging research on implementing nutrition support plans with individuals with anorexia nervosa, bulimia nervosa, and binge eating disorder



# EDUCATIONAL SESSION II

In this session, attendees have **13 different options** to choose from: **7 Workshops**, **5 Paper Sessions**, and **1 SIG Panel**

**THURSDAY, APRIL 19**

4:15 PM - 5:45 PM

## EDUCATIONAL SESSION II

### Workshop Session 2

#### W2.1

#### The Influence of Persuasion and Coercion in the Treatment of Eating Disorders

**Wayne Bowers, PhD, ABPP, FAED**  
**Taylor Ford, MSW**

University of Iowa, Iowa City, IA, USA

Power is a fact of daily life, just as various forms of coercion are a (controversial) companion in the treatment of individuals with eating disorders. This program will look at persuasion and coercion, and how a compassionate ethical approach is important to limit the influence of coercion when caring for individuals with an eating disorder. Various forms of persuasion and coercion will be discussed including civil commitment, involuntary treatment and the ethics of civil commitment. Ethical aspects of involuntary treatment will be discussed including the clinician's obligation to act in the patient's best interests. While the individual's right to self-determination is acknowledged, a duty to protect requires a clinician to proceed with treatment even if this is against the patient's wishes. One potential approach to ethical treatment for individuals with an eating disorder is for explicit disclosure of professionals' personal values and for professionals to make the rationale and steps involved in their decision making transparent to patients. Ethics of coercion suggests good clinical practice adheres to the parameters of respecting personal autonomy, providing the least restrictive interventions for a given clinical circumstance and using treatments that have been empirically demonstrated to be effective.

#### *Learning Objectives:*

- ▶ Participants will be able to differentiate between persuasions and coercions in treatment
- ▶ Participants will be able to understand ethical aspects of involuntary treatment and when there is a need to override autonomy
- ▶ Participants will have a better understanding of the global nature of civil commitment

#### W2.2

#### Moving from Science Influencing Practice to Engaging in Scientific Practice: How to Make Discoveries in the Clinic and Get Them Published

**Kyle De Young, PhD<sup>1</sup>**  
**Drew Anderson, PhD, FAED<sup>2</sup>**

<sup>1</sup> University of Wyoming, Laramie, WY, USA

<sup>2</sup> University at Albany, State University of New York, Albany, NY, USA

Bridging the research-practice gap is critical to improve the care of individuals with eating disorders. Many barriers stand in the way of this goal, not the least of which is the perception of researchers and clinicians being different groups of people. The implicit suggestion that researchers generate knowledge that then must be absorbed and enacted by clinicians puts clinicians in a passive role and leads researchers to feel disconnected and powerless. The purpose of this workshop is to describe and emphasize the active role individuals who primarily engage in clinical practice can play in generating scientific knowledge and the role individuals who primarily engage in research can play in collaborating with those who practice in their communities. After an overview of the diversity of research designs useful for making new discoveries, contextualizing single-case research designs as a set of valid options particularly suitable for smaller-scale settings, the basics of creating a data collection protocol, informed consent and institutional review boards, and collaborating with colleagues in research positions will be discussed (20 minutes). A brainstorming session for individualized opportunities and difficulties will follow, providing attendees with constructive feedback and additional ideas (20min). Next, specific examples of clinical research that can be accomplished in practice settings and with research collaboration will be provided (20 minutes). Finally, participants will choose a research question, share their question with a group of peers, and collectively discuss options for testing their ideas using research strategies that increase the likelihood of drawing valid inferences, with the presenters available to provide feedback (30 minutes). Attendees will also be encouraged to exchange contact information to build a network of scientific practitioners interested in making discoveries by leveraging the access and external validity of everyday practice.

#### *Learning Objectives:*

- ▶ Choose appropriate (research-worthy) measures for assessing variables of interest in clinical settings.
- ▶ Design single-case research for testing specific questions in clinical settings.
- ▶ Propose valuable collaborations between academic and practicing professionals.

**W2.3****Eating Disorders in Bariatric Surgery Populations: Assessment, Treatment and Special Considerations****Leslie Heinberg, PhD, FAED**<sup>1</sup>**James Mitchell, MD, FAED**<sup>2</sup>**Eva Conceição, PhD**<sup>3</sup><sup>1</sup> Cleveland Clinic Lerner College of Medicine, Cleveland, OH, USA<sup>2</sup> University of North Dakota, Fargo, ND, USA<sup>3</sup> Universidade do Minho-Escola de Psicologia, Braga, Portugal

Bariatric surgery patients are of increasing interest to eating disorder (ED) clinicians. A subset require pre-surgical treatment of ED patterns (e.g., binge eating disorder). Similarly, aftercare is needed for patients who have developed ED behaviors (e.g., graze eating) or other complications (e.g., body image disturbance). To stimulate involvement and understand the background, a 10 minute brainstorming will review the main challenges in this population. Discussion will be stimulated by prompts including: difficulties experienced; differences in presentation; adequacy of available assessment and intervention tools; and the role of surgery for the onset of ED-like behaviors. 1. Overview and Assessment: An overview detailing the types of bariatric surgery, their outcomes and complications, and impact on ED will be followed by review of the Bariatric Surgery Version of the Eating Disorders Examination (EDE-BSV), (20 minutes), Dr. Mitchell; 2. Treatment Options for Pre-operative ED: will focus on Binge, Night and Graze Eating. Handouts from a validated treatment manual for pre-operative ED will be included. Materials will be reviewed with multiple case examples and audience discussion. (20 minutes), Dr. Heinberg; 3. Treatment Options for Post-operative ED: Therapeutic strategies that can be utilized for the post-surgical ED will be reviewed. Handouts from a comprehensive, experimentally utilized treatment manual will be distributed. The manual will be briefly reviewed with multiple case examples and audience discussion. (20 minutes), Dr. Conceição; 4. Overview and Assessment of Other Problematic Outcomes: Case examples presented by the audience will be discussed with supporting literature and audience discussion. Role play strategy will be used to illustrate how the presented strategies are employed in real cases. Special attention will be paid to comorbid body image disturbance and alcohol use disorders. (20 minutes), Panel.

*Learning Objectives:*

- ▶ Characterize eating psychopathology and eating behaviors in the pre- and post-operative periods of bariatric surgery.
- ▶ Describe the main clinical features of eating disorders presenting after the bariatric surgery.
- ▶ Manage eating disordered behaviors after bariatric procedures.

**W2.4****Treating Comorbid Suicidality and Non-suicidal Self-injury among Multi-problem Adolescents with Eating Disorders: A DBT Approach****Michelle Lupkin, PhD**<sup>1</sup>**Lucene Wisniewski, PhD, FAED**<sup>2</sup><sup>1</sup> Montefiore Medical Center/Albert Einstein College of Medicine, Bronx, NY, USA<sup>2</sup> Shaker Heights, OH, USA

Rates of mortality for ED patients are among the highest of all psychiatric disorders, with suicide contributing significantly to these statistics. In adolescents with ED, lifetime prevalence of SI ranges from 31-52% and 8-15% for suicide attempts (SA), with risk for SA increasing significantly when adolescents present with other comorbid psychopathology (Crow et al., 2014). Additionally, 27% of adolescents with ED have engaged in NSSI (Cucchi, et al., 2016). Despite these alarming statistics, most evidenced-based treatment models do not include a framework for addressing these behaviors directly. Further, given the added risk in treating these patients in an outpatient setting, many therapists and facilities will not treat or are fearful of treating adolescents presenting with ED and comorbid SI and NSSI. Dialectical Behavior Therapy (DBT), a therapy originally designed for chronically suicidal, difficult-to-treat patients, provides a clear and systematic approach for addressing the behavior of patients with multiple comorbidities. DBT has been adapted to treat multiproblem adolescents and places a strong emphasis on including the family in both individual and group modalities of treatment. Given the literature on the importance of family in the treatment of adolescents with ED combined with the effectiveness of DBT in eliminating SI and NSSI in adolescents, DBT may be an effective approach for treating adolescents presenting with the difficult combination of ED, comorbid psychopathology, and SI or NSSI. Using case presentations, role play, and discussions, participants will learn how to use the DBT target hierarchy to structure individual sessions in the treatment of adolescents with complex ED. Specifically, participants will learn how to address SI and NSSI in the context of ED symptoms and other comorbidities. It is hoped that in learning these treatment strategies participants will feel more confident in their ability to treat adolescents with complex ED.

*Learning Objectives:*

- ▶ Use a hierarchy to decide which behaviors should be addressed first during an individual therapy session with a complex ED patient.
- ▶ Use a behavioral chain analysis and solutions analysis to target SI, NSSI, ED symptoms, and other comorbidities
- ▶ Learn strategies to target adolescent and family behaviors that interfere in treatment.

**W2.5****Disordered Eating and Body Image in Middle-aged and Older Women: Research- and Evidence- based Approaches to Treatment***Simultaneously translated to Spanish***Niva Piran, PhD, FAED**<sup>1</sup>**Margo Maine, PhD FAED**<sup>2</sup>**Mary Tantillo, PhD FAED**<sup>3</sup><sup>1</sup> University of Toronto, Toronto, Canada<sup>2</sup> Maine & Weinstein Specialty Group, West Hartford, CT, USA<sup>3</sup> University of Rochester, Rochester, NY, USA

Across the globe, increasing numbers of middle aged and older women, a significant segment of the population, are reporting high rates of negative body image and disordered eating. Although frequently associated with co-morbid disorders, their plights, like their bodies, are often 'unseen.' The workshop aims to equip participants with research and evidence-based approaches to understanding and working on body image issues with middle aged and older women. Part I (20 min.) will address the particular challenges faced by older women, including: physical experiences (e.g., unaddressed histories of physical trauma, aging), social expectations (e.g., other-oriented care, superwoman performance), and social disempowerment (e.g., related to ageism, sexism, racism), as informed by studies with older women and the research-based Developmental Theory of Embodiment. Participants will be invited to reflect on their own body journeys through an experiential exercise, followed by a group discussion of the implications to practice of Part I (20 min.). Part II of the workshop will focus, first, on applying several evidence-based practices in responding to the unique clinical needs of older women (20 min.). Relational-Cultural Therapy (R-CT) is an effective approach to working with women that conceptualizes mental distress (e.g., disordered eating patterns) as an expression of disconnection from self and others in responses to adverse relational and cultural contexts. This approach can be particularly attuned to the experiences of older women in focusing on shifting long-held patterns of relational disconnections, self-disavowal, and disempowerment. Further, supplementary effective techniques used in trauma-informed therapy, such as the sensorimotor approach and psycho-education, can target long held self-body disconnection. Part II will conclude with group discussions of case studies (20 min.), and end with participants' reflections (10 min.).

*Learning Objectives:*

- ▶ Identify the factors placing adult women at risk for disordered eating and negative body image.
- ▶ Utilize the Developmental Theory of Embodiment to understand eating disorders and body image issues in older women.
- ▶ Employ the principles of Relational Cultural Theory, supplemented by trauma-informed approaches, in the treatment of adult women suffering from eating and body image disorders.

**W2.6****The Challenge of Working Inter-culturally: Are We Sufficiently Considering Race, Culture and Ethnicity in the Treatment of Adolescent Eating Disorders? A Discussion from Three Continents****Elizabeth Dodge, MSc, CQSW**<sup>1</sup>**Gina Dimitropoulos, PhD, MSW, RSW**<sup>2</sup>**Martin Pradel, BSW, McFT**<sup>3</sup><sup>1</sup> Kings College, London, UK<sup>2</sup> University of Calgary, Calgary, Canada<sup>3</sup> Royal Children's Hospital Specialist Eating Disorders Service, Melbourne, Australia

In recent years, attention has been paid to cross cultural aspects of eating disorders and their increased incidence world-wide. However, there has been less focus on families from minority ethnic groups or consideration of how the process of immigration may impact on engagement, treatment and maintaining factors for the eating disorder. In many countries e.g. the US, Canada, Australia, and the UK a family intervention focused on the eating disorder is the recommended first line of treatment for adolescents. These are countries with significant multicultural communities including first nations/indigenous people, newly arrived immigrants and those who have been settled over several generations. The recognition and diagnosis of eating disorders in young people from these communities may be affected by stereotypical beliefs held by professionals and unusual presentations impacting on early access to appropriate services. Initial engagement and development of a good therapeutic alliance can be influenced by families' feelings of stigma, concerns regarding confidentiality, the demands of family resettlement, and beliefs about mental illness. Racism, a history of trauma and loss, acculturation, poverty, religious and cultural beliefs and practices and family relationship to food and beliefs about self-starvation may all impact on treatment as well as on the development and trajectory of the eating disorder. Assessment and engagement of families by clinical teams requires an understanding and sensitivity regarding these issues whilst holding in mind evidence based treatment with a focus on early weight restoration. In addition, clinicians should be able to reflect on their own cultural background and use of self in therapy. Each presenter will outline some of their experience from Australia, Canada and the UK. The workshop will include experiential exercises reflecting on meaning of illness behaviours, and provide opportunity for participants to share their experience.

*Learning Objectives:*

- ▶ Maximise opportunities for developing their practice in engagement and treatment of young people and families from minority ethnic populations without losing sight of the goals of weight restoration and achievement of optimum physical and mental health
- ▶ Develop skills in exploring family beliefs' around eating disordered behaviours and attend to the organisation,

structure and belief system of individual families to enhance both engagement and the ongoing therapeutic relationship

- ▶ Develop sensitive ways of exploring the wider context for families from diverse Communities and reflect on ways of addressing potential differences both within the therapeutic relationship and within families including issues of power.

## **W2.7** **Incorporating Technology in Assessment and Treatment of Eating Disorders in Clinical Practice**

**Shiri Sadeh-Sharvit, PhD<sup>1,3</sup>**  
**Ellen Fitzsimmons-Craft, PhD<sup>4</sup>**  
**Denise Wilfley, PhD<sup>4</sup>**  
**C. Barr Taylor, MD, FAED<sup>1,2</sup>**

<sup>1</sup>Stanford University Department of Psychiatry and Behavioral Sciences, Stanford, CA, USA

<sup>2</sup>Center for Mental Health, Palo Alto University, Palo Alto, CA

<sup>3</sup>Baruch Ivcher School of Psychology, The Interdisciplinary Center, Herzliya, Israel

<sup>4</sup>Department of Psychiatry, Washington University School of Medicine, St. Louis, MO, USA

Technology-enhanced services for eating disorders (EDs) are becoming increasingly available and individuals with EDs presenting for treatment may expect or want to be able to use their smartphones, computers, and/or wearable devices to monitor their symptoms or work on difficulties between sessions. This workshop will provide important knowledge, skills and capabilities for ED professionals who are interested in incorporating telepsychology and digital tools in their clinical practice. We will first present guidelines to determine in which cases technology could benefit clients, and how to assess the client's and the provider's readiness for introducing technology. The empirical support for said programs will be evaluated as well (20 minutes). We will then demonstrate how currently available digital resources can aid clients with EDs, using case reports and role-plays: clinician-led and patient-led assessment of ED symptoms and monitoring of progress; telepsychology and telemedicine to provide remote care when warranted via text and email messages as well as web-conferencing platforms; online support or treatment groups for patients; opportunities for remote training and consultation; analysis of the individual's use of social media and its impact on ED symptoms; and the use of guided self-help, coached programs to reduce target symptoms and improve resilience (40 minutes). The workshop will also describe safety, privacy, ethical and billing considerations in the use of technology with individuals with EDs (10 minutes). Finally, we will provide participants with tools to develop a learning plan to identify, assess, and practice technology-based resources that could complement their clinical practice, and open the discussion to questions from the audience (20 minutes).

*Learning Objectives:*

- ▶ Formulate the types and frequency of use of technology-based services that are applicable to apply with clients with eating disorders.
- ▶ Identify a few digital resources for individuals with eating disorders that could be implemented in participants' clinical practice.
- ▶ Recognize the primary legal and ethical considerations in the use of technology in individuals with eating disorders.

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**THURSDAY, APRIL 19**

**4:15 PM - 5:45 PM**

## **EDUCATIONAL SESSION II** **Paper Session 2**

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### **P2.1** **RISK FACTORS FOR EATING DISORDERS**

*Co-Chairs:*

**Debra Franko, PhD, FAED and Rachel Rodgers, PhD**

#### **P2.1.1** **Intimate Partner Violence and Eating Disorder Symptoms in Women Veterans**

**Karen Mitchell, PhD**  
**Katherine Iverson, PhD**

VA Boston Healthcare System and Boston University School of Medicine, Boston, MA, USA

Interpersonal forms of trauma have been associated with the development of eating disorders (EDs; Mitchell et al., 2012). However, the impact of intimate partner violence (IPV) on ED symptoms has been relatively understudied. Recent studies have found that sexual and psychological IPV were associated with negative body image and body shame (Campbell & Soeken, 1999; Gervais & Davidson, 2013). Further, disordered eating may serve as a means to numb or avoid negative affect associated with trauma reminders (Heatherton & Baumeister, 1991). Women veterans are at high risk for IPV (Dichter, Cerulli, & Bossarte, 2011) and may be at elevated risk for EDs (Bartlett & Mitchell, 2015), underscoring the need for investigation of IPV and EDs in this vulnerable population. Participants were women veterans recruited from a nationally representative online research panel. They were invited to participate in a web-based survey assessing intimate partner violence, physical and mental health functioning, and ED symptoms. Our sample included 190

women who completed three waves of data collection. Regression models were used to estimate the impact of lifetime psychological, physical, and sexual IPV at time 1 (T1) on T2 ED symptom scores, controlling for T2 age and BMI and T1 ED symptom scores. At Time 1 (T1), 7.37% of participants met criteria for current bulimia nervosa, 6.7% met criteria for current binge eating disorder, and 15.2% met criteria for any full or subthreshold ED. T1 physical ( $b = -.10, t = -2.05, p = .04$ ) and sexual IPV ( $b = -.15, t = -3.07, p = .002$ ) were both associated with T3 ED symptoms; the impact of psychological IPV was not significant after adjusting for covariates ( $b = -.01, t = -.27, p = .79$ ). Results suggest that sexual and physical IPV may play a role in the development or maintenance of ED symptoms and emphasize the importance of assessing for EDs among IPV survivors, as well as addressing this association in psychotherapy for IPV and/or EDs.

#### *Learning Objectives:*

- ▶ Participants will recognize the importance of assessing for intimate partner violence in women with eating disorders.
- ▶ Participants will interpret findings that intimate partner violence was associated with eating disorder symptoms.
- ▶ Participants will demonstrate increased knowledge regarding the etiological role of intimate partner violence in the development of eating disorders.

## P2.1.2

### Testing Relations between Interoceptive Deficits, Emotion Regulation Strategies, and Self-Injurious Behaviors in two Eating Disorder Samples

April Smith, PhD  
Lauren Forrest, MA  
Elizabeth Velkoff, BA  
Dorian Dodd, MA  
Shelby Ortiz, BA

Miami University, Oxford, OH, USA

Given the elevated rates of self-injurious behaviors (SIBs) among individuals with eating disorders (ED), it is imperative that we increase our understanding of factors that may enable individuals with EDs to engage in SIBs. The aim of the current study was to test one such factor—interoceptive deficits—in order to determine whether interoceptive deficits are related to SIBs among people with EDs. Interoception refers to self-awareness and the construct encompasses awareness of emotions, physiological sensations (like hunger and satiety), cardiac sensations, pain sensitivity, and the position of the body in space (Craig, 2002). Thus people with interoceptive deficits are believed to be out of touch with their bodies. Muehlenkamp (2012) has theorized that individuals with interoceptive deficits are more detached from their bodies and more likely to view their bodies in objectified ways. She further speculates that it is this disconnect from

the body that helps facilitate self-injury (Muehlenkamp, 2012). Across two ED samples, the relationship between interoceptive deficits and SIBs was tested by having participants complete the Interoceptive Deficits subscale of the Eating Disorder Inventory and questions assessing lifetime SIBs. Study 1 ( $n = 100$ ) found that suicide attempters and those engaging in non-suicidal self-injury (NSSI) had greater interoceptive deficits than those with no self-injury history. Lack of access to emotion regulation strategies accounted for the link between interoceptive deficits and SIBs. In Study 2 ( $n = 92$ ) multiple suicide attempters had greater interoceptive deficits than single attempters and those engaging in NSSI; however, the latter two groups did not differ from one another. Among ED samples, interoceptive deficits may differentiate those who engage in severe SIBs from those who do not, and thus be a useful determinant of suicide risk severity among patients with eating disorders. Lack of access to emotion regulation strategies appears to be one pathway linking interoceptive deficits and self-injury.

#### *Learning Objectives:*

- ▶ Describe the relation between interoceptive deficits and self-injurious thoughts and behaviors in an eating disorder sample.
- ▶ Relate how interoceptive deficits differentiate patients with eating disorders into subgroups consistent with categorically distinct levels of suicide risk.
- ▶ Assess one possible mechanism for the relation between interoceptive deficits and suicidal behavior, namely, lack of access to emotion regulation strategies.

## P2.1.3 - Personal Safety Anxiety and Safety Vigilance: Unexamined Independent Mediating Mechanisms in the Objectification Theory Model of Disordered Eating

Rachel Calogero, PhD, FAED<sup>1</sup>  
Tracy Tylka, PhD, FAED<sup>2</sup>

<sup>1</sup>Western University, London, Ontario Canada

<sup>2</sup>The Ohio State University, Marion, OH, USA

## P2.1.4

### Beyond Self-Report: Evaluating Links between Appearance-Related Rumination and Autonomic Nervous System Activity

Erin Reilly, PhD<sup>1</sup>  
Elana Gordis, PhD<sup>2</sup>  
James Boswell, PhD<sup>2</sup>  
Stephanie Emhoff, MA<sup>2</sup>  
Joseph Donahue, BA<sup>2</sup>  
Drew Anderson, PhD, FAED<sup>2</sup>

<sup>1</sup>University of California, San Diego, CA, USA

<sup>2</sup>University at Albany, SUNY, Albany, NY, USA

Recent study suggests that rumination and other repetitive negative thinking processes may play a role in the etiology and maintenance of eating disorders (EDs). However, few studies have experimentally tested the influence of rumination on ED-related anxiety. Fewer have done so using assessments outside of self-report. Given research linking autonomic nervous system (ANS) functioning with repetitive negative thinking and emotion dysregulation in other forms of psychopathology, including ANS measurements in the study of emotional processes relevant to EDs may enhance our understanding of these disorders. The current study evaluated the influence of a rumination induction on appearance-related anxiety, using both self-report assessments and measurements of sympathetic (i.e., skin conductance level, SCL) and parasympathetic (i.e., respiratory sinus arrhythmia, RSA) nervous system activity. Undergraduates (N = 126) completed an impromptu speech and then were randomly assigned to engage in a distraction or appearance-focused rumination task. Results suggested differences in self-reported appearance anxiety across conditions in response to the rumination task ( $p < .01$ ), such that individuals assigned to the rumination condition reported increases in appearance anxiety, as compared with the distraction group. The RSA model revealed significant main effects of lab task ( $p = .029$ ), and group x lab task ( $p = .028$ ). Marginal means suggested that the rumination group demonstrated greater increases in RSA, often considered an indicator of self-regulatory effort, during the rumination task, as compared with the distraction group. The SCL model indicated a main effect of lab task ( $p < .01$ ), but no significant group effects. Marginal means indicated increases in SCL across all appointment tasks that were equivalent across groups. The current study represents the first investigation of appearance-related rumination using ANS assessment. Our findings, which highlight differences in patterns of ANS activity associated with rumination and distraction, underscore the need for further investigation of repetitive negative thinking processes in EDs using multi-modal measurement.

*Learning Objectives:*

- 1 Describe the relevance of repetitive negative thinking processes, including rumination, in understanding risk for and maintenance of eating disorder symptoms, and summarize existing research on these processes in disordered eating.
- 2 Discuss the importance of using multi-modal measurement to evaluate emotional processes related to disordered eating.
- 3 Interpret effects associated with common indicators of the autonomic nervous system (i.e., skin conductance and respiratory sinus arrhythmia) and synthesize findings from the current investigation with past work evaluating ANS activity in disordered eating.

## P2.1.5

### Unique Associations of Weight Suppression with Eating Disorder Symptoms in Anorexia Nervosa and Bulimia Nervosa

Jason Lavender, PhD  
 Laura Berner, PhD  
 Erin Reilly, PhD  
 Tiffany Brown, PhD  
 Christina Wierenga, PhD  
 Walter Kaye, MD

University of California, San Diego, CA, USA

The extent to which weight suppression (defined here as highest lifetime weight - current weight) is related to eating disorder (ED) symptoms when accounting for other salient variables requires further study. Treatment-seeking adult women with AN (N=119) or BN (N=111) completed measures of weight history, ED symptoms (Eating Disorder Examination-Questionnaire), and impulsiveness (Temperament and Character Inventory-Novely Seeking). Generalized linear models were used with weight suppression as the main predictor variable and age, current BMI, and impulsiveness as theory-driven covariates. Dependent variables were overall ED symptoms, binge eating frequency, and vomiting frequency. A conservative alpha of .01 was used for evaluating significance. Results revealed that weight suppression ( $B = .23$ ,  $p = .009$ ) was uniquely associated with overall ED symptoms in AN, but not in BN. Further, weight suppression was not uniquely associated with objective binge eating frequency in either AN or BN. Finally, weight suppression was uniquely associated with vomiting frequency in BN ( $B = .19$ ,  $p = .007$ ), but not in AN. In sum, weight suppression was related to overall symptoms in AN and vomiting frequency in BN, even accounting for relevant psychological (impulsiveness), physiological (current BMI), and demographic (age) variables. Findings thus suggest the salience of weight suppression to ED symptoms and demonstrate differential associations across diagnoses. In BN, individuals with a higher past weight (thus greater suppression) may be motivated to engage in more vomiting to maintain their lower weight. Further, the lack of an association with binge eating suggests the occurrence of compensatory vomiting independent of objective binges. Given the typically intense weight focus in AN, a higher past weight may represent a general risk factor for a broader array of ED symptoms. Considering weight suppression may therefore have utility in ED treatment planning and evaluating relapse risk.

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#### *Learning Objectives:*

- ▶ To describe the construct of weight suppression and its potential relevance to eating disorder psychopathology.
- ▶ To explain how weight suppression may relate to different types of eating disorder symptoms.
- ▶ To review findings from the current data in anorexia nervosa and bulimia nervosa regarding independent associations of weight suppression with eating disorder symptomatology.

### **P2.1.6** **Identification of Predictive Biomarkers by Whole-Genome Methylation Profiles in AN Cohorts of Patients and Remitters**

Nicolas Ramoz, PhD<sup>1</sup>  
Nicolas Ramoz, PhD<sup>1</sup>  
Sébastien Guillaume, MD, PhD<sup>2</sup>  
Boris Chaumette, MD, PhD<sup>3</sup>  
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The purpose of this study is to identify epigenetic signatures with the methylation profiles of genes in Anorexia nervosa (AN) patients and remitters to propose biomarkers for diagnostic and prognostic. AN is a severe eating disorder. Regulation via epigenetic mechanisms is strongly suggested in AN. We and other groups have carried out studies on whole-genome methylation profiles in AN. We have found that the differentially methylated CpG sites are located among genes involved in biological processes in link with brain development and its plasticity, in particular adhesion and axon guidance. Here, we analyzed two independent cohorts, (1) a longitudinal group of 40 AN patients with a follow-up during more than one year, to compare the methylation profiles in subjects that evolve to the remission, and (2) two groups of 24 AN patients and 24 remitters to validate the predictive methylation profiles in remission. DNAs were extracted from blood samples of fasted state subjects. Methylation of DNAs was measured by using the Infinium HumanMethylation450 BeadChip technology. The methylome study in the longitudinal AN cohort allow to characterize significant profiles of methylation at two times for the same subjects to compare the 18 AN patients that convert to remitters and 18 current AN patients. Taking into account of these results, we are now comparing the methylation profiles of the second cohort of the 24 AN patients to 24 remitters to validate the predictive biomarkers of the AN remitters. Thus, we expect characterize biomarkers of specific methylation signatures of the prognostic of the AN remission. This work was supported by Nestle Foundation France.

#### *Learning Objectives:*

- ▶ Understand epigenetic mechanisms.
- ▶ Identify biomarkers of Anorexia Nervosa.
- ▶ Characterize predictive biomarkers to Anorexia Nervosa Remission.

### **P2.2** **TREATMENT OF EATING DISORDERS II (ADULT)**

#### *Co-Chairs:*

Allison Kelly, PhD, CPsych and Marica Herrin, EdD, MPH, RD, FAED

#### **P2.2.1** **What Changed First: The Cognitions or the Behaviors? A Longitudinal Study of Symptom Change Trajectories in Recovery Record Mobile App Users.**

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Kelsey Hagan, MA<sup>1</sup>

**Benjamin Kite, PhD<sup>1</sup>**  
**Kelsie Forbush, PhD<sup>1</sup>**  
**Kelsey Clark, BA<sup>2</sup>**  
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The best available eating-disorder (ED) treatments work for only about half of patients. Poor treatment outcomes exist, in part, because clinicians have limited information about how ED symptoms change, on average, during treatment. Without information about the average rate-of-change, clinicians do not have data that can signal when clients are at-risk for a poor outcome. The purpose of the current study was to test whether change in ED behaviors preceded change in ED cognitions or vice versa. A secondary aim was to identify typical change patterns for ED symptoms in patients with EDs and to test how individual differences (e.g., age-of-onset, gender) contribute to the rate of symptom reduction. This study is one of the largest studies, to date, to assess change patterns in a treatment-seeking sample of people with EDs (N = 5,685; 87.2% female). Participants were Recovery Record users who completed the Eating Pathology Symptoms Inventory (EPSI) once per month for three months. Bivariate latent change score analyses indicated that ED behaviors and cognitions changed simultaneously and mutually predicted change in one another. Results from latent growth curve models indicated that, on average, ED psychopathology significantly declined over three months. However, participants who had an older (vs. younger) age-of-onset had slower reductions in cognitive restraint, excessive exercise, and purging. Men had slower reductions in body dissatisfaction and purging compared to women. Expanding our knowledge of symptom change is significant because it helps researchers and clinicians identify individuals who are at-risk for slow treatment progress and poor outcomes. Knowledge of individual differences associated with poor outcomes provides clinicians with an opportunity to intensify their treatment protocol from the beginning of therapy.

*Learning Objectives:*

- ▶ Describe how client eating disorder symptoms progress during treatment considering the client's age-of-onset, gender, and clinician-rated diagnosis.
- ▶ Describe the temporal pattern of eating disorder behavior change compared to eating disorder thought change.
- ▶ Understand how the Eating Pathology Symptoms Inventory (EPSI) can be used to track client progress in treatment.

## **P2.2.2**

### **Early Improvements in Dialectical Behavior Therapy Skill Use as a Mediator of Change in Eating Disorder Psychopathology in a Partial Hospital Setting**

**Tiffany Brown, PhD**  
**Erin Reilly, PhD**  
**Leslie Anderson, PhD**  
**Anne Cusack, PsyD**  
**Christina Wierenga, PhD**  
**Walter Kaye, MD, FAED**

University of California, San Diego, CA, USA

Emergent research supports the use of dialectical behavior therapy (DBT) for eating disorders (EDs); however, potential mechanisms by which DBT exerts its effects are less well-characterized. While theoretical and behavioral research support DBT skill use as a potential mechanism of treatment efficacy, to date, no study has empirically tested this in regards to ED outcomes. Thus, the present study sought to: (1) characterize improvements in early DBT skill use and (2) test whether improvements in skill use mediated the relationship between admission emotion regulation skills deficits and improvements in ED and depressive symptoms through discharge. Adult patients (n=79) admitted to a DBT-based ED partial hospital program completed the Eating Disorder Examination Questionnaire (EDE-Q), Difficulties in Emotion Regulation Scale (DERS), Beck Depression Inventory (BDI), and the DBT Ways of Coping Checklist (WCCL-DBT) at admission, one month post-admission, and discharge. Mediation analyses were conducted using the lavaan package in R to test the indirect effect of DERS-Strategies at admission via change in DBT skill use (WCCL-DBT from admission to one-month) on change in EDE-Q subscale and BDI scores from admission to discharge. Overall, 74.7% of patients made improvements in DBT skill use from admission to one-month. Mean DBT skill use increased from M(SD)=1.61(0.47) at admission to M(SD)=1.85(0.42) at one-month post-admission, representing a 13.0% increase. Mediation results demonstrated that change in DBT skill use mediated improvements in EDE-Q Eating (CI:-.036 to -.002; p=.03), Weight (CI:-.038 to -.001; p=.03), and Shape Concerns (CI:-.038 to -.001; p=.04), but not Restraint (CI:-.023 to .006; p=.25). DBT skill use also mediated improvements in BDI scores (CI:-.276 to -.018; p=.03). Results support a growing literature on the effectiveness of DBT skills for EDs and suggest that early improvements in DBT skill use may be one mechanism by which improvements in eating, body image, and mood-related psychopathology occur.

*Learning Objectives:*

- ▶ Identify patterns of early change in DBT skill use after one month of intensive eating disorder treatment.
- ▶ Describe the impact that early change in DBT skills use has on eating disorder psychopathology through treatment discharge.

- Describe the impact that early change in DBT skills use has on depressive symptoms through treatment discharge.

### P2.2.3

#### A Randomised Sham-Controlled Feasibility Trial of Repetitive Transcranial Magnetic Stimulation in Severe and Enduring Anorexia Nervosa

Ulrike Schmidt, MD PhD, FRCPsych, FAED<sup>1</sup>  
 Bethan Dalton, MSc<sup>2</sup>  
 Savani Bartholdy, PhD<sup>2</sup>  
 Jessica McClelland, PhD<sup>2</sup>  
 Maria Kekic, PhD<sup>2</sup>  
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Anorexia nervosa (AN) is a disabling and deadly disorder. Treatment innovations are urgently needed, especially for those with severe and enduring illness (SE-AN). Repetitive transcranial magnetic stimulation (rTMS) is a noninvasive brain stimulation method which has shown promise in small studies in AN and other eating disorders. The aim of the present study was to conduct a randomised controlled double-blind feasibility trial in adult outpatients with SE-AN and previous unsuccessful treatment, comparing real rTMS with sham treatment, as an add-on to treatment-as-usual (TAU) in this patient group. Thirty-four participants with SE-AN (mean illness duration 14 years) were allocated by chance to receive either 20 sessions of real high frequency rTMS or a sham version of this treatment in addition to their usual treatment. A range of outcomes (body mass index, eating disorders symptoms, mood and quality of life) were assessed at pre-treatment, post-treatment (1 month post-randomisation) and follow-up (4 months post-randomisation). We also asked participants about their experience of this treatment. Two patients (one per group) were withdrawn for safety reasons post-randomisation, 32 started and 30 completed treatment and all research visits. There were negligible group differences in body mass index and eating disorder symptoms at both post-treatment and follow-up. At 4 months post-randomisation, there were between-group differences in depression, stress and obsessive compulsive symptoms of medium to large effect size, favouring real rTMS over sham. rTMS was well tolerated and considered to be an acceptable treatment by participants. This study provides evidence for the therapeutic potential of rTMS in adults with SE-AN. It also supports the need for future larger-scale studies to establish/confirm the effectiveness of rTMS in SE-AN.

#### Learning Objectives:

- Understand the rationale for the use of rTMS and other non-invasive neurostimulation methods in severe and

enduring anorexia nervosa.

- Describe the clinical outcomes of rTMS in severe and enduring anorexia nervosa.
- Describe future directions in research on non-invasive neurostimulation in anorexia nervosa.

### P2.2.4

#### Right Patient, Right Treatment, Right Time: Redesigning a Tertiary Adult Inpatient Eating Disorder Program for the Canadian Public Health Care System

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 Julie Gourdeau, MD, FRCPC  
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Providence Health - St. Paul's Hospital, Vancouver, Canada

For over 20 years the Provincial Adult Tertiary & Specialized Eating Disorder Program (PATSED) located at St. Paul's Hospital in Vancouver, Canada has provided the only specialized inpatient eating disorders program for adults (17 and older) in the province of British Columbia. British Columbia is Canada's western most province and has a population of 4.7 million people. To serve the province, the St. Paul's Hospital eating disorder program has only 7 publicly funded inpatient treatment beds for adults. With such limited treatment resources, the program requires intensive collaboration with both primary care providers and community secondary eating disorder programs within the province to ensure appropriate patient access and flow. Given the limited availability of our inpatient beds, many iterations of the program with various length of stay and treatment modalities have been trialed and evaluated for best patient outcomes using continuous quality improvement data. Provincially, over the last 4 years, there has also been a monumental effort to review all eating disorder services, to identify service gaps, to strengthen provider networks and to ensure evidence-based treatment is being utilized in all aspects of our programming. This process has involved provincial stakeholders from all levels – patients, families, practitioners, administrators and government. The provincial government has also utilized experts to produce provincial clinical guidelines for the treatment of eating disorders. Using the feedback from the larger service review our inpatient team engaged in a project to review, evaluate and update the adult inpatient program to ensure we are matching treatment services to the right patient at the right time. Our process has included feedback from stakeholders of all levels and has focused on providing an equitable program with clear boundaries, expectations and treatment non-negotiables. Our goal has been to ensure the best utilization of a small inpatient treatment program, to enhance the collaboration with primary care

and community care providers, to optimize patient flow and access to resources and above all to offer patients the right treatment at the right time.

*Learning Objectives:*

- ▶ Participants will learn about the challenges of redesigning an inpatient program and the importance of broad stakeholder involvement and collaboration in this endeavor.
- ▶ Participants will be able to describe the clinical, social and other factors involved in matching the right patient to the right treatment at the right time and learn about the triage tool we use to help clinically place patients. They will practice apply.
- ▶ Participant will learn about our system of non-negotiable treatment parameters which help our team in determining a patient's readiness for treatment. There will be discussion arising from the practical application of non-negotiable treatment parameters.

### **P2.2.5 Readiness, Self-Compassion and Fear of Self-Compassion as Predictors of Change in Inpatient and Residential Eating Disorder Treatment Programs**

**Yuan (Joanne) Zhou, BA<sup>1</sup>**  
**Megumi Iyar, BA<sup>2</sup>**  
**Suja Srikameswaran, PhD, RPsych<sup>1</sup>**  
**Erin Dunn, PhD, RPsych<sup>3</sup>**  
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Readiness has been shown to be a consistent predictor of clinical outcome in the eating disorders and there has been growing interest in the role of self-compassion in recovery for this population. This study examined the utility of readiness, self-compassion and fear of self-compassion in predicting clinical outcome variables (i.e., improvements in eating disorder symptoms, quality of life) and treatment process variables (i.e., tube feeding, meal replacement, early discharge). These relations were examined in two treatment settings: inpatient (average length of stay 30.1 days), focusing on assessment and stabilization, and residential, focusing on skill acquisition and full recovery (average length of stay 95 days). Inpatients (n = 90) and residential patients (n = 60) completed measures of readiness, compassion, symptom severity and quality of life upon admission and discharge. Consistent with previous research, readiness was a significant predictor of all clinical outcome and treatment process variables in both programs. An interesting finding emerged regarding the readiness domain, with a pattern for readiness to change dietary restriction to be associated with eating-related variables (replacement, tube feeding and eating disorder symptom change), and for global readiness (a

composite of all symptom domains) to be associated with early discharge and improved quality of life. Finally, a new clinical outcome predictor emerged: in the residential population, fear of self-compassion explained unique variance in symptom change and quality of life after controlling for baseline readiness. These findings replicate the central role of readiness in predicting outcome in two intensive treatment settings, and suggest there may be different utility for symptom specific vs. global readiness scores. The emergence of fear of self-compassion as a predictor of symptom change suggests that this may be a second key variable to target in ED treatment.

*Learning Objectives:*

- ▶ Describe baseline levels of readiness, self-compassion and fear of self-compassion in residential and inpatient treatment settings
- ▶ Determine the utility of readiness, self-compassion and fear of compassion in predicting clinical outcome variables
- ▶ Determine the utility of readiness, self-compassion and fear of compassion in predicting treatment process variables

### **P2.2.6 The Impact of Personal Growth Initiative on Eating Disorder Pathology: A Potential Target to Improve Treatment Outcomes**

**Caitlin Martin-Wagar, MA<sup>1</sup>**  
**Kelly Bhatnagar, PhD<sup>2</sup>**  
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The purpose of this study was to examine the relationship between personal growth initiative (PGI) and eating disorder severity in a transdiagnostic treatment-seeking population (N = 93). The impact of deficit-based factors on eating pathology (e.g. maladaptive coping behaviors, ineffective emotion regulation strategies, cognitive inflexibility, etc.) have received considerable attention in the literature (e.g., Gianini, White, & Masheb, 2013; Stice et al., 2001; Wildes, Forbes, & Marcus, 2014). Less is known, however, about the impact of protective and strengths-based factors. Due to treatment engagement challenges (Geller & Dunn, 2011) and the high rates of relapse and mortality in eating disorder populations (Arcelus, Mitchell, Wales, & Nielson, 2011), understanding client's strengths, such as personal growth initiative, is warranted. PGI, which is an individual's active intent and commitment to grow and make necessary changes, is one potential factor related to ED severity and treatment engagement. Due to treatment engagement challenges inherent in the nature of ED treatment, PGI may help facilitate willingness and ability to alleviate symptoms severity. PGI has been associated with higher levels of psychological well-being and self-acceptance, lower levels

of psychological distress, and greater treatment gains (Robitschek & Keyes, 2004; Weigold et al., in press). In this preliminary sample, PGI was found to significantly predict eating pathology, with lower rates of PGI being associated with higher ED symptom severity ( $F(1, 91) = 5.737, p < .05$ ). Results suggest the need for future research on clinical interventions focused on increasing strengths, such as PGI, in ED populations. Additional findings related to the impact of PGI on treatment engagement and treatment outcome will be discussed.

#### *Learning Objectives:*

- ▶ Learn about the concept of personal growth initiative as it relates to treatment engagement for eating disorder patients.
- ▶ Describe how personal growth initiative was found to relate to eating disorder severity.
- ▶ Consider potential clinical and research implications of personal growth initiative on eating disorder treatment and outcomes.

## **P2.3 INNOVATIVE USES OF TECHNOLOGY**

#### *Co-Chairs:*

**Mirjam Mainland, MS and Stephanie Bauer, PhD**

### **P2.3.1 Leveraging Technology Partnerships for Large Scale Eating Disorders Awareness, Intervention & Advocacy**

**Claire Mysko, MA**

CEO of National Eating Disorders Association, New York City, NY, USA

Eating disorders are serious global public health issues that are underreported, underfunded, and undertreated. Those affected by these illnesses deserve early intervention, effective care, and support to maintain recovery. At a time when more than half of the world uses a smart phone and more than half of the world's web traffic now comes from phones, it is imperative that we engage with the platforms that people use every day in order to achieve that vision. In this session, Claire Mysko will discuss NEDA's partnership with Facebook and Instagram, which has included strategies to increase the reach and impact of National Eating Disorders Awareness Week (in 2017, the social media reach was 500 million. Mysko will include an updated report for 2018 in this presentation); reporting and support functions that connect users directly to NEDA's Helpline; and co-branded toolkits that educate users on steps to take to help a friend. Using NEDA's online screening tool & partnerships with organizations including

Recovery Record, Crisis Text Line and Mental Health America are providing opportunities to connect people to help options at the point of screening, and delivering valuable data on demographics, reported behaviors, & the paths people take. In a 12-week period beginning with NEDA's Awareness Week 2017, more than 50,000 screens were completed (ICED presentation will include updated NEDA's Awareness 2018 data). Results show that online screening through NEDA is reaching individuals in need, as 96% of respondents reported high eating disorder pathology. These respondents were provided tailored screen feedback, alerting them that their symptoms may indicate that they are at risk for or struggling with an eating disorder. They were also provided information on how to harness NEDA's resources to locate a treatment provider and to learn more about eating disorders. Mysko will highlight the potential to address the very large treatment gap that exists for eating disorders – of those who screened positive for a clinical or subclinical eating disorder, 86% were not currently in treatment.

#### *Learning Objectives:*

- ▶ Foster an understanding of how technology companies are working with patient advocacy organizations to raise awareness about eating disorders and direct high risk individuals to help resources.
- ▶ Expand knowledge of online screening data on eating disorder behaviors, demographics and help seeking outcomes.
- ▶ Increase awareness of how organizations and individuals can use social media as a tool for global eating disorders advocacy.

### **P2.3.2 Patients' Experience of a Randomised Controlled Feasibility Trial of Multiple Sessions of Real vs. Sham Repetitive Transcranial Magnetic Stimulation as a Treatment for Individuals with Severe and Enduring Anorexia Nervosa (the TIARA study)**

**Bethan Dalton, MSc<sup>1</sup>**  
**Jessica McClelland, PhD<sup>1</sup>**  
**Savani Bartholdy, PhD<sup>1</sup>**  
**Maria Kekic, PhD<sup>1</sup>**  
**Iain C. Campbell, DSc<sup>1</sup>**  
**Ulrike Schmidt, MD, PhD, FRCPsych, FAED<sup>1,2</sup>**

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We recently completed the first ever randomised sham-controlled double-blind feasibility trial of 20 sessions (over one month) of high-frequency repetitive transcranial magnetic stimulation (rTMS) in 34 people with severe and enduring anorexia nervosa (SE-AN). Clinical outcomes of this trial are reported separately and showed improvements following real, but not sham rTMS in

mood and quality of life. As part of an integrated process evaluation, semi-structured interviews were conducted with 30 study participants (mean illness duration 14.1 years) 3-months after the end of their rTMS treatment sessions. Participants were asked about their hopes/concerns about rTMS treatment, participating in the trial, observations on effects/side effects of the rTMS, their reports on close others' perspectives on these changes, their views on combining rTMS with psychological treatments for AN, and what they would say to other people considering participation in a similar future trial. Several participants highlighted that the fact that rTMS targeted their brain gave this treatment credibility, as they felt that talking therapies on their own were not enough to effect change. Two participants were concerned that rTMS might change them as a person or lead to a loss of control, but found this not to be the case. Whilst many participants found rTMS slightly uncomfortable initially, all said that this improved over time. All participants found the rTMS clinic a relaxed, supportive and happy experience. Many emphasized how their lives had changed to some extent during, but mainly after treatment in making them more positive, open-minded, flexible and willing to try new things in relation to their eating disorder symptoms, but also in other aspects of their lives. These qualitative data are a rich source of information that will be valuable in shaping participant information, informing recruitment and planning other aspects of the study design of future large scale trials in this area.

*Learning Objectives:*

- ▶ Recognize that participants provide valuable information that can be of great use and importance in planning future research trials of brain-directed treatments in eating disorders.
- ▶ Describe the key reasons why participants with severe and enduring anorexia nervosa chose to take part in a randomized controlled trial of real vs. sham repetitive transcranial magnetic stimulation.
- ▶ Summarize why qualitative evaluations of brain-directed treatments should be incorporated into future research in this area.

### P2.3.3 Preliminary Evaluation of an Online Intensive Outpatient Program for Eating Disorders

Athena Robinson, PhD  
Caroline Wilkes, BA  
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Due to the increasing prevalence of eating disorders (ED), barriers to traditional face-to-face treatment, and the palpable need to increase higher-level of care access to low / no-care areas, leveraging the viability of telemedicine platforms is a timely step in need of research evaluation.

Specifically, it is important to identify online intensive-outpatient treatment programs (IOP) that are feasible to administer, accepted by patients, and effective in treating ED. The first online IOP for ED administers evidence-based treatments and comprehensive programming (individual and group psychotherapy, nutrition counseling) through virtual video conferencing platforms to eligible patients nationwide. While some data suggest that in-person IOPs may be effective for ED treatment, and telemedicine platforms may be viable for ED prevention and treatment, no data exist on the feasibility, acceptability and effectiveness of an online IOP for ED. This study evaluated this program's acceptability, feasibility, and preliminary effectiveness in reducing ED symptoms among 34 female patients (82% white; mean age=35.65 years (SD=13.73); mean BMI=26.75 (SD=10.44); mode weeks in program=12.5) from 24 different states with varied ED diagnoses (35% bulimia nervosa; 15% anorexia nervosa; 9% binge eating disorder; 41% other specified feeding or eating disorder). Results indicate moderate feasibility (recruitment, retention, and program implementation metrics) and high acceptability (participant evaluation of the program). Effect sizes from baseline to post-treatment were small to moderate for reductions in behavior frequency (vomiting  $d = -.32$ ; binge eating  $d = -.56$ ) and moderate to large effect for reductions in EDE-Q subscales (restraint  $d = -.76$ ; eating concerns  $d = -.71$ ; shape concerns  $d = -.94$ ; weight concerns  $d = -.97$ ). Such preliminary evidence suggests that this telemedicine-based IOP for ED may be feasible, acceptable, and effective. Further research on telemedicine-based IOP for ED programs is warranted.

*Learning Objectives:*

- ▶ Review rationale for telemedicine-based intensive outpatient programs for eating disorders.
- ▶ Discuss this online IOP's impact on ED behavior and pathology.
- ▶ Discuss limitations of this preliminary uncontrolled effectiveness study and outline steps for future research.

### P2.3.4 Unique Challenges and Considerations in Large-Scale Smartphone Application Research

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Jenna Tregarthen, MA<sup>2</sup>  
Shiri Sadeh-Sharvit, PhD<sup>1</sup>  
Alison Darcy, PhD<sup>1</sup>  
Jane Paik Kim, PhD<sup>1</sup>  
Eric Neri, PhD<sup>1</sup>  
Molly Vierhile, BA<sup>1</sup>  
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Significant access barriers and inadequate numbers of sufficiently trained providers impede the potential for traditional models of in-person, evidence-based eating disorder treatments to meet the need for treatment. Thus, a major shift in intervention practice is required to overcome these challenges. Smartphone applications (apps) could play a role in improving access due to their reach, breadth of functionality, 24/7 accessibility, and relatively low cost. Apps for eating disorders are now well established and widely used. One such app is being used in a randomized clinical trial designed to evaluate individualized adaptive app content to standard app content. The aim of the study is to randomize 7,616 users who are not otherwise receiving structured treatment. Such large-scale smartphone app studies are relatively new to the eating disorder field and present unique research challenges and considerations. Details of the protocol will be presented. Among the challenges this protocol addressed during study implementation were recruiting non-patient participants; institutional review board and consent procedures administered via app; strategies to assess compliance and engagement; problems related to study retention and participant accountability; assessment completion; participant monitoring and safety assurances; user dropout norms; app lifespan; and data analysis. Insight gained from the current study may inform viable protocol models for large-scale smartphone app research which are needed to establish precedent to aid future research endeavors.

*Learning Objectives:*

- 】 Review rationale for and available data on the use of smartphone apps in eating disorder intervention.
- 】 Discuss the unique research challenges and considerations that accompany large-scale smartphone app eating disorder research.
- 】 Outline and understand how a current RCT protocol addressed such unique research challenges.

### P2.3.5

#### **Watch Out, I'm getting fat! Embodiment in a Fatter Virtual Body Increases Body Anxiety and Fear of Weight Gain in Female College Students**

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 Bruno Porras-Garcia, MSc  
 Cristina González-Ibáñez, MSc  
 Mireia Gracia-Blanes, MSc  
 José Gutiérrez-Maldonado, PhD

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Body-swapping has been successfully used to induce the illusion of owning a virtual body (avatar) with a different size to that of the participant's real body. Embodiment of a slimmer or a heavier avatar has proved able to produce changes in individuals' own body satisfaction. In view of these findings, this study aims to assess the ability

of a virtual reality (VR)-based software to produce body anxiety responses in a non-clinical sample. Twenty-one female college students were exposed to an immersive VR environment, in which the illusion of owning a virtual body was induced by means of visual-tactile synchronization. Each participant was sequentially exposed to three body sizes: an avatar with the same body measurements as the participant, an avatar 20% larger than the participant, and another avatar 40% larger. Drive for thinness (EDI-DT), body dissatisfaction (EDI-BD) and body mass index (BMI) were assessed before exposure, while body anxiety (PASTAS) and fear of gaining weight (Visual analogue scale [VAS], from 0 to 100) were assessed after exposure to each avatar. Repeated measures analyses of variance showed significantly higher levels of body anxiety ( $F(1, 20) = 6.277, p = .021, \eta^2 = .239$ ) and fear of weight gain ( $F(1, 20) = 8.797, p = .012, \eta^2 = .481$ ) after owning the 40% larger virtual body than after owning the virtual body with the participant's own real measurements. When scores of body dissatisfaction and drive for thinness were considered (using mixed between-within analyses of variance), students with higher scores on these scales reported more body anxiety ( $F(1, 19) = 13.454, p = .002, \eta^2 = .415$ ) and more fear of weight gain ( $F(1, 19) = 5.815, p = .026, \eta^2 = .234$ ) in all conditions. This study provides evidence of the ability of virtual body embodiment to induce weight- and body- related anxiety in female college students. In the light of these results, the use of embodiment techniques for treating body anxiety in anorexia patients during weight restoration is proposed.

*Learning Objectives:*

- 】 Describe the use of the embodiment techniques in virtual reality (i.e., induction of the illusion of owning a virtual body) to modify the perception of, and satisfaction with, one's own body.
- 】 Describe the effect of inducing the illusion of owning a fatter virtual body on body anxiety and fear of weight gain in female college students without eating disorders.
- 】 Discuss the use of embodiment techniques for the treatment of body anxiety and eating rejection in patients with anorexia nervosa during the healthy weight recovery phase.

### P2.3.6

#### **Broadening the Lens: Screening Digital Stories with Healthcare Providers to Enhance Training on Eating Disorders**

Andrea LaMarre, MSc  
 Carla Rice, PhD

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There is a significant lack of training in eating disorders (EDs) for healthcare providers (HCPs) across disciplines; medical schools commonly offer only approximately three hours of training in mental health in total. Even when they do receive training, a large proportion of HCPs feel

ill equipped to manage the complexity of EDs or to feel confident in referral and follow up processes. Further, we know little about HCP understandings of and attitudes toward ED recovery, and how they talk about recovery with their patients. Time is limited in healthcare curricula to cover major topics; thus, finding short, effective training mechanisms to teach interprofessional audiences about EDs is highly desirable. This pilot study was designed to explore the effect of having HCPs view stories of people who have recovered from EDs and their supporters. Five short, first-person stories made by four people in recovery and one supporter were shared with 22 HCPs. HCPs completed pre- and post-screening qualitative questionnaires to assess their prior training in EDs and understandings of EDs and recovery. HCPs were also asked about what they learned from viewing the films and who they thought would benefit from viewing them. HCPs described EDs as complex and multifaceted both before and after viewing the films. Following the film screening, they noted more attunement to the diversity of the presentation of EDs and recovery; they also noted that the films helped them to better understand the strength of people with EDs and the interpersonal strain that EDs can cause. HCPs noted a desire for longer films to enhance their understandings of how best to approach EDs in practice. HCPs suggested screening the films with practicing HCPs and HCPs in training, as well as people with EDs and supporters. The primary benefits of the films noted by HCPs were their capacity for stigma reduction and empathy building amongst people without significant training in EDs. Screening films made by people with lived experience appears to be a promising brief intervention for stigma reduction amongst HCPs, an effect that could be tested in different HCP groups and with longer films.

*Learning Objectives:*

- ▶ Identify the gaps in healthcare provider training for eating disorders.
- ▶ Understand the ramifications of having poorly trained front line healthcare providers in terms of recognition and management of eating disorders.
- ▶ Assess the utility of a brief intervention involving screening films made by people in recovery for enhancing training for healthcare providers across disciplines.

## **P2.4** **BIOLOGY AND MEDICAL** **COMPLICATIONS**

*Co-Chairs*

**Guido K.W. Frank, MD, FAED and Timothy B. Walsh, MD, FAED**

## **P2.4.1** **Readmissions and Length of Stay in Adolescents with Atypical Anorexia Nervosa**

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Adolescents with Atypical Anorexia Nervosa (AAN) have lost a significant amount of weight but present at normal or above normal weight. Because of their weight status, diagnosis may be delayed and they can be medically compromised on presentation, requiring medical admission. Readmission rates and inpatient length of stay (LOS) have not previously been studied in this population. We conducted a retrospective chart review of 521 adolescents (aged 12-25 y) admitted to the Stanford inpatient eating disorders program from 2011-2014, to investigate whether a prior history of overweight and weight suppression (WS) influence readmissions and LOS. We hypothesized that adolescents with AAN would have a higher likelihood of being readmitted compared to those who were not previously overweight. We excluded adolescents with chronic disease, those who left AMA, and those transferred to another facility. Overweight was defined as  $\geq 85$ th percentile BMI; not previously overweight was  $< 85$ th percentile BMI, based on self-reported highest weight before presentation. Previous BMI was calculated using patient's recall of past highest weight and height at presentation. WS was calculated as maximum pretreatment weight minus weight at presentation. Patients were followed for one year after initial admission to record any readmissions. Of 443 eligible patients, 117 (26.4%) met criteria for AAN. Compared to the 326 adolescents who were not previously overweight, adolescents with AAN were more likely to be male ( $p = .0004$ ), Hispanic ( $p = .009$ ) and have greater WS ( $p < .001$ ). 43.6% of patients with AAN were readmitted within one year compared with 31.9% of those not previously overweight ( $p = .02$ ). There was no significant difference in LOS between the two groups, but greater WS was associated with longer LOS in both groups. Our results demonstrate that prior weight status and WS impact readmission and LOS in adolescents with eating disorders and that patients with AAN are at increased risk of readmission.

*Learning Objectives:*

- ▶ List two research findings associated with atypical anorexia nervosa.
- ▶ Define how previously overweight was determined.
- ▶ Describe the relationship between weight suppression and length of inpatient stay.

### P2.4.2

#### Bone Health and Fracture Occurrence amongst Adolescents with Eating Disorders: A Longitudinal Community-Based Study

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Eating Disorder (ED) behaviours, including excessive food restriction, purging and excessively exercising, particularly in the adolescent years, may disrupt the attainment of peak bone mass and affect bone health throughout life. This study used participants from the Avon Longitudinal Study of Parents and Children (ALSPAC) (N=4,998) to determine the longitudinal association between ED behaviours, Bone Mineral Density (BMD) and fracture occurrence throughout adolescence. Multivariate longitudinal regression methods were used to determine the association between ED behaviours at 14, 16 and 18 years and BMD at 15.5 and 17.5 years. Furthermore, the relationship between EDs, BMD and fracture occurrence was determined using logistic regression models. ED behaviours reported at 14 years did not significantly affect BMD at 15.5 years and high levels of exercise was found to have a protective effect on total body BMD ( $\beta = 0.02$ ; 95% CI: 0.01; 0.03;  $P < 0.001$ ). Both fasting and purging between 14 and 16 years were found to have a negative impact on total body BMD measured at 17.5 years, ( $\beta = -0.03$ ; 95% CI: -0.03; -0.02) and ( $\beta = -0.02$ ; 95% CI: -0.03; -0.01), respectively ( $P < 0.001$ ). Finally, fasting ED behaviours reported between 14 and 18 years predicted a higher occurrence of fractures in adolescence and early adulthood (OR: 1.73; 95% CI: 1.23; 2.46;  $P = 0.002$ ) when adjusting for both confounders and total body BMD. It is evident that ED behaviours during adolescence not only have a negative impact on BMD, but also significantly increase the occurrence of fractures. This study has implications for early identification of behavioural risk factors for poor bone health, and recommends DXA scanning for all ED patients.

#### Learning Objectives:

- ▶ Understand the effect of Eating Disorders on Bone Mineral Density (BMD).
- ▶ Understand the effect of individual eating disorder behaviours on BMD and fracture occurrence in adolescents.
- ▶ Describe key risk factors during adolescence which can affect BMD and fracture occurrence in individuals with eating disorders.

### P2.4.3

#### Methylation of the Oxytocin Receptor Gene in women with Anorexia Nervosa: Relationship to Social Behavior

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 Sarah Brassard, BA<sup>2</sup>  
 Linda Booij, PhD<sup>3</sup>  
 Esther Kahan, BSc<sup>1</sup>  
 Kevin McGregor, MSc<sup>2</sup>  
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 Mimi Israel, MD, FAED<sup>1</sup>  
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DNA methylation allows for the environmental regulation of gene expression and is believed to link environmental stressors to mental-illness phenotypes such as Anorexia Nervosa (AN). The Oxytocin Receptor (OXTR) gene is epigenetically regulated and studies have shown associations between OXTR and social behaviors in various samples, including in women with AN. The present study examined differential levels of methylation at various cg sites of the OXTR gene in 78 women with active Anorexia Nervosa (AN), 21 who had recovered from Anorexia (Rec) and 36 normal-eater controls (Ctrl). We also explored the interaction of group (AN Vs. Ctrl vs. Rec) and methylation on measures of social behavior such as insecure attachment, social avoidance and stimulus seeking, as measured by the Dimensional Assessment of Personality Pathology – Basic Questionnaire (DAPP-BQ). Finally we examined changes in methylation during ED treatment. Hypermethylation of a number of cg sites was seen in participants with AN as compared to Rec and Ctrl participants ( $p$  values .000 to .020). Higher methylation corresponded to higher levels of insecure attachment in Ctrl vs AN on cg 11589699 ( $p = .035$ ) and in Rec vs ANs on cg 27501759 ( $p = .001$ ). Conversely, lower levels of methylation corresponded to higher levels of insecure attachment for controls vs AN on cg17285225 ( $p = .050$ ). Finally, we saw increases in methylation on cg 08535600 from pre- to post- ED treatment in the sample of women with AN. Our results, the first to our knowledge examining methylation of the OXTR gene in AN, highlight epigenetic differences among women with AN, those recovered and those who never had an ED on the OXTR gene, and such differences correspond to measures of social behavior in the various samples. The data from the current study add to the body of literature implicating the OXTR gene in the pathogenesis of AN.

#### Learning Objectives:

- ▶ Understand the role of oxytocin in Anorexia Nervosa.

- Describe differential levels of methylation of OXTR gene in Anorexia vs. Control and Recovered samples.
- Explain the relationship between methylation of OXTR cg sites and social behavior in Anorexia, Control and Recovered samples.

#### P2.4.4 Illness Activity, Plasma Nutrient Levels, and DNA Methylation in Anorexia Nervosa

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Various physiological and psychiatric manifestations in Anorexia Nervosa (AN) appear to be subject to epigenetic regulation through such processes as DNA methylation. This ongoing study examines genomewide methylation profiles in women with and without Anorexia Nervosa (AN), with special attention to effects of symptom remission and nutritional status (as reflected by plasma levels of micronutrients implicated in DNA methylation--namely, methionine, dimethylglycine, choline, betaine, B12 and folate). At present, we have obtained DNA for methylation measurements from 116 actively ill women (AN-Active), 32 women in 12-month remission (AN-Remitted), and 44 normal-weight women with no eating disorder history (NED). We have followed 62 of the AN-Active women through partial weight restoration, and have obtained plasma for measurement of nutrient levels in a subset of 37 AN-Active, 31 AN-Remitted and 29 NED women. Ongoing data collection will increase all samples noted. Interim analyses (using False Discovery Rate-corrected comparisons) identify multiple sites at which women with active AN differ from AN-Remitted or NED women, and associate methylation changes with genes influencing neurotransmitter activity, lipid/glucose metabolism and immune function. Intriguingly, findings on many methylation indices show illness activity to have effects opposite in direction to those of illness remission. In parallel, preliminary findings show significant elevations of plasma methionine and betaine in AN-Active women, and normalization of methionine levels with improved clinical status. Findings associate altered DNA methylation in AN

with active illness, and suggest that methylation profiles may be quite responsive to nutritional factors. Such results point to nutrigenomic effects that could inform etiological modelling and treatment, and clinical decision-making surrounding illness staging and recovery.

*Learning Objectives:*

- Summarize core concepts involved in the application of epigenetic science to eating disorders.
- Describe the ways in which Anorexia Nervosa may implicate alterations in epigenetic "marks" associated with malnutrition.
- Understand the clinical relevance of epigenetic factors, and the potentials of epigenetic mechanisms to explain entrenchment and recovery from this eating disorder.

#### P2.4.5 Introducing a Functional Genomics-Based Paradigm to Investigate the Response to Nutritional Changes in Patients with Anorexia Nervosa

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Studies investigating the molecular mechanisms of anorexia nervosa (AN) are limited by access to disease relevant tissues, such as brains, that are both faithful to the genetic background of individuals with AN and are responsive to external stimuli. A recent major success from stem cell biology has been to derive neurons from donated blood. This process changes the cell's active signaling pathways from those of blood to those of neurons, while maintaining the genetic background of the donor. We propose a novel model for studying AN in which we change the nutritional environment of patient-derived neurons. Specifically, we will derive dopaminergic neurons from the blood of 10 patients with restrictive type AN and 10 controls without an eating disorder. We have selected dopaminergic neurons due to the important role of dopamine and reward processing in AN. We will then perform functional genomics assays, such as RNA-sequencing, before and after manipulating the neurons' nutritional environment. By decreasing the amount of essential nutrients to the cells (e.g. by decreasing the amount of glucose in the cell's media) and comparing the response between patients with AN and controls, we may gain insight into the biological responses to restricting behavior. On the other hand, by maintaining derived neuronal cells in a low-nutrient environment and then increasing the nutritional content, we may be able to generate biologically-based hypotheses as to what occurs during re-feeding of patients that are underweight. Overall, we propose a functional genomics-based paradigm in which brain cells derived from patients with AN and controls are tested for differences in response to

nutritional changes. This novel approach for studying AN can provide insight into the genetic underpinnings of AN susceptibility and recovery.

*Learning Objectives:*

- ▶ Describe how neurons derived from donor blood could be used to investigate the molecular mechanisms of anorexia nervosa.
- ▶ Explain how changing the media of the derived neurons and measuring the neuron's responses could generate novel hypotheses for differences between individuals of anorexia nervosa and those that have not been previously diagnosed with an eating disorder.
- ▶ Evaluate the use of functional genomics (including RNA sequencing) in studying the molecular mechanisms of anorexia nervosa.

### P2.4.6 Essential Fatty Acid Deficiency in Adolescents with Eating Disorders

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Essential fatty acid (EFA) deficiency results from a relative state of malnutrition and can be associated with mood changes and mental health disorders. Few studies have investigated EFA deficiency in adolescents with eating disorders (ED). A retrospective chart review of 859 patients presenting to a tertiary care center for evaluation and treatment of ED was performed. EFA status was assessed using a fatty acid profile performed at Mayo Medical Laboratories; EFA deficiency was defined as the presence of 1 or more of 3 key markers indicative of fatty acid status: decreased alpha linoleic acid, decreased linolenic acid, or elevated triene:tetraene ratio > 0.025. Patients with and without EFA deficiency were compared on presentation characteristics, DSM-5 diagnosis, and eating behaviors using chi-square and Mann-Whitney U testing. Patients were predominantly female (n=756, 88%) and Caucasian (n=604, 70%) with a mean age of 15.7 ± 2.3. EFA deficiency was present in 24.5% (n = 206) and did not differ by sex or ethnicity. Mean age did not differ between the groups. Patients with EFA deficiency presented at lower percent median body weight (MBW) (84.3 vs. 87.2%, p<0.01) and lost more weight prior to presentation (22.5 vs. 19.9 kg, p<0.01) than patients who were not EFA deficient despite no difference in reported disease duration. EFA deficient patients were more

likely to carry a diagnosis of anorexia nervosa (71.4 vs. 63.0%, p<0.01) and to report laxative use, both within the last month (17.7 vs. 11.0, p<0.01 and ever (9.6 vs. 5.3, p<0.05) than patients who were not EFA deficient. Purging, bingeing, diet pill use, and amount of exercise did not differ between the two groups. EFA deficiency was prevalent in this sample of adolescents with ED, and was associated with lower %MBW at presentation, greater weight loss, diagnosis of anorexia nervosa, and laxative use. Future studies should examine the association between EFA deficiency and bone health, eating disorder severity, and comorbid mood symptoms in adolescents with ED.

*Learning Objectives:*

- ▶ Identify prevalence of essential fatty acid deficiency in eating disorder subtypes in children and adolescents.
- ▶ Review associations of essential fatty acid deficiency and weight status in children and adolescents with eating disorders.
- ▶ Discuss essential fatty acid deficiency in eating disorder subtypes in children and adolescents who use laxatives.

### P2.5 AVOIDANT AND RESTRICTIVE FOOD INTAKE DISORDER

*Co-Chairs*

**Jennifer J. Thomas, PhD, FAED and Kamryn Eddy, PhD, FAED**

#### P2.5.1 Restrictions Apply: Comparing Standardized Caloric and Macronutrient Intake among Individuals with Low-Weight Eating Disorders and Healthy Controls

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Anorexia nervosa (AN) and avoidant/restrictive food intake disorder (ARFID) share restrictive eating behaviors that can lead to low weight. Whereas restriction in AN is thought to be driven by fear of weight gain, individuals with ARFID cite sensory sensitivity, fear of aversive consequences, and/or lack of interest in eating. Reflecting their divergent rationales, clinical observations suggest that individuals with ARFID often prefer foods high in refined carbohydrates (CHO). We compared calorie (kcal) and macronutrient consumption among AN, ARFID, and healthy controls (HC) at a laboratory test meal. After a 12-hr overnight fast, 74 females (35 AN, 10 ARFID, 29 HC; mean age $\pm$ SD=17.88 $\pm$ 3.21) were given a 400 kcal mixed meal standardized for macronutrient content (average of 19 g protein, 10 g fat, and 63 g CHO) to be consumed over 15 min. After the observed meal, the remaining food was weighed to calculate total caloric and macronutrient intake. One-way ANOVAs using Bonferroni-adjusted alpha levels showed that ARFID consumed fewer kcal overall (M=312.99 $\pm$ 89.95) and fewer grams of protein specifically (M=14.11 $\pm$ 4.47) compared to both AN (kcal: M=388.77 $\pm$ 60.54; protein: M=17.55 $\pm$ 2.71) and HC (kcal: M=376.10 $\pm$ 56.67; protein: M=16.96 $\pm$ 2.69),  $F(2,71)=5.55$ ,  $p=.006$  and  $F(2,71)=5.20$ ,  $p=.008$ , respectively. AN subjects did not significantly differ from HC for kcal and proteins consumed. There were no significant differences among groups in fat and CHO consumption. Although a preference for carbohydrates is often described as a hallmark feature of ARFID, our results suggest that, at least in low-weight individuals, this relative over-consumption of carbohydrates may reflect an absolute under-consumption of protein. Further research is needed to identify mechanisms driving differences in caloric intake between the low-weight eating disorders. Clinicians should consider tailoring treatment to emphasize increasing protein consumption as part of weight restoration in low-weight ARFID.

*Learning Objectives:*

- ▶ Identify the differences in caloric and macronutrient intake among individuals with low-weight eating disorders and healthy controls.
- ▶ Illustrate how eating pathology in individuals with ARFID may translate in a research setting where their preferred foods may not be offered.
- ▶ Apply findings to clinical settings where meal plans can be tailored for weight restoration in low-weight ARFID.

**P2.5.2**  
**Descriptive Study of Avoidant-Restrictive Food Intake Disorder (ARFID): Symptoms and Comorbidities in Children Presenting to a Specialized Eating Disorder Clinic**

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Although Avoidant-Restrictive Food Intake Disorder (ARFID) was officially added to the DSM-5 in 2013, there remains a lack of recent empirical data characterizing the clinical correlates of the disorder. The current investigation aimed to provide an updated clinical description of the ARFID diagnosis from a cohort of patients with ARFID (N = 22) that presented to a specialized child eating disorder treatment setting from 2014 to 2017. Youth (54.5% male) had a mean age of 10.23 (SD = 2.37, range = 7-14) and, at presentation to the clinic, were around 85% of their ideal body weight. As per parent report at intake, 32% of the sample reported onset of feeding difficulties in infancy (i.e., before 36 months of age), whereas 68% reported onset of feeding problems in childhood. Fifty percent of the patients (ns = 11) reported significant fears of choking, vomiting, or contamination, as well as specific taste and textual aversions, 31.8% (ns = 7) reported significant somatic complaints that had functional relation to eating behaviors and a history of low hunger cues. Forty-five percent (n = 10) of the sample had medical comorbidities, including failure to thrive, functional gastrointestinal concerns, and Crohn's disease. Related to psychiatric comorbidities, 32% of the sample (n = 7) was diagnosed with Attention-Deficit/Hyperactivity Disorder (ADHD), 23% (n = 5) were diagnosed with Generalized Anxiety Disorder, 14% (n = 3) were diagnosed with Unspecified Anxiety Disorders, and 9% (n = 2) were diagnosed with Obsessive-Compulsive Disorder. Of note, only one participant (4.5%) in the sample had a diagnosis of Autism Spectrum Disorder (ASD). Although some of the descriptive data provided by our clinical sample supports previous characterizations of ARFID in treatment programs, other findings, including the lower prevalence of ASD and higher prevalence of ADHD, suggest that widespread work better characterizing ARFID over time is crucial to better understanding this disorder.

*Learning Objectives:*

- ▶ Describe the common presenting symptoms in avoidant-restrictive food intake disorder.
- ▶ List common comorbidities in avoidant-restrictive food intake disorder.
- ▶ Discuss differences between the demographic characteristics of this sample and previously reported samples.

**P2.5.3**  
**Just How Different are Avoidant Restrictive Food Intake Disorder Subtypes?**

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ARFID was added to DSM-V to better diagnose patients with feeding and eating disorders who were not well described in previous categories or who fell into the DSM-IV EDNOS diagnosis. The ARFID diagnosis includes a heterogeneous group of patients who share avoidant/restrictive eating behaviors, but may differ in terms of clinical presentation and medical status. The purpose of this study is to describe the prevalence of proposed ARFID subtypes and clinical characteristics of patients presenting for eating disorder treatment at a Children's Hospital. Participants (N=103), ages 7-18, were evaluated at initial intake. The subtypes proposed include: selective eating (44.7% of patients; sensory food aversions, restricted range of foods, neophobia) physical (19.4%; gastrointestinal symptoms, abdominal pain), specific phobia (13.6%; anaphylaxis, vomiting, choking), and food avoidant emotional disorder (FAED) (22.3%; lack of interest in food, emotional problems interfere with appetite and eating). Differences among subtypes were compared using chi-square test or Fisher exact for categorical variables and analysis of variance for quantitative variables. Post hoc pairwise comparisons between groups were also performed. Subtypes differed on BMI z-score (-0.8 for specific phobia vs. -2.1 for FAED,  $P=0.0047$ ) and %EBW (92.3 for specific phobia vs. 80.8 for FAED,  $P=0.0042$ ). The groups differed on rates of inpatient admission (4.4% for selective eating vs. 26.1% for FAED,  $P=0.0139$ ), comorbid diagnoses of depression (13.0% for selective eating vs. 43.5% for FAED,  $P=0.0072$ ), ADHD (28.3% of selective eating vs. 0% of specific phobias,  $P=0.0268$ ), and scores on measures of anxiety (BAI=6.8 for physical vs. 18.5 for specific phobia,  $P=0.0329$ ) and self-esteem (RSE=23.3 for physical vs. 17.9 for FAED,  $P=0.0141$ ). Results highlight significant differences in presentation within the ARFID diagnosis and have implications for tailoring treatment for these patients based on ARFID subtype.

#### *Learning Objectives:*

- 1 Describe different clinical presentation of patients with ARFID.
- 2 Understand the differences in psychological symptoms, comorbid diagnoses, and medical presentation of different ARFID subtypes.
- 3 Better understand special considerations and how to tailor treatment for specific ARFID subtypes.

## P2.5.4

### Features of Avoidant Restrictive Food Intake Disorder in an Online Sample of Children

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Avoidant Restrictive Food Intake (ARFID) captures individuals with insufficient food intake or dietary quality not captured by anorexia or bulimia nervosa. This study aims to describe and compare features of ARFID to identify salient clinical characteristics that may aid treatment development. The study sample includes parents (N=469) who responded to an online survey of fear of trying new foods in children aged 3-12. Survey responses were used to create an ARFID classification and look at associations among three domains: (1) impairing consequences of the disorder (being underweight, needing nutritional supplements/ enteral feeding, experiencing psychosocial distress), (2) hypothesized motivations for food avoidance (sensory sensitivity to food, traumatic experience with food, indifference to food) and (3) features associated with selective eating (family history of selective eating, food allergies, gastrointestinal issues, birth complications, developmental delay, autism spectrum disorder etc.). Of those classified with ARFID, 20% were underweight, 52% required nutritional supplements and 78% had psychosocial distress. Further, 94% had sensory sensitivities to food, 60% had traumatic experiences with food, and 65% had indifference to food. Chi-square tests of independence and binomial logistic regressions were conducted. Results indicate significant relationships between ARFID classification and developmental delay ( $p=.027$ ), food related trauma ( $p=.013$ ) and difficulty introducing solid foods ( $p=.035$ ). Other significant associations were: (1) food allergies and nutritional deficiency, and low weight; (2) difficulty introducing foods and weight, nutritional deficiency, psychosocial distress, food related trauma, and indifference to food; (3) autism spectrum disorder and experiencing both nutritional deficiency and psychosocial distress; (4) birth complications and indifference to food; and (5) family history and experiencing both low weight and psychosocial distress. A better understanding of potential subgroups of ARFID, motivations for food avoidance and associated features may help suggest avenues for treatment development..

*Learning Objectives:*

- ▶ Describe features of Avoidant Restrictive Food Intake Disorder (ARFID).
- ▶ Identify (1) the impairing consequences of Avoidant Restrictive Food Intake Disorder (ARFID), (2) hypothesized motivations for food avoidance, and (3) associated features of selective eating.
- ▶ Discuss associations among the impairing consequences of, the hypothesized motivations for food avoidance and associated features of selective eating as they relate to a classification of Avoidant Restrictive Food Intake Disorder (ARFID).

### P2.5.5 Efficacy of a Family-Based Partial Hospital Treatment Program for Avoidant-Restrictive Food Intake Disorder: A Pilot Study

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Avoidant-Restrictive Food Intake Disorder (ARFID) is a new eating disorder diagnosis included in the DSM-5. Currently, there is no evidence-based treatment for ARFID, and the existing treatment literature is comprised of case reports and single-case designs. The current pilot study evaluated the effectiveness of a partial-hospitalization treatment program for ARFID in children and young adolescents (N = 22). The treatment program is based on a family-based therapy model, with family-based therapy considered the primary treatment component. Parents are placed in charge of managing refeeding and attend weekly family therapy and multifamily therapy groups as part of the treatment program. In addition to family-based therapy, adjunctive treatments include nutritional rehabilitation, psychiatric management, group therapy, cognitive-behavioral therapy with exposure and response prevention, and parent management training. Data was collected on each patient's weight (operationalized as percent of ideal body weight) and average meal completion at intake and discharge from the clinic. Additionally, a subset of parents (n = 11) completed self-report assessments of parent and family stress and their child's internalizing and externalizing symptoms at discharge, which allowed us to evaluate changes in these constructs over the course of treatment. Results from paired sample t-tests indicated statistically significant increases in weight ( $d = -1.87, p = .000$ ), as well as meal completion ( $d = -.49, p = .032$ ), over the course of treatment. Parents that completed self-report assessments at discharge reported significant decreases in parent anxiety ( $d = .77, p = .038$ ) and depression ( $d = .80, p = .018$ ). Finally, parents noted significant decreases in

youth internalizing ( $d = .79, p = .019$ ) and externalizing ( $d = .76, p = .023$ ) psychopathology. Overall, pilot data from our clinic indicate that existing evidence-based approaches for the treatment of adolescent anorexia nervosa (e.g., family-based treatment and nutritional support) may also be useful in targeting food refusal and weight loss associated with ARFID, particularly when supplemented by behavioral interventions, such as exposure and parent management training.

*Learning Objectives:*

- ▶ Describe the components of a family-based partial hospital treatment program for avoidant-restrictive food intake disorder
- ▶ Explain the rationale for applying current evidence-based treatments for anorexia nervosa to the treatment of avoidant-restrictive food intake disorder.
- ▶ Identify primary treatment outcomes at discharge from a partial hospital treatment program for avoidant-restrictive food intake disorder.

### P2.5.6 Long-Term Follow-Up Study of Avoidant Restrictive Food Intake Disorder Compared with Childhood-Onset Anorexia Nervosa: Psychiatric and Occupational Outcome

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There is limited knowledge of the long-term outcome of Avoidant Restrictive Food Intake Disorder (ARFID) as well as Childhood-Onset Anorexia Nervosa (AN). This study investigates a low-weight sample of ARFID and Childhood-AN, with emphasis on psychiatric, psychosocial and occupational outcome. The sample consists of 56 consecutive patients treated at a regional eating disorders center. Mean age at inclusion was 11 years (all < 13). The mean Follow-Up (FU) period was 15, 8 years. At treatment start, the sample consisted of two groups: the AN-group (32 patients, 82 EBW% (Expected Body Weight %)), and the ARFID-group (24 patients, 83 EBW %). For the ARFID-group, the diagnosis was made retrospectively based on DSM-5 criteria. At FU, patients completed a semi-structured and SCID-interview. Weight and height were recorded. The Morgan-Russel Outcome Assessment Schedule and self-report questionnaires including SCL-90 and EDE-Q were administered. At FU, 16.1% had a remaining eating disorder, 28.5% had another diagnosis and 55, 4% had no diagnosis. With respect to group at treatment start, at FU the levels of morbidity were comparable between the ARFID and AN-group. Also, there were no differences between the ARFID and AN-group at FU in regard to BMI, SCL-90 and EDE-Q. The Morgan

Russel Outcome Schedule showed very good results for patients with no diagnosis at FU, and markedly low results, in the 17-24 percentile, for those with remaining eating disorder. Interestingly, Morgan Russell indicated poorer social functioning for the ARFID –group compared with the AN-group (Morgan Russell Item E1-4). Moreover, occupational outcome was worse in the ARFID-group. Whereas the AN-group had an unemployment rate of 5%, the ARFID-group had an unemployment rate of 16%. In conclusion, low-weight ARFID may have a prognosis as poor as childhood-onset AN.

*Learning Objectives:*

- ▶ Describe the long-term outcome of Avoidant Restrictive Food Intake Disorder (ARFID).
- ▶ Describe the long-term outcome of childhood-onset Anorexia Nervosa.
- ▶ Compare differences and similarities in outcome and prognosis for ARFID and Childhood-AN.

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## THURSDAY, APRIL 19

4:15 PM - 5:45 PM

### EDUCATIONAL SESSION II SIG Panel

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#### SP2.1

#### How to Choose Your Yellow Brick Road: Exploring Diverse Career Paths and Using Personal Values to Inform Career Trajectories

**Presented by:**

The AED Student and New Investigator SIGs

**Kathryn Coniglio, BA<sup>1</sup>**

**Annie Haynos, PhD<sup>2</sup>**

**Helen Murray, BA<sup>3</sup>**

**Linsey Utzinger, PsyD<sup>4</sup>**

**Giovanni Castellini, MD, PhD<sup>5</sup>**

**Daniel Le Grange, PhD, FAED, FAED<sup>6</sup>**

**Renee Rienecke, PhD, FAED<sup>7</sup>**

**Marian Tanofsky-Kraff, PhD, FAED<sup>8</sup>**

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Given the multitude of paths available within the field of eating disorders, many individuals early in their career have difficulty deciding which type of career will most ideally suit them, and what steps are necessary to pursue their desired career. This workshop will allow students, trainees, and new investigators in the eating disorders field the opportunity to: 1) learn from leaders in the field about different career options; 2) think critically about what trajectory best corresponds with their interests, strengths, and values; and 3) determine what steps are necessary to pursue various career paths. Indeed, the idea for the workshop came out of a request from Student and New Investigator SIG members to learn more about different career paths to consider relevant advantages and disadvantages of various career directions. Panelists represent a diverse range of career paths (e.g., clinical, research in arts and sciences, research in a medical school), career development stages (i.e., both early career and well-established), and career and training location (i.e., panelists have trained and worked both within the United States and internationally). Panelists will first give a brief 10-minute introduction of their position and career path, including advantages and disadvantages of the position, and the ways in which their job corresponds with their personal strengths and values. Attendees will then participate in a panelist-facilitated, small group self-reflection activity designed to use their interests, strengths, and work and life values to guide decisions about their career path. The workshop will conclude with a question and answer session with panelists in a larger group format about the rewards and challenges of specific careers, and the steps required to pursue such career paths.

*Learning Objectives:*

- ▶ Identify the range of possible career paths available, based on their desired level of training and career goals.
- ▶ Evaluate their own strengths and personal values and how these may inform their desired career path.
- ▶ Understand steps necessary to pursue different career paths.



# POSTER SESSION I

## & OPENING RECEPTION

Sponsored by:

International Journal of  
**EATING  
DISORDERS**

**THURSDAY, APRIL 19**

5:45 PM - 7:15 PM

*Grand Ballroom, Seventh Floor*

### T-001

#### **Obesity is Associated with Increased Impairment, Depressive Symptoms, and Anxiety among College Women with Eating Disorders**

Katherine Balantekin, PhD, RD<sup>1</sup>  
Ellen Fitzsimmons-Craft, PhD<sup>2</sup>  
Andrea Kass, PhD<sup>3</sup>  
Dawn Eichen, PhD<sup>4</sup>  
Grace Monterubio, BA<sup>5</sup>  
Shiri Sadeh-Sharvit, PhD<sup>6</sup>  
Neha Goel, BA<sup>7</sup>  
Rachael Flatt, BS<sup>7</sup>  
Anna Karam, MS<sup>2</sup>  
Marie-Laure Firebaugh, LMSW<sup>2</sup>  
Mickey Trockel, MD, PhD<sup>6</sup>  
C. Barr Taylor, MD<sup>6</sup>  
Denise Wilfley, PhD, FAED<sup>2</sup>

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Both eating disorders (EDs) and obesity are associated with negative health consequences, which may be compounded when they present concurrently. This study examines whether weight status, in a sample of college women with EDs, is related to differences in: 1) ED pathology and risk factors (i.e., weight/shape concerns, thin-ideal internalization, global ED pathology); 2) DSM-5 ED diagnosis; 3) ED clinical impairment; and 4) psychiatric co-morbidity (i.e., depressive symptoms, anxiety). Participants included 690 college women who screened positive for a clinical/subclinical ED (other than anorexia nervosa) at 28 U.S. colleges. Body mass index was calculated using self-reported height and weight and converted to weight status [i.e., normal weight (18.5-24.9), overweight (25-29.9), obesity (>30)]; participants classified as underweight (n=7) or with missing weight data (n=6) were excluded due to the small sample

size. In this sample, 60.9% had normal weight, 21.7% had overweight, and 17.4% had obesity. Weight/shape concerns and thin-ideal internalization differed by weight status ( $p < .001$ ); those with obesity endorsed higher levels than those with normal weight. There were no differences in global ED pathology ( $p = .203$ ). ED diagnosis also differed by weight status ( $p < .001$ ); those with obesity were more likely to meet criteria for clinical or subclinical binge eating disorder than those with overweight or normal weight. ED clinical impairment, depressive symptoms, and anxiety differed by weight status ( $p \leq .03$ ); those with obesity endorsed greater impairment and higher levels of depressive symptoms and anxiety than those with normal weight. These findings reinforce that EDs affect individuals across the weight spectrum, and indicate that obesity in individuals with EDs is associated with heightened ED risk factors, binge eating, impairment, and comorbid psychopathology. These findings highlight the need for treatments that address both conditions among this population.

#### *Learning Objectives:*

- ▶ Demonstrate an understanding of how eating disorders affect individuals across the weight spectrum.
- ▶ Demonstrate an understanding of differences in eating disorder risk factors, clinical impairment, and comorbid psychopathology across different weight statuses.
- ▶ Acquire an understanding of the need for treatments that target both weight and ED pathology among individuals with co-morbid obesity and EDs.

### T-002

#### **Does Sleep Deprivation Affect Food Intake at Breakfast in Subjects Reporting Binge Eating Symptoms and Emotional Eating?**

Silvia Cerolini, PhD student<sup>1</sup>  
Rachel F Rodgers, PhD/ ICED member<sup>2</sup>  
Giulia Crescentini, MSc<sup>3</sup>  
Valeria Bacaro, MSc<sup>3</sup>  
Caterina Lombardo, PhD<sup>3</sup>

<sup>1</sup>Sapienza University of Rome, Rome, Italy

<sup>2</sup>Department of Applied Psychology, Northeastern University, Boston, Massachusetts, USA

<sup>3</sup>Department of Psychology, Sapienza University of Rome, Rome, Italy

This study evaluated the effect of partial sleep deprivation on food intake in individuals reporting binge eating

symptoms, controlling for emotional eating. Twenty-eight young adults (Binge Eating Group, N=14; Control Group, N=14; Mean age=23.75±4.03, 21% male) participated in a lab assessment after a night of habitual sleep (HN) and after a night of partial sleep deprivation (DN). Participants were then offered a breakfast buffet, and food intake was unobtrusively measured, including Kcal and macronutrient intake (carbohydrates, fats, protein, fiber). Emotional eating when depressed (EES-D) and BMI were also measured. An electrical portable device (Zeo) was used to objectively control the compliance to the instructions. Findings revealed that the Binge Eating Group presented higher scores of EES-D ( $t=-5.881$ ,  $p<.001$ ) and higher BMIs ( $t=-2.64$ ,  $p=.014$ ) than Control Group. A repeated measures ANCOVA revealed a significant Night\*EES-D interaction on Kcal. Using a median split, a Low EES-D and a High EES-D group were created. A repeated measures ANOVA Night (HN vs. DN)\*Group (Low EES-D vs. High EES-D) revealed a significant Night\*Group interaction ( $F(1,26)=4.42$ ,  $p=.045$ ) and a marginal Group effect ( $F(1,26)=3.25$ ,  $p=.083$ ) on Kcal, such that the Low EES-D group ate less after DN than after the HN ( $t=2.66$ ,  $p=.02$ ). The same pattern of results was found on carbohydrates (Night\*Group interaction:  $F(1,26)=5.96$ ,  $p=.022$ ; Group:  $F(1,26)=4.31$ ,  $p=.048$ ). After the DN, the Low EES-D group consumed fewer carbohydrates compared to the HN ( $t=2.77$ ,  $p=.016$ ). Moreover, after the HN, the Low EES-D group consumed more carbohydrates compared to High EES-D group ( $t=2.70$ ,  $p=.015$ ). Low EES-D group consumed overall more carbohydrates compared to High EES-D group. A main effect of Night on fibre intake ( $F(1,26)=7.12$ ,  $p=.013$ ) revealed that both groups consumed less fibre after the DN compared to after the HN. These findings suggest that emotional eating may moderate the effects of sleep deprivation on food intake regardless of binge eating status. Further research in ecologically valid settings is warranted to clarify these relationships.

#### Learning Objectives:

- ▶ To describe the relationship between sleep deprivation and food intake.
- ▶ To understand the role of emotional eating in the relationship between sleep deprivation and eating.
- ▶ To discuss the role of sleep in the maintenance of eating disorder patterns.

### T-003 - Problematic Eating Behaviors after Bariatric Surgery: The Mediating Role of Negative Urgency

Eva Conceição, PhD  
Flávia Teixeira, MSc  
Tânia Rodrigues, MSc  
Marta de Lourdes, MSc  
Ana Pinto-Bastos, MSc  
Sofia Ramalho, MSc  
Ana Vaz, PhD  
Paulo Machado, PhD, FAED

University of Minho, Braga, Portugal

Bariatric surgery is the most effective method for the treatment of morbid obesity. However, the development of eating psychopathology and the emergence of problematic eating behaviors (PEBs) have been reported in the literature. This cross-sectional study aimed at characterizing the post-bariatric population in terms of the frequency of PEBs over time and at the understanding of the related psychological features. This sample was composed of 155 bariatric patients which responded to self-report instruments destined to assess eating psychopathology, PEBs, anxiety, depression and stress and impulsive behavior. Results showed that grazing, binge eating, concerns about body weight and shape, and negative urgency are significantly more frequent at 24 months after bariatric surgery (when compared to earlier follow-up periods). Correlational analyses showed that eating psychopathology and PEBs were significantly and positively associated with levels of anxiety, depression, stress and negative urgency. This study also reinforces the mediating role of negative urgency in the relationship between time elapsed since surgery and psychological distress, and problematic eating behaviors, accounting for a total of 32.3% and 27.2% of its variance, respectively. The results suggest a growing trend of PEBs and levels of impulsivity being reported by bariatric patients over time. Given the established evidence that supports its impact on weight variability, early identification of PEBs and of patients with a tendency to act impulsively in situations of negative emotionality should be a central concern in the follow-up of the bariatric population.

#### Learning Objectives:

- ▶ To identify different problematic eating behaviors presented post bariatric surgery.
- ▶ To consider the time since surgery as a key variable in the assessment of problematic eating behaviors post bariatric surgery.
- ▶ To consider the tendency for impulsive behaviors under negative emotions as a mediator for the presence of problematic eating behaviors.

### T-004 Emotional Eating in Obesity: Who Experiences the Benefits of Treatment?

Alexandra Convertino, BS  
Evan Forman, PhD  
Meghan Butryn, PhD

Drexel University, Philadelphia, PA, USA

Emotional eating (EE), defined as the tendency to overeat in response to negative emotions, is estimated to affect about 60% of overweight and obese adults, and often induces guilt or shame in sufferers. In addition, participants with EE typically experience poorer weight

loss outcomes in behavioral weight loss (BWL) programs. There is notable variability in the extent to which emotional eating improves during BWL and greater improvements are correlated with increased weight loss. Typically, participants who are white, older, and male are more successful in treatment; change in EE might be one explanation for these trends. The aims of this study are to 1) investigate change in EE between baseline and 6 months as a predictor weight loss outcome and 2) explore race, gender, and age for differences in EE change. Overweight and obese adults (n=283) were enrolled a 12-month BWL program with a 12-month follow-up period. EE change (as measured by the Three-Factor Eating Questionnaire) between baseline and 6 months was associated with weight loss at 12, 18, and 24 months in a simple linear regression ( $p < .001$  at each timepoint); greater reduction in EE predicted greater weight loss. In examining demographic groups, African American (AA) participants were found to experience significantly smaller reductions in EE in an independent-sample t-test ( $p = .037$ ). A multiple regression model was tested to investigate if the association between gender and EE depended on age. Results indicated that men experienced a greater reduction in EE than women ( $p = .002$ ). The interaction between age and gender was also significant ( $p = .004$ ), such that young men experienced significantly greater decreases in EE compared to young women; these differences disappear with greater age. These results suggest that EE in young women and AA participants is not adequately being targeted by current treatments. Future studies should develop interventions specifically targeting EE in these populations.

*Learning Objectives:*

- 1 Define emotional eating and describe its incidence in overweight and obese adults.
- 2 Describe how emotional eating affects weight loss outcomes.
- 3 Identify which demographic groups are most prone to emotional eating.

### T-005

#### Perceived Health-related Quality of Life in Obese Patients at Risk and Non-risk for Eating Disorder.

Jesica Custodio, CPsychol<sup>1</sup>  
 Luciana Elizathe, CPsychol - PhD<sup>1</sup>  
 Brenda Murawski, CPsychol – PhD<sup>1</sup>  
 Guillermina Rutzstein, CPsychol - PhD – FAED<sup>2</sup>

<sup>1</sup>Facultad de Psicología. Universidad de Buenos Aires. Conicet, Ciudad Autónoma de Buenos Aires, Argentina

<sup>2</sup>Facultad de Psicología, Universidad de Buenos Aires, Ciudad Autónoma de Buenos Aires, Argentina

Obesity is a chronic disease whose prevalence has increased considerably in the world. It is associated to a physical and psychological impairment that impacts

negatively on the quality of life of the suffering people. At the same time, one of the most common complications in the treatment of obesity is that it co-exists with eating disorders (ED). The objective of this study was to compare perceived health-related quality of life in obese patients at risk and non-risk for ED. The sample was conformed by 65 adult obese patients in treatment for this disease: 27 women at risk for ED and 38 women at non-risk for ED. Participants filled out the RAND-26 Item Health Survey. This self-administered questionnaire assesses the perceived quality of life and is based on a bi-dimensional model of health: physical and mental. The results showed statistically significant differences between the two groups in relation to overall quality of life [ $t(63) = 2.73, p = .008$ ] and the mental component [ $t(63) = 3.39, p = .001$ ]. The obese women at risk for ED presented the lowest scores in both cases. No significant differences by group were found in the physical component [ $t(63) = 1.36, p = .179$ ]. In the same line of several epidemiological studies, it can be concluded that obese patients at risk for ED perceive a worse quality of life compared to those at non-risk. This accounts for the importance of performing not only a therapeutic approach to obesity but also preventive approaches aimed at avoiding the development of ED.

*Learning Objectives:*

- 1 Describe the presence of risk of eating disorders in female obese adults from Buenos Aires.
- 2 Assess the degree of perceived quality of life in female obese adults at risk and non-risk for eating disorder.
- 3 Discuss the role of quality of life and risk of eating disorder in obesity treatment.

### T-006

#### Traumatic Events in Patients with an Eating Disorder

Gry Kjaersdam Telléus, PhD, FAED, PCAC<sup>1,2</sup>  
 Maria Rodrigo Domingo, PhD<sup>2</sup>  
 Marlene Lauritsen, DMSc<sup>1</sup>

<sup>1</sup>Research Unit for Child and Adolescent Psychiatry, Aalborg University Hospital, Aalborg, Denmark

<sup>2</sup>Unit for Psychiatric Research, Aalborg University Hospital, Aalborg, Denmark

The purpose of this study was to assess the association between eating disorders and traumatic life events and to detect if the nature of the traumatic events and number of events were associated with any specific sub-type and severity of the eating disorder. All patients included in this cross-sectional study were newly referred and assessed according to a standardized diagnostic assessment battery, including EDE-16, and diagnosis was in accordance with DSM-5. The presence of traumatic life events (e.g. bullying, loss, negative sexual experience/sexual assault, and accident), both the nature of it and number of events, were assessed through an interview

with the patient. Finally, other relevant information on e.g. somatic condition was obtained. A total of 339 patients (95.6% female and 4.4% male) were included. Mean age at diagnosis was 16.86 years [11.15; 34.04] while mean duration of illness at time of diagnosis was 1.72 years [0.04; 22.32]. About 67% of the patients had experienced at least one traumatic life event. Among the ones classified, bullying was the most common (32%), followed by loss (24%), negative sexual experience/sexual assault (19%), accident(s) (11%), and loss of a parent (5%). The maximum reported number of traumatic events was five. Although for most types of traumatic events, the differences between groups were not statistically significant, patients with anorexia nervosa seemed to experience less traumatic events except for bullying. The sexual traumatic events were rated into four categories of severity. The difference in sexual traumatic events between diagnostic groups was statistically significant. Thus, patients with anorexia nervosa reported significantly less sexual traumatic events than patients with anorexia nervosa binge-purge, bulimia nervosa, and atypical bulimia nervosa.

#### *Learning Objectives:*

- ▶ Following the poster session, participants will have gained increased knowledge of patients' experience of traumatic life events.
- ▶ Participants will have gained increased knowledge of what types of traumatic events the patients experienced.
- ▶ Following the poster session, participants will have increased knowledge of the relationship between traumatic life events and differences in eating disorder sub types and the severity of the eating disorder.

### **T-007** **Nutritional Treatment for BED - AMBULIM's Experience at GRECCO**

**Alessandra Fabbri, Clinical Nutritionist**  
**Tamiris Gaeta, Nutritionist**  
**Fernanda Pisciolaro, Nutritionist**  
**Fábio Salzano, Physician**  
**Táki Cordás, Physician**

Institute of Psychiatry, University of São Paulo (USP), São Paulo, SP, Brazil

The prevalence of BED (Binge Eating Disorders) among young adults varies from 1.6 to 0.8%, this data can be even greater if we analyze the individuals who seek treatment to lose weight, its prevalence is highly associated with obesity. One of the main outpatient clinics of the Eating Disorders Program of the Institute of Psychiatry of the Hospital das Clínicas of the Faculty of Medicine of the University of São Paulo (AMBULIM - IPq-HC-FMUSP). AMBULIM the GRECCO (Compulsive Eating Group) since 2004, serving more than 120 patients. For the nutrition team, it was an important challenge to treat

these patients, because what is generally recommended for the treatment of obesity (low calorie diets, reduction of sweets and sugars, preferring whole foods, etc.) is contraindicated by the main guidelines in the treatment for eating disorders. Patients with BED need to reduce dietary restraint to establish that eating normally and flexible eating pattern that will not result in loss of control, which will help reduce binge eating as is well documented. The treatment performed at the outpatient clinic is multidisciplinary specialized in eating disorder, with nutritional intervention, psychological and medical, and physical educator. Based not only on nutritional education but also on cognitive behavioral therapy techniques, motivational interviewing, intuitive eating, mindfulness our current intervention possessed 28 weeks. Currently, there are no protocols for nutritional treatment of BED, so the purpose of this poster is to describe the experience experienced by the GRECCO nutrition team at AMBULIM.

#### *Learning Objectives:*

- ▶ Describe the nutritional treatment for compulsion performed in Brazil.
- ▶ Present compulsive eating outpatient clinic in Brazil.
- ▶ Discuss nutritional treatment in binge eating.

### **T-008** **Maladaptive Hypothyroidism, or The Famine Response, 1 and 2 Years Post-Bariatric Surgery: TSH not the Gold Standard For Detection**

**Natasha Fowler, BS<sup>1</sup>**  
**Natasha Fowler, BS<sup>1</sup>**  
**Sarah Adler, PsyD<sup>2</sup>**  
**Thomas Najarian, MD<sup>3</sup>**  
**Carol Rowsemitt, PhD, RN, FNP<sup>4</sup>**  
**Debra Safer, MD<sup>2</sup>**

<sup>1</sup>Michigan State University, East Lansing, MI, USA

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At least 30% of bariatric patients experience unsuccessful weight loss outcomes post-op. Undetected hypothyroidism (HT) due to insufficient food intake and rapid weight loss pre- and post-op may influence this untoward outcome. TSH, the current ideal for diagnosing HT may not be an adequate measure of this type of HT, which is part of the famine response. In the famine response, the hypothalamus accepts lowered T3 levels as normal, in an attempt to increase survival in food scarcity. Instead, Free T3 pg/mL (FT3) and the FT3 to reverse T3 ng/dL (rT3) ratio is used. This study examined changes in thyroid hormones and HT symptoms early ( $\leq$  3 months) post-op to examine the prevalence of famine response HT 1 year after surgery. Thyroid hormone levels (i.e., TSH, FT4, FT3, and rT3) and patient self-reported

HT symptoms were measured in bariatric patients (n=22) pre-, early post-, and 1 year post-op. HT was defined as endorsement of  $\geq 1$  HT symptom and either FT3:rT3  $< .20$  or FT3  $< 3.25$  pg/mL. Patients were 96% female,  $44.0 \pm 16.1$  years old, with a mean BMI at surgery of  $45.5 \pm 7.80$  kg/m<sup>2</sup>. Half received gastric-bypass, half gastric sleeve. At baseline 73.9% met criteria for HT, 82.6% met at early post-op, and 64.3% met criteria at 1 year post-op, despite normal FT3, rT3, and TSH levels. Paired sample t-tests revealed significant decreases from pre to early post-op in weight, FT3, FT3:rT3 and significant increases in HT symptoms and FT4 (all  $p < .05$ ). No significant differences were observed for TSH. Regression models revealed that changes in FT3, FT3:rT3, and HT symptoms indicate that the presence of maladaptive hypothyroidism early post-op significantly predicts poor weight loss outcomes 1-2 years post op. TSH showed no significant influences on weight loss. This supports the idea that TSH, unlike FT3, FT3:rT3, and HT symptoms, is not a sensitive marker of developing HT and that early post-op labs and HT symptoms predict later reduced weight loss due to the famine response.

*Learning Objectives:*

- ▶ Name the percentage of bariatric patients who experience unsuccessful weight loss outcomes post-op.
- ▶ Identify hormonal factors that influence weight loss in bariatric patients.
- ▶ Understand why TSH is ineffective in detecting famine response hypothyroidism.

### **T-009** **Imagery and Obesity: The Role of Imagery in Eating Pathology in Overweight and Obese Individuals**

**Iris Janssen, MSc**  
**Sandra Mulkens, Assistant Professor, PhD**  
**Marleen Rijkeboer, Professor, PhD**  
**Marisol Voncken, Assistant Professor, PhD**  
**Anita Jansen, Professor, PhD**

Maastricht University, Maastricht, Netherlands

The purpose of this study is to investigate the occurrence and content of spontaneous imagery in an overweight/obese sample in relation to their eating pathology. Moreover, the function of imagery in maintenance of disordered eating is investigated. The study is conducted in a sample of overweight and obese participants (BMI $>28$ ) as well as a healthy control group. An imagery interview is used in which participants are asked to recall positive and negative spontaneous imagery. The thematic content is analyzed qualitatively to assess common themes. These reported images are also explored on sensory aspects, such as vividness, and emotional valence, such as distress. Additionally, the effects of images are investigated, such as distressing images leading to a need to attenuate negative affect by food

consumption. The cognitive meaning of the images in terms of core beliefs are also explored. Lastly, the relation of the image to memories is detailed. This study is not merely exploratory in nature. The Maastricht CBT model for eating pathology is used as a framework for imagery and their function within eating pathology, also compared to traditionally used verbal cognitions. The study is nearly moving into the testing phase but participant recruitment rates are unpredictable. Therefore, study results cannot be provided at this point. However, the study design and hypotheses are highly interesting, potentially with preliminary results.

*Learning Objectives:*

- ▶ Learn about the function of imagery within obesity related eating pathology (binge eating and overeating).
- ▶ Detail the thematic content of positive and negative spontaneous imagery.
- ▶ The place of imagery, aside from verbal cognitions, in a CBT model for eating pathology.

### **T-010** **Defining Addictive-Like Eating: A Qualitative Study on the Perceptions and Experiences of Treatment-Seeking Men and Women**

**Emilie Lacroix, MSc<sup>1</sup>**  
**Edgar Oliveira, MD<sup>2</sup>**  
**Juliana Saldanha de Castro, RPsych<sup>2</sup>**  
**Janice Rico Cabral, RPsych<sup>2</sup>**  
**Hermano Tavares, MD, PhD<sup>2</sup>**  
**Kristin von Ranson, PhD, RPsych<sup>1</sup>**

<sup>1</sup>University of Calgary, Calgary, Canada

<sup>2</sup>University of Sao Paulo, Sao Paulo, Brazil

Addictive-like eating has been the subject of much debate, and no consensus exists on a definition of this construct. To reach a valid and clinically useful definition of addiction-like eating, there is a need for qualitative research to help generate hypotheses and provide context for individuals' experiences. This is the first known qualitative study on addictive-like eating to be conducted in South America. We explored how Brazilian men and women seeking treatment for addictive-like eating defined and experienced this eating pattern. Semi-structured interviews were conducted with 7 men and 8 women (M age = 46.6, M BMI = 35.43 kg/m<sup>2</sup>, M YFAS symptom count = 9.13) at a large psychiatric institute. Thematic analysis identified three saturated, overarching themes which encompassed participants' conceptualizations of Characteristics, Causal Factors, and Consequences of addictive-like eating. When asked to define addictive-like eating, all participants described a lack of control, leading to consumption of excessive quantities of food. Eating was characterized as an emotion regulation strategy which provided immediate relief from negative affect, but which was ineffective in the long term. Participants

identified emotional, interpersonal, occupational, and health-related impairments as the most concerning consequences of addictive-like eating and resulting weight gain, and reported repeated attempts to reduce eating. Existing questionnaires designed to assess addictive-like eating may not adequately capture individual experiences with this pattern, particularly regarding lack of control and emotional eating. Additional research is needed to determine whether the construct of addictive-like eating has incremental validity beyond the diagnosis of binge-eating disorder and the construct of emotional eating.

*Learning Objectives:*

- ▶ Understand the importance of defining the construct of addictive-like eating.
- ▶ Recognize characteristics of addictive-like eating.
- ▶ Apply this knowledge when considering assessment and treatment of addictive-like eating.

### **T-011** **Exploring Overvaluation of Weight and Shape in Treatment-Seeking Individuals with Binge Eating Disorder**

**Michele Laliberte, PhD**  
**Mary Boulos, HBSc**  
**Kristen Lucibello, MSc Candidate, HBSc**  
**Iris Balodis, PhD**

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Binge eating disorder (BED) is the only major eating disorder diagnosis that does not include a body image disturbance criterion. However, there is a growing body of evidence suggesting that overvaluation of weight and shape may be a useful severity specifier for BED, with studies indicating that individuals who endorse overvaluation exhibit higher levels of depression, lower self-esteem, more severe eating psychopathology and poorer treatment outcomes. Importantly, previous research has primarily been in the community, or has recruited individuals with BED in a bariatric setting. In this context 60% of patients were identified as overvaluing weight and shape. The purpose of this study was to examine overvaluation and its associated characteristics in a clinical eating disorder treatment setting where patients are self-referred. Data was retrospectively reviewed for 53 patients with BED from 2014-2016. Information on overvaluation and diagnostic features were collected in a semi-structured interview at assessment. Self-report measures were collected prior to the initiation of treatment, and included the Beck Depression Inventory, Rosenberg measure of Self-Esteem and select scales of the Eating Disorder Inventory - 3. In a clinical setting where patients are self-referred, 86.8% (n=46) endorsed moderate or severe overvaluation of weight and shape. As in previous research, these patients reported significantly worse depression and self-esteem than patients who did not

endorse overvaluation of weight and shape. They also reported significantly greater Drive for Thinness and Interoceptive Deficits, but reported no differences in Emotion Dysregulation. Semi-structured interview also suggests that patients who overvalue weight and shape are significantly more likely to endorse certain features of binge eating. These findings make a novel contribution to the literature suggesting that overvaluation of weight and shape may be a meaningful severity specifier for BED.

*Learning Objectives:*

- ▶ Describe what is known about over-valuation of weight and shape for individuals with binge eating disorder.
- ▶ Assess the rates of over-valuation of weight and shape in a sample of patients with binge eating disorder who have self-referred for eating disorder treatment.
- ▶ Describe the relationship between overvaluation of weight and shape with both symptoms of binge eating and other measures of clinical functioning.

### **T-012** **Eating Disorder Symptoms and Perfectionism in a Binge Eating Sample**

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Perfectionism is known to play a causal and maintaining role in eating disorders. However, research on its role in binge-eating disorder is still sparse. The goal of this study is to examine the difference in eating disorder symptoms among different groups of perfectionism which were created on the basis of two main factors of perfectionism (perfectionistic strivings and perfectionistic concerns). Participants were 422 women seeking help for eating and body image problems in three different clinics specialized in eating disorders in Quebec, Canada. To be included in the study, participants had to report at least one binge-eating episode in the past 28 days (based on the EDE-Q6). They completed online questionnaires assessing perfectionism and eating disorder symptoms (French version of Frost-Multidimensional Perfectionism Scale and EDE-Q6). Four groups were created: 1) no-perfectionism (n=70), 2) perfectionistic strivings (n=65), 3) mixed profile (n=191), and 4) perfectionistic concerns (n=96). ANOVA analyzes were performed and results show a significant difference score in restraint ( $F(3, 418)=2,634, p=.049$ ), weight concern ( $F(3, 418)=8,28, p=.000$ ), eating concern ( $F(3, 418)=8,285, p=.000$ ), and shape concern ( $F(3, 418)=12,475, p=.000$ ) across the four perfectionism groups. The global score show also a significant difference ( $F(3, 418)=10,565, p=.000$ ).

Results suggest that the eating disorders symptoms are more important in the mixed profile and perfectionistic concerns group than in the other ones. In addition, the perfectionistic strivings group had higher eating symptoms than the non-perfectionism one. Those results highlight the negative effect of perfectionism strivings and concerns on eating symptoms among women who have binge-eating episodes and question the healthy impact of personal standards and organization on the functioning of those individuals.

*Learning Objectives:*

- ▶ Describe the different perfectionism profiles in binge eating.
- ▶ Demonstrate the impact of the profile of perfectionism on the eating disorder symptoms.
- ▶ Consider the negative impact of perfectionistic striving on individual who present binge eating.

### T-013

#### What Goes Down Must Come Up? Health-related Strategies, Personality Traits and Successful Weight Loss Maintenance

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Obesity is often defined as the epidemic of the 21st century and is a major risk factor for severe, chronic ailments such as heart disease and diabetes. Weight loss is therefore potentially beneficial, but maintaining weight loss is often problematic. Previous research has examined the determinants of weight loss, but not much is known about factors that predict weight loss maintenance. No study, to date, has examined health-related strategies aimed at weight loss maintenance in Israel. The purpose of this study was to examine health-related strategies and personality traits that may predict successful weight loss maintenance. One hundred and twenty-nine participants aged  $34.45 \pm 12.5$  who had undergone weight loss completed online questionnaires assessing weight loss, weight maintenance, health-related strategies, locus of control, self-efficacy, Persistence and Novelty Seeking. Participants were divided into two groups: those who maintained a weight loss of at least 10% of their body weight for over a year and those who did not. No significant between-group differences were observed on health-related strategies. Overall, Israelis reported eating large amounts of fruits and vegetables and eating breakfast every day. However, they also reported infrequent physical activity and irregular daily weighing. People who successfully maintained weight loss were characterized by higher Persistence and self-efficacy than those who did not, and only Persistence positively predicted the use of health-related strategies in both

groups. Persistence and self-efficacy may be protective against weight gain after weight loss. In addition, Persistence appears to be a good predictor of health-related strategies focusing on weight loss maintenance. This strengthens the hypothesis that personality factors not directly related to eating habits may significantly influence weight management. Whereas most obesity interventions target weight loss, future interventions should broaden their focus to include weight loss maintenance as well.

*Learning Objectives:*

- ▶ Following the training, participants will be able to explain health related strategies aimed at maintaining weight loss.
- ▶ Following the training, participants will be able to talk about health risks due to obesity.
- ▶ Following the training, participants will be able describe personality traits related to maintaining weight loss.

### T-014 -Poster Withdrawn

### T-015

#### The Interdependent Nature of Mother/Child Temperament and the Impact on Weight Status

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Extensive literature has found that aspects of temperament such as increased negative affectivity, increased impulsivity, and decreased effortful control are associated with increased weight status in children. In addition, there is extensive research exploring the intergenerational transmission of weight status from parents to their children. However, the current research does not consider the developmental nature and interactional quality of the parent-child dyad and how the match or mismatch between parent and child temperament impacts the weight status for the family. Thus, using the actor-partner interdependence model (APIM), the current study seeks to investigate how parents' and young children's temperament may contribute to each other's weight status in a sample of 220 mother-child dyads. Consistent with past research, it is hypothesized that lower rates of effortful control in addition to higher rates of negative affectivity and impulsivity in both parents and children will predict higher weight status in parents and children respectively. It is also hypothesized that parent temperament will predict child weight status; conversely, child temperament will influence parent weight status. The interaction between parent and child temperament will also be explored in order to determine what combination(s) of parent and child temperament

is the strongest predictor of weight status in the parent, child, or both dyad members. This information may have important implications for clinical preventions and interventions and could lead to modifiable parent and/or child factors that clinicians could use when helping parents to provide a family environment that fosters healthy practices related to weight status issues.

*Learning Objectives:*

- ▶ Describe the combination of parent-child temperament that is the strongest predictor of weight status for parent and child.
- ▶ Understand the importance of the interdependent nature of parent and child temperament and its impact on weight status.
- ▶ Discuss the importance of targeted preventions for childhood obesity.

### **T-016** **Disinhibition Towards Food and Susceptibility to Hunger Mediate the Relationship Between Personality Dimensions and Food Addiction Symptomatology Among Bariatric Candidates**

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The present study aimed to explore the associations between personality dimensions and food addiction (FA) as mediated by eating behaviors among bariatric candidates. Participants (N=146; mean BMI=48.29 kg/m<sup>2</sup>) were recruited at the Quebec Heart and Lung Institute during their preoperative visit. They were invited to complete the Yale Food Addiction Scale (FA), the Temperament and Character Inventory (novelty seeking, harm avoidance, reward dependence, persistence, self-directedness, cooperativeness, and self-transcendence), and the Three-Factor Eating Questionnaire (dietary restraint, disinhibition toward food, and susceptibility to hunger). Multiple mediation analyses were conducted, using FA as the dependent variable, personality dimensions correlated with FA as independent variables, and eating behaviors correlated with both those personality dimensions and FA as possible parallel mediators. The first model tested the association between harm avoidance and FA as mediated by disinhibition toward food and susceptibility to hunger. The overall model was significant (95% CI:0.0082-0.0248). Both disinhibition toward food (95% CI:0.0037-0.0181) and susceptibility to hunger (95% CI:0.0020-0.0129)

were significant mediators. The second model tested the association between self-directedness and FA as mediated by dietary restraint, disinhibition toward food, and susceptibility to hunger. The overall model was significant (95% CI:-0.0386-(-0.0169)). Only disinhibition toward food (95% CI:-0.0270-(-0.0072)) and susceptibility to hunger (95% CI:-0.0188-(-0.0009)) were significant mediators. These findings highlight the presence of a double vulnerability as bariatric candidates showing high harm avoidance and/or low self-directedness may have more difficulties regulating their food consumption and hunger and thus may report more FA symptoms. The presence of such vulnerability could help design better-targeted psychosocial interventions in the bariatric context.

*Learning Objectives:*

- ▶ Better understand what the concept of food addiction entails among individuals suffering from severe obesity and awaiting bariatric surgery.
- ▶ Further explore the aetiological factors underlying food addiction symptomatology.
- ▶ Document the associations between personality dimensions and food addiction symptomatology in greater details, including the mediating role of various eating variables.

### **T-017** **Psychological and Behavioral Aspects Between the Primary and Reoperative Bariatric Groups Six Months After Bariatric Surgery**

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Psychological and behavioral factors impact the results of weight loss after primary surgery, which may also be expected after reoperative bariatric surgery. This study aimed to investigate differences between reoperative and primary bariatric surgery patients regarding eating behavior and related psychological characteristics before surgery and six months after surgery. This longitudinal study compares two groups: a reoperative surgery (R-Group, n=116), and a primary surgery group (P-Group, n=122). Patients were assessed the day before surgery (T0) and six months (T1), after bariatric surgery, during the follow-up consultations at the hospital. Assessment included EDE diagnostic interview and a set of self-report measures assessing eating disorder symptomatology, grazing, depression, anxiety and impulsive behavior. Both groups presented significant improvements in eating behavior and related psychological characteristics from T0 to T1. At the pre-surgical time, no differences were found between both groups. However, R-Group showed higher anxiety symptoms than P-Group (Wald  $\chi^2(1) = 5.31$ ,  $p < .05$ , 95% CI 0.01 – 0.11), as well as dysfunctional

eating behavior (compulsive grazing) (Wald  $2(1) = 4.45$ ,  $p < .05$ , 95% CI 0.06 – 0.52) at six months after surgery. R-Group presents less weight loss ( $t(236) = 5.78$ ,  $p < .001$ ). This study reveals that already six months after surgery, the R-Group may be a risk group who tends to have more eating problems and consequently, compromise a long term weight outcomes. Keywords: bariatric surgery, reoperative bariatric surgery, maladaptive eating behaviors, grazing, anxiety, longitudinal study.

*Learning Objectives:*

- ▶ To describe the variation of problematic eating behaviors and psychological variables at baseline and six months following surgery.
- ▶ To present differences between P-Group and R-Group in problematic eating behaviors and psychological variables, before and after surgery.
- ▶ To understand why the R-Group is a risk group and the need for psychological monitoring.

**T-018**  
**Effect of Initial Cognitive and School Functioning on Weight Loss among Adolescents Receiving Bariatric Surgery**

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In adults, research suggests that higher scores on measures of attention/executive function and memory predicts lower body mass index (BMI; kg/m<sup>2</sup>) in the year after bariatric surgery. Our prior work found that prior to bariatric surgery increased BMI was associated with lower Wechsler Abbreviated Scale of Intelligence (WASI) and poor school outcomes in a sample of adolescents. However, few studies have analyzed whether cognitive or school functioning predicts post-surgery weight loss in adolescents. The current study included adolescents ( $n = 140$ ) who completed vocabulary and matrix reasoning subtests of the WASI to derive an IQ approximate total score and a clinical interview evaluating school functioning (e.g., special education, school refusal, repeating grades, etc.). BMI was measured pre-surgery, and at 1, 3, 6, 12, 18, and 24 months post-surgery. We ran a mixed-effects model of BMI change over time using a robust maximum likelihood estimator and an expectation-maximization

algorithm to handle missing data. Predictors of the random effect of change in BMI over time included WASI total score and a sum of problems with school functioning. Type of surgery was the sole predictor of BMI change over time ( $b = 0.87$ ,  $SE = 0.13$ ,  $p < .001$ , 95% CI [0.60, 1.13]), with adolescents receiving gastric sleeve resections losing more weight than adolescents receiving laparoscopic adjustable gastric banding. A subgroup analysis in 108 participants whose parents also completed a WASI found that parent WASI was associated with baseline BMI ( $b = -0.12$ ,  $SE = 0.05$ ,  $p < .05$ , 95% CI [-0.21, -0.02]), but did not predict BMI change over time. Our findings indicate that although baseline measures of parent and adolescent IQ are associated with initial adolescent BMI, and self-reported school problems occur frequently, these measures are not predictive of treatment outcome for adolescents and should not serve as contraindications for bariatric surgery.

*Learning Objectives:*

- ▶ To understand the relationship between cognitive functioning and weight-loss post-bariatric surgery.
- ▶ To investigate parent factors that may be related to treatment outcome following bariatric surgery in adolescence.
- ▶ To evaluate factors that have implications for candidacy for bariatric surgery.

**T-019**  
**APOLO-Teens, A Web-Based Intervention For Overweight and Obese Adolescents: Early Findings From a Randomized Controlled Trial**

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The aims of this paper are to describe the study protocol for the randomized controlled effectiveness trial of APOLO-Teens and to present a baseline description of the sample. APOLO-Teens is a web-based intervention for adolescents with overweight and obesity delivered by Facebook® and developed to optimize treatment as usual. The study sample included adolescents aged between 13-18 years with BMI Percentile  $\geq 85$  ( $N=211$ ; 57.35% girls; BMI

z-score  $2.41 \pm 0.76$ ) in hospital ambulatory treatment for overweight/obesity. Pearson's and Spearman's correlation coefficients were used to testing correlations between variables. Mann-Whitney test and t test for independent samples were used to analyze differences between boys and girls. Higher values of depression, anxiety, stress, impulsivity and percentage body fat were associated with less health-related quality of life. On the other hand, physical activity out of school was positively correlated with health-related quality of life. When compared to boys, girls demonstrated significantly more psychological distress, as well as higher impulsivity, more grazing behavior, fewer minutes of moderate to vigorous physical activity per day at school and lower scores in the health-related quality of life. This study stressed the necessity of considering gender differences in hospital ambulatory treatment for overweight and obesity, with a special focus on girls who seem to present an overall higher burden.

*Learning Objectives:*

- 】 Characterize the main features regarding biochemical indicators, perceived health status, household food availability, eating behavior, physical activity and overall/psychological functioning of overweight/obese adolescents in hospital ambulatory treatment.
- 】 Analyze differences between boys and girls in hospital ambulatory treatment for overweight/obesity regarding anthropometric data, biochemical indicators, physical activity, eating behavior and psychological function.
- 】 Consider different approaches for obesity treatment and management in adolescence.

## T-020

### Genetic, Cognitive and Psycho-pathological Differences are Evident among Obese Patients According to their Eating Behaviors

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Considering that specific genetic profiles, psychopathological conditions and neurobiological systems underlie human behaviors, the recognition of different phenotypes of obese patients according to eating behaviours should be attempted. The aim is to identify different phenotypes according to eating behaviors in a sample of obese patients. Overall 201 obese outpatients seeking weight reduction treatment underwent: dietetic visit, psychological and psychiatric assessments (eating behavior psychopathology, affective symptoms, impulsivity, personality, decision making and cognitive flexibility) and genotyping for SCL6A2 polymorphisms (5-HTTLPR and sTin2). Eating behaviors (i.e. binge eating, grazing, craving for carbohydrates, emotional eating, sweet eating, night eating, social eating, hyperphagia) were clustered through two-step cluster analysis; the clusters were subsequently compared. Two groups emerged: Cluster 1 contained patients with predominant prandial hyperphagia, social eating, increased frequencies of the long allele and low scores in all tests. Cluster 2 included patients with eating behaviors more emotionally related (emotional eating, grazing, binge eating, night eating, post-dinner eating, craving for carbohydrates), dysfunctional personality traits, neurocognitive impairment and increased frequencies of affective disorders, short (S) allele and the S/S genotype. Dysfunctional eating behaviors beyond binge eating have demonstrated to be useful symptoms to identify two different phenotypes of obese patients in this sample from a comprehensive perspective (genetic, clinical, personality and neuropsychological) in this sample. This clustering overcomes the idea that 'binging' is the most significant altered eating behaviour in identifying obese patients with and without eating disorders. Further, identifying different types of obesity may lead not only to a deeper comprehension of this illness but also to distinct and more accurate treatment pathways.

*Learning Objectives:*

- 】 Recognizing different phenotypes of obese patients starting from their eating behaviors (binge eating, grazing, craving for carbohydrates, emotional eating, sweet eating, night eating, social eating, hyperphagia).
- 】 Internalize that obese patients with predominant grazing, emotional eating, sweet eating, craving, binge eating or night eating have more severe psychological impairment and different 5-HTTLPR genotype than obese whose eating behaviors are characterized by.
- 】 Overcoming the idea that bingeing is the most significant altered eating behavior among obese patients with eating disorders. Learning that assessing eating behaviors can help clinicians easily identify obese patients who could need additional psychologic.

**T-021****Is Loss of Control Eating (LOC) in Childhood Obesity More Related to Weight Status or the Presence of Mental Disorder?**

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Binge eating is common in childhood obesity. However, few children meet DSM-V criteria for binge eating disorder. Against this difficulty, Tanofsky-Kraff, et al. (2008) proposed criteria for a new diagnosis, Loss of control Eating Disorder in Children (LOC) aged 12 and younger. The main aim of this study was examined the association between the presence of loss of control eating, weight status and mental disorders in a childhood obesity sample. The sample made up 170 overweight and obesity children (52% boys and 48% girls), ages ranged between 8 and 12 (M = 10.28, SD = 1.33). Psychiatric disorders were assessed through a standardized diagnostic interview schedule (K-SADS- R) and loss of control eating through a clinical interview based on Tanofsky-Kraff, et al. (2008) criteria. Results show that eighty -eighth obese children obtained a DSM-V diagnosis, most often an anxiety (36%) and depressive disorders (12%). The 40% of the sample present episodes of loss of control eating. LOC and mental disorders were strongly associated ( $r = 0.86$ ,  $p < .01$ ). The weight status is not associated with a DMS-V diagnosis and loss of control eating. In conclusion, it is important to adapt the criteria of the episodes of uncontrolled eating behavior in childhood obesity and its relationship with mental disorders to improve prevention. These findings strengthen the need to further explore the interrelatedness between psychological problems and childhood obesity.

*Learning Objectives:*

- ▶ Describe the cormobidity of loss of control eating episodes and mental disorders in childhood obesity.
- ▶ Asses the differences between a binge eating disorder and loss of control eating disorder in childhood.
- ▶ Analyze the role of anxiety and depressive disorders in the development and maintenance of childhood obesity.

**T-022****Binge Eating Disorder: Clinician Views on Comorbidities, Patient Burden, and Treatment-Related Decisions**

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This qualitative study explored the natural history of disease progression in binge eating disorder (BED), including patterns of treatment, associated comorbidities, and impact on functioning and well-being, to gain a better understanding of the major concepts to be included in outcomes measures for BED studies. We gathered information directly from clinicians about their experience diagnosing and treating BED. Eight clinicians participated in hour-long, semi-structured telephone interviews (primary care physicians [PCPs] and behavioral health [BH] specialists from different regions of the United States). Clinicians described commonly reported symptoms and comorbidities of BED, and how BED symptoms impact patients' overall physical and emotional lives. Clinicians also discussed their treatment approach for BED, including treatment-related decisions. Data were analyzed for emerging themes as well as differences by clinician type. Overall, clinicians described major symptoms and impacts of BED that reflected the DSM-5 criteria, with depression and anxiety as the most common comorbidities. All eight clinicians reported that their preferred treatment method was cognitive behavioral therapy; however, generally, clinicians favored eclectic treatment approaches for BED, using a variety of therapeutic techniques and prescribed medications. Two different approaches to treatment emerged as a function of clinician type. PCPs most often prescribed psychotropic medications first, addressing underlying issues of depression and anxiety as a means to reduce binge behaviors. BH specialists most often reported prescribing medications for decreasing binge episodes and promoting weight loss (e.g., Lisdexamfetamine) and felt the weight loss would effectively alleviate patients' depression. In summary, findings from this qualitative study provide valuable information from a clinician perspective about BED patients' diagnostic and treatment journey.

*Learning Objectives:*

- ▶ Discuss from a clinician perspective about BED patients' diagnostic and treatment journey.
- ▶ Describe commonly reported symptoms and comorbidities of BED, and how BED symptoms impact patients' overall physical and emotional lives.
- ▶ Compare clinician's preferred treatment method and differentiate between approaches to treatment as a function of clinician type.

**T-023****Binge Eating Disorder: Clinician Thoughts on Diagnosis, Remission, and Treatment Success**

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This qualitative study explored clinicians' perspective on diagnosis, disease progression, treatment success, and remission in binge eating disorder (BED). We gathered information directly from clinicians about their experience diagnosing and treating BED. Eight clinicians participated in hour-long, semi-structured telephone interviews (primary care physicians [PCPs] and behavioral health [BH] specialists from different regions of the United States). Clinicians discussed: factors that motivate patients to seek treatment for BED, communication with patients about BED, the typical patient journey to diagnosis, and definitions of treatment success and remission from BED. Data were analyzed for emerging themes as well as differences by clinician type. Overall, clinicians reported obesity as the most common motivating factor for patients seeking treatment for BED. While all clinicians reported participating in conversations about BED with their patients, BH specialists reported that their patients most often initiate such conversations, whereas PCPs reported that they usually initiate conversations about BED with their patients, while discussing health concerns of patients' obesity. Though the journey to diagnosis for BED can be lengthy, clinicians described the actual screening process as brief and expressed that the primary hindrance to diagnosis and treatment is communication. Clinicians also described views about treatment success, reporting that they do not expect complete remission from binge episodes. Other parameters for measuring treatment success were discussed such as patients' goals for significant weight loss, decreased binge episodes, and managing food and weight issues so that these issues no longer control their lives. In summary, this qualitative study provided valuable information from a clinician perspective about BED patients' diagnostic and treatment journey.

*Learning Objectives:*

- ▶ Summarize clinicians' perspective on the typical patient journey, diagnosis and disease progression of binge eating disorder (BED).
- ▶ Identify factors that motivate patients to seek treatment for BED.
- ▶ Describe the clinician's perspective on definitions of treatment success and remission from BED and parameters for measuring treatment success.

**T-024****Real Time Changes in Emotion Regulation Predict Loss of Control Eating**

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There is evidence that difficulties in emotion regulation predict emotional overeating and general eating pathology cross-sectionally. Although usually conceptualized as a dispositional construct, we found evidence that emotion regulation abilities fluctuate within-person. In the current study, almost half (49%) of variance in emotion regulation scores was attributable to within-person fluctuations over a two-week study period. Furthermore, there is debate among personality researchers as to whether dispositional or situational variables determine individual behavior in any given situation. The current study analyzed real time fluctuations in emotion regulation ability, and its relation to loss of control (LOC) eating. This study examined LOC eating in lieu of binge eating, due to evidence that loss of control eating is the most clinically meaningful concept. Forty-five community and college participants who reported binge eating once per week carried tablets and responded to assessments of emotion regulation abilities and eating. We compared trajectories of emotion regulation abilities before and after LOC eating episodes on days with and without LOC eating episodes. We found that emotion regulation abilities did not differ across non-LOC eating days, but there was a significant increase in emotion regulation difficulties after LOC eating episodes. This increase began sharply after the estimated time point of the LOC eating episode and dissipated over the course of several hours, suggesting that LOC eating may result in difficulties regulating emotions for hours afterward.

*Learning Objectives:*

- ▶ Define binge eating and loss of control (LOC) eating.
- ▶ Define ecological momentary assessment (EMA) methods.
- ▶ Describe implications of the results of the current study: deficits in emotion regulation abilities did not appear until after the LOC eating episode was initiated.

**T-025****An Evaluation of Self-Esteem and Mood in Clients with Binge Eating Disorder at Completion of a Short-Term Cognitive Behavioural Therapy Based Group**

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The purpose of this project was to retrospectively evaluate changes in self-esteem and depression symptomatology in participants who attended a short-term Cognitive Behavioural Therapy (CBT) based group for clients with binge eating disorder (BED). Participants were identified from attendance records of CBT based groups offered from 2007 to 2013. Evaluation measures that were administered pre and post group treatment included the Beck Depression Inventory-2, (BDI-2), the Rosenberg Self-Esteem Scale (RSE) and the Eating Disorder Diagnostic Scale (EDDS). The Eating Disorder Inventory 3 (EDI-3) was used to corroborate age of onset and baseline weight. At group completion, there was a statistically significant improvement in self-esteem scores ( $p < 0.001$ ), depression scores ( $p < 0.001$ ) and binge-eating behaviours ( $p < 0.001$ ) in the absence of a statistically significant change in weight ( $p = 0.452$ ).

*Learning Objectives:*

- ▶ To highlight that improvement in mood and self-esteem can occur without significant changes in weight in clients with Binge Eating Disorder.
- ▶ To understand co-morbidities in clients with Binge Eating Disorder.
- ▶ To appreciate the treatment needs of clients with Binge Eating Disorder.

## T-026

### The Impact of Estrogen and Progesterone on Changes in Eating Disorder Symptoms during the Menopause Transition

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Eating disorder (ED) symptoms fluctuate across the menstrual cycle and within-person change in estrogen (E2) and progesterone (P4) account for these phase differences. However, this work has focused on young adults and ignored periods of dramatic hormonal flux such as perimenopause. We examined the effect of E2 and P4 on changes in binge eating (BE) and body dissatisfaction (BD) in perimenopausal women. Methods were modeled after similar studies. Eligible women were aged 42-52 at perimenopause reporting at least two loss of control eating episodes in the past month ( $n = 8$ ). Five-

day rolling averages were calculated for hormones and ED symptoms and converted to Z scores based on the participant's overall mean and SD. Mixed linear models examined within-person associations between hormones and changes in ED symptoms and the association between absolute change in the previous day's hormone level and ED symptoms the next day, with an E2xP4 interaction. A significant interaction was observed for BE ( $= .15; p < .01$ ) and BD ( $= .13; p < .05$ ). Decomposing this interaction with P4 as the moderator: when P4 was higher than the person's mean level, E2 was positively correlated with BE ( $p = .005$ ) and tended to predict marginally higher BD ( $p = .17$ ). When P4 was lower than usual, E2 tended to predict marginally lower BD ( $p = .17$ ). With E2 as the moderator: when E2 was lower than the person's mean level, P4 was negatively correlated with BE ( $p = .002$ ) and tended to predict lower BD ( $p = .07$ ). When E2 was higher than usual, P4 was uncorrelated. Absolute change in E2 from one day also tended to predict greater BE the next day ( $b = 1.10; p = .08$ ). This pilot study was small yet patterns are similar to those in young adults and expected to be more robust with larger samples. At perimenopause, E2 flux—particularly in the context of elevated P4—may increase ED symptoms whereas high P4 may be protective when E2 is relatively low. Vulnerability to hormone flux may contribute to ED seen in midlife women.

*Learning Objectives:*

- ▶ Summarize the influence of ovarian hormones on change in eating disorder symptoms.
- ▶ Describe the prevalence of midlife eating disorders.
- ▶ Compare the influence of ovarian hormones on change in eating disorder symptoms in midlife and young adult women.

## T-027

### Inflammatory Cytokine Levels in Anorexia Nervosa in Relation to Symptom Severity and Course of Illness

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Inflammation has recently been implicated in the etiology of a number of psychiatric illnesses, including obsessive-compulsive disorder, schizophrenia and mood disorders. Because inflammation has also been associated with increased preoccupation with physical state in healthy people, we hypothesized that elevated pro-inflammatory cytokine levels might contribute to the body preoccupations observed in eating disorders. The objective of this study was to determine if inflammation might be a factor related to illness presentation amongst women with anorexia nervosa (AN). Using an existing

cohort of serum samples, we assessed cytokine levels in 75 women with anorexia nervosa and healthy women. Elevated pro-inflammatory cytokines were observed in AN relative to healthy comparison subjects. Specifically, the AN group showed higher levels than controls in IL-1 (mean(SD), AN=32.6(66.9), HC=9.0(10.6),  $P=0.03$ ) and trending differences in TNF- (mean(SD), AN=7.8(18), HC=0.8(0.5),  $P=0.09$ ). To explore whether peripheral cytokine signaling varied in relation to clinical symptoms, we sorted the subjects with AN into groups of high and low inflammation, based on IL-1 (the cytokine most robustly linked to eating disorders), and assessed whether feeding behaviors, mood symptoms, or body preoccupations differed across these groups. Subjects with elevations of IL-1 ( $n=31$ , AN-HI) showed trending increases in body shape preoccupations compared to those with low levels of IL-1 ( $n=20$ , AN-LI) (Body Shape Questionnaire, AN-LI=114(35), AN-HI=134(36),  $P=0.07$ ), supporting our hypothesis that inflammation may be related to body preoccupations in AN. There were no significant or trending differences in any other measures, including depression (QIDS, AN-LI=8.0(5.8), AN-HI=6.5(4.9),  $P>0.1$ ), anxiety (SIGH-A, AN-LI=10.5(8), AN-HI=12.2(9),  $P>0.1$ ), eating symptoms (EAT, AN-LI=24.5(17), AN-HI=26.3(14),  $P>0.1$ ) and body mass index (BMI, AN-LI=20.0(3.8), AN-HI=20.4(3.9),  $P>0.1$ ). An additional cohort of 65 women with eating disorders as well as serum samples recently became available; this will result in a cohort of ~135 women by spring 2018. With this larger sample set, we will further consider whether inflammation in eating disorders is related to symptom severity or the long term course of disease.

#### Learning Objectives:

- ▶ Understand that inflammation may play a role in the etiology of adult anorexia nervosa.
- ▶ Realize that elevated levels of pro-inflammatory cytokine levels may be related to symptom severity in anorexia nervosa.
- ▶ Recognize that inflammation may be target for therapeutic interventions in adult anorexia nervosa.

### T-028 Participation in Varsity Athletics and Eating Restraint Are Associated with Amenorrhea in a Sample of Female College Students

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The purpose of this study was to better characterize the level of sport involvement, as well as aspects of eating disorder psychopathology, associated with amenorrhea in female college students. This study used cross-sectional data from the Healthy Bodies Study (HBS), a population-

level, web-based survey administered to a randomly selected sample of undergraduate and graduate students at participating institutions ( $N=3277$ ). Aspects of eating disorder psychopathology were assessed via the Eating Disorder Examination Questionnaire (EDE-Q). EDE-Q subscale scores were observed as continuous variables, and self-reported participation in club sports and varsity sports were observed as binary variables. Amenorrhea was observed as a binary outcome, where women who reported having missed  $\geq 3$  menstrual cycles over the past three to four months were considered amenorrheic and those who reported having missed  $< 3$  were considered eumenorrheic. These data were analyzed with logistic regression models adjusted for race. The prevalence of amenorrhea in this sample was 9.3%. Involvement in varsity athletics (odds ratio [OR]=2.15; 95% confidence interval [CI]: 1.14, 3.83) and EDE-Q Restraint subscale score (OR=1.19; 95% CI: 1.05, 1.35) were associated with greater odds of amenorrhea. These findings support a need for targeted intervention in intercollegiate athletics programs and highlight the importance of eating restraint as a risk factor for amenorrhea.

#### Learning Objectives:

- ▶ Describe the prevalence of amenorrhea in this population of college females.
- ▶ Identify eating and exercise variables that increase the risk of amenorrhea in college women.
- ▶ Determine if varsity athletes were at a greater risk of amenorrhea and a population in need of focused intervention.

### T-029 Safety and Feasibility of Osteogenic Loading in Adults with Low Body Weight: A Preliminary Evaluation

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The benefits of osteogenic loading (OL) for improved bone health are documented but not previously studied in individuals with low body weight (LBW) in part due to concerns regarding possible bone weakness and risk of injury. The purpose of this study was to examine if OL; 1) is feasible for LBW individuals, and 2) safe for LBW individuals, in order to consider potential benefit for bone health in this population. Adults with LBW (Body Mass Index (BMI)= 14.0-18.5 kg/m<sup>2</sup>;  $n=272$ ) were selected from an electronic database of adults using OL weekly for a minimum of 24 weeks ( $N=21,194$ ; 10 countries). Numbers of participants meeting or surpassing minimal compressive force associated with bone reformation (multiple of body weight (MOB)  $\geq 4$ ) were assessed. Ninety-three percent of participants ( $n=255$ ) created OL forces associated with bone reformation without report

of injury. LBW adults had sufficient strength to create large compressive forces necessary for bone reformation without reported injury. OL may have restorative potential and low injury risk in an underweight population. Results may be relevant in addressing bone health concerns among individuals with history of LBW. Additional research is needed to validate OL as a viable and safe strategy for bone reformation across physical conditions and medical illnesses associated with low bone mineral density.

*Learning Objectives:*

- ▶ Define “osteogenic loading.”
- ▶ Describe how osteogenic loading impacts bone mineral density.
- ▶ Describe the potential usefulness of osteogenic loading for individuals with low body weight and/or history of anorexia.

### T-030 Impact of Weight Suppression on Bone Health in Bulimia Nervosa

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**Paula Tabares, MD<sup>2</sup>**  
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**Melissa Riegel, BA<sup>3</sup>**  
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Women with Anorexia Nervosa (AN) have poor bone health due to weight loss, nutritional deficiencies, and menstrual irregularities. We aimed to explore the impact of weight suppression (WS), defined as lifetime highest minus current weight, on bone health in women with bulimia nervosa (BN), which is not well described. Participants were 65 women with BN (DSM-5 criteria) between the ages of 18-45 years. Lifetime highest weight was self-reported and current weight was measured at evaluation to determine WS. Bone mineral density (BMD) at the lumbar spine(LS), total hip(TH), femoral neck(FN) and distal radius(DR) was evaluated by DXA and a fasting blood sample was drawn for bone turnover markers. Groups were compared by WS: Low WS (n=37) < 5 kg, high WS (n=28) > 10 kg. Linear regression was performed with BMD (g/cm<sup>2</sup>) as the outcome variable and WS, menstrual status and use of oral contraceptives as independent variables. All analyses were performed with SPSS software version 24.0. There were no significant differences in demographic variables in the low and high

WS groups with the expected exception of WS: age (26± 7 vs 25± 5 years, p=0.625, BMI 25± 45 kg/m<sup>2</sup> vs 24.3± 4 kg/m<sup>2</sup>, p=0.667, binge frequency per week of 6.0± 5.0 vs 8.0± 8, p=0.226/0.346), illness duration of 9.7± 7.5 vs 8.0± 6.2 years and WS 1.7± 1.6 kg vs 21.0± 15.5kg, p<0.0001). Regional BMD was not significantly different in participants with lower versus higher WS: LS p<0.63, z-score -0.17±1.1vs 0.01± 1.1; TH p< 0.73, z-score 0.11± 1.0vs 0.22± 1.1; FN p<0.86, z-score 0.07± 1.2vs 0.09± 1.0 and DR p<0.49, z-score 0.55± 1.0vs 0.34± 0.7. Serum levels of IGF-1, PTH, Ca<sup>2+</sup> and bone turnover markers (P1NP, CTX, osteocalcin) were not statistically significantly different between low and high WS groups. Linear regression of WS and menstrual status did not support a significant effect of WS or MS on BMD at any site. Compared to women with AN, the bone health of women with BN appears within normal range, even when adjusting for WS and menstrual status.

*Learning Objectives:*

- ▶ Examine the impact of weight suppression on women with bulimia nervosa by measuring regional bone mineral density in women with lower versus higher weight suppression.
- ▶ Determine bone health as a function of serum bone turnover markers between participants with lower versus higher weight suppression.
- ▶ Evaluate whether weight suppression impacts bone health in patients with bulimia nervosa as it does in anorexia nervosa.

### T-031 A Meta-Analysis of Biochemical and Anthropometric Traits in Individuals with Acute Anorexia Nervosa

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Anorexia nervosa (AN) is a psychiatric disorder with alterations in body composition and laboratory parameters. With a lifetime prevalence of approximately 1%, achieving adequate sample sizes to meaningfully examine metabolic changes in AN patients is challenging. Meta-analytic approaches are crucial. Inverse variance-weighted and random-effects meta-analyses comparing acute AN cases and healthy controls were performed to quantify the association between AN and biochemical and anthropometric alterations. The number of studies included in each meta-analysis varied by outcome variable with a minimum of 200 cases per outcome required. Subgroup differences among studies examining adults

versus adolescents or different measurement methods were contrasted. Preliminary results reveal a wide range of alterations in several key biochemical and anthropometric: On average, AN cases had a 15.5 kg lower body weight, 5.9 kg/m<sup>2</sup> lower BMI, were 0.5 cm shorter, had 50% lower fat mass (-9.2 kg), and 5.0 kg lower fat free mass than healthy controls. There was no difference between groups in mean waist-to-hip ratio. Cholesterol (21.72 mg/dL), glucose (-3.92 mg/dL), insulin (-14.23 pmol/L), leptin (-5.70 ng/mL) were decreased, whereas adiponectin, and mean serum cortisol were elevated by 2.50  $\mu$ g/mL and 45.39  $\mu$ g/L compared with controls. C-peptide levels did not differ. To our knowledge, this meta-analysis is the largest of its kind in the study of biochemical and anthropometric traits in patients with AN. A thorough and rigorous examination of body composition and laboratory parameters in individuals with AN could help elucidate the physiological changes associated with this serious disorder, which could lead to more effective medical management, monitoring, and treatment strategies.

*Learning Objectives:*

- ▶ Following the training, participants will be able to understand alterations in body composition and laboratory parameters associated with AN.
- ▶ Following the training, participants will be able to critically evaluate their measurement methods.
- ▶ Following the training, participants will understand differences in body composition between adolescents and adults suffering from acute AN.

### T-032

#### **A Case of Symptom Relapse Post Placement of Intrauterine Device (IUD) in a Canadian Patient with Bulimia Nervosa: Consequence or Coincidence**

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**Brad Mac Neil, PhD CPsych<sup>2</sup>**  
**Kathleen Dempsey, MSc, NP-PHC<sup>2</sup>**  
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The use of contraceptives during treatment and recovery from an eating disorder is understudied with little known about possible association with symptom lapses and relapse. An intrauterine device (IUD) is a hormonal device inserted into the uterus to prevent conception. We report the case of a 26-year-old female patient with a DSM-5 diagnosis of bulimia nervosa who experienced a symptom relapse following insertion of an IUD after having completed evidence-based outpatient care. Following IUD insertion, there was a recurrence of active nutritional restriction, heightened eating disorder automatic thoughts, and a significant increase in her anxiety symptoms. After removal of the IUD, the patient's anxiety and eating disorder symptoms returned to baseline within two days

with no adjustments to medications for her anxiety during that time. We will discuss possible clinical implications and future directions of this research area.

*Learning Objectives:*

- ▶ Describe the literature of the use of contraceptives in individuals with eating disorders.
- ▶ Describe the case of a woman with BN who experienced symptom relapse after insertion of an IUD.
- ▶ Describe possible mechanisms underlying the association between symptom relapse and contraceptives, and describe areas for future research.

### T-033

#### **Pancreatic Enzyme Elevation in Adolescents with Eating Disorders**

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**Courtney Cheek Park, BS**  
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Serum amylase has been noted to be elevated in some patients with eating disorders, particularly those engaging in purging behaviors. However, no literature to date has investigated the pancreatic lipase levels in adolescents with EDs. This report aims to describe pancreatic enzyme levels in adolescents with EDs and their relationship to diagnosis, %mBMI, % weight loss, and purging behaviors. Medical records of 215 patients ages 7-23 years with a DSM-5 ED diagnosis who presented for inpatient treatment from October 2012 to September 2014 were retrospectively reviewed. Inpatient clinical care protocols at CHOP had historically suggested baseline amylase and lipase on admission; 157 patients had labs measured within 48 hours of admission and these patients were included. Patients averaged 15.5 years old (SD 2.6); 66% AN, 17% AtAN, 5% BN, 5% PD, 3% ARFID, and 4% UFED. The mean amylase level was 70.5 (n=151, SD 27.0); low amylase levels were noted in 3% of patients, while 10% of patients presented with high amylase levels. The mean lipase level was 110.5 (n=150, SD 96.0). Patients with high levels were not symptomatic and continued to be refeed per inpatient protocols. No patient had a low lipase level at admission, while 34% of patients presented with a high lipase level. Amylase and lipase values were significantly correlated with each other ( $r=0.494$ ,  $p<0.01$ ). Patients with purging behaviors were less likely to have a high lipase levels compared with non-purgers (22 vs 41%,  $p=0.035$ ) and more likely to have high amylase levels (23 vs 9%,  $p=0.048$ ). Lower %mBMI at presentation correlated with increased lipase levels ( $r= -0.162$ ,

$p < 0.05$ ). Patients with high lipase levels had a higher mean percentage weight loss prior to admission (21 vs 18%,  $p = 0.048$ ). Elevated amylase and lipase levels were not uncommon in this sample of adolescents with eating disorders, with 1/3 of patients displaying an elevated lipase level on admission. Levels did not seem to indicate clinical pancreatitis. Purgers were less likely to have high lipase levels and more likely to have high amylase levels. High lipase levels were associated with lower %mBMI and a higher percentage weight loss. Future studies should examine the clinical significance of pancreatic enzyme elevations and changes in these values with refeeding over time in patients with eating disorders.

*Learning Objectives:*

- ▶ Assess elevated pancreatic enzyme levels in adolescents with eating disorders in an inpatient setting.
- ▶ Explore the relationship between elevated lipase levels and degree of malnutrition as defined by %mBMI and % weight loss.
- ▶ Describe associations between elevated amylase and lipase levels and purging behavior in adolescents with eating disorders.

### T-034

#### A Case of Mycobacterium Kansasii in a Male Patient Receiving Treatment of Anorexia Nervosa and Obsessive Compulsive Disorder: Clinical Implications and Considerations

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Cases of non-tuberculosis Mycobacterium are on the rise across North America. Anorexia nervosa (AN) is a severe biological based illness that has been linked with declines in endocrine functioning and immune suppression. Although there have been two documented cases of this pathogen occurring in women with AN, no cases have been observed in men with an eating disorder until this time. We describe the the first case report of an adult male patient in Canada with a prior history of AN and comorbid obsessive compulsive disorder who learned over the course of his engagement in evidence-based treatment that he had Mycobacterium kansasii. We described the case of a 31-year-old man with diagnoses of AN and comorbid obsessive compulsive disorder who provided his consent for the study. Demographic and physical health information was collected. He had no prior formal assessment or treatment for an eating disorder. He completed the Detail and Flexibility Questionnaire (Dflex), Readiness Ruler, Satisfaction with Life scale, Beck Depression Inventory – 2nd edition, Beck Anxiety

Inventory, Clark-Beck Obsessive Compulsive Inventory, and the Eating Disorders Examination questionnaire. Immunosuppression secondary to AN may place male patients at risk for developing non-tuberculosis bacterium. Implications for addressing eating disorder symptoms in primary care are discussed.

*Learning Objectives:*

- ▶ Participants will learn about implications for treating one of the first documented cases in a male patient of anorexia nervosa (AN) and obsessive compulsive disorder who also had the medical complication of Mycobacterium kansasii during his engagement in.
- ▶ Learn about the etiology of non-tuberculosis Mycobacterium and how patients with AN may be at heightened vulnerability due to the negative effects of nutritional restriction on the endocrine and immune systems.
- ▶ Clinical considerations for treatment and follow-up will be discussed.

### T-035

#### Pre-post Intervention Study of a Peer-Led Body Appreciation Program in Undergraduate College Students

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This study investigated the feasibility and acceptability of implementing the peer-led group based body appreciation program, Be Body Positive, to reduce and prevent disordered eating on a university campus. Undergraduate peer facilitators ( $n = 12$ ) led weekly small group sessions promoting body acceptance, self-compassion, and intuitive self-care through discussion and activities. Adherence to the curriculum was measured using a self-report checklist. Group participants completed on-line surveys pre and post intervention and at 3 months follow up to measure body appreciation (BAS-2), thin ideal internalization (Thin Ideal Internalization Scale), self-compassion (Self Compassion Scale), intuitive eating (IES-2) and disordered eating (EDE-QS). Chi-square and paired t-tests were used to compare results pre-post for each measure with  $p < 0.01$  considered significant. A total of 8 groups were conducted over the 2016-17 academic year with 8-12 student participants recruited for each group. Participants ( $n = 77$ ) were 91% female and 86% white with a mean age of 19.7 years. The median BMI was 22.5kg/m<sup>2</sup> and 26% had an EDE-QS score of 18 or greater suggesting risk of an eating disorder. The majority were varsity athletes (59.5%) and 28.9% in a sorority or

fraternity. Seventy participants attended the first session and 38 participants or more attended each subsequent session. At each session, 75% or more of the curriculum content was delivered. For participants (n=46) with survey data at all three time points, body appreciation, self compassion and intuitive eating increased significantly and internalization of the thin ideal and disordered eating decreased significantly post-intervention. All of these changes were sustained at 3 months post-intervention. This study supports further investigation of Be Body Positive, a peer led body appreciation focused intervention to reduce and prevent disordered eating in college students.

*Learning Objectives:*

- 】 Describe the structure of the Be Body Positive peer led program for disordered eating prevention.
- 】 Summarize how the Be Body Positive program implementation was assessed.
- 】 Summarize the results of the pre-post study of the Be Body Positive intervention.

### **T-036** **Body Dissatisfaction is in Function of Weight and Membership Group**

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**Karina Franco-Paredes, PhD<sup>2</sup>**  
**Georgina Alvarez-Rayón, PhD<sup>3</sup>**  
**Juan Manuel Mancilla-Díaz, PhD<sup>3</sup>**  
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At present, when the world experiences the obesity epidemic, the cult of thinness is exacerbated, this ideal can lead people to develop body dissatisfaction (BD), thus the obesity condition involves not only the biological but also the psychosocial dimension, BD is clinically relevant because can development eating disordered behaviors (EDB) and to have repercussions on physical and mental health. Therefore, the objective of this research was evaluated body dissatisfaction according to the body mass index (BMI) and membership group. With a non-experimental design and a non-probabilistic-intentional sampling, 394 participants were selected from six groups: 1) Normal weight college students (N = 80); 2) Overweight /obese college students (N = 54); 3) Overweight/obesity aerobic exercise gym users (N = 19); 4) Overweight/obese housewives (N = 71); 5)

Obesity weight reduction program (N = 125); 6) Morbid obesity, candidates for bariatric surgery (BS, N = 45). All participants signed written informed consent, completed the Body Image Questionnaire (BSQ) and was measured their weight and height. It was found that, the lowest and highest BSQ means were reported by normal weight students and BS candidates, respectively. The ANOVA test (F = 18.4 [5, 389], p < .05) and Tukey's HSD (< .001) showed that students and housewives normal weight differ significantly from the other groups. Of the six groups, the BS, a higher percentage (51.1%) is over BSQ cut-off point. It concludes that to higher BMI higher BD, also to higher implication in treatment of obesity higher BD, thus BD is in the function of the BMI and the membership group. Therefore, the treatment for obesity should also address the psychosocial dimension, since the concomitance of obesity and BD can form a vicious cycle and maintain these conditions and develop complex psychopathologies such as EDB.

*Learning Objectives:*

- 】 Recognize that although obesity is a health condition, it also affects the psychosocial dimension of the person who suffers it.
- 】 Identify the importance of addressing body dissatisfaction in the treatment of obesity and that the concomitance of these variables can trigger eating disordered behavior and at the same time maintain the obesity condition.
- 】 Comprehend that to higher BMI higher BD, also to higher implication in treatment of obesity higher BD, thus BD is in the function of the BMI and the membership group.

### **T-037 - Poster Withdrawn**

### **T-038** **Relationship of Desired Weight Constructs with Eating Disorder Severity and Body Mass Index over the Year following Discharge from Inpatient or Day Hospital Treatment for Anorexia Nervosa**

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**Lindsay Bodell, PhD<sup>1</sup>**  
**Karen Jennings, PhD, RN, PMHNP-BC<sup>1</sup>**  
**Andrea Kass, PhD<sup>1</sup>**  
**Ross Crosby, PhD, FAED<sup>2</sup>**  
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Desired weight appears to be an indicator of illness severity in youth with anorexia nervosa (AN), but its impact on eating disorder symptoms over time and in adults is unknown. This study examined longitudinal associations

between two desired weight constructs validated in youth with AN (desired weight percentage and weight difference percentage) and eating disorder severity and body mass index (BMI) in patients aged 16-62 years old with AN presenting for inpatient or day hospital treatment. Participants (N = 160) completed the Eating Disorder Examination and measures of height and weight at treatment admission, discharge, and 3, 6, and 12 months post-discharge. Desired weight percentage was calculated as  $[\text{desired BMI (desired weight in kg/height in meters}^2\text{)/healthy BMI (20)}] \times 100$ . Weight difference percentage was calculated as  $[(\text{actual weight-desired weight})/\text{actual weight}] \times 100$ . At admission, participants were approximately 78.6% of a healthy BMI (i.e.,  $\text{BMI} \geq 20$ ) and desired to be 81% of a healthy BMI. During the year following treatment, participants were, on average, 89% of a healthy BMI, but wanted to be 86% of a healthy BMI. Lower desired weight percentage (wanting to be a lower percentage of a healthy BMI) and higher weight difference percentage (wanting to lose a larger percentage of one's body weight) were associated with greater eating disorder severity. Higher desired weight percentage (wanting to be at a higher percentage of a healthy body weight) and higher weight difference percentage were associated with higher BMI, but only desired weight percentage predicted BMI over time. Results highlight that desired weight constructs represent correlates of eating disorder severity in AN, and desired weight percentage may provide useful information about an individual's likely weight trajectory during and after treatment.

*Learning Objectives:*

- 】 Define two desired weight constructs: desired weight percentage and weight difference percentage.
- 】 Validate these constructs in a sample of older adolescents and adults presenting for inpatient and day hospital treatment for AN.
- 】 Identify the relationship of desired weight constructs with eating disorder severity and body mass index over the year following discharge from inpatient or day treatment for AN.

### T-039

#### What Can My Body do for Me? Seeking to Improve Body-dissatisfaction through Functionality-focused Mirror Exposure

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The present study sought to investigate whether incorporating body-functionality into a guided mirror exposure (ME) exercise would effectively improve body-satisfaction in a sample of undergraduate college women. ME interventions have proven to be particularly effective

in improving body-satisfaction. However, few studies to date have incorporated aspects of positive body image within a guided ME treatment. The current study incorporated a particular component of positive body image, body-functionality, into a ME exercise. Following the training, it was hypothesized that participants in the body functionality condition would display increased appreciation of the functional capabilities of their bodies and decreased concern regarding physical appearance compared to those in the control condition. One hundred and one undergraduate females were randomly assigned to one of two guided ME tasks. In the functionality task, participants were prompted by an audio recording to think of the various ways in which their bodies performed necessary and meaningful functions. In the control ME task, participants were prompted by an audio recording to examine the same body parts with no specific instructions. All participants completed measures assessing body-appreciation, state body-esteem, and body-surveillance both before and after the guided ME task. Participants in the functionality condition displayed increased body-appreciation and increased orientation toward the fitness of their bodies. However, no significant differences were found between groups in terms of self-objectification or state body-image. Thus, this research supports prior findings identifying functionality as a means to improving body-appreciation and provides support for interventions that incorporate these concepts.

*Learning Objectives:*

- 】 Describe the potential therapeutic benefit of speaking of the body in functional, rather than aesthetic, terms.
- 】 Recognize the consequences of female-objectification and realize the importance of implementing body-image interventions that actively draw females away from a pervasive focus on appearance and provide novel ways of conceptualizing the body in the process.
- 】 Further understand the components of positive body-image, and how these components and the entire construct of positive body image is distinct from the absence of negative body image.

### T-040

#### Swipe right! A Preliminary Study of the Association between Online Dating and Body Image in Female and Male College Students

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Social media use has been associated with increased

body image concerns, although to date it is unclear whether these relationships hold across different types of social media. While online dating is popular among college-aged students, this type of social media has rarely been investigated in relation to body image concerns. The aim of the current study was to explore relationships between dating applications (dating apps) and other types of social media use among female and male college students. A sample of 171 students of mean age (SD) = 22.3 (3.1) years, 50% female, who self-identified as using, or having used dating apps completed an online survey assessing body dissatisfaction, media ideal internalization, and three subscales of objectified body consciousness: body shame, appearance controllability, and self-surveillance. In addition, they reported on the time they spent daily using dating apps and other types of social media. The patterns of associations between time spent on dating apps and time spent on other forms of social media with body image variables differed by gender. Among women spending more than one hour a day on dating apps was associated with higher levels of self-surveillance at the trend level ( $r = .21, p = .079$ ). Similarly, women who spent more than one hour a day on other social media applications reported higher levels of body dissatisfaction ( $r = .22, p = .054$ ). However, men who used dating apps for more than one hour a day reported lower levels of controllability beliefs ( $r = -.46, p < .001$ ), and higher levels of body shame ( $r = .25, p = .038$ ). Preliminary findings suggest that individuals who use dating apps may present higher levels of body image concerns, although these patterns differ across gender. These results contribute to the growing body of evidence documenting the association between social media use and risk for eating disorders. Longitudinal research is warranted to clarify the directionality of these relationships.

*Learning Objectives:*

- ▶ To understand the relationship between body image and online dating.
- ▶ To identify how the relationship between body image and dating apps differs from general social media use.
- ▶ To describe gender differences in the relationships between social media use and body image.

## T-041

### The Effects of Body Positive Advertisement Campaigns

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Previous research on media and body image shows that

exposure to thin-ideal media messages can decrease body satisfaction among women. Several companies have attempted to combat this impact through releasing body-positive media advertisements and campaigns that promote diverse body types. However, the impact of these body-positive messages has not been systematically evaluated. The goal of the current study was to examine whether or not body-positive media messages increase body satisfaction. Female-identified undergraduate psychology students ( $N = 270$ ) completed pre-test surveys assessing body-related attitudes. One week later, participants viewed one of four video conditions: (1) body positive advertisements, (2) body negative advertisements, (3) neutral control advertisements, and (4) positive emotional control advertisements. Participants then completed post-test surveys of body-related attitudes. Mixed ANOVA models assessed differential changes in body-related attitudes across the four video conditions. There was a significant impact of video type on change in body appreciation from pre- to post-test ( $p < .001$ ). Participants who viewed body negative advertisements reported a reduction in body appreciation relative to participants in all other video conditions, who reported an increase in body appreciation (all  $ps < .01$ ). There was no significant impact of video condition on three additional body-attitude measures: negative body image, sociocultural pressures, and objectified body consciousness. These results suggest that body-positive media may not evoke body positivity in the way it is intended. In fact, body positive media did not uniquely increase body satisfaction compared to neutral or positive emotional media, while thin-ideal media did decrease body satisfaction. Additional research is needed to better understand the intent and impact of body positive media.

*Learning Objectives:*

- ▶ Following the presentation, participants will be able to think critically about the effects of body positive media.
- ▶ Following the presentation, participants will be able to evaluate the theoretical underpinnings of the effect of media exposure on body image.
- ▶ Following the presentations, participants will further understand the importance of effective body positive media for the general public.

## T-042

### Online Dating among Men who have Sex with Men: Associations with Body Dissatisfaction, Obesity and Sexual Risk Behavior

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Previous evidence has suggested that Facebook use can lead to an increase in body dissatisfaction (BD), which is a recognized risk factor for developing an eating disorder (ED). Similarly, among men who have sex with men (MSM), using social networks (SN) to meet new sexual partners (e.g., Grindr) has been associated with higher levels of BD and the development of sexual risk behavior (SRB). Consistently, obesity has also been found to be associated with SRB in MSM. The present study aims to evaluate the associations between the use of SN to meet new sexual partners, SRB, BD and obesity among MSM in Argentina. A sample of 609 male Facebook users with an average age of 30 years ( $SD = 8.9$ ) was used. SRB were defined as having multiple partners, inconsistent condom use, or substance use during sex, in the last 3 months. The Male Body Attitude Scale was used to assess BD. Significant associations were observed between SRB and SN use to meet new sexual partners. Particular, a number of associations were observed among Grindr users. Also, using SN to meet new sexual partners was associated with higher levels of BD (muscularity-oriented concerns), presenting a larger effect size when evaluating differences among Grindr users and non-users. Finally, the presence of obesity ( $BMI > 30$ ) was found to be associated with inconsistent condom use among MSM using SN to meet new sexual partners. The presence of SRB in people with BD and obesity, who present a possible risk for developing an ED, expands the scope of the clinical presentation, and could represent an obstacle in the treatment of affected individuals.

*Learning Objectives:*

- 1 Identify the associations between Sexual Risk Behavior and Body Dissatisfaction and Obesity among men who have sex with men.
- 2 Enhance the understanding of how social network usage to meet new sexual partners may impact body image.
- 3 Describe associations between obesity and Sexual Risk Behavior, among Social-Networks users in general, and Grinders users in particular.

### T-043

#### Ladies Who Ink: The Effects of Tattoos on Body Image, Self-esteem and Perceived Negative Judgment

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The art of tattooing has become increasingly popular in Western culture, although previous research has identified a number of negative stereotypes associated with people

with tattoos, from being less competent to being more willing to engage in risky behaviors (Guéguen, 2013; Swami and Furnham, 2007). Despite these negative stereotypes, research has shown that body image and self-esteem may be positively impacted by tattoo art because of the sense of individuality it provides (Swami, 2011). The present study examined the relations between body image, self-esteem, and perceived negative judgment by peers for 76 women with tattoos and 113 women without tattoos (ages 18-30). Participants completed an online questionnaire consisting of the Distinctive Appearance Investment scale, the Rosenberg Self-Esteem scale, the Fear of Negative Evaluation-II scale, the Physical Appearance State and Trait Anxiety scale, the Body Appreciation Scale, and a demographic section that included height and weight questions. Those with tattoos also completed a section about their tattoos. For tattooed participants, a greater number of tattoos was related to less fear of being negatively evaluated, and body appreciation was positively correlated with distinctive appearance investment. However, those with tattoos had lower levels of self-esteem than those without tattoos. Negative relations between self-esteem and BMI, as well as body appreciation and BMI, were only seen for the non-tattooed group of participants. These results provide evidence that women with tattoos may experience less negative issues with body image and less fear of negative evaluation, although women with tattoos did not show greater levels of self-esteem than non-tattooed women. Explanations for these findings will be discussed at the presentation.

*Learning Objectives:*

- 1 Understand the relations between tattoo art and body image.
- 2 Examine specific ways that tattooing affects body image and body image beliefs in women through multiple measures.
- 3 Examine different constructs about body image in women with and without tattoos.

### T-044

#### The Use of Labels in Advertising to Reduce the Detrimental Effects of Media Exposure on Body Image: A Systematic Review of Experimental Studies

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Most advertisements contain thin-ideal imagery enhanced by digital modification. The deleterious effects of exposure to such images on body image and eating disorder risk have been well documented. One of the solutions proposed by policy initiatives to mitigate these effects has

been the use of labels on images, primarily disclaimer labels. A growing number of studies have explored the effectiveness of such labels in protecting against media effects on body image; however, findings have been divergent. The current study aimed to review and synthesize the existing literature investigating label usage on media images. An initial pool of 422 identified studies yielded 16 eligible articles that were included in the review. The findings revealed that the studies primarily included women aged 18-40. Additionally, 14 out of 16 studies explored disclaimer or warning labels highlighting digital modification, and 2 out of 16 studies investigated labels that indicated retouch-free images. Most studies evaluated body image outcomes using self-report measures. Overall, 12 out of 16 studies found that labels did not significantly mitigate the effects of exposure to media images on body image. 9 out of 16 studies also reported that exposure to any set of digitally modified images, regardless of the inclusion of a label, was associated with decreased body satisfaction. Furthermore, the findings suggested that the effects of the images were moderated by trait appearance comparison, such that women with high trait comparison tendencies were especially vulnerable to the negative effects thin-ideal imagery. Together these findings provide little support for the use of warning labels as a means of protecting against the detrimental effects of media exposure on body image. This is especially concerning in light of recent legislation in France mandating disclaimer label usage on advertisements, as well as similar international proposals. Additional research examining alternative strategies for universal prevention is warranted.

#### *Learning Objectives:*

- ▶ Understand the reasons for leveraging labels on media image to mitigate the detrimental effects of media exposure on body image.
- ▶ Describe the evidence to date regarding the usefulness of warning labels.
- ▶ Discuss alternatives to warning labels and implications for policy.

### **T-045** **Confirmatory Factor Analysis Evidence for a 3-Factor Model Structure of the Appearance Schema Inventory-Revised in Women**

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The Appearance Schemas Inventory-Revised (ASR-I; Cash, Melnyk, & Hrabosky, 2004) is a widely used

measure that has shown high internal consistency and robust convergence with other measures related to body image constructs. One reason for its popularity is that the ASI-R captures beliefs about the importance of appearance and motivation to change one's appearance. Recent research suggests that the ASI-R may also capture a third factor, an appearance power and control factor, although this finding may be unique to the participants in that study (middle-aged breast cancer patients; Chua, DeSantis, Teo, & Fingeret, 2015). Using confirmatory factor analysis, we compared whether a two-factor (i.e., self-evaluative salience, motivation) or three-factor (i.e., appearance self-evaluation, appearance standards & behaviors, appearance power/control) model best captured the underlying structure of the ASI-R. We also found evidence for the three-factor structure in a large sample (N = 435) of women 18 to 65 years of age who had not undergone a major medical procedure during the past year. Moreover, both the "appearance self-evaluation" and the "control" factors were found to be positively related to body image satisfaction measures and negatively related to BMI. These findings are discussed in terms of the use and interpretation of the ASI-R as a body image construct.

#### *Learning Objectives:*

- ▶ Describe the Appearance Schemas Inventory-Revised as a widely used measure of body image constructs. Discuss its underlying factor structure.
- ▶ Explain how Confirmatory Factor Analysis was used to examine the factor structure of the ASI-R in a large sample (N = 435) of women between 18 and 65 years of age. Discuss evidence for a three-factor structure.
- ▶ Empirically evaluate each factor and its relation to a number of body image constructs and outcomes. Discuss the implications of our findings in terms of future use of the ASI-R.

### **T-046** **The Development, Feasibility and Initial Efficacy of a Preventative School-Based Interpersonal Psychotherapy (IPT) Group for Adolescents with Body Image Difficulties**

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The interpersonal context in which a young person grows up plays an important role in the development of their body image. Interpersonal psychotherapy– skills for body confidence (IPT-SBC) is a new intervention aimed to reduce body dissatisfaction and improve positive body image in adolescents who are concerned about their

weight or shape by helping them to develop skills to build and make use of supportive interpersonal relationships. This paper describes the theoretical rationale for IPT-SBC, the manualised protocol of this novel intervention and preliminary data regarding feasibility, acceptability and efficacy. A pilot of IPT-SBC is currently taking place within secondary schools in the UK. Pupils were recruited via self referral or identified via school staff. Young people were eligible if they are between 12-18 years, enrolled in the participating school, and self identified as having elevated weight and shape concerns (participants were excluded if they met DSM-V criteria for an eating disorder). IPT-SBC draws on an established, evidence based preventative approach for adolescent depression using IPT (IPT-AST: Young et al.; 2003) and involves 8 weekly groups sessions, with groups of 6-10 young people aged 12-18 years and is delivered by two IPT trained facilitators. Pupils completed a brief self-report measure of body image in each session alongside a battery of self-report assessments of body image, interpersonal difficulties, depression and eating disorder symptoms at baseline, mid-point, at the end of the intervention period. A subsample of pupils were invited to take part in a small focus group about their experiences of the intervention and their recommendations for any improvements. Refinements of the manualised intervention based on these findings will be discussed.

*Learning Objectives:*

- 】 Review what is known about interpersonal difficulties and body image.
- 】 Describe the development of an interpersonally-orientated intervention for body image including underpinning theoretical perspectives.
- 】 Examine initial feasibility and efficacy findings for this novel intervention.

**T-047**

**How do Men and Women Experience Owning a Virtual Avatar with Increased Weight? Gender Differences in Body Image Distortion and Body Dissatisfaction after Embodiment in Avatars of Different Body Size**

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 Mireia Gracia-Blanes, MSc  
 Cristina González-Ibáñez, MSc  
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Full body ownership illusions over a virtual body have proved able to induce changes in individuals' body image. As a result, the use of embodiment techniques for the treatment of body image disturbance in eating disorders has been proposed. This study aims to extend the available data on the ability of ownership illusions over

a virtual body of different body sizes to induce changes in participants' body image distortion and body image dissatisfaction. Gender differences are also explored. Twenty college students (10 women and 10 men) were exposed to an immersive virtual environment, in which they were sequentially embodied in two avatars with different body sizes: an avatar with the same body size as the participant and another avatar 40% larger. Body image distortion and body image dissatisfaction were assessed using a silhouette test (BIAS-R), at pre-test, after embodiment in the real-size virtual body, and after embodiment in the 40% larger virtual body. Mixed between (Gender)-within (Time) analyses of variance showed statistically significant differences in body image dissatisfaction ( $F(2,17) = 3.636, p = .048, \eta^2 = .300$ ) and marginally significant differences in body distortion ( $F(2,17) = 3.259, p < .063, \eta^2 = .277$ ) over the three assessment times. The highest levels of body image distortion and body image dissatisfaction were reported after owning the 40% larger virtual body. Overall, women reported significantly higher levels of body image distortion ( $F(1,18) = 5.966, p = .025, \eta^2 = .249$ ), but not of body image dissatisfaction ( $F(1,18) = 1.531, p = 0.252, \eta^2 = .078$ ) than men. Interestingly, the greatest differences between men and women were found at pre-test and after embodiment in the 40% larger avatar. Results show that virtual reality-based embodiment techniques are able to modify body image disturbances and to reproduce the gender body image differences reported in previous research.

*Learning Objectives:*

- 】 Describe the ability of embodiment (based on the ownership illusion paradigm) in a virtual body of different body sizes to modify body image distortion and body image dissatisfaction of college students.
- 】 Describe gender differences in body image distortion and body image dissatisfaction after embodiment in virtual bodies of different body size.
- 】 Discuss the potential of embodiment techniques in virtual reality environments to assess and treat body image disturbances in eating disorders.

**T-048**

**Interaction of Hormonal and Social Environments in Understanding Body Image Concerns in Adolescent Girls**

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During adolescence, peer approval becomes increasingly important and may be perceived as contingent upon appearance in girls. Concurrently, girls experience hormonal changes, including an increase in progesterone. Progesterone has been implicated in affiliative behavior but inconsistently associated with body image concerns. The current study sought to examine whether progesterone may mediate or moderate the association between perceived social pressures to conform to the thin ideal and body image concerns. Secondary analyses were conducted in cross-sectional data from 813 girls in early puberty and beyond (ages 8-16) with assessments of the peer environment, body image concerns, and progesterone. Models for mediation and moderation were examined with BMI, age, and menarcheal status as covariates. Belief that popularity was linked to appearance and the experience of weight-related teasing were both positively associated with greater body image concerns ( $p$ 's < .001), but not progesterone, once adjusting for covariates ( $p$ 's > .18). Instead, there was a significant interaction between progesterone and perceived social pressures in predicting body image concerns ( $p$ 's < .01). At higher progesterone levels, appearance-popularity beliefs and weight-related teasing were more strongly related to body image concerns than they were at lower levels. Findings support a moderating rather than mediating role for progesterone in the link between social pressures and body image concerns in girls. This study adds to a growing literature examining how girls' hormonal environments may modulate responses to their social environments. Longitudinal and experimental work is needed to understand temporal relations and mechanisms behind these associations.

*Learning Objectives:*

- ▶ Explain the role of peer influences in body image concerns.
- ▶ Describe the evidence supporting that progesterone is related to affiliative behavior.
- ▶ Describe how progesterone modulates the relationship between social pressures to be thin and body image concerns in girls.

**T-049**  
**Inhibitory Learning VS Extinction as a Guiding Principle in Body Image Dissatisfaction Intervention in ED Patients**

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Introduction: Achievements in body image dissatisfaction intervention in ED continue to be discouraging. Emphasis in a functional use of the body as a novel approach to this difficulty seems to be a useful approach in recovery

and relapse prevention. Method: In 30 women with AN, BN and binge eating disorder (DSM-5), assisting to an intensive outpatient clinic (Equilibrio), a protocol of 10 individual CBT sessions was applied. It includes a photographic history of the body, a personal hierarchy for body exposure to feared situations and daily exercises of sensory integration. The content of an interview to patients and therapists was analyzed. Results: 83% of patients were able to expose themselves to the situations in their hierarchies, and behave accordingly, building new learnings even without a change in the body image disturbance. Conclusion: Inhibitory learning principle according to which the appearance of new experiences with the body, facilitate the emission of new responses, more adaptive and functional, could be the explanatory model for the achievement of a functional use of the body even in the absence of a change in the dissatisfaction and/or distortion of body image.

*Learning Objectives:*

- ▶ Participants are expected to be familiar with a different theoretical framework to body image disturbances and its intervention.
- ▶ Participants are expected to comprehend the importance of inhibitory learning VS habituation as a result of the exposure to feared situations.
- ▶ Participants are expected to be familiar to the concept of functional body as a novel way to approach intervention in body image disturbances.

**T-050 - Poster Withdrawn**

**T-051 - Poster Withdrawn**

**T-052**  
**Perceptual and Cognitive components of Body Image Dissatisfaction are Associated with Different factors of the Eating Disorders Tendency**

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**Shinsuke Suzuki, Assistant Professor**  
**Motoaki Sugiura, Professor**

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The purpose of this study is to demonstrate that (i) body image dissatisfaction can be decomposed into two independent components, perceptual and cognitive discrepancies (PD and CD respectively); and (ii) how these discrepancies interact with eating-disorder-related traits such as "drive for thinness", "impulse regulation" and so on. We recruited 30 healthy female students from Tohoku University. By conducting a psychophysics

experiment, we measured their PD, defined as discrepancy between the estimated self-image and the real-image, and CD, defined as discrepancy between an estimated self-image and ideal-image. We also asked the subjects to undergo Japanese version of Eating Disorder Inventory2 (EDI2) in order to correct the data concerning their eating-disorder-related traits. This version of EDI2 divides the traits into six factors. First, we found that PD and CD didn't correlate with each other ( $r = 0.10$ ,  $p = 0.60$ ), supporting the notion that body image dissatisfaction can be decomposed into two independent components. Second, these two components are found to be correlated with different eating-disorder-related traits: PD with EDI2-factor3 consisting of the items from "impulse regulation", "interoceptive awareness", "social insecurity" and "ineffectiveness" ( $r = 0.41$ ,  $p = 0.026$ ) and CD with EDI2-factor2 composed by the items from "body dissatisfaction" and "drive for thinness" ( $r = 0.74$ ,  $p < 0.001$ ). Furthermore an additional examination confirmed that the association between CD and EDI2-factor2 remained significant ( $r = 0.59$ ,  $p < 0.001$ ) after controlling for the effect of Body Mass Index (BMI), despite that BMI had significant correlation with both CD ( $r = 0.54$ ,  $p < 0.001$ ) and EDI2-factor2 ( $r = 0.34$ ,  $p < 0.01$ ). These findings together suggest that two independent components of body image dissatisfaction underlie different aspects of eating disorders.

*Learning Objectives:*

- 1 Describe the components of Body Image Dissatisfaction.
- 2 Estimate tendencies of Eating Disorders by psychophysical experiment.
- 3 Report the relationship between Body Image Dissatisfaction and Eating Disorders tendency in detail.

### **T-053** **The Effects of Active Social Media Engagement on Eating Disorder Risk Factors in Young Women**

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The present study's objective was to examine how actively engaging with peers on social media affects young women in terms of their body image and self-esteem. Participants were 112 female (aged 17-27) undergraduate students. Sixty-two of these participants left comments on photos of one of their own subjectively more attractive acquaintances and interacted with this contact's social media profiles for five minutes on Facebook and five minutes on Instagram. The other 50 participants completed the same procedure with a family member they did not consider more attractive than themselves. After the manipulation, all participants completed several measures of body image and self-esteem. Women who

had engaged with attractive acquaintances subsequently had lower state self-esteem and body image than those who had engaged with family members on Facebook and Instagram. Trait self-evaluative salience of appearance investment and upward physical appearance comparison tendencies moderated various relationships between social media condition and self-esteem and body image. The findings suggest that appearance-based social media engagement is causally related to risk factors for eating disorders in young women, and young women with certain traits are more susceptible to such effects. This study's results may inform prevention initiatives to protect young women from adverse effects of certain social media activity on body image and self-esteem.

*Learning Objectives:*

- 1 Recognize the importance of comparing active social media engagement with family members to active social media engagement with acquaintances.
- 2 Describe what causal effects engaging on social media in a common way has on both state appearance self-esteem and body image.
- 3 Describe the moderating roles of certain individual difference factors have on the relationship between type of social media engagement and state body image as well as self-esteem.

### **T-054** **Perspectives on Weight Measurement within a Physical Education Classroom**

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Amy Lang, BS<sup>1</sup>  
Jillian Austin, PhD, BCBA<sup>2</sup>  
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Due to the increased prevalence of childhood obesity, schools have begun implementing health-screening programs for adolescents that often include measuring weight as a class requirement. Despite mixed evidence regarding the efficacy of weight measurement programs in obesity reduction, weight measurement in a school setting may lead to decreased positive body image and weight-related stigmatization. The purpose of this study was to examine the perceptions of weight measurement practices among emerging adults. Two hundred thirty-nine emerging adults, primarily White (75%) and female (66%), completed an online survey. Participants were asked their opinion regarding weight measurement policies within a physical education class and those participants previously weighed within their class completed multiple choice and free-response question about their experiences. Qualitative responses were coded using

the Delphi coding method. Of the 239 participants, 151 (63%) reported being weighed and 59% reported that this was a requirement for class. When asked how they felt about being weighed at school, 31% indicated a negative reaction and only 1% of the sample reported feeling positive about the experience. Additionally, most (57%) of participants reported that the weighing process was inappropriate. When asked how they felt about a weight measurement policy in the classroom, 37% of participants had a negative reaction and 19% described this policy as unhelpful. Fewer participants regarded the policy as positive (15%) and/or helpful (14%). Results suggest many students may respond negatively if required to have their weight measured in class. This may be particularly true for individuals with already poor body image. Further research is needed to determine if these experiences place students at increased risk for negative body image development and the potential effects on youth with already poor body image and/or eating disorder symptomology.

*Learning Objectives:*

- ▶ Describe the experience of individuals weighed in a classroom setting.
- ▶ Assess the potential harm of a weight measurement policy in middle and high school classrooms.
- ▶ Propose future research on the relationship of body image and weighing in the classroom.

### T-055

#### Depression and Body Image: The Moderating Role of Negative Core Beliefs associated with the Eating Disorders

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Belfu bi , BA Student<sup>1</sup>

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From the developmental perspective, eating disorders are a form of coping with depression in physical appearance during puberty. Understanding the relationship between depression and body satisfaction have been highlighted in the literature to prevent and threat the eating disorders. On the other hand, negative core beliefs that associated with the eating disorders and its relation to depression and body dissatisfaction have not been examined. The aim of the study is to examine the moderating roles of negative core beliefs that associated with the eating disorders on the depression and body dissatisfaction. The study consisted of 126 adolescents (86 female and 40 male). In addition to BMI information, the Socio-Demographic Form, Body Cathexis Scale (BCS), Beck Depression Inventory

(BDI) and Eating Disorders Belief Questionnaire (EDBQ) were used to collect data from the participants. Results revealed that beyond the controlling BMI, control over eating and weight and shape as a means to acceptance by others have a moderator role on the relationship between depression and body dissatisfaction. In respect to literature and the current results of our study, modifying negative core beliefs are recommended for clinicians to maximize patients therapeutic gain.

*Learning Objectives:*

- ▶ Assess the role of negative core beliefs on eating disorders.
- ▶ Getting a different perspective for an effective treatment/prevention plan for eating disorders and related symptoms.
- ▶ Describe the relationship between core beliefs about eating disorders and body dissatisfaction and depression.

### T-056

#### Weight Bias Among Young Adults: Could One's Own Body Image Issues Matter the Most?

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Weight bias is wide spread in Occidental societies and has potential devastating consequences on stigmatized individuals. Multiple strategies have been tested to reduce weight bias in different populations, but none have been systematically effective. Hence, it is important to better understand the underlying factors of weight bias to guide more effective strategies. The present study explores the role of attribution style and body image issues in the expression of explicit and implicit weight bias. Therefore, 70 young adults answered online questionnaires measuring body esteem, tendency to social comparison, attribution style and explicit weight bias. Participants also completed an Implicit Association Test measuring implicit bias. Overall, as of body image issues, both a decreased body esteem ( $r = -0.404$ ,  $p = 0.001$ ) and a high tendency for social comparison ( $r = 0.515$ ,  $p < 0.001$ ), seem to be the related more strongly to the expression of explicit weight bias than attribution and beliefs that weight is controllable ( $r = 0.259$ ,  $p = 0.031$ ). Implicit weight bias appears to be independent of both body image issues and attribution. Moreover, a mediation model showed that there was a significant indirect effect of body esteem related to appearance on explicit weight bias through social comparison ( $ab = -0.23$ , BCa CI [-0.41, -0.07]). Social comparison could account for more than half of the total effect,  $PM = .61$ . These results propose a certain

role of body esteem in the endorsement of weight bias and the likely role of the social enbrainment. Thus, weight bias reduction strategies might aim to target body image components and possibly the social acceptability of this prejudice.

*Learning Objectives:*

- ▶ Introduce the problematic behind weight bias.
- ▶ Demonstrate the role of body image in the dynamic of weight bias.
- ▶ Discuss about the impact of social acceptability in the endorsement of weight bias.

### **T-057** **Body Image Flexibility and Treatment Outcomes in a Residential Eating Disorder Facility**

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The purpose of this study was to examine the effects of changes in body image psychological flexibility in patients with an eating disorder over the course of treatment on various outcome variables. Participants included 103 female, residential patients diagnosed with an eating disorder. Pre- and post-treatment data were collected that examined body image psychological flexibility, general psychological flexibility, symptom severity, and other outcome variables. Changes in body image psychological flexibility significantly predicted changes in all outcome measures except for obsessive-compulsive symptoms after controlling for body mass index, depression, and anxiety. Changes in body image flexibility scores significantly predicted eating disorder severity, quality of life, and general mental health ( $R^2$  after controlling for body mass index, depression, anxiety, and general psychological flexibility = .067, .098, and .055, respectively). Additionally, the incremental validity of the Body Image Acceptance and Action Questionnaire (BI-AAQ) was further established as results remained significant after controlling for general psychological flexibility. Findings suggest that changes in body image psychological flexibility meaningfully predict changes in various treatment outcomes of interest, including eating disorder risk, quality of life, and general mental health. Findings indicate that body image psychological flexibility might be a viable target for eating disorder treatment.

*Learning Objectives:*

- ▶ Define body image flexibility and describe how it relates to disordered eating behavior.

- ▶ Explain how changes in body image flexibility are related to treatment outcome variables of interest, such as quality of life, eating disorder severity, and general mental health.
- ▶ Appraise the utility of targeting body image flexibility in the treatment of eating disorders.

### **T-058** **Feeling Good about your Body: Body Fulfillment, Body Dissatisfaction and Well-being**

**Lilac Lev-Ari, Dr.**  
**Ada Zohar, Prof.**  
**Rachel Bachner-Melman, Dr.**

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Negative body image is a symptom of eating disorders, as well as a result and a cause of disordered eating, helping to maintain a positive feedback loop. In the current study, we extended the concept of body perception beyond the negative features that usually underlie body dissatisfaction – like/dislike of size, shape and weight. We examined the contribution of positive body experiences, including vitality, sexual fulfillment, positive narcissism, body acceptance, and physical contact, to satisfaction with life. An online survey was completed by 552 community adult volunteers, including the Dresdner Körperbildfragebogen (DKB-35), EAT-26, EDI-2 Drive-for-Thinness subscale, Satisfaction With Life Scale (SWLS). They also reported height and weight. Linear hierarchical regression predicting SWLS scores from EDI-2 and EAT-26 scores, and then the 5 subscales of the DKB-35 was conducted. The EDI-2 and the EAT-26 both negatively predicted SWLS ( $\beta = -.41$ ,  $p < .001$  and  $-.20$ ,  $p < .01$ , respectively) and explained 23% of the variance. However, entering DKB-35 vitality, sexual fulfillment, positive narcissism, body acceptance, and physical contact subscale scores mediated the effect of the negative body perception and disordered eating on SWLS scores. Satisfaction with life was predicted positively by vitality ( $\beta = .29$ ,  $p < .001$ ), body acceptance ( $\beta = .19$ ,  $p < .05$ ) and sexual fulfillment ( $\beta = .21$ ,  $p < .001$ ), which fully mediated the association between satisfaction with life and disordered eating / body dissatisfaction, while contributing another 17.6% to the explained variance. BMI was not significantly associated with SWLS scores. These results support the importance of expanding measures of body image and suggest that the negative effects of an unhealthy drive for thinness, that permeates our culture and encourages disordered eating and eating disorders, may be attenuated by emphasizing positive aspects of body perception. BMI does not contribute to satisfaction with life, belying the common and destructive myth that thin people are more satisfied with their lives than fat people.

*Learning Objectives:*

- Following the training, participants will be able to discuss positive body experiences.
- Following the training, participants will be able to discuss the effects of negative vs. positive body experiences on psychological well being.
- Following the training, participants will know the psychometric properties of the DKB-35.

**T-059****Instagram Use and Body Image: Exploring the Role of Thin Ideal Internalization in Ethnically Diverse Women**

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Research has established that the media promotes unrealistic beauty standards and internalization of the thin ideal, which results in body image concerns. However, little research has examined the effects of image-based social networking sites like Instagram (IG) on these constructs. The present study investigated whether thin-ideal internalization mediated the relationship between daily IG use and shape concern in a sample of ethnically diverse young women. Participants were 266 young adult women with a mean age of 19.31 (SD = 1.42) and mean BMI of 24.49 (SD = 4.90). Approximately 59% of the sample identified as Hispanic/Latina. Participants completed a social media use questionnaire, Sociocultural Attitudes Towards Appearance Questionnaire-4, and Eating Disorder Examination-Questionnaire. They reported spending an average of two hours on IG every day (SD = 2.02). Results of the mediation analysis with bootstrapping indicated that thin-ideal internalization significantly mediated the relationship between IG use and shape concern ( $ab = .08$ , 95% CI [.02, .13]). More specifically, as daily IG use increased by one hour, shape concern increased by one point via the effect of thin-ideal internalization. Study findings indicate that frequent IG use may be particularly problematic for ethnically diverse women who internalize the thin ideal. IG is likely another type of media source that portrays and reinforces the thin ideal, which in turn contributes to shape concern. Future research should examine the different types of appearance-based images on IG (i.e., thin ideal, athletic/muscular ideal) and explore other mechanisms that may underlie the relationship between IG use and body image concerns, such as appearance comparison or body surveillance.

*Learning Objectives:*

- Recognize the role of thin-ideal internalization in the development of body image concerns.

- Differentiate between traditional media pressures and social media pressures.
- Assess the role of Instagram use in levels of shape concern and thin-ideal internalization.

**T-060****Body Perception, Body Dissatisfaction and BMI in Young Males: A Multicentre Italian Study**

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Eleonora Roncarati, Dietitian<sup>1</sup>  
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Recent studies have shown a meaningful presence of body misperception in underweight males, while data about it in young males with overweight and obesity are controversial. In males with a normal BMI, a distorted self-perception of their body shape and concerns about their weight can be risk factors for developing disordered eating behaviours. The multicenter study was conducted in a sample of 121 males, from 4 Italian regions, aged 15 to 30 yrs. They were administered the BUT and EAT-26 tests, the Stunkard figure rating scale and a photo test designed by two SISDCA centres in Ferrara and Pisa, displaying Silhouettes with an increasing BMI. A comparison between actual weight and height (actual BMI) and self-perceived weight and height (self-perceived BMI) was made for each subject. Each subject was asked to choose the Figure and the Silhouette he identified with, as well as the photo representing his ideal body shape. The sample included 66.7% subjects with normal-weight, 5% with underweight, 22.5% with overweight and 5.8% with obesity. 14% of the subjects showed high scores, possibly pathological, at BUT. 35.5% people would like to be thinner and 38.8% would like to have a greater weight. 28.1% attribute to themselves a lower BMI than the actual one and 5% attribute to themselves a higher BMI than the actual one. There is substantial discrepancy between self-perceived weight and height and visual perception (BMI of the silhouette chosen as representing their body shape in the Photo-test).

*Learning Objectives:*

- ▶ The aim of study is to highlight the characteristics of body perception in a sample of young student males.
- ▶ To highlight the characteristics of body image and shape perception in young male general population.
- ▶ The study focused on risk factors ( body image and eating behavior) for eating disorders in young males.

### T-061 Features of Body Image and Eating Habits in a Samples of Competitive and Not Competitive Body Builders

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Body builders are often focused on their body shape and muscularity and they might be willing to practice dangerous eating behaviour for their health. The aim of our study is to compare the features of a sample of competitive body builders (10 subjects) with a sample of not competitive body builders (52 subjects). A semistructured interview and two psychometric tests (Body Usiness Test and Eating Attitude Test) have been administrated. The study shows many similarities between the two samples, such as an important focus on the body shape, excessive attention for the body image and the extreme research of the muscle definition. Both samples (particularly the competitive body builders) reveal an excessive use of the scale and they spend a lot of time in structured spaces for training. Competitive body builders focus their concern particularly on the calves, instead the sample of the not competitive body builders is focused on the stomach/belly. With reference to the sample of competitive body builders, we can assure they use a strictly controlled meal plan and they abuse of food supplements. However, both groups usually follow an unbalanced diet in terms of nutritional value, according to the guide lines. Body disperception and dissatisfaction are present only in a minority of the sample, especially in the group of the not competitive body builders. Our study highlights the presence of some risk factors for the development of disorders, such as muscle dysmorphia (body dysmorphia) and eating disorders in competitive as well as in not competitive body builders.

*Learning Objectives:*

- ▶ The aim of study is to focus on body image and the altered eating behaviour as risk factors for eating disorders or dysmorphia in a sample of body builders.

Furthermore, to highlight the possible differences between agonist body builders and not agonis.

- ▶ The study is focused on body image in body builders as risk factor for dysmorphia corporea.
- ▶ The aim is to focus on epidemiological study of risk factors for eating disorders in agonist and not agonist body builders.

### T-062 Perceived Effectiveness of Others' Coping Reactions to Body Image Distress: A Social Learning Examination

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According to Social Learning Theory we can learn attitudes and reactions by witnessing others be reinforced for displaying that attitude or reaction. Because self-compassion protects against negative body image and facilitates adaptive body image, this study examined: 1) the degree to which a self-compassionate reaction to body image distress was perceived as effective-and thus reinforcing, and 2) how hearing this reaction influenced one's motivation to use self-compassion in times of future personal body image distress. Given the adverse outcomes associated with body image distress, it is vital to understand the factors that encourage adaptive coping with body image. In this study, 159 female undergraduates listened to a self-compassionate, self-esteem enhancing or objective reaction to a body image threat. They were then asked to evaluate the reactions they heard and whether they themselves might benefit from reacting in the same way. Results indicated that participants judged a self-compassionate reaction as significantly more effective for the person in the clip than either a self-esteem enhancing reaction or a neutral reaction,  $ps < .05$ . Furthermore, compared to those who heard the self-esteem enhancing and neutral clips, those who heard the self-compassionate clip believed that reacting in a similar way would be more helpful for themselves personally,  $ps < .001$ , and reported greater motivation to use this coping style for their own body image distress in the future,  $ps < .001$ . Theoretically, results are among the first to suggest that adaptive body-related attitudes may be socially learned in our immediate environment. Practically, they suggest that self-compassionate reactions to body image may be more amenable to social learning than other coping attitudes. Thus encouraging women to cultivate relationships with self-compassionate others may be an especially effective way of leveraging interpersonal influence to benefit womens' body image.

*Learning Objectives:*

- ▶ Learn which of three positive coping styles - self-compassion, self-esteem enhancement, and distraction

- is perceived to be most beneficial in dealing with body image distress.

- ▶ Summarize the effect of exposure to these coping styles on participant's motivation to personally use the same type of coping when faced with body image distress in the future.
- ▶ Apply Social Learning Theory to predict how being exposed to another's body-focused self-compassion may influence one's own body-focused self-compassion.

### T-063

#### The Gap between the Perceived Body and the Ideal Body in Argentine and Spanish Women

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 Jesica Custodio, CPsychol<sup>2</sup>  
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The ideal female body that is being promoted by the mainstream media of western societies is dangerously thin and may lead many women to feel dissatisfied about their own body weight and image. The unhealthy thin ideal is socially reinforced by family members, peer groups and friends. The gap between the average size and the ideal body as well as the general discontent about body image is increasing among female population. The aim of this study was to compare Argentine and Spanish women regarding a series of variables usually associated with eating disorders. The sample included 341 Argentinian and 332 Spanish women (N=673), aged between 18 and 35 years. All women filled out the following questionnaires in order to assess body dissatisfaction and variables usually associated with eating disorders: Body Shape Questionnaire, Eating Attitude Test, Body Image Automatic Thoughts Questionnaire, Thought Check List, Body Image Assessment, and The Sociocultural Attitude towards Appearance Questionnaire-4. They also were asked about their perceived and wished body by a silhouette scale. Results showed that 75% of women presented low (<18.5) or normal (18.5-24.99) Body Mass Index (M=

22.43; SD=3.93). In spite of this, 61.5% of them wanted to be thinner. Regarding discrepancies between wished and perceived body image, no significant differences were founded between Argentine and Spanish groups. However, significant and positive correlations were found in BMI and body discrepancies obtained with the other measures. These findings show important implications in prevention and clinical work. Public policies are necessary to promote that media outlet to show more models and actors with diversity of body size. This could protect positive body images as well as women's and girls' self-esteem showing an important preventive impact.

*Learning Objectives:*

- ▶ Assess body image dissatisfaction of women from different countries.
- ▶ Notice the importance of transcultural perspective of eating disorders.
- ▶ Discuss the role of the sociocultural influences across body image dissatisfaction.

### T-064

#### How Should We Respond When a Friend Fat Talks?

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Since fat talk (i.e. negative talk about one's body) is common among women and has been linked to negative psychological states, the present study aimed to discover what types of responses to a friend's fat talk are most helpful to her. 90 undergraduate females were presented with a distressing body image scenario in which they engaged in fat talk. Each participant then heard a hypothetical friend respond to the fat talk in five different, counterbalanced ways: denying her claims, warmly accepting her concerns, challenging her to improve her health and physique, both accepting and challenging her, and encouraging body image flexibility (i.e. recognizing body dissatisfaction but not allowing it to interfere with one's lifestyle). Visual analog scales were completed after each response. Repeated measures ANOVAs indicated that response type impacted scores on all dependent variables ( $p < .001$ ). Specifically, the responses that involved denial, acceptance, or the encouragement of body image flexibility resulted in the greatest positive affect, body image flexibility, and likeability of the responder, and in the least negative affect. However, the responses that challenged the participant to self-improve or that combined this response with acceptance encouraged more motivation to engage in healthy eating and exercise behaviors than did the other conditions.

Preliminary results therefore suggest that denial, acceptance, and body image flexibility encouragement are all ideal responses to a friend's fat talk. Challenging a friend to improve her health and physique, even when combined with acceptance, may motivate her to change her body but at the expense of helping her feel better emotionally about her body in the moment. Much work remains to be done, but these results are an important step in discovering how female undergraduates can respond to their friends' fat talk in a manner that combats its negative effects and promotes more positive experiences.

*Learning Objectives:*

- ▶ Discuss the advantages and/or disadvantages of various responses to a friend's fat talk.
- ▶ Identify which fat talk responses are helpful overall.
- ▶ Implement this knowledge in real-life fat talk situations.

**T-065 - Poster Withdrawn**

**T-066  
Body Weight Dissatisfaction and Abnormal Eating Behaviors in a Community Sample of Chilean Adults**

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The aims of this research were to estimate the percentage of body weight dissatisfaction in males and females Chilean adults, assessing its relationship with different sociodemographic, behavioral and psychological variables, and analyzing whether the presence of body weight dissatisfaction acts as a risk factor for some disordered eating behaviors. 654 participants (436 women, 218 men; age range 18–64 years, mean body mass index 25.49 kg/m<sup>2</sup>) were evaluated with a battery of self-administered questionnaires. The percentage of body weight dissatisfaction in the whole sample was 45.9% and significantly higher in women than men. Significant differences were observed in the clinical scales that evaluated disordered eating in function of the body mass index of the participants; in those scales females also showed higher scores than males. Comparing participants with and without body weight dissatisfaction, the first one showed more unhealthy eating behaviors. The results of this study show how body weight dissatisfaction can interact and influence healthy habits, such as a daily eating behaviors and physical exercise.

*Learning Objectives:*

- ▶ Estimate the percentage of body weight dissatisfaction in males and females Chilean adults.
- ▶ Assess the relationship of body weight dissatisfaction with different sociodemographic, behavioral and psychological variables.
- ▶ Analyze whether the presence of body weight dissatisfaction acts as a risk factor for some disordered eating behaviors.

**T-067  
Body Dissatisfaction in Collegiate Athletes: Sex Differences According to Sport Type**

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**Liz Dougherty, MS<sup>1</sup>**  
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Body dissatisfaction (BD) is associated with significant distress and often precipitates the development of disordered eating. Research indicates that both male and female athletes experience BD. The risk for BD is greater in sports that promote leanness for success (e.g., track) as compared to sports that do not emphasize leanness (e.g., basketball). This study sought to clarify the relations of sport type and sex with BD in college athletes. Male (n=44 in lean-promoting sports, n=18 in non-lean-promoting sports) and female (n=59 in lean-promoting sports, n=70 in non-lean-promoting sports) collegiate athletes were recruited from two Midwestern universities to complete self-report questionnaires. Lean-promoting sports were defined as: cross country, track and field, swimming and diving, gymnastics, and volleyball. Non-lean-promoting sports were defined as: soccer, golf, lacrosse, baseball, softball, basketball, and tennis. A two-way ANOVA (sex vs. sport type) revealed a significant main effect for sex, ( $p < .001$ ) such that women reported greater BD than men. There was also a main effect for sport type which trended towards significance ( $p = .052$ ) such that athletes in lean-promoting sports reported greater BD than athletes in non-lean-promoting sports. There was a significant interaction between sport type and sex on BD ( $p < .05$ ). Follow up analyses revealed that men who participated in lean-promoting sports reported higher BD compared to men who participated in non-lean-promoting sports. For women, there was no significant difference in BD by sport type. Females in lean-promoting sports did not experience more BD than females in non-lean promoting sports, perhaps because the ideal body is internalized by female athletes of different collegiate levels of competition. In contrast, a sporting environment that emphasizes a lean body may be especially salient to BD in male athletes. Future studies should determine if prevention strategies that aim to increase body positivity in the sporting environment are helpful in this population.

*Learning Objectives:*

- Describe body dissatisfaction in athletics.
- Determine how body dissatisfaction differs by sport type in male collegiate athletes.
- Illustrate the significance of body dissatisfaction in female collegiate athletes regardless of sport type.

**T-068**

### The Relationship Between Weight Bias Internalization, Fat Talk, and Body Satisfaction in Undergraduate Females

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Research has demonstrated relationships between fat talk and body dissatisfaction as well as weight bias internalization and body dissatisfaction. No studies, however, have examined the interaction between fat talk and weight bias internalization on body dissatisfaction. The current study measured these variables in 143 undergraduate females (Mage = 19.81; MBMI = 22.3) and found that fat talk, weight bias internalization, and BMI accounted for 53% of the variance in body satisfaction,  $F(4, 131) = 36.87, p < .001$ . There was a significant interaction of fat talk and weight bias internalization,  $\beta = -.01, t(131) = 2.19, p = .031$ . Follow up tests of simple slopes indicated that for participants who were one SD above the mean for weight bias internalization, there was not a significant relationship between fat talk and body satisfaction ( $p = .445$ ). However, for participants one SD below the mean for weight bias internalization, higher levels of fat talk were significantly associated with lower body satisfaction ( $.036$ ). Consistent with previous research, there also was a main effect for weight bias internalization, with higher levels of weight bias internalization predicting lower body satisfaction,  $\beta = -.36, t(131) = -9.33, p < .001$ . These results demonstrate that for participants who are lower in weight bias internalization, fat talk has a stronger effect on body dissatisfaction. Therefore, the normalization of and participation in fat talk may increase the risk of body dissatisfaction in undergraduate females, especially for those who do not internalize weight bias attitudes. Overall the results highlight the importance of prevention efforts in college populations.

*Learning Objectives:*

- Describe weight bias internalization and fat talk.
- Assess the interaction between weight bias internalization and fat talk on body satisfaction.
- Explore the role of prevention efforts on college campuses to reduce fat talk.

**T-069**

### Body Image and Eating Disorder Peer Education: A Report on Advocacy Training for Eating Disorder Outreach with College Students

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This paper reviews the development and outcome of a new peer advocate outreach program for eating disorder prevention on a college campus. The rationale for this program originating at the University of Iowa was threefold: First, eating disorders are a serious mental health concern on college campuses and outreach to college students should focus on prevention and early identification of disordered eating and eating disorders. Second, there is stigma surrounding eating disorders and the campus community needs to be educated on symptoms of, and treatment for eating disorders. Third, research has identified that concerned others play an important role in the help-seeking process of students with eating disorders. After a literature review of peer education and peer advocate programs on college campuses, this paper describes the mission and program development steps for this program. Component one is a semester-long peer training where advocates learn about outreach, eating disorders, and body image concerns as well as outreach skills. Component two is peer-advocate facilitated campus outreach the second semester of the year-long commitment. Both of these components will be described in detail. A qualitative evaluation of the training program revealed that peer advocates gained new information (knowledge about resources for assistance, ways to interact with individuals struggling with eating disorders, importance of advocacy work), new skills (peer counseling, communication skills, compassion for others, advocacy skills), increased understanding of the link between body image concerns and eating disorders, and positive changes in attitudes about their own bodies. Pre-post assessment information about peer advocated outreach sessions will also be provided. Statistically significant increases in knowledge of eating disorders, awareness of a range of counseling center services, and willingness to seek help were mentioned by program attendees. Assessment of the training and outreach components will be discussed. Strengths (growth in peer advocates, increased outreach presentations) and limitations of this program (resource needs, outreach activities to more diverse groups) will be noted.

*Learning Objectives:*

- Discuss the status of research on peer education and peer advocacy on college campuses related to eating disorder prevention and early intervention.

- Describe objectives, logistics, and program evaluation findings of the training and outreach components of this peer advocate program for eating disorder and body image outreach.
- Evaluate and critique the effectiveness of college peer education/advocate programs for eating disorder and body image concerns.

**T-070**  
**Interpersonal Correlates of Body Dissatisfaction: Investigating Associations between Friendship Quality, Body Dissatisfaction and Interpersonal Sensitivity**

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Poor friendship quality has been linked to multiple negative mental health outcomes, including body dissatisfaction, while high-quality friendships may buffer the pressures that can lead to body dissatisfaction. Some individuals may be more sensitive to perceived negative interactions with friends. The purpose of this study was to explore whether (a) friendship quality and interpersonal sensitivity predict body dissatisfaction, (b) depressive symptoms mediate these associations, and (c) interpersonal sensitivity moderates the relationship between friendship quality and body dissatisfaction. The study included an international sample of 274 women between the ages of 18 and 29 years. The cross sectional study consisted of a self-report online survey including measures of body dissatisfaction, friendship quality, fear of negative evaluation and depressive symptoms. Multiple linear regressions were used to investigate the relationships between these factors. None of the positive friendship features (trust, communication, stimulating companionship, help, intimacy, reliable alliance, self-validation and emotional security) significantly predicted body dissatisfaction. Alienation was the only friendship feature that significantly predicted body dissatisfaction ( $\beta = 0.35$ ), however this association was reduced to non-significance when depression was taken into account. Fear of negative evaluation significantly predicted body dissatisfaction beyond the predictive power of depression ( $\beta = -0.33$ ) but did not moderate the relationship between friendship quality and body dissatisfaction. The results suggest that negative friendship features (i.e., alienation) and interpersonal sensitivity are associated with body dissatisfaction and may be important targets for intervention. Future research should further investigate negative friendship features and their association with body dissatisfaction.

*Learning Objectives:*

- Review what is known about the role of friendships in the development of body dissatisfaction.
- Examine the association between positive and negative friendship characteristics and body dissatisfaction.
- Consider the role that individual differences in depressive symptoms and fear of negative evaluation play in these associations.

**T-071**  
**A Proposal for a Physiotherapy Protocol for the Rehabilitation of Body Image Distortion of Brazilian Women with Eating Disorders**

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 Felipe Souza, Specialist  
 Fabio Salzano, Dr  
 Eduardo Aratangy, Dr  
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The aim of this work was to apply a physiotherapeutic protocol of body activities to treat the perceptual component of body image distortion in adult women with eating disorders (ED). Five women under treatment for anorexia nervosa ( $n=3$ ) and bulimia nervosa ( $n=2$ ) at the Eating Disorder Program (AMBULIM) of the Hospital das Clínicas of the University of Sao Paulo School of Medicine-Institute of Psychiatry in Brazil participated in this study. There is no structured and specific body intervention protocol for the inaccurate body perception typically observed in people with ED. Subject's self-perception of body size and shape was evaluated by the Image Marking Procedure test (IMP). Its measurements generated a Body Perception Index (BPI), categorized as adequate perception (accuracy ranging from 99.4% to 112.3%); moderate (BPI 123% to 349.7%) and severe distortion (BPI  $\geq 150.0\%$ ). The latter is further subcategorized into mild, moderate and severe. The patients were later submitted to a physiotherapeutic protocol of specific corporal activities that stimulate body perception with the objective to improve inaccurate perception of real body size. Before intervention, patients presented severe overestimation (mean BPI = 242.88%). After the 42-week program of body perception activities, they were tested again and presented moderate overestimation (mean BPI = 147.16%). These results suggest that the physiotherapeutic protocol can be a promising resource to treat the perceptual component of body image distortion, seeking the rehabilitation of the neural mechanism that constructs the representation of the body in the parietal cortex, which is dysfunctional in ED.

*Learning Objectives:*

- ▶ Identify body image distortion.
- ▶ Consider a classification of body dimension.
- ▶ Detect the possibility of treatment of body image distortion.

**T-072****What's missing? A Narrative, User-centered Approach to Understanding Body Image among Women who Identify as Lesbian****Samantha VanHorn, BA, MA, ABD**

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Offering an innovative approach to studying body image within the lesbian population, this study explains how standardized body image assessments may do a disservice to understanding the body image experiences of lesbians. At the intersection of feminist theory, disability studies, and user experience (UX), this study critiques many existing assumptions and methods of standardized body image assessments and points out how they falter. The social model of disability studies states that disability is made when the particularity of the body does not fit in the built environment. Relatedly, the lived experiences of lesbians are ignored by many body image assessments. UX—a prevalent field in the tech industry—focuses on accessibility, usability, and how humans engage with their environments. UX researchers observe the ways humans interact with things like apps and websites, and then design novel interfaces for interacting with these digital environments. In merging the fields of feminist theory and disability studies with the methodological practices of UX, this study presents a novel approach for better understanding lesbian body image experiences. Lesbians may experience their bodies in ways that are not reflected in existing assessments; the answers you receive depend upon the questions you ask. Forty self-identified lesbians in Atlanta, GA and New York, NY ranging in age from 18-75 participated in individual interviews and focus groups about body image. In the focus groups, participants discussed three existing standardized assessments frequently used in body image research. No participant felt that any single body image assessment would adequately depict her body image situations or concerns. Instead, by applying UX, each participant offered up more user-friendly assessment ideas. This study suggests that lesbians may not only define the concept of body image differently, but may also experience body image differently than much existing research indicates.

*Learning Objectives:*

- ▶ Describe how the fields of disability studies and user experience can both benefit and contribute to body image research.

- ▶ Apply methodologies from the field of User Experience (UX) to body image research and critique shortcomings of existing standardized body image assessments.
- ▶ Offer a more holistic, qualitative analysis of the lived experiences of lesbians and explain how existing standardized body image assessments often ignore the reality of lesbian body image concerns.

**T-073****Changing Mindsets: A Brief Compassion-Based Intervention Targeting the Negative Effects of Appearance-Focused Social Comparisons****Kiruthiha Vimalakanthan, MA****Allison Kelly, PhD, CPsych****Sarina Trac, BA**

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The practice of making upward appearance comparisons is harmful yet ubiquitous. Among women, these unfavourable comparisons increase body dissatisfaction and negative affect. Researchers have examined whether making downward or favorable comparisons can counteract these harms but results are mixed and the approach perpetuates competitiveness. Applying social mentalities theory, this study investigated whether adopting a compassionate mentality toward upward comparison targets would buffer against the harms of appearance comparisons and the motivation to make them. In an in-lab task, 133 women recalled a recent distressing upward appearance comparison, then learned and practiced one of three strategies: cultivating feelings of loving-kindness and compassion toward the target; making a downward comparison to the target in a non-appearance domain of superiority; or distracting themselves through counting (Control). Adopting a compassionate mentality toward the recalled comparison target reduced feelings of distress,  $F(1, 111) = 10.63, p = .002$ ; and the motivation to make appearance comparisons,  $F(1, 122) = 20.98, p < .001$ , relative to the downward-comparison condition. It also reduced feelings of body dissatisfaction,  $F(1, 124) = 5.58, p = .02$ ; distress,  $F(1, 111) = 12.28, p < .001$ ; and appearance comparison motivation,  $F(1, 122) = 5.38, p = .02$ , relative to the control condition. As the first study looking at the effects of cultivating compassion for others in the body image domain, these findings are a novel contribution. This research offers a new, non-competitive strategy for how we might intervene with the problem of appearance comparisons and their harmful effects on women's well-being.

*Learning Objectives:*

- ▶ Describe concepts fundamental to social mentalities theory and how this theory can be applied to the practice of making appearance comparisons.

- Recognize how downward comparisons might be seen as maintaining a competitive orientation towards others.
- Demonstrate how the practice of cultivating compassion for others could benefit women when faced with the threat of appearance-focused social comparisons.

**T-074**

**#ihaveembraced: Differences in Body Appreciation, Dietary Restraint, and Opinions about the Film between Mothers and Non-mothers Who Have Seen the Film Embrace**

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A great deal of research indicates that pregnancy and the postpartum period are time of significant body, and body image changes for women. Yet there are very few evidence-based programs and resources to support new mothers. The film Embrace offers an opportunity for a brief intervention that can be widely disseminated and appeals to this audience. 1099 women who had seen the film Embrace (650 of whom were mothers) completed an online questionnaire. We found that 75% of the mothers were not satisfied with their weight, and since having children, 80% had initiated dietary changes, and 61% had initiated exercise programs to lose weight. Only 52% of the mothers agreed that they were excellent role models of positive body image for their children. There was no difference between those that were mothers (n=636), or not mothers (n=363) in an ANCOVA (controlling for age) for body appreciation  $F(1, 52.45) = 0.83, p = .362$ , Internalisation  $F(1, 5.1) p = 0.2$ , dietary restraint  $F(1, .09) = .001, p = .97$ , or self-objectification  $F(1, 326) = 2.35, p = .12$ . Of the 62 mothers who had seen the film and responded to open-ended questions many indicated that Embrace had an impact on their awareness of the potential impact of role modelling body dissatisfaction and diet and exercise behaviours. Although many mothers indicated that they were already careful about the way that they talk about their body in front of their children, the film enhanced their capacity to support their children. It is important that research continues to investigate mother's body attitudes and eating and exercise behaviour as they have the potential to impact their own physical and psychological health and that of their children.

*Learning Objectives:*

- Assess the impact of motherhood on body appreciation, objectification, and internalisation.
- Explain the nature of body image concerns in women who are mothers.
- Express the advantages of working in this way.

**T-075**

**Drive for Muscularity and Disordered Eating Behaviors and its Relationship with Anthropometric Indicators and Physical Activity in Mexican Male Adolescents**

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Male adolescents have been identified as a risk population to develop Muscle Dysmorphia (MD) and Eating Disorders (ED). It is important to identify the risk factors like disorder eating behaviors (DEB) and the drive for muscularity (DM) as precursors of these pathologies. The aim of this study was to determine the risk to develop ED and DM and its relationship with anthropometric indicators and Physical Activity (PA) in male adolescents from Mexico. A cross-sectional, descriptive and correlational field study was carried out in a non-probabilistic sample of 267 adolescents aged 15-19 years. Three self-report questionnaires were applied: Brief Questionnaire for Disordered Eating Behaviors (BQDEB), Drive for Muscularity Scale (DMS) and International Physical Activity Questionnaire (IPAQ). Each subject was weighted and measured to calculate Body Mass Index (BMI), Body Fat Percentage (BFP) and Fat-Free Mass Index (FFMI). The risk for developing DM was 14.2% and 6.7% for ED. There were no significant correlations found between DMS score and anthropometric indicators. We found significant correlations between DEB score and anthropometric indicators; it was also identified a significant correlation between DMS and DEB score. A slight positive correlation was found between the DMS score and PA level. Important percentages of risk to develop DM and ED were found in Mexican male adolescents. In agreement with other findings there was no association between anthropometric indicators and DM.

*Learning Objectives:*

- Participants will be able to discuss the correlations between anthropometric indicators and risk factors associated with eating disorders as well as with muscle dysmorphia in Mexican adolescents.
- Participants will be able to distinguish that Drive for Muscularity is more related with the level of muscular development than with body weight and that men are more prone to develop behaviors with the intention to gain weight, rather than behaviors to lose weight.
- Participants will be able to analyze the role of physical activity as a risk factor to develop drive for muscularity in male adolescents.

**T-076****Father-Daughter Relationship in Eating Disorders: A 'mixed-methods' Systematic Review**Amelia Brighouse, BSc Honours<sup>1</sup>Erica Cini, MD MRCPsych<sup>2</sup>Darren Cutinha, MA, MSc, MRCPsych<sup>3</sup><sup>1</sup>Sheffield University, Sheffield, UK<sup>2</sup>Imperial College London; University College London; ELFT; SABP; The Priory Group, London, UK<sup>3</sup>University College London, UCL, SLAM, London, UK

Female adolescents are a 'high risk' group for the development of an eating disorder. The 15 to 19 years old, age group is identified as having the highest incidence rate of eating disorders. During adolescence, the father-daughter relationship is important as it plays a role in the development of autonomy and self-esteem. Both these factors are involved in eating disorder psychopathology. A gap in the literature regarding the father-daughter relationship and eating disorders was identified.

This study critically reviews the literature, looking at the father-daughter relationship, in relation to eating disorders. Systematic searches were carried out using CINAHL-Plus, Embase, PsycINFO, PubMed and Web of Science, in accordance with the preferred reporting items for systematic reviews and meta-analysis (PRISMA) guidelines. These were carried out on 9th July 2017. Fifteen studies were identified for this review. The most frequent aspects looked at by quantitative studies were temperament and character traits. 'Over protective and avoidant' and 'caring and benevolent' relationship profiles were prominent reflected, re-occurring themes obtained from qualitative studies. Fathers were experienced as being weight-conscious by their daughters and in placing a high focus on body image. Fathers showed a self-ideal discrepancy in terms of both body fat and muscularity. This study identifies factors in the father-daughter relationship that will help focus future research. Further understanding of this dyadic relationship has merit for use in the development and application of preventative measures aimed at adolescents, the education of the family, and the therapeutic treatment of eating disorders by family therapy.

*Learning Objectives:*

- ▶ Understand the research to date of the father-daughter relationship in eating disorder psychopathology.
- ▶ Relate the father-daughter relationship to eating disorder precipitation and maintenance.
- ▶ Look at the father-daughter relationship in the prevention of adolescent eating disorders.

**T-077****Among Youth with Loss of Control (LOC) Eating, Higher Trait Anxiety is Associated with Adverse Eating and Weight-related Factors, and Components of Metabolic Syndrome (MetS)**Meghan Byrne, BA<sup>1</sup>Marian Tanofsky-Kraff, PhD<sup>1</sup>Nichole Kelly, PhD<sup>2</sup>Monika Stojek, PhD<sup>2</sup>Manuela Jamarillo, BA<sup>2</sup>Sarah Mi, BS<sup>2</sup>Anne Claire Grammer, BA<sup>2</sup>Elisabeth Davis, BA<sup>2</sup>Lisa Shank, MA<sup>1</sup>Natasha Burke, PhD<sup>2</sup>Natasha Schvey, PhD<sup>2</sup>Sheila Brady, FNP<sup>1</sup>Miranda Broadney, MD, MPH<sup>1</sup>Susan Yanovski, MD<sup>1</sup>Jack Yanovski, MD, PhD<sup>1</sup><sup>1</sup>Uniformed Services University of the Health Sciences, Bethesda, DC, USA<sup>2</sup>National Institutes of Health, Bethesda, MD, USA

LOC eating is associated with, and predictive of, eating disorder psychopathology, gains in BMI, and adverse metabolic outcomes in youth. Some data suggest anxiety may exacerbate these associations and play an important role in the impact of LOC on these outcomes. We therefore examined if the interaction of anxiety and LOC eating was associated with eating pathology, BMI, fat mass, and MetS components in youth. The EDE was used to assess presence of LOC eating/past month and global eating pathology. Youth completed questionnaires assessing trait anxiety and appetitive traits, including emotional eating and eating in the absence of hunger. BMI and components of MetS (triglycerides, LDL-cholesterol, HDL-cholesterol, glucose, insulin) were measured after an overnight fast. Fat mass (kg) was assessed by air displacement plethysmography or dual energy x-ray absorptiometry. The interaction of LOC eating by anxiety was tested using MANCOVAs adjusting for age, sex, and race. Height (cm) was included for the model of fat mass, and height and fat mass were included in analyses of disordered eating/appetitive traits and MetS components. 384 non-treatment seeking youths (12.8±2.8y; 53% female; BMI<sub>z</sub> = .77±1.1; 23% with LOC eating) were studied. The interaction of anxiety and LOC was significant such that, only in youth with LOC eating, anxiety was positively associated with EDE global score (p<.001), BMI (p=.04), fat mass (p=.01), triglycerides (p=.003) and LDL-cholesterol (p=.05). The interaction of anxiety and LOC was not significantly related to emotional eating, eating in the absence of hunger, nor any other component of MetS. Data from the current study suggest anxiety may exacerbate eating pathology, adiposity, and components of MetS in non-treatment-seeking youth with LOC eating.

Additional studies are needed to identify potential mechanisms linking these outcomes. These mechanisms, in turn, may inform interventions for those at greatest risk for adverse health outcomes.

*Learning Objectives:*

- ▶ Describe the comorbidity of anxiety and loss of control eating.
- ▶ Describe the comorbidity of loss of control eating, eating disorder psychopathology, and adverse metabolic outcomes in youth.
- ▶ Assess the role of anxiety in eating pathology, adiposity, and components of metabolic syndrome in non-treatment-seeking youth with loss of control eating.

### T-078

#### A Service Evaluation Comparing Group Enhanced Cognitive Behavioral Therapy and Group Radically Open-Dialectical Behavioural Therapy in an Inpatient Adolescent Setting

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A variety of therapeutic approaches are used for the treatment of anorexia nervosa in children and adolescents with eating disorder focused family interventions considered first-line. There are limited studies in the adolescent population on group CBT-E and group RO-DBT, particularly in an inpatient setting. This study explores service user satisfaction of group CBT-E versus group RO-DBT in an adolescent inpatient eating disorder service. A cohort of thirteen patients with a primary diagnosis of anorexia nervosa were followed over a twelve-week session cycle. The participants attended either group CBT-E (n=7) or group RO-DBT (n=6). Group session rating scale, number of attended sessions and weight change (calculated as the difference in weight at start- to end-of treatment) were the parameters collated during this period. There was no significant difference in scores for group CBT-E (M=20.94, SD=6.62) and group RO-DBT [(M=23.70, SD=5.49; t(11)=0.81, p=0.44), (eta squared=0.04)]. A small, positive but non-significant, correlation between weight change and the number of

attended sessions was noted with a 4% shared variance [r=0.02, n=13, p=0.24]. These results highlight the need for a future powered study with a larger sample size to ascertain the effectiveness of these treatments, as both appear equally acceptable among adolescents. This study is the first of its kind and will inform a future feasibility and then a randomised controlled trial comparing the effectiveness of these interventions in the management of anorexia nervosa in adolescents in an inpatient/day-patient setting.

*Learning Objectives:*

- ▶ List the current evidence-base for therapeutic interventions in child and adolescent anorexia nervosa.
- ▶ Discuss the evidence base behind CBT-E and RO-DBT.
- ▶ Identify the gaps in research in the therapeutic interventions for adolescent anorexia and discuss future research projects.

### T-079

#### Infant Nutrition: Feeding Practices

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The aim of the study is to describe and evaluate infant feeding practices between 6 and 36 months, compared to recommendations, and to study infant feeding practices taking in consideration maternal and infant characteristics. Transversal descriptive study. Twenty nine dyads have been filmed during a common feeding practice with their main carer. The description of the feeding practice was done by experts using observational methods. Nutritional assessment by WHO criterion (SD- classification) using summary indices of nutritional status: height-for-age and weight-for-height was done. In addition, survey topics were added including breastfeeding, formula and complementary feeding, infant health, food allergies, sleeping arrangements and parents social demographic characteristics. All informed consents have been approved by the main carer. Among all under 36 months surveyed, 62% were boys and 38% girls, the mean age was 2,12 years (SD=0,48), the mean birth weight was of 3,5 kgs (SD=0,5), 8,3% were underweight, 12,5% obese and 16,7% overweight . The majority of the mothers had completed a university degree and a 75,9% of them were on favor the upbringing of their children. 86,2% of the infants had been breastfed between 5 and 25 months. The most frequent problematic eating behavior was the refusal to eat specific foods because of their texture or flavors

(28%) followed by a 20,7% who had difficulties to stay calm during the feeding process. A 24% of the children were fed in places not according recommendations, 35% of them used electronic devices (cell phones, iPads, etc.) that interfere the feeding process and in 14% of the cases there was not a clear order in the feeding. These preliminary results indicate that almost half of the infants had eating behavior problems. 1 out of 3 are not fed accordance with infant feeding recommendations during their first 3 years.

*Learning Objectives:*

- ▶ Describe and evaluate infant feeding practices.
- ▶ Compare infant feeding practices to recommendations.
- ▶ Considerate maternal and infant characteristics in feeding and eating behaviors.

### **T-080** **Relationship Between DSM-5 Diagnosis and QTc Interval in Adolescents and Young Adults with Eating Disorders**

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Cardiac complications are a major contributor to hospitalizations and mortality for patients with eating disorders (ED). The purpose of this study was to investigate the relationship between DSM-5 diagnosis and QTc interval length in a sample of adolescents/young adults with ED, as compared to a sample of age- and gender-matched control patients. Retrospective chart review was performed on 200 patients with ED who received electrocardiograms (ECG) at initial presentation and categorized by DSM-5 diagnosis and 200 age- and gender-matched controls without ED who received ECGs between 3/2008-3/2013. Each ECG was interpreted in a blinded fashion by two expert readers, with the QT interval measured and corrected according to the Bazett formula. Prolonged QTc was defined as greater than 450msec in patients <18 years, and greater than 460msec in patients >18 years. Factors known to affect QTc interval length, such as serum electrolyte levels and treatment with SSRIs, were also reviewed. ED patients were 89.5% female, with a mean age of 16.4 years (SD=2.4), mean percent median body weight of 92.5% (SD=14.6) at presentation. Overall, ED patients had a significantly shorter mean QTc interval (399.6msec) compared to control patients (413.4msec),

$p < 0.001$ . There was no statistical difference in the rates of prolonged QTc in ED patients (2.5%,  $n = 5$ ) compared to controls (5.5%,  $n = 11$ ). Patients with anorexia nervosa (AN)- restricting subtype had a significantly shorter mean QTc interval (392.8msec) compared to control patients (413.4msec) ( $p < 0.001$ ) and patients with atypical AN (405.7 msec) ( $p = 0.0013$ ). Patients with atypical AN, AN-binge/purge subtype, avoidant/restrictive food intake disorder, and bulimia nervosa did not have significantly different mean QTc intervals compared to control patients. While prior research has indicated that ED may be associated with changes to the QTc interval, our results suggest that the relationship may be mediated by specific DSM-5 diagnosis.

*Learning Objectives:*

- ▶ To determine whether all adolescents and young adults with eating disorders have longer QTc finding on electrocardiograph than that of healthy controls.
- ▶ To determine whether a difference exists among subcategories of the various eating disorder DSM-5 diagnoses and QTc.
- ▶ To determine whether other factors, such as electrolyte abnormalities, impact QTc in patients with eating disorders versus controls.

### **T-081** **Sex Differences in the Relation between Stressful Daily Events and Body Dissatisfaction in Overweight Children**

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Body dissatisfaction (BD) is prevalent among overweight youth and may represent a risk factor for the development of disordered eating. Evidence suggests that the occurrence of stressful daily events precipitates BD, however few studies have investigated this in overweight children. In addition, no research has examined whether the relation between stressful daily events and BD differs for overweight boys versus girls. The purpose of this study was to examine temporal associations between stressful daily events and BD among overweight boys and girls, using momentary data capture methodology. We also aimed to determine whether stressful daily events differentially relate to BD in overweight boys and girls. Forty overweight ( $\geq 85$ th

percentile) children (52% female) recorded their body dissatisfaction and the occurrence of stressful events multiple times a day, for two weeks. Multilevel model analyses revealed that a greater number of stressful daily events significantly predicted greater momentary BD for both sexes ( $p < .01$ ). Sex moderated a positive relation between the number of stressful daily events and momentary BD ( $p = .02$ ), such that there was a stronger association between stressful daily events and momentary BD for girls compared to boys. These data suggest that stressful daily events are more strongly linked to BD for overweight girls than for overweight boys. One possibility is that overweight girls are more likely than boys to attribute stressful daily events (e.g., not having anyone to sit with at lunch) to characteristics of their physical appearance due to the added cultural emphasis on physical attractiveness for females. The results of this study provide support for the integration of techniques to promote healthy stress management into body image interventions for children, particularly those designed for girls.

*Learning Objectives:*

- 1 Describe the nature of the relation between stressful daily events and momentary body dissatisfaction among overweight children.
- 2 Distinguish between the way stressful daily events relate to body dissatisfaction for overweight boys versus girls.
- 3 Consider methods to improve existing body image interventions for children.

## T-082

### Personality Traits in Adolescents Suffering from Eating Disorders: A Meta-analysis

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In recent years, there is an increased interest regarding personality traits in eating disordered young population, recognizing that a better understanding of personality traits may facilitate clinical management in patients with eating disorder (ED). However, up until now, studies have been referring to different personality constructs and measures making it difficult to obtain a clear portrayal of which traits most characterized adolescents with ED as well as whether those traits differed from non-clinical population. The present study aims to synthesize personality literature in adolescents with ED in order to identify personality trait dimensions that differentiate adolescents with and without ED and to estimate

amplitude of these effects. The review included 12 studies published from 2000 to 2017. Thirty-eight effect sizes on personality traits in adolescents with ED (anorexia, bulimia or eating disorders not otherwise specified) were pooled. A significant elevation of over-controlled personality traits (e.g. inhibition, trait anxiety, harm avoidance, interpersonal distrust) was noted in youth with ED compared to non-ED youth ( $d = 0.65$ ,  $p < .001$ ). No significant difference has been found for the under-controlled traits (e.g. borderline tendency, impulse dysregulation, novelty seeking). According to past studies, over-controlled personality traits seem to characterize young people with ED and could represent explaining factor for the presence of ED. More studies are needed to clarify relationships between ED and under-controlled personality traits in youth.

*Learning Objectives:*

- 1 Describe relationships between personality traits and presence of eating disorders in adolescents according to past studies.
- 2 Interpret moderating factors of the relationships between eating disorder and personality (e.g. age ED type).
- 3 Formulate recommendations for future studies based on a critical synthesis of the literature.

## T-083

### Nonsuicidal Self-injury in an Adolescent Partial Hospitalization Eating Disorder Treatment Program Sample

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Nonsuicidal self-injury (NSSI) is elevated in adult populations with eating disorders (EDs), with a particularly increased incidence of NSSI in individuals who engage in binge and/or purge (B/P) behaviors compared to restrictive behaviors. However, despite substantially elevated rates of NSSI in adolescence in general, NSSI in adolescent ED samples is largely understudied. The few existing studies in transdiagnostic adolescent samples have produced conflicting results, with some finding similar rates of NSSI between B/P and restricting groups and others finding elevated NSSI prevalence in B/P samples. Given that adolescence is a period of high risk for NSSI, our aim was to identify the rates at which adolescent ED patients ( $n = 132$ , mean age = 16.7,  $SD = 3.24$ ) in a family based partial hospitalization program report engaging in NSSI within a month prior to program entry, and examine whether rates of NSSI differ in individuals who engage in B/P behaviors versus restriction

only. Recent NSSI and ED behaviors were assessed using items from the MINI International Neuropsychiatric Interview or MINI-KID (for children and adolescents) and the Eating Disorder Examination (EDE), both administered by trained clinicians at program entry. 18.4% ( $n = 38$ ) of patients reported engaging in NSSI in the month prior to treatment. Chi-square analyses revealed a significant relationship between NSSI and ED behavior ( $\chi^2(1) = 12.217, p < .01$ ), with NSSI more common in individuals who reported B/P behaviors compared to individuals who reported restriction only. Specifically, 65% of the NSSI+ cohort endorsed B/P behavior, while only 30% of patients in the NSSI- cohort endorsed B/P behaviors. These results suggest a significant increase in risk for recent NSSI in adolescent ED patients who endorse B/P behaviors. Future work is needed to clarify etiologic factors that may explain this association, such as impulsivity and affective dysregulation.

*Learning Objectives:*

- ▶ Identify the rates at which adolescent ED patients report engaging in NSSI within a month prior to program entry.
- ▶ Examine whether rates of NSSI differ in individuals who engage in bingeing/purging behaviors versus restriction only.
- ▶ Describe possible transdiagnostic mechanisms that maintain disordered eating, nonsuicidal, and suicidal cognition and behaviors.

#### **T-084** **Perfectionism and Drive for Thinness in Adolescents: A Moderated Mediation Analysis**

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Although perfectionism has been identified as a risk factor for the development of eating disorders (ED), little is known about the underlying mechanisms of the relationship between these two constructs, as well as the conditions under which it could be presented (e.g., a stronger relationship in females). Therefore, the current study aims to evaluate the mediating role of body dissatisfaction in the perfectionism-ED link and to explore gender as a moderator variable. A hundred and ten adolescents (65 women, age range: 13-17) completed socio-demographic data along with the Eating Disorder Inventory-3 and the Almost Perfect Scale-Revised. Drive for thinness (DT) subscale was used as a proxy of ED,

while High standards and Discrepancy subscales were used as a proxy of positive and negative perfectionism, respectively. A moderated mediation analysis was performed. Our results showed that discrepancy has a direct effect on DT, and this path was moderated by sex. Specifically, this effect is uniquely observed in women ( $B = .07, t(104) = 2.08, p = .04$ ). In turn, discrepancy has an indirect effect on DT mediated by body dissatisfaction ( $B = .17, SE = .033, 95\% CI = .10-.23$ ) in both sexes. The proposed model explains 75% of the variability of DT ( $F(1, 107) = 27.90, p .00, R^2 = .75$ ). Conversely, possession of high standards did not have any direct or indirect effect on DT. We conclude that maladaptive perfectionism, in its form of discrepancy, is an important variable in the development of ED in adolescents. Those with a high discrepancy may develop body dissatisfaction, which in turn promotes attitudes and behaviors aimed at losing weight. Nevertheless, discrepancy in women increases the search for thinness regardless of the presence of body dissatisfaction, thus confirming them as a particular risk-group. These results support the need to develop preventive tailored interventions at reducing discrepancy in adolescent women as well as body dissatisfaction in both sexes.

*Learning Objectives:*

- ▶ Assess eating disorders and associated features in adolescents.
- ▶ Evaluate the mediating role of body dissatisfaction in the perfectionism-eating disorder link.
- ▶ Bring the conclusions of this study to the field of prevention of eating disorders.

#### **T-085** **What Predicts Weight Loss Velocity in Adolescents Receiving Bariatric Surgery?**

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Bariatric surgery is the most effective treatment for severe obesity, with postoperative improvements in weight, Type II diabetes, and other obesity-related medical complications. Prior research in adults using receiver operating characteristic curves identified successful weight loss by a threshold of 0.5 kg/wk weight loss velocity (WLV) between 3 and 6 months post-surgery. This study was designed to determine whether psychiatric diagnoses or demographic characteristics predicted WLV among adolescents.

Adolescents (n=153) received a laparoscopic adjustable gastric band or a gastric sleeve resection. Body mass index (kg/m<sup>2</sup>; BMI) was measured pre-surgery, and at 3 and 6 months post-surgery. A growth mixture model was used to estimate WLV, with an average WLV of -1.170 BMI units per timepoint (SE = 0.471, 95% CI = -2.903 - -1.352). Older age increased WLV post-bariatric surgery ( $\mu$ slope = -0.202, SE = 0.081, p = 0.013, 95% CI = -0.335 - -0.068); however, other baseline demographic variables and psychiatric diagnoses were not significantly associated with WLV. Thus, age was the only demographic variable that significantly predicted WLV in adolescent patients, with older adolescent patients experienced increased weight loss velocity post-bariatric surgery. These data have the potential to inform clinical practice in approving adolescent candidates for bariatric surgery, as with support from future research, bariatric teams may choose to prioritize operating on older adolescents to optimize weight loss outcomes.

*Learning Objectives:*

- ▶ Understand the adolescents as a unique patient population for bariatric surgery.
- ▶ Identify age as a significant predictor of weight loss velocity in adolescents, post-bariatric surgery.
- ▶ Understand demographic and psychiatric variables that may impact success of bariatric surgery in adolescent patients.

## T-086

### Perceived Family Functioning in Relation to Energy Intake in Adolescent Girls with Loss of Control Eating

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Family functioning has been suggested to be a factor that may influence the development, maintenance, and treatment of eating disorders. However, there are limited data examining family functioning in relation to energy intake in the laboratory among youth at high-risk for eating disorders and excess weight gain. Therefore, we examined the relationship between perceived family functioning and energy intake during a laboratory test meal designed to model a binge episode. We studied 113 adolescent

girls (14.5±1.7y; 60.2% non-Hispanic White) with BMIs between 75th-97th %ile (BMI<sub>z</sub>=1.5±.3) who were at high-risk for eating disorders and excess weight gain due to reports of loss of control eating (LOC). Participants completed the Family Adaptability and Cohesion Scale III (FACES III) to assess adolescent perception of family's rigidity/ability to change (adaptability) and level of separation/connectedness among family members (cohesion). Body fat and lean mass were assessed by dual-energy x-ray absorptiometry. Following an overnight fast, girls consumed lunch from a 9,835 calorie laboratory test meal (12% protein, 51% carbohydrate, 37% fat). Adjusting for age, race, height, body fat (%), lean body mass (kg), and total energy intake (kcal), poorer family adaptability, but not cohesion, was associated with lower % kcal from protein ( = .417, p=.002) and greater % kcal from carbohydrate ( = .311, p=.019). Adjusting for the same covariates, no significant relationships were found for either scale and % fat intake (ps≥.15). Neither adaptability nor cohesion was associated with total intake (ps≥.19). It is possible that, similar to individuals with full-syndrome eating disorders, girls with LOC eating and high BMI consume obesity promoting options during binge episodes. The directionality and/or temporality of the association between unhealthy consumption and family rigidity requires further study.

*Learning Objectives:*

- ▶ Recognize that there is an unclear yet important relationship between family functioning and energy intake in adolescent girls with loss of control eating.
- ▶ Express the importance of using objective measures to assess energy intake/food consumption in studies assessing disordered eating.
- ▶ Identify which food types adolescent girls are more/less prone to consume if they perceive their families as being less adaptable.

## T-087

### The Relation Between Overeating and Loss of Control Eating and Morningness-Eveningness Preferences: The Importance of Puberty in Overweight and Obese Children

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Research supports an association between the dimension of morningness-eveningness (ME) and psychological outcomes (e.g., depression) and meal timing. Adult studies indicate eveningness (evening preferences and increased energy and cognitive effectiveness in evenings) is associated with greater eating disorder symptoms. We examined ME and eating disorder symptoms in overweight/obese (body mass index 85th percentile for age and sex) children (N = 43, 25% female) ages 8 to 14. Participants completed the Child EDE interview, the Morningness-Eveningness Scale for Children, and parents completed the Tanner puberty scale (31.8% pre-pubertal children). Log-likelihood path analyses with zero-inflated Poisson fit estimated positive associations between ME and overeating episodes ( $p < .01$ ) and loss of control (LOC) eating episodes ( $p = .047$ ). Thus, high ME scores (morningness preferences) were associated with greater frequency of overeating episodes and LOC eating episodes. These associations remained significant after controlling for puberty. A significant interaction between puberty and ME ( $p = .031$ ) indicated post-pubertal children had more LOC eating episodes with high ME scores (morningness preferences) and less LOC eating episodes with low ME scores (eveningness preferences). In contrast, pre-pubertal children had consistent frequencies of LOC eating episodes across the ME dimension. Consistent with adult research, eating disorder symptoms were associated with ME in children. However, the direction of these relations contrasts adult research since morningness, not eveningness, was associated with more frequent eating disorder symptoms. Also, these estimations suggest that puberty status plays a role in LOC eating and its association with ME. Future research should investigate factors (e.g., depressed mood, sleep disturbances, developmental stages) to explain these findings. Since ME measures aspects of diurnal behaviors and sleep timing, these findings provide insight for novel treatment approaches of eating disorders.

*Learning Objectives:*

- 1 Describe the overlap of morningness-eveningness preferences and eating disorder symptoms in children.
- 2 Understand the potential role of morningness-eveningness preferences in regards to eating disorders.
- 3 Recognize the importance of puberty status and morningness-eveningness preferences in relation to eating disorder symptoms.

**T-088**  
**Emotion Dysregulation Moderates the Relationship Between Depressive Symptoms and Eating Disorder Symptomatology in Adolescents**

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Eating disorders (EDs) are frequently comorbid with depressive and anxiety disorders and depression and anxiety are well-established risk factors for disordered eating and EDs. Emotion regulation difficulties are also highly prevalent in ED populations and are believed to play a role in the maintenance of ED symptomatology. Given the relationship that emotion regulation shares with EDs, depression, and anxiety disorders, the ability to regulate one's emotion may serve as an exacerbating factor among individuals who experience these symptoms comorbidly. The current study sought to evaluate the moderating effect of emotion dysregulation on the relationships between depression, anxiety, and ED symptoms among adolescents diagnosed with EDs (AN-R, AN-BP, BN) and to examine differences in these relationships across diagnoses. Participants were 231 adolescents (M(SD) age = 15.04(1.88)) who completed assessments at intake for treatment at the UCSD Eating Disorders Partial Hospitalization Program. Consistent with prior research, results demonstrated main effects for anxiety, depression, and emotion regulation in predicting eating disorder symptoms ( $ps < .004$ ). The relationship between depression and eating disorder symptoms was moderated by emotion dysregulation ( $p = .006$ ), but the relationship between anxiety and eating disorder symptoms was not moderated by emotion dysregulation ( $p = .727$ ). When examined across diagnoses, there were no moderating effects for emotion dysregulation ( $ps > .088$ ). Participants diagnosed with AN-R (N=157) demonstrated main effects for anxiety, depression, and emotion dysregulation ( $ps < .003$ ) and participants diagnosed with AN-BP (N=34) and BN (N=40) demonstrated main effects for anxiety only ( $ps < .021$ ). Results suggest that, for individuals with greater depressive symptoms, greater emotion dysregulation exacerbates eating disorder symptoms. However, emotion dysregulation does not appear to impact eating disorder symptoms for individuals high in trait anxiety.

*Learning Objectives:*

- 1 Describe the impact of anxiety, depressive symptoms, and emotion dysregulation on eating disorder symptomatology at intake.
- 2 Describe the moderating effects of emotion dysregulation on the relationship between anxiety, depression, and eating disorder symptoms.
- 3 Identify differences in relationships between anxiety, depression, and emotion dysregulation across eating disorder diagnostic categories.

**T-089****Substance Use and Eating Disorder in Children and Adolescents: How Substance Users Differ from Non-substance Users in an Outpatient Eating Disorders Treatment Clinic**Ryan Kirkpatrick, BScH in progress<sup>1</sup>Ryan Kirkpatrick, N/A - BScH in progress<sup>1</sup>Ashleigh Vance, BSc, BASc, RD<sup>2</sup>Brittany Marshall, BT<sup>2</sup>Marina Kanellos-Sutton, BScN, RN, NP-PHC<sup>2</sup>Patricia Marchand, MSW, RSW<sup>2</sup>, Sarosh Khalid-Khan, MD<sup>1</sup><sup>1</sup>Queen's University, Kingston, Canada<sup>2</sup>Kingston Health Sciences Centre, Kingston, Canada

**Objective:** The relationship between eating disorders (EDs) and substance use has only been briefly described in literature with mainly non-clinical adult populations. Therefore, this study aims to examine the prevalence and characteristics of substance use among patients of the ED Outpatient program (EDO) in the Division of Child and Adolescent Mental Health (CAMH) at Hotel Dieu Hospital in Kingston, Ontario. **Method:** A retrospective medical chart analysis from patients referred to the EDO between 2011-2017 was conducted to determine patients' medical status, social history, treatment course and outcome (i.e. time in treatment, medical status, weight status, reason for leaving the EDO program, etc.). Beck Youth and ED Inventory Scores were compared to determine differences in self-reported mental health, well-being, ED risk factors and psychological profiles between substance and non-substance users through a combination of descriptive statistics, parametric and nonparametric testing. **Preliminary results:** Over 44% of the patients referred to the EDO reported regularly using substances and 30.6% of substance users received a DSM-5 diagnosis involving purging behaviours (AN-Binge/Purge Type and Bulimia Nervosa) compared to only 3.2% of non-substance users. Substance users were older ( $U=757.0, p<0.001$ ), reported higher levels of self-harm (53.2% in substance vs. 35.0% in non-substance users), relationship impairments ( $t(66)=-2.202, p=0.031$ ), emotional eating ( $t(66)=-2.31, p=0.024$ ) and maturity fears ( $t(66)=-2.557, p=0.013$ ). Substance users were also more likely to require weight maintenance (61.2%) whereas non-substance users were more likely to require weight gain (54.1%). More often than not, substance users dropped out of (40.8%) or declined starting (10.2%) the EDO program and were less likely to meet their weight goal if they did participate in the EDO program (88.6% of substance users vs. 97.4% of non-substance users met their weight goal). **Conclusion:** Child and adolescent substance users present distinctly from non-substance users in the EDO and therefore could benefit from innovative, multi-disciplinary programming within the EDO program and CAMH that encourages their participation in the program and helps prevent these challenging patients from dropping out of the program.

*Learning Objectives:*

- ▶ Identify unique social characteristics of child and adolescent EDO patients presenting with substance use.
- ▶ Understand the treatment course and outcome challenges of child and adolescent EDO patients presenting with substance use.
- ▶ Identify the differences between substance users and adolescents that do not use substances in the EDO.

**T-090****Differences in Emotion Identification among Female Adolescents with Anorexia Nervosa**

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Individuals with anorexia nervosa (AN) often demonstrate challenges in recognizing emotions, which may lead to difficulties in social and emotional processing skills. However, most previous studies were conducted with adult samples. Less is known regarding emotion identification processes in adolescents with AN. This study explored emotion identification in an adolescent sample of 23 females with anorexia nervosa and 30 healthy controls (HC). Participants completed a computerized web-based neuropsychological assessment battery that included an emotion identification task. This task required participants to select an emotion (anger, sadness, fear, disgust, happiness, neutral) when presented with a visual stimulus of either a male or female face. Results showed that adolescents with AN were overall slower than HC in identifying emotional facial expressions, particularly for neutral faces. Further, those with AN made significantly more errors in labeling neutral faces correctly compared to HCs. Specifically, those with AN had greater tendency to mislabel a neutral face as a sad face when compared to HCs. In contrast, adolescents with AN were better than HCs at correctly labeling angry and fearful facial expressions. This study provides more insight into how AN may impact processes of emotion identification for adolescents. It highlights that adolescents with AN have a negative emotional bias that impacts their emotion identification. This bias results in misinterpreting neutral emotions and increased ability to recognize negative emotions.

*Learning Objectives:*

- ▶ Describe differences in emotional processing and identification between those with AN and those typically developing.

- 】 Categorize emotions that those with AN may have more difficulty identifying.
- 】 Better understand the intersection of attentional biases and emotional processing for those with AN.

### T-091

#### Perceived Family Functioning among Adolescents with and without Loss of Control Eating

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Loss of control eating (LOC), a possible risk factor for the development of binge-eating disorder (BED), is broadly associated with social difficulties in adolescence. Although evidence suggests that adolescents with BED have poorer perceived family functioning compared with adolescents without BED, perceived family functioning among youth reporting LOC is relatively unexplored. We therefore examined perceived family functioning among 990 twins (mean age (SD) = 17.47 (.71) years, 53% female) from the Colorado Center for Antisocial Drug Dependence study with (n = 158, 70% female) and without (n = 832, 50% female) LOC. LOC was assessed with one binary item ("Is it sometimes hard to stop eating?"). Family functioning was assessed via three subscales from an adapted version of the Family Environment Scale - family cohesion, family expressiveness, and family conflict. Associations between LOC and family functioning were examined using general linear models that accounted for dependence in twin data. The first model included demographic covariates (age, race) and body mass index z-score; the second model additionally accounted for depressive symptoms. Girls and boys were examined separately. After correcting for multiple testing, girls with LOC had higher odds of reporting family conflict than girls without LOC (p = .02), but not after accounting for depressive symptoms (p = .26). Family cohesion and expressiveness did not differ significantly for girls with and without LOC. No significant differences between boys with and without LOC emerged on perceived family functioning variables (ps > .05). Findings suggest associations between perceived family conflict, depressive symptoms, and LOC among girls exist. Additional research examining the temporal nature of these associations and potential utility in intervention efforts is needed.

#### Learning Objectives:

- 】 Summarize the background literature on social functioning among youth with loss of control eating.
- 】 Discuss study findings in the context of existing theory of binge and loss of control eating, specifically an interpersonal model of loss of control eating.
- 】 Consider possible implications of study findings for intervention efforts among youth with loss of control.

### T-092

#### The Changing Demographics of Eating Disorders in Children and Adolescents Over 20 Years

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The purpose of our study was to analyze demographic trends in children and adolescents in Arkansas presenting to the Arkansas Children's Hospital (ACH) Eating Disorders Clinic. New patient demographic data has been tracked since 1997; and, data presented here shows trends across a 20-year time period of all new patients up to the age of 21 years to the ACH Eating Disorders Clinic. Our research shows that disordered eating has increased over all demographic sectors; but, at a faster rate in younger patients, male patients, and lower socioeconomic patients. Average age at presentation decreased from 16 years old to 14 years old over the 20 year study. Males in our study increased over time, and nearly tripled as compared to the first ten years data (5.7% to 14.9%). Our ethnic subgroups have changed as well. We had no Hispanic origin patients from 1997 to 2006, compared to the recent two years, which was 10% of new patients. Additionally, patients who identified as Indian or Middle Eastern increased. We also looked at payer type. From 1997-2006, the primary payer type was private insurance, comprising 82.3% of all new patients, as compared to Arkansas Medicaid (MCD), which comprised 17%. From January 2015-June 2017, private payer decreased to 62% of all new patients, and MCD patients increased to 36%. In a yearly analysis, MCD patients increased in all years. It should be noted that Arkansas expanded MCD with the Affordable Care Act. Finally we looked at changes in diagnosis using DSM-5. Application of DSM-5 criteria lead to an increase in population prevalence of Anorexia Nervosa and Bulimia Nervosa across all demographics. A large proportion of patients met criteria for Other Specified Feeding and Eating Disorder (OSFED), most of which were Atypical Anorexia Nervosa. In 2016, 26.3% of new patients seen met criteria for Atypical Anorexia Nervosa. Additionally, Avoidant Restrictive Food Intake Disorder (ARFID) was diagnosed in 5% of new patients in 2016.

One trend we noted was the increase in patients seeking care for Eating Disorder treatment over time. From 1997-2006, a total of 300 new patients were seen, averaging 30 patients per year (noting the number of patients seen per year did increase year by year). As a comparison, from January 2015-June 2017, 222 new patients were seen, averaging 89 new patients per year and 7-8 new patients per month.

*Learning Objectives:*

- ▶ Describe trends in demographic data of Eating Disorder patients over time.
- ▶ Assess changes in payer type (private insurance vs Medicaid) in Arkansas.
- ▶ Identify that treatment for Eating Disorders is increasing.

### T-093

#### How to Examine Possible Cases of Risk of ED in Adolescents with Affective Pathology? A Case-control Study

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The incidence of eating disorders in depression has not received as much attention as the incidence of depression in eating disorders. However, it is known that comorbidity is high and also that depression in adolescence is associated with negative consequences related to food pathology. The aim was to study different psychological factors that could be associated to the alimentary pathology in patients with affective disorder. A case-control study was performed with 40 patients with ED, 40 patients with affective disorder and 40 adolescents without pathology. Participants aged 12-17 were matched by age and parent socioeconomic status. A diagnostic interview and questionnaires related to: eating pathology, body dissatisfaction, depression, anxiety, obsessional symptoms and perfectionism, were carried out for the 3 samples. Taking into account the obsession with thinness as a marker of alimentary pathology, the results indicate that this appears in both clinical groups (affective disorder and eating disorder), as opposed to the control group. Different models were tested taking into account the different variables, proving that for all the groups the obsession for the thinness is explained by the corporal dissatisfaction. Given the high comorbidity among both

disorders, the identification of body dissatisfaction in the group with affective pathology could be an indicator of possible cases of risk of developing an ED. Likewise, the treatment of depression in childhood and adolescence could include the work of body image corporality as a measure of protection factor.

*Learning Objectives:*

- ▶ Following the paper, participants will be able to realise of the similarity between affective and eating disorders in adolescence.
- ▶ Following the paper, participants will be able to think about how to reduce comorbidity.
- ▶ Following the paper, participants will be able to examine possible cases of risk of ED in adolescents with affective pathology.

### T-094

#### Anxiety and Loss of Control (LOC) Eating in Relation to Interpersonal Model Components among Adolescent Military Dependents Seeking Prevention of Eating Disorders and Adult Obesity

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Adolescent military dependents are at high risk for eating disorders and adult obesity, and may face more psychosocial stressors than their civilian counterparts. Interpersonal theory of LOC eating proposes that difficult relationships lead to negative affect, thereby promoting emotionally-induced eating. This model may be particularly salient for adolescent military dependents. Research on interpersonal psychotherapy's (IPT) impact on disordered eating and weight in youth suggests the relevance of anxiety to interpersonal theory. Therefore, we analyzed the roles of anxiety and LOC eating in relation to interpersonal theory in adolescent military dependents at

high risk for eating disorders and excess weight gain. 109 adolescents (45% boys, age=14±2y, BMIz=2.0±.4) were studied prior to initiation of any intervention. Anxiety, social problems, depressive symptoms, and emotional eating were assessed via questionnaires and LOC presence was determined with the Eating Disorder Examination. Fasting weight and height were measured. Participants were categorized into four groups: only elevated anxiety (ANX, 48%), only LOC in the past month (LOC, 7%), both elevated anxiety and LOC in the past month (BOTH, 36%), or neither elevated anxiety nor LOC (NE, 9%). Groups did not differ by age, race, sex, or BMIz. Adjusting for BMIz and race, main effects were found for social functioning and depressive symptoms ( $p < .005$ ). Compared to NE, all other groups reported more social problems and depressive symptoms, but only ANX and BOTH, and not LOC, reported significantly greater social problems ( $p < .05$ ) and depressive symptoms ( $p < .001$ ). Emotional eating did not differ by group ( $p = ns$ ). In adolescent military dependents, the presence of anxiety may be more influential on social functioning and negative affect in the interpersonal model than LOC. More data are needed to determine the impact of anxiety and LOC on emotional eating outcomes in IPT and overall intervention success.

*Learning Objectives:*

- ▶ Understand the roles of anxiety and loss of control (LOC) eating in relation to interpersonal theory.
- ▶ Consider how components of the interpersonal model may be particularly unique for adolescent military dependents seeking prevention of eating disorders and excess weight gain.
- ▶ Identify whether the presence of anxiety may be more influential than loss of control (LOC) eating on specific aspects of the interpersonal model.

**T-095**  
**Characteristics of Female and Male Adolescent Military Dependents Seeking Prevention of Eating Disorders and Adult Obesity**

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Among civilians, data consistently suggest that females are at higher risk for disordered eating and associated distress than males. By contrast, in military samples, men may be as likely as women to report disordered eating. Yet, there are no data examining sex differences in eating pathology and distress for adolescent military dependents, despite research suggesting that military dependent youth with disordered eating may present with worse symptomatology than their matched civilian counterparts. Therefore, we examined disordered eating attitudes and associated psychosocial characteristics in adolescent military dependents at high risk for both eating disorders and adult obesity (BMI  $\geq$  85th %ile and elevated anxiety and/or loss of control, LOC, eating). 101 (14.0±2.0y; 43.6% boys; BMIz, 2.0±.4) were studied prior to entry in an eating disorder and excess weight gain prevention trial. Youth were administered the Eating Disorder Examination (EDE) to determine disordered eating attitudes and LOC status, and completed questionnaires to assess self-esteem, social functioning, and depression. Girls and boys did not differ by BMIz ( $p = .41$ ) or race/ethnicity ( $p = .66$ ). Adjusting for age, race, BMIz, LOC presence, and anxiety, girls and boys did not differ significantly on the EDE global score (1.4±.93 v 1.2±.78,  $p = .13$ ), self-esteem ( $p = .71$ ), or social functioning ( $p = .79$ ). Findings persisted when covariates were removed. By contrast, more girls (48.3%) than boys (18.4%) met criteria for mild depression ( $p = .001$ ), but this difference became non-significant when accounting for covariates ( $p = .09$ ). Similar to military personnel, male and female adolescent military dependents at high-risk for eating disorders and adult obesity report similar levels of disordered eating attitudes and psychosocial correlates. Further data are needed to elucidate how male and female adolescent military dependents present with full-syndrome eating disorders, and their response to intervention.

*Learning Objectives:*

- ▶ Examine eating pathology and psychosocial factors among adolescent military dependents.
- ▶ Identify sex differences in disordered eating attitudes and associated distress within a military dependent sample.
- ▶ Expand data on pathological eating in military samples to include adolescent military dependents, in order to detect trends and compare to civilian populations.

**T-096****Assessment Profiles of Adolescent Patients with ARFID who Subsequently Develop Anorexia Nervosa: A Case Series**

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 Mark Norris, FRCPC, MD, BSc  
 Wendy Spettigue, FRCPC, MD, MA  
 Nicole Hammond, MA, BA  
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Avoidant/Restrictive Food Intake Disorder (ARFID) was recently introduced in the Diagnostic and Statistical Manual of Mental Disorders, 5th Edition (DSM-5). Due to its novel nature, research to date has not fully explored or described how historical, medical and psychological characteristics contribute to the proper detection, diagnosis, and assignment of appropriate specialized treatment. Although not yet fully understood, early research suggested that a small proportion of patients initially classified as having ARFID evolve to meet criteria suited for a diagnosis of Anorexia Nervosa (AN). The purpose of the present study was to examine medical and psychological profiles of adolescents who initially were identified as meeting criteria for ARFID but subsequently were diagnosed with AN at any point in their treatment course. We reviewed all identified cases of patients with ARFID and subsequent AN using an established program database in order to identify patients meeting inclusion criteria. Of 77 adolescent patients identified as meeting criteria for ARFID at first assessment, 7 met the inclusion criteria for this study. All seven patients were female, with a mean age of 13.69 years (SD=1.89 years). A review of pertinent medical information at assessment revealed an average Body Mass Index (BMI) of 15.1 kg/m<sup>2</sup> (SD=2.0 kg/m<sup>2</sup>), heart rate of 48 bpm (SD=11 bpm), % Treatment Goal Weight of 75.3% (SD=7.1%), and length of illness of 7.2 months (SD=5.0 months). Psychological information relating to illness presentation revealed that 57.1% of patients were concerned about the aversive consequences of eating, and that 42.9% were diagnosed with a comorbid anxiety disorder. All patients exhibited evidence of food refusal, avoidance, and/or restriction. Of note, 57.1% of patients cited a fear related to the composition of foods or not wanting to eat meat because of concerns regarding hurting animals. Small sample size precluded the inclusion of formal comparisons with other ARFID patients. Further research and larger sample sizes are needed to better understand variables that may contribute to an increased risk of AN-onset in those with ARFID-type behaviours and how diagnostic criteria (as presently laid out) are applied to youth with restrictive eating disorders.

*Learning Objectives:*

- ▶ Describe medical characteristics found in ARFID patients that cross over to a diagnosis of AN.
- ▶ Describe psychological characteristics that are specific to the feeding process documented in ARFID patients that cross over to a diagnosis of AN.
- ▶ Describe challenges that clinicians face in best determining whether young patients meet criteria for AN or ARFID.

**T-097****Risk of Eating Pathology among Parents of Children and Adolescents Treated at a Brazilian Eating Disorder Program**

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 Manuela Capezzuto, Registered Dietitian<sup>1</sup>  
 Priscila Soares, Registered Dietitian<sup>1</sup>  
 Fabyana Francisco, Registered Dietitian<sup>1</sup>  
 Julianna Santiago, Registered Dietitian<sup>1</sup>  
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The aim of this study was to assess eating disorder symptoms in a sample of parents of patients (ages 11-17) treated in the only specialized care program for children and adolescents with eating disorders in Brazil. Between 2010 and 2017, 68 parents (mothers n=63, fathers n=5) completed the Eating Attitudes Scale (EAT-26) at the moment of their child's admission. Patients were diagnosed by clinical interview and also completed the inventory. Results were categorized as high risk (≥20 points), low risk (10-19 points) and no risk (0-9 points). Eating Disorders Not Otherwise Specified (EDNOS) cases diagnosed under DSM-IV were grouped together with later Other Specified Feeding or Eating Disorder (OTAE) cases in one single category. The parents did not display significant risk behaviors for eating disorders. Although 25% of participants scored positively, only 4.4% (n=3) could be assigned to the high risk group. As expected, patients had much higher scores (M=28 points). These results do not show the same associations between eating disorder symptoms in adolescents and parental disordered eating found elsewhere but they replicate earlier results from a study conducted in the same program. Since our clinical experience suggests many parents (especially mothers) have considerably distorted notions about healthy eating and body weight, we discuss the sensitivity of EAT-26 as they seem to underreport their symptoms in the beginning of treatment.

*Learning Objectives:*

- ▶ Assess eating disorder symptoms in parents of children and adolescents.
- ▶ Compare results diverging from the pertaining literature.
- ▶ Discuss lower sensitivity of self-completing questionnaires such as EAT-26 when screening the parents of patients with eating disorders.

**T-098**

### **Nutritional Profile of Brazilian Children and Adolescents with Eating Disorders: 2001 to 2017 Data from the Country's Only Specialized Treatment Program for Non-adults**

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**Vanessa Pinzon, MD, MSc**  
**Manuela Capezuto, Registered Dietitian**  
**Priscila Soares, Registered Dietitian**  
**Fabyana Francisco, Registered Dietitian**  
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The University of Sao Paulo School of Medicine's Child and Adolescent Eating Disorder Program (PROTAD) is the only specialized public service for the care of non-adult eating disorder patients in Brazil. In this cross-sectional study, we evaluated anthropometric data and diagnostic status of all female and male patients of PROTAD to date. Psychiatric diagnoses were given after clinical interview and completion of self-report inventories. Eating Disorders Not Otherwise Specified (EDNOS) cases diagnosed under DSM-IV were grouped in a single category with later Other Specified Feeding or Eating Disorder (OSFED) cases. Weight and height were measured upon admission. Nutritional diagnoses were based on the World Health Organization (WHO) Growth Standards. As expected, Girls (n=169, 88.94%, mean age 15.1 years  $\pm$  1.5) were the majority in our sample (n=190). Anorexia nervosa restrictive subtype (ANr) was the most frequent diagnosis (43,68%) among girl and boys (n=21, 11%, mean age 14.8 years  $\pm$  1.0), followed by EDNOS/OSFED cases in girls (27,8%) and anorexia nervosa binge eating/purging subtype (ANbp) cases in boys (19%). Lower BMI/Age percentiles were found in both girls (mean p9  $\pm$  10.4) and boys (mean p5  $\pm$  8.1) with ANbp. A greater mean z-score difference between the sexes was observed in bulimia nervosa (BN) patients (girls 0.3 $\pm$ 0.84 and boys 1.66 $\pm$ 0.25). Even though this small sample cannot be generalized to Brazil's population, this is novel data which showcase PROTAD's clinical experience over the years.

*Learning Objectives:*

- ▶ Learn anthropometric and diagnostic data from Brazilian children and adolescents with eating disorders treated at PROTAD.
- ▶ Compare the differences and similarities between female and male patients.
- ▶ Compare our results to the findings of other specialized treatment programs in other countries.

**T-099**

### **Feasibility of Providing Pediatric Medical Treatment Incorporating Principles of Family Based Treatment... without Providing Family Based Therapy: Practical or "Heretic"?**

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Purpose: to describe how physicians working with traditional multidisciplinary teams that do not include family therapists, rather than foregoing the advantages of FBT can incorporate its philosophy and strategy in the care of their patients. Situation: Family Based Therapy has become a preferred way of treatment for children and adolescents with anorexia nervosa. However there are numerous circumstances in which a family cannot take advantage of this treatment: lack of FBT trained therapists, long waiting lists, lack of insurance coverage and unwillingness to enter family therapy, among the main ones. This is an observation study of a pediatric practice (n=3). In the initial visit (60 minutes) it is requested that the child come with both parents. In addition to anthropometrics, vital signs, physical examination and labs to determine if a hospitalization may be needed; the physician recommends a treatment plan for those that can be treated as outpatients. The treatment includes the following 10 elements adapted from FBT: creating anxiety about the condition, eliciting from parents their knowledge and thoughts about AN, then proclaim agnostic view of AN, describe how weight recovery is a precondition to normalization, empower the parents to nourish their child, externalize AN, identify guilt and blaming as an obstacle to recovery, diagnose co-morbidity. The subsequent visits (30') include anthropometrics are obtained at every visit and harnessed to the counseling session. Conclusion: this treatment is NOT therapy, though it is definitively therapeutic, rather it is part of the traditional medical approach (psychoeducational, anticipatory guidance). Insurance companies reimburse for the treatment of weight loss, bradycardia, malnutrition, fatigue etc. This helps families by sparing the "using up" of their psychiatric insurance. Finally the dropout rate is very high for patients with ED, but they do not drop out from treatment with their physician: this provides a safety net. The number of visits and the length of medical care are adapted to the

needs in every case. It is not inordinately burdensome, as visits get spaced as weight is recovered. This treatment modality is not intended to replace FBT but rather to offer the “nuggets” of FBT when it is not otherwise available. It can also be support for those actually engaged in FBT.

*Learning Objectives:*

- ▶ Describe a pediatric/adolescent medicine utilization of the principles involved in Family Based Treatment (FBT) in the absence of available FBT. This is based on the principles of anticipatory guidance and psychoeducational counseling inherent to medical practice.
- ▶ Present the pediatric FBT components, such as: create anxiety, proclaim an agnostic view, describe how weight recovery is the precondition for psychological normalization, empower the parents, identify guilt and blaming as an obstacle to recovery.
- ▶ Emphasize the role of pediatric continuity in the FBT approach, in the context of a high dropout rate from mental health care. Drop outs mean the pediatrician is “standing alone” in the treatment of AN. This adaptation of FBT is congruent with the treatment goals.

## T-100

### Promoting Health Behaviour in Overweight and Obese Children via Short Message Service (SMS): An Efficacy Study

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The use of technologies in promoting health behaviours has shown promising results. The present study is a randomized clinical trial developed to analyse the effectiveness of an additional monitoring and feedback tool (SMS-based programme) in promoting healthy behaviours (fruits and vegetables intake, screen time, and physical activity) among overweight and obese children and adolescents enrolled in a weight loss programme. One-hundred and seven overweight participants aged 8 to 17 years old (mean=11.8, SD=2.3) were recruited from a local Hospital in the North of Portugal and were all enrolled in a treatment-as-usual weight loss programme delivered by the Paediatric Nutrition Care Service. From the total sample, 55 participants (51.4%) were randomly allocated to the control group (treatment-as-usual) and 52 (48.6%) to the intervention group (the one receiving the additional SMS-programme on top of treatment-as-usual). Intervention outcomes were measured at baseline, after intervention (10 weeks later) and at follow-up (6 months after the end of intervention). In the total sample,

58.9% were boys. Results showed that the intervention group had a significant decrease in screen time after the use of the SMS programme, followed by a significant increase in screen time during follow-up. No significant changes over time were observed in terms of fruit and vegetable consumption, and physical activity in both groups ( $p < .05$ ). The group with higher compliance to the programme showed a significant increase in fruit and vegetable consumption during follow-up and had, overall, healthier behaviours than the others, less compliant groups. The SMS monitoring and feedback tool seemed effective in decreasing screen time and increasing fruit and vegetable consumption, especially when participants were compliant with the SMS-based programme. However, the positive effects of the intervention were substantially attenuated during follow-up.

*Learning Objectives:*

- ▶ Describe the role of an additional monitoring and feedback tool (SMS-based programme) in promoting healthy behaviours.
- ▶ Associate the use of SMS-based programme with a treatment-as-usual for overweight children and adolescents.
- ▶ Comprehend the positive role of new technologies during behavioural treatments for weight loss.

## T-101

### Predictors of Positive Response to Family-based Hospital Based Treatment for Children and Adolescents with Eating Disorders

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This paper will present markers indicative of early response to treatment in hospital-based care. Research indicates that rate of weight gain in the first 4 weeks of outpatient treatment is a marker of early response to treatment and an indicator of positive outcomes in family based treatment. Providers of outpatient care can use this information to help families fine-tune their intervention strategies to improve the efficacy of treatment. In day treatment and inpatient levels of care (where caloric intake is highly monitored and rate of weight gain is regulated), providers require a different standard for determining what rate of weight gain indicates “early response.” Additionally, it can be inferred that rate of weight gain is an objective criterion marker - suggestive of some other family dynamic(s) that are working well enough to facilitate the weight gain treatment goal in traditional family based treatment. With an objective rate of weight gain criteria, providers in higher levels of care can more quickly identify

potential barriers to weight gain and can more effectively design specific interventions to augment treatment at earlier stages thereby potentially improving treatment outcomes. Data from approximately 80 child/adolescent patients participating in higher level of care hospital family based treatment will be analyzed to demonstrate weight markers and indicators of family functioning, parent efficacy, and expressed emotion in predicting response to treatment. The results will be discussed in terms of how to use rate of weight gain in higher levels of care to identify potentially significant family dynamics and/or individual characteristics which might impact treatment outcome to improve the ability to individualize care and improve prognosis for recovery. Discussion will include preliminary data on interventions designed to address parent empowerment and efficacy.

*Learning Objectives:*

- ▶ Compare indicators for remission/relapse between outpatient treatment and higher levels of care.
- ▶ Highlight significance of parental efficacy in predicting outcome.
- ▶ Demonstrate effective methods for increasing parent efficacy.

### **T-102** **Improving the Transition of Care from a Specialty Eating Disorders Program to the Adult Healthcare System**

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**Seena Grewal, MD, MSc**  
**Margus Heinmaa, PhD**  
**Jessica Watts, RN, CNS**  
**Jaimie Kennedy, RD**  
**Tania Turrini, RD**

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Approximately half of adolescents with eating disorders recover while 50% continue to be affected by the illness into their young adult years. Even those who recover may have ongoing medical issues related to their eating disorder, such as loss of bone density, which require follow up. The transition of adolescent patients with eating disorders from the specialized pediatric Eating Disorders Program at The Hospital for Sick Children (SickKids), a tertiary care pediatric hospital, to adult care services occurs at age 18 years. The process of connecting youth to a different health care system is often poorly coordinated and carries potential patient safety risks, such as health care drop-out, poor treatment adherence, and worse overall health outcomes in adulthood. To better meet the needs of youth and families transitioning to adult care, we conducted a quality improvement project designed to better understand our transition population and create materials to help support their successful

transfer to adult care. Based on data from 2015-2017 we determined that the majority of youth 16-17 years old transitioning out of the SickKids Eating Disorders Program had achieved full weight restoration and clinically did not require a specialized adult eating disorders program. Therefore, the majority of patients were transferred to primary care providers and, if needed, community mental health services. Given this, the focus of our transition materials was on themes of ongoing recovery and relapse prevention. For example, how to work towards intuitive eating, how to navigate a university environment and how to advocate for oneself in the adult health care system. Sample transition materials will be presented.

*Learning Objectives:*

- ▶ Describe a quality improvement project for youth transitioning out of a pediatric tertiary care eating disorders program.
- ▶ Understand communication strategies, verbal and visual, to support youth in their transition to adult health care services.
- ▶ Describe nutrition information targeted towards transition age youth with a history of an eating disorder.

### **T-103** **Evaluation of Nutrition on the Health and Performance of the High School Cross Country Runner**

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This project was intended to improve nutrition with health education and promote early surveillance of endurance runners who are at risk for eating disorders. Through health outcomes, the intent of this project was to positively impact the health outcomes of the adolescent cross country runners in the community. Eating disorders affects 2.7% of female's age 13-17 y/o. Long distance running or endurance running can be classified as a form of continuous running over distances of at least 3.2 miles<sup>1</sup>. Consequently, 42% of female athletes competing in aesthetic sports demonstrate eating disordered behaviors<sup>(2)</sup>. Long distance running is often connected with a stigma that lower body weight will have a positive effect on sport performance, such as by enhancing speed on the course or in a race. While research does not support this theory, this myth strongly circulates among long distance runners, particularly in high school athletes<sup>(2)</sup>. The pressure of sports performance and competition involved with long distance running can be a breeding ground for eating disorders. The prevalence of eating disorders is more common among those competing in leanness-dependent and weight-dependent sports than in other sports. A collaborative effort among coaches, athletic trainers, parents, physicians, and

athletes is optimal for recognizing, preventing, and treating eating disorders in athletes(2). Partnering with a dietitian specializing in pediatric nutrition and 2 urban high schools we provided a brief survey on nutrition and training, offered education on nutrition specific to endurance runners, challenged many myths, and returned after the season to repeat the survey. We collected demographic data, nutrition data, menstruation history, amount of time participating in the endurance sport, training prior to the season, and motivation for participation. We confirmed improvement in nutrition from the pre-survey to post-survey and recognized a tool to identify athletes at risk and struggling with eating disorders. We identified an area of health deficit which was statistically significant ( $p=0.011$ ) with an approximately 400% rate of secondary amenorrhea from the pre-season to the post-season. We saw 90%, report making new friends and the challenge, but 50% report weight loss as motivation to run on their cross country team.

*Learning Objectives:*

- ▶ Describe the role of education on the nutrition of endurance runners.
- ▶ To identify a tool to screen endurance runners for eating disorders.
- ▶ Understand the rate of secondary amenorrhea due to exercise and nutrition.

#### T-104

### What are the Individual, Family and Social Characteristics Differentiating Prepubertal from Pubertal Anorexia Nervosa?

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This study aims to examine differences between prepubertal and pubertal anorexia nervosa on psychological, familial and social features in order to contribute to drawing clinical profiles of prepubertal anorexia. Samples included 19 prepubertal patients and 126 pubertal patients admitted in specialist eating disorders services. Patients were considered prepubertal if they were premenarchal (Tanner Stage 1 or 2). Assessment of pubertal development and diagnosis of anorexia (DSM IV) were established by pediatricians. All patients and their parents completed questionnaires at their admission in services (EDI-3, BDI II, IPPA, FACES IV, IDPESQ). Scores of the two groups are compared using Student's t test for independent samples or its nonparametric equivalent. Objective manifestations of anorexia nervosa in both age groups were not similar ( $p < 0.05$ ). Prepubertal patients had significant low mean BMI percentile ( $5.17 \pm 9.94$  kg / m<sup>2</sup>) than pubertal patients

( $14.94 \pm 20.15$  kg / m<sup>2</sup>). However, prepubertal patients obtained significantly lower scores than pubertal patients for bulimia, low self-esteem, interpersonal alienation, interoceptive deficit and depression ( $p < 0.05$ ). Parents of prepubertal and pubertal patients did not differ in terms of psychological distress ( $p > 0.05$ ). Differences between groups are not significant ( $p > 0.05$ ) for family functioning and parent-child relationship. For social features, the scores indicate no significant differences between groups ( $p > 0.05$ ). The main finding of this study is that prepubertal patients have a less severe psychological profile than pubertal patients. This may reflect a certain difficulty for prepubertal patients to think critically (metacognition) about themselves. This explanation is consistent with experts' opinions who believe that prepubertal patients may have difficulty reporting, describing, understanding and expressing the meaning of their thoughts, concerns and dietary behaviors.

*Learning Objectives:*

- ▶ Recognize anorexia nervosa on children.
- ▶ Differentiate prepubertal and pubertal anorexia.
- ▶ Differentiate the clinical profil of prepubertal and pubertal anorexia.

#### T-105

### “When FBT met ABFT”: Using an Attachment Approach to Augment Traditional Family Based Treatment.

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Family Based Treatment for anorexia nervosa (FBT for AN) is the standard model of outpatient treatment in the Eating Disorders Service at the Children's Hospital at Westmead. However, significant relationship or communication difficulties between adolescent and parent/s can hinder progress in FBT and can have a detrimental impact on treatment outcome. An increasing proportion of adolescents and families require additional therapeutic support, and may respond to an adjunctive approach to standard treatment. One of the approaches we have utilised is Attachment-Based Family Therapy (ABFT), a model of family therapy originally developed to treat adolescents with depression. This therapy is targeted towards young people who have experienced an attachment rupture, and is focused on strengthening the parent-adolescent relationship. The model allows the therapist to work with the adolescent and parent individually before joining together for a series of sessions, over five core treatment tasks. The main aims of treatment are to improve adolescent-parent communication, to develop a more emotionally attuned and secure relationship between adolescent and parent, and finally

to develop autonomy of the adolescent. The case of Paige, an adolescent female with AN and depression, will be presented to illustrate the use of ABFT as an adjunct to standard FBT. Outcomes of treatment will also be discussed.

*Learning Objectives:*

- ▶ Identify factors within the family relationships and communication processes which can impact on progress in Family Based Treatment (FBT).
- ▶ Describe the main aims of Attachment Based Family Therapy (ABFT) in the treatment of adolescent depression.
- ▶ Develop an understanding of how ABFT can be applied as an adjunctive therapy to FBT, from the case example included in the presentation.

### T-106

#### Cardiac Abnormalities in Adolescent Males with Anorexia Nervosa

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The purpose of the study was to evaluate changes in the heart of adolescent males with anorexia nervosa restrictive subtype. Echocardiographic studies were performed in 40 male patients with the diagnosis of anorexia nervosa restrictive subtype (ANR), with ages ranging from 9.3 to 20.9 years ( $15.2 \pm 2.3$ ; mean  $\pm$  s.d.). All of them with body mass index (BMI) below 19 ( $16 \pm 1.7$  kg/m<sup>2</sup>). A control group of 40 healthy adolescent males of same age (10.1 to 19.6 years;  $14.7 \pm 2.1$  years), and normal BMI ( $20.8 \pm 2.3$  kg/m<sup>2</sup>) was also studied. M-mode, and Colour-Doppler-Echocardiography were performed in all cases. Left ventricular mass (LVM) and LVM normalized by body surface area (BSA) was calculated. Mitral E and A inflow waves, and also E/A ratio were analyzed for each patient. Left ventricular function was also calculated for each case. Findings were analyzed looking for statistical differences with the control group. Results showed that in ANR males, LVM and LVM/BSA were diminished compared to the control group ( $p < 0.001$ ). Also, diastolic E and A waves were abnormally low ( $p < 0.005$ ), with and increased E/A ratio compared to controls ( $p < 0.01$ ). The left ventricular function remained within normal limits in both groups. It is concluded that in males with ANR, there is an abnormal decrease of left ventricular cardiac mass, with an alteration in the diastolic filling pattern, but without significant changes on left ventricular function. These changes are similar to those present in females with

ANR. These abnormalities should be followed up along the clinical course of the patient in order to evaluate the severity of the process.

*Learning Objectives:*

- ▶ Describes the comorbidity of anorexia nervosa affecting to the heart.
- ▶ Anorexia nervosa affects the heart by decreasing mass and function.
- ▶ Anorexia nervosa affects several organs and systems into the body of affected subjects.

### T-107

#### Purging is a Bridge Symptom in a Network Model of Eating Disorder and Obsessive-compulsive Symptoms

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Although eating disorders (EDs) and obsessive-compulsive disorder (OCD) are highly comorbid, few studies have examined the relationship between ED and OCD symptoms. Network analysis is an emerging method to examine how specific symptoms are related within and across disorders. We used network analysis in a large sample, the Avon Longitudinal Sample of Parents and Children (N = 8149). Parents reported their children's ED and OCD symptoms at 14 and 16 years of age. Using network analyses, we identified the central (i.e., most important) and bridge (i.e., points of ED-OCD connection) symptoms. In logistic regressions, we examined whether the most central and most peripheral OCD symptoms at 14 years predicted ED-OCD bridge symptoms both cross-sectionally and prospectively at 16 years. Lucky/unlucky numbers [Strength (S) = 0.60], compulsions around germs (S = 1.48), and repeating behaviors (S = 0.82) were the most central OCD symptoms, whereas excessive cleaning (S = -0.68), checking (S = -1.49), and touching behaviors (S = -1.26) were the most peripheral. Purging was a bridge symptom between ED-OCD (S = 1.84). Cross-sectionally, having compulsions around germs was positively associated with purging ( $b^* = .08$ , p

= .009, Odds Ratio (OR) = 3.27); repeating and touching were negatively associated with purging[(b\* = -.33, p = .002, OR = 0.01) and (b\* = -.42, p < .001, OR < 0.01), respectively]. Prospectively, lucky/unlucky numbers (b\* = .07, p = .034, OR = 2.48) predicted purging at age 16, controlling for purging at age 14 (b\* = .15, p < .001, OR = 2.95). Purging may serve as a compulsive behavior that links ED and OCD. Lucky/unlucky numbers, compulsions around germs, and purging may be important targets in the prevention and treatment of comorbid ED-OCD.

*Learning Objectives:*

- ▶ Describe which symptoms are most central in eating disorder-obsessive-compulsive disorder comorbidity.
- ▶ Compare how eating disorder and obsessive-compulsive symptoms are related and lead to one another over time.
- ▶ Integrate these new data on central and bridge symptoms in the eating disorder-obsessive-compulsive symptom network with their knowledge about current treatments.

**T-108**  
**A Network Analysis of Borderline Personality Disorder Symptoms in Disordered Eating**

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 Tara De Paoli, MPsych(Clin)/PhD Candidate<sup>1</sup>  
 Matthew Fuller-Tyszkiewicz, PhD<sup>2</sup>  
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The current study used network analysis to explore associations between syndrome specific groupings of borderline personality disorder (BPD) symptoms and disordered eating, and other transdiagnostic variables including insecure attachment, rejection sensitivity (RS), emotion dysregulation, theory of mind (ToM), and emotion recognition. Network analyses were undertaken on self-report data from 109 participants (98% female) with a lifetime eating disorder (ED) diagnosis and 109 propensity matched control participants (97% female). Participants were asked to complete a questionnaire related to the variables of interest. Network analyses indicated that the interrelationships between the variables differed between the clinical ED and control groups. For the ED group, relationships and drive for thinness were the most central elements in maintaining the correlational connectivity of transdiagnostic variables, while for controls, emotion dysregulation and abandonment were most central. Comorbidity between BPD and ED was partially conceptualised through the transdiagnostic variables in the control sample. The findings provide empirical insight into the nature of observed comorbidity between BPD and

ED and serve to highlight the need to screen for comorbid BPD in clinical ED populations to improve clinical decision-making regarding psychological treatment.

*Learning Objectives:*

- ▶ Understand the statistical technique of network analysis in assessing comorbidity between BPD and ED.
- ▶ Interpret network maps and how they differ between a clinical ED group and a comparison group.
- ▶ Describe how BPD and ED may be related through shared transdiagnostic features.

**T-109**  
**Predictors of Suicidal Ideation in U.S. College Women with Eating Disorders**

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 Katherine Balantekin, PhD, RD<sup>3</sup>  
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 Grace Monterubio, BA<sup>3</sup>  
 Marie-Laure Firebaugh, MSW<sup>3</sup>  
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Suicidal ideation (SI) is highly prevalent amongst individuals with eating disorders (EDs). Though there is ample research on the relationship between SI and EDs in adolescent and adult populations, less is known about this relationship in college students, a group that is at elevated risk for both SI and EDs. This study identified predictors of SI in a large sample of college women with EDs. Participants were 690 female college students from 28 universities across the U.S. who screened positive for an ED, with the exception of anorexia nervosa. Variables that were tested included: ED pathology (i.e., EDE-Q Global and subscales), ED behaviors (i.e., binge eating, vomiting, laxatives, compulsive exercise), comorbid psychopathology (i.e., depression, anxiety, insomnia), ED-related clinical impairment (i.e., CIA), weight and shape concerns (WSC), and body mass index (BMI). 25.6% of the sample reported SI. A series of univariate logistic regression tested independent predictors of SI. Global ED pathology (p<.001), all EDE-Q subscales (ps<.001),

binge eating ( $p = .018$ ), vomiting ( $p < .001$ ), laxative use ( $p = .029$ ), comorbid psychopathology (all  $ps < .001$ ), CIA ( $p < .001$ ), WSC ( $p < .001$ ), and BMI ( $p = .018$ ) were all independent predictors of SI. When all predictors were included in a backward binary logistic regression model, depression ( $B = .93$ ;  $p < .001$ ), anxiety ( $B = .50$ ;  $p = .001$ ), and vomiting ( $B = .69$ ;  $p = .002$ ) were identified as the most salient predictors of SI for the sample. Given the high prevalence of SI among college females with EDs, ED screens should assess for SI on college campuses, and prevention and treatment efforts should be aimed at targeting comorbid psychopathology and vomiting symptoms in an effort to reduce SI for these individuals.

*Learning Objectives:*

- ▶ To understand the prevalence of suicidal ideation in a large sample of U.S. college women with eating disorders.
- ▶ To identify the characteristics of individuals with eating disorders who may be at greatest risk of developing suicidal ideation.
- ▶ To understand the importance of integrating assessments of suicidality into eating disorder screening on college campuses.

### T-110 Prevalence of Eating Disorders, Suicidality, and Non-suicidal Self Injury in a Sample of Low-income, Ethnic Minority Adolescents

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Rates of mortality for ED patients are among the highest of all psychiatric disorders, with suicide contributing significantly to these statistics. In adolescents with ED, lifetime prevalence of suicidal ideation (SI) ranges from 31-52% and 8-15% for suicide attempts (SA), with risk for SA increasing significantly when adolescents present with other comorbid psychopathology (Crow et al., 2014). Additionally, 27% of adolescents with ED have engaged in NSSI (Cucchi, et al., 2016). Despite these alarming statistics, there is a dearth of research looking at the prevalence of ED with and without comorbid SI and NSSI in marginalized populations. The current study examined prevalence rates of ED and SI, NSSI, and SA in a sample of youth presenting to a specialty Anxiety and Mood outpatient program (AMP) in Bronx, New York. The study also compared frequency of SI, NSSI, and SA in this population in patients with and without an ED. All patients presenting to AMP were assessed for anxiety, mood, and eating disorders through the use of semi-

structured interviews and self-report measures using DSM-V criteria. Of the 90 patients admitted to AMP, 31.9% met criteria for an ED (16.7% AN; 23.3% BN; 53.3% OSFED; 6.7% ARFID). More than half (53.3%) of patients with an ED reported at least one SA, 80.0% reported SI, and 73.3% reported a history of NSSI. Chi-square was used to compare number of patients with and without SI, NSSI, and SA in AMP with and without ED. Chi-square analyses with a Bonferroni correction were used. Results were significant and showed higher frequency of SI ( $(\chi^2(2, N=90) = 12.49, p < .001)$ ), NSSI ( $(\chi^2(2, N=90) = 14.70, p < .001)$ ), and SA ( $(\chi^2(2, N=90) = 13.69, p < .001)$ ) in adolescents with ED as compared to those without ED. This data provides evidence that ED can occur in any population and highlights the importance of screening all patients for ED, regardless of ethnicity or level of income.

*Learning Objectives:*

- ▶ Increased awareness of prevalence of eating disorders in low income, ethnic minority sample.
- ▶ Increased awareness of prevalence of comorbid suicidal ideation, suicide attempts, and non-suicidal self injury in a sample of adolescents with ED presenting to an outpatient clinic in Bronx, NY.
- ▶ Compare rates of SI, NSSI, and SA in adolescents presenting with a mood or anxiety disorder as compared to those with mood or anxiety disorder and ED.

### T-111 Eating Disordered Behaviors as a Form of Nonsuicidal Self-Injury

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Prior literature has identified the overlap of eating disordered (ED) behavior and nonsuicidal self-injury (NSSI); however, no study has examined ED behaviors as NSSI. The study examined 1,969 patients receiving treatment in an inpatient ( $n = 904$ ; 45.9%) or partial hospitalization ( $n = 1065$ ; 54.1%) program for NSSI. The sample was mostly female (87.8%), adolescent or emerging adult (93.9%), and non-Hispanic white (76.4%) or Hispanic (15.7%). Patients completed the Alexian Brothers Assessment of Self-Injury (ABASI) at the time of admission as part of routine clinical assessment. The ABASI assessed 21 forms of NSSI, including forms that result in tissue damage, as well as forms that do not result in immediate tissue damage, such as ED behaviors for NSSI. Specifically, the ABASI assessed for "over-

exercising to injure or cause pain” and “restricting eating, purging, or using laxatives to injure or cause pain.” Over one quarter (29.8%) of patients endorsed ED behaviors for NSSI, including restricting, purging, and laxative use (27.5%) and over-exercising (7.1%). Patients who engaged in ED behaviors for NSSI engaged in a greater number of NSSI behaviors in the prior week (3.7 vs. 2.8,  $t[1967]=2.43$ ,  $p=.015$ ,  $d=.12$ ), had a greater urge to engage in NSSI (18.6 vs. 22.9,  $t[1967]=11.34$ ,  $p<.001$ ,  $d=.56$ ), lower quality of life (43.4 vs. 52.2,  $t[1967]=10.00$ ,  $p<.001$ ,  $d=.49$ ), and greater functional impairment (20.3 vs. 17.5,  $t[1967]=5.82$ ,  $p<.001$ ,  $d=.29$ ). The vast majority of patients who engaged in ED behaviors for NSSI also engaged in ED behaviors to influence their shape or weight (85.8%); however, approximately a third (32.3%) of patients who engaged in ED behaviors to influence their shape or weight did not engage in ED behaviors for NSSI. Although the ABASI is the only NSSI assessment to assess for ED behaviors for NSSI purposes, these findings suggest the importance of assessing for ED behaviors as a form of NSSI.

*Learning Objectives:*

- ▶ Following the training, participants will be able to list ED behaviors that are used as a form of NSSI.
- ▶ Following the training, participants will be able to use the ABASI (Alexian Brothers Assessment of Self-Injury) assessment to identify ED behaviors for NSSI purposes.
- ▶ Following the training, participants will be able to describe the impact of quality of life and functional impairment in individuals engaging in ED behaviors for NSSI purposes.

**T-112**  
**Cross-Sectional and Longitudinal Tests of the Relation between Eating Psychopathology and Suicidal Ideation**

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Individuals with eating disorders (ED) are at high risk of death by suicide. The interpersonal-psychological theory on suicidal behavior (IPTs) posits that when individuals perceive themselves to be a burden and lack social belongingness, and when these perceptions are considered unchangeable (i.e., hopeless), individuals will experience suicidal ideation. This model has been tested in cross-sectional data; however, longitudinal evidence is needed. Therefore, this study used multiple mediation analyses to test the hypothesis that perceived burdensomeness, thwarted belongingness, and hopelessness would mediate the relationship between ED psychopathology (measured by the Eating Disorder

Examination-Questionnaire) and suicidal ideation in an undergraduate sample (N = 353; 78.8% female; 91.8% Caucasian) measured on three occasions over a 10-week period. Results from cross-sectional mediation analyses of data from the first time-point indicated significant indirect effects of perceived burdensomeness mediating the relations between global ED psychopathology (95% CI [.022, .165]), fasting (95% CI [.019, .242]), binge-eating (95% CI [.003, .067]), self-induced vomiting (95% CI [.078, .335]), and suicidal ideation, which is consistent with extant cross-sectional evidence. However, no significant indirect effects were identified when tested longitudinally. The lack of consistency across cross-sectional and longitudinal tests suggests that the usefulness of IPTs for understanding the development of suicidal ideation among individuals with ED pathology may be limited. Even so, future research should identify ideal assessment intervals for capturing change in these variables, as it is possible this study’s 10-week period was unsuitable. Overall, these conflicting results emphasize the need for longitudinal designs to thoroughly test IPTs’s developmental predictions among individuals with ED psychopathology.

*Learning Objectives:*

- ▶ Identify variables influencing the relationship between eating psychopathology and suicidality.
- ▶ Recognize the discrepancies between cross-sectional and longitudinal results within the framework of IPTs for explaining the development of suicidal ideation in individuals with ED pathology.
- ▶ Consider the importance of examining IPTs longitudinally among individuals with ED psychopathology.

**T-113**  
**Irritability and Concentration Difficulties Link Eating Disorder and PTSD Symptoms: Understanding Comorbidity with Network Analysis**

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Eating disorders (ED) and post-traumatic stress disorder (PTSD) are highly comorbid. However, specific mechanisms by which PTSD-ED comorbidity is maintained are unknown. Network analysis is an emerging method used to understand psychological comorbidity by examining direct relationships between symptoms. We can identify both (a) core (or most central) symptoms and (b) symptoms that bridge (or connect) between disorders. The current study constructed two PTSD-ED comorbidity networks in two separate samples: a clinical and non-clinical sample. The clinical sample consisted of

158 individuals with an ED diagnosis (primary AN; 72%). The non-clinical sample included 300 female college students. In both networks, ED symptoms were more central than PTSD symptoms. We identified the following central symptoms of PTSD-ED comorbidity: fear of weight gain (ED), desire for a flat stomach (ED), binge eating (ED), and disturbing dreams (PTSD). We also identified bridge symptoms that connect two disorders: Binge eating (ED) had a strong connection to irritability (PTSD), and concentration problems (PTSD) bridged to weight and shape-related concentration problems (ED). Our findings suggest that intrusive trauma-related cognitions and weight-related fears are at the core of comorbid PTSD-ED. Additionally, concentration difficulties and irritability may be the mechanisms by which comorbidity is maintained between PTSD-ED. Interventions targeted at core and bridge symptoms should have the maximum impact to reduce the severity of all other symptoms within the psychopathology network. Interventions targeting these symptoms may be more efficient than traditional treatment approaches and alleviate the need to choose which disorder to treat first.

#### *Learning Objectives:*

- ▶ Participants will learn about the how network analysis can be used to better understand psychological comorbidity.
- ▶ Following the presentation, participants will have a greater understanding of symptoms that maintain PTSD-ED comorbidity.
- ▶ Participants will learn how targeting core symptoms of PTSD-ED comorbidity may be an efficient way to treat both disorders simultaneously.

### **T-114**

#### **The Impact of Alexithymia on Symptoms of Autism in Females with Anorexia Nervosa**

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Alexithymia is a difficulty identifying and communicating one's own emotions, and is known to be prevalent in several psychiatric disorders, including anorexia nervosa and autism spectrum disorders (ASD). Alexithymia is also predictive of many emotional difficulties, including abilities typically assessed during behavioural diagnostic assessments of ASD. Symptoms of ASD are known to be over-represented in AN, such that a high proportion of individuals with AN meet clinical cut-off on standardised assessments of ASD, including the autism diagnostic observation schedule (ADOS). The aim of this study was to examine the relationship between ADOS scores

and alexithymia in a sample of 96 females with AN. The impact of alexithymia on meeting the criteria for ASD was investigated, as were correlations between alexithymia and ADOS subscales: social affect and restricted and repetitive behaviours. Being above the cut-off for alexithymia on the Toronto Alexithymia Scale was predictive of meeting criteria for ASD on the ADOS. Alexithymia scores were also significantly correlated with the social affect subscale of the ADOS, but not with the restricted and repetitive behaviour subscale. While the nature of the relationship between alexithymia and symptoms of ASD in AN cannot be inferred, it could be that difficulties with one's own emotion recognition may exacerbate the presence of symptoms which appear to be autistic in nature.

#### *Learning Objectives:*

- ▶ Describe the overlap in symptoms between anorexia nervosa and autism spectrum disorder.
- ▶ Assess the role that difficulties with emotion recognition may have on symptoms characteristic of autism, in females with anorexia nervosa.
- ▶ Identify the difficulties of diagnostic autism spectrum disorder in individuals with eating disorders.

### **T-115**

#### **Pathological or Healthy? The Correlates of Orthorexia Nervosa among Undergraduate Students**

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**Rachel Rodgers, PhD**

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Orthorexia Nervosa, while not formally a disorder, can be described as anxiety around attaining a "perfect diet," with a focus on the quality and balance of foods, to the point where it negatively impacts functioning and wellbeing. However, if moderate, such a drive might have a positive impact on daily health behaviors and be associated with health-promoting eating patterns. Our current knowledge of Orthorexia Nervosa is limited by the lack of understanding regarding the capacity for preoccupation around diet to be respectively associated with health-promoting eating habits and pathological preoccupation around eating. This study aimed to contribute to bridging this gap by examining the relationships between scores on a validated measure of Orthorexia Nervosa and pathological and healthy eating dimensions. A sample of 144 undergraduate women aged 18-25, Mean (SD) = 19.79 (1.63), with BMI ranging from 16.64-42.06, Mean (SD) = 22.34 (3.07), completed an online questionnaire assessing for Orthorexia Nervosa, as well as eating disorder symptoms, perfectionism, positive attitudes towards eating, and intuitive eating. Higher levels of

Orthorexia Nervosa were associated with higher levels of eating disorder symptoms ( $r = -.26, p = .001$ ), higher levels of perfectionism ( $r = -.23, p = .008$ ), and less positive attitudes towards eating ( $r = .31, p < .001$ ). No relationship was found with intuitive eating. These results suggest that overall higher levels of Orthorexia Nervosa are associated with higher levels of disordered eating and lower levels of flexible healthy eating. Thus, Orthorexia Nervosa appears to co-exist within a constellation of risky eating patterns. Additional research regarding the longitudinal outcomes of Orthorexia Nervosa is warranted. However, our findings contribute to the building body of research supporting the consideration of Orthorexia Nervosa as a form of eating disorder.

*Learning Objectives:*

- ▶ To define Orthorexia Nervosa.
- ▶ To understand the association between Orthorexia Nervosa and eating disorder symptoms.
- ▶ To evaluate the usefulness of continuing to investigate Orthorexia Nervosa as a potential clinical entity.

### T-116 Validity of the Bogus Taste Test as a Laboratory Measure of Food Intake

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The current study aimed to examine the validity of the bogus taste test, a commonly used measure of food intake. College students ( $n=78$ ; 80.8% female) were recruited for a study originally designed to examine emotional eating. Subjects were told that the purpose was to examine memories and taste preferences. Participants were randomly assigned to a negative (i.e., recall a recent, negative memory) or neutral (i.e., recall their route to class) mood induction. After the mood induction, subjects were left alone for 10 minutes to taste and rate various aspects (e.g., texture) of preferred foods (e.g., skittles). Subjects were told that remaining food would be discarded so they could eat as much as they would like. Unbeknownst to subjects, food intake was measured. Subjects also completed self-report measures and height and weight were assessed. Correlations, t-tests, and ANOVA were used to calculate results. Subjects in negative ( $M = 95.3, SD = 44.7$ ) and neutral conditions ( $M = 89.8, SD = 39.9$ ) consumed similar grams of food ( $t = .57, p = .57$ ). There was no interaction between time and condition on negative affect, suggesting that the mood induction did not elicit more negative emotion in the negative, compared to the neutral condition, Wilks Lambda = .93,  $F = 1.6, p = .2$ . A higher ability to imagine

negative memories was related to greater negative affect ( $r = .46, p < .01$ ). Baseline hunger was associated with food intake ( $r = .26, p < .05$ ), but other variables were unrelated to food intake (i.e., BMI, restrained and binge eating). Although several methods were used to optimize the impact of the mood induction and the validity of the taste test, findings suggest that the bogus taste test may not be valid among college students. Methods to increase salience of memories may improve mood induction effectiveness. Former conclusions about the validity of the bogus taste test may be limited by publication bias, as studies with null findings may not have been reported.

*Learning Objectives:*

- ▶ Describe the bogus taste test as a laboratory-based, behavioral measure of food intake.
- ▶ Discuss how mood induction procedures are used in research on eating behaviors.
- ▶ Critique the use of the bogus taste test as a measure of eating behavior.

### T-117 Phenomenology of Subjective Binge Eating: A Qualitative Interview Study

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Growing evidence suggests that subjective binge eating (SBE; loss of control eating involving subjectively, but not objectively, large quantities of food) is clinically concerning even though it is not currently included in the diagnostic classification system for eating disorders. Unfortunately, the phenomenology of SBEs has not been examined in a systematic, data-driven way. Rather, SBEs have been defined based upon clinical observation and included as such in the Eating Disorder Examination interview. The current study used a qualitative, inductive interview approach to further define the phenomenology of SBEs as described by individuals who experience SBEs. Participants were 14 individuals who reported loss of control eating episode amounts that met SBE size criteria and that occurred at least twice per week over the prior three months. We completed semi-structured qualitative phone interviews with participants regarding their most recent SBE and objective binge eating episode (OBE), as well as broader experiences and attitudes regarding non-binge eating. Thematic and in vivo coding yielded a variety of descriptive and interpretive codes regarding SBEs on their own and in comparison to OBEs and

non-binge eating. Most notably, SBEs were described as being in response to hunger more so than appetitive desires for food, in contrast to OBEs. SBEs were related to an overarching attitude of over-control regarding eating, such that participants described SBEs as “out of control” because they were in contrast to restrictive and over-controlled non-binge eating. SBEs also co-occurred with dissociative experiences (i.e., not being present or aware during SBE occurrence). The current study highlights new information regarding the lived experiences of those who experience SBEs, and provides an important foundation and means of hypothesis generation for future research on SBEs in larger samples.

*Learning Objectives:*

- ▶ Describe the phenomenology of subjective binge eating.
- ▶ Discuss diagnostic implications of the current findings with regard to subjective binge eating.
- ▶ Consider how to best address subjective binge eating in eating disorder treatment given the current findings.

### **T-118** **Development of the SPORT: Survey of Physical-Overtraining and Related Thoughts**

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Victoria Perko, BA<sup>1</sup>  
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Several studies have found that eating disorder (ED) pathology is elevated in athletes compared to non-athletes. The assessment and identification of excessive exercise among athletes is a challenge because, compared to non-athletes, athletes are required to train at higher intensities and for longer periods of time. However, individuals participating in competitive sports are still susceptible to unhealthy exercise patterns. There are currently no measures that adequately differentiate healthy versus unhealthy training behaviors among athletes because most ED assessments were developed and normed in non-athlete samples. We aimed to develop a novel self-report measure to assess healthy and unhealthy training behaviors in athletes and to evaluate its factor

structure and construct validity. The initial item pool was developed by expert ED researchers and clinicians who worked extensively with athletes. The item pool was administered to N= 267 female collegiate athletes who were participating in a randomized investigation of the Female Athlete Body Project, an ED prevention program for female athletes, at three large universities. Athletes also completed measures of ED pathology and affect. Parallel analyses indicated that a maximum of five factors could be extracted, although an exploratory factor analysis indicated that the best fit was a four-factor model,  $2(51) = 131.973$ , RMSEA= .077, CFI=.992, TLI=.984, SRMR=.031. Results indicated excellent convergent validity with a measure of ED pathology and excellent discriminant validity with a measure of affect. This study is significant as one of the first measures to differentiate healthy vs. unhealthy training in athletes. By expanding our assessment tools to the community of athletes, we are providing clinicians and coaches with a valid indication as to whether female athletes are engaging in unhealthy training which would be helpful in preventing and/or treating EDs in female athletes.

*Learning Objectives:*

- ▶ Discuss a new measure of unhealthy vs. healthy training in athletes.
- ▶ Evaluate the measure's factor structure.
- ▶ Describe the measure's construct validity.

### **T-119** **Psychometric Evaluation of the Compensatory Eating and Behaviors in Response to Alcohol Consumption Scale (CEBRACS)**

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Drunkorexia is a growing field of literature that examines the intersection of alcohol use and disordered eating behaviors. Specifically, drunkorexia involves the use of compensatory behaviors in an effort to avoid increased caloric intake during episodes of alcohol use. Several validated measures exist; however, none have been thoroughly psychometrically tested for gender differences. Given gender differences in both alcohol use and disordered eating behaviors, examining whether measures of drunkorexia are appropriate for use with both men and women is paramount. This study examined gender invariance of the Compensatory Eating and Behaviors in Response to Alcohol Consumption Scale (CEBRACS), which is theorized to measure behaviors

and motives of compensatory behaviors before, during, and after drinking. Participants were undergraduates (n = 587; 78% female), ranging in age from 18 to 35. The original factor structure of the CEBRACS was not supported in this sample; the Restriction subscale was removed due to low internal consistency and a lack of convergence for this latent factor. The 3 factor model (Bulimia, Diet and Exercise, and Alcohol Effects) demonstrated good fit for men and women individually. Invariance testing suggested that the underlying factor structure is the same across gender. Scalar invariance was supported in this cohort, supporting that this measure can indeed be used in both men and women. Overall, findings support the CEBRACS as a measure to assess behaviors and motives for engaging in drunkorexia behaviors. This is the first study to examine measurement invariance in a measure of drunkorexia.

*Learning Objectives:*

- 1 Understand the measurement of “Drunkorexia”, or the compensatory behaviors utilized in an effort to avoid increased caloric intake during episodes of alcohol use.
- 2 Describe the psychometric similarities of the Compensatory Eating and Behaviors in Response to Alcohol Consumption Scale (CEBRACS) for use with males and females.
- 3 Determine an appropriate factor structure of the CEBRACS for undergraduate males and females.

### T-120

#### The Structure of Mental Health in Eating Disorders: A Network Approach

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Mental health is defined by scholars as having two main components, namely adequate levels of well-being and the absence of major psychopathology. Research among the general population in multiple countries shows that well-being and psychopathology are not two opposites of one dimension, but two related aspects of mental health. This two continua structure of mental health was also found recently among eating disorder (ED) patients. In the same study it was however also found that the correlations between well-being and psychopathology were different depending on the type of ED, suggesting a complex relationship which needs further examination. Another issue, concerning mental health, is that it is not clear whether there are underlying components of well-being, such as self-acceptance, positive relationships with others, autonomy and happiness, that are more central within the mental health structure than other components. Centrality of components in a structure is

a central theme of network analysis and suggests that targeting these components will give more improvement on the whole structure (of mental health) than targeting peripheral components. This is the first study to examine the network and centrality of the underlying components of mental health in a representative sample of 468 eating disorder patients. In addition, the network structure of ED patients compared to a representative sample of the general population of mental health is examined. Results show different centrality components of mental health, dependent on the ED type. Also differences in network strength (stability of mental health) are found between ED patients and the general population.

*Learning Objectives:*

- 1 To describe how network analysis may inform treatment strategies (i.e. identify key components to target in treatment).
- 2 To describe the most important components to target in eating disorder patients to improve mental health as suggested by network analysis.
- 3 To describe three differences in the structure (network) of mental health of eating disorder patients and the general population.

### T-121

#### Well-being Should be Evaluated in Eating Disorder Treatment: Determinants and the Complex Relationship with Psychopathology among Patients with Anorexia Nervosa, Bulimia Nervosa and Binge Eating Disorder

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Mental health is defined by scholars as having two main components, namely adequate levels of well-being and the absence of major psychopathology. Research among the general population in multiple countries shows that well-being and psychopathology are not two opposites of one dimension, but two related aspects of mental health. This means that the absence of psychopathology does not necessarily mean that well-being is also present in individuals. This has major consequences for how mental health is conceptualized for psychiatric patients and how we should think about treatment and recovery of mental illnesses. Studies on well-being among eating disorder patients are however sparse and the relationship between well-being and psychopathology has not been examined to date among eating disorder

patients. This study examines the relationship between well-being and psychopathology in a representative sample of 468 eating disorder patients in the Netherlands. In addition, differences in well-being scores of eating disorder patients compared to a control group of 835 Dutch adults are examined. Results of this study show statistically significant differences in the presence of well-being among eating disorder patients compared to the general population. Also a complex relationship between psychopathology and well-being, dependent on the type of eating disorder was found. Determinants that are associated with eating disorder pathology and well-being will also be addressed in this paper presentation. An important finding was that different determinants were associated for pathology and well-being.

*Learning Objectives:*

- ▶ Describe how Dutch eating disorder patients function on well-being compared to the general population.
- ▶ Describe the complex relationship of well-being and psychopathology among eating disorder patients.
- ▶ Name at least 3 determinants that are associated with well-being and psychopathology in eating disorder patients.

### T-122

#### What does the ORTO-15 Measure? Orthorexia Nervosa in a Meat-avoiding Sample

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Orthorexia nervosa (ON) is a proposed diagnosis characterized by an obsessive need to eat healthfully. The suitability of available measures for capturing true pathology associated with ON has been questioned. Vegans and vegetarians differ from omnivores in their focus on health. We administered the ORTO-15 to groups of various meat avoiders to test the hypothesis that it captures health focus, rather than pathology. A community sample of 111 omnivores, 35 meat reducers, 52 lacto-ovo-vegetarians, and 201 vegans completed a battery of self-report measures that included the ORTO-15 to quantify ON severity and the Eating Disorder Examination Questionnaire (EDE-Q) to assess for eating pathology. More than 70% of respondents met criteria for a diagnosis of ON. The ORTO-15 and EDE-Q were not correlated. Respondents above the 2.50 EDEQ cutoff (suggesting the likely presence of an eating disorder) did not differ from controls in ORTO-15 scores. There was a main effect of meat avoidance type on the EDE-Q ( $p < .01$ ), with vegans endorsing fewer symptoms than semi-vegetarians and/or omnivores across subscales ( $p < .05$ ). Using the ORTO-15 cutoff of 40, there was an effect of vegetarian diet type

on ON diagnosis ( $p = .02$ ), such that vegans are more likely to meet the clinical ON cutoff (adjusted residual = 3.0) and omnivores are less likely to meet the cutoff (adjusted residual = -2.6). Based on ORTO-15 results, vegans' scores should be most indicative of pathological eating behavior, but the opposite appears to be true. The ORTO-15 is able to differentiate between types of meat avoiders, but given the difference in health focus between groups, the scale may be tapping into a construct of being more attentive to consumption.

*Learning Objectives:*

- ▶ Assess the utility of the ORTO-15.
- ▶ Debate what the ORTO-15 is measuring.
- ▶ Differentiate between meat avoidance, eating disorder symptoms, and ORTO-15 scores.

### T-123

#### Food Addiction in Ethnically Diverse Adults Seeking Treatment for Binge Eating

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Recent research has shown that food addiction is prevalent among adults with binge eating disorder (BED) and bulimia nervosa (BN). Less is known about the comorbidity of food addiction and binge eating among ethnic minorities, despite evidence that they experience BED and BN at similar or greater rates compared to non-Hispanic Whites. The current study examined the prevalence and symptoms of food addiction in an ethnically diverse sample of adults seeking binge eating treatment. Participants were 26 adults (76.9% ethnic minority) diagnosed with BED, subthreshold BED, BN or subthreshold BN who were enrolled in a randomized controlled trial for binge eating. This sample had a mean age of 36.73 (SD = 11.78) and mean BMI of 32.11 (SD = 8.75) with most participants categorized as overweight ( $n = 9$ ; 34.6%) or obese ( $n = 12$ ; 46.2%). Participants completed a structured interview to assess for eating disorder symptoms and the Yale Food Addiction Scale (YFAS) 2.0 to assess for food addiction. Approximately 81% of the participants ( $n = 21$ ) met criteria for severe food addiction and 57.7% of the participants ( $n = 15$ ) endorsed all eleven food addiction symptoms. The YFAS mean score was 9.62 (SD = 1.70) reflecting severe food addiction. With regard to ethnicity, all White participants

(n = 6) and 75% of ethnic minority participants (n = 15) met criteria for severe food addiction. Study findings indicate that food addiction is common in a predominately ethnic minority sample of adults with binge eating. A majority of the participants reported symptoms indicative of an addictive process which may contribute to a more severe presentation of binge eating. Future research should further investigate food addiction and binge eating in ethnic minorities with a focus on potential differences between those who do and do not meet criteria for food addiction.

*Learning Objectives:*

- ▶ To describe food addiction.
- ▶ Assess the comorbidity of binge eating and food addiction in ethnically diverse adults.
- ▶ Summarize the prevalence and symptoms of food addiction in ethnically diverse adults.

**T-124**  
**Examining the Association between Canadian Patients' Readiness to Change Eating Disorder Behaviour and Treatment Engagement in an Adult Outpatient Eating Disorder Program**

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Eating disorders are debilitating illnesses that are associated with severe psychological and physiological repercussions, and as such, patients with eating disorders require timely interventions. Identifying the factors that predict treatment adherence allows clinicians to make appropriate treatment recommendations that maximize clinical resources. The current study investigated whether patients' self-reported readiness to change was associated with treatment adherence among patients enrolled in a hospital-based outpatient treatment program for adults with eating disorders. The sample included 68 women with a DSM-5 diagnosis of an eating disorder. At an intake assessment, participants were asked how prepared they were to change their eating disorder behaviour on a 10-point likert-type scale. Participants also completed measures of symptom severity. Treatment adherence was operationalized as the decision to attend the core treatment program, the number of sessions attended, and whether the participants dropped out of treatment prematurely. Forty-one participants (60.29%) engaged in the core group-based treatment program. Self-reported readiness to change was not associated with engagement in the treatment. Among the participants that attended the program, self-reported readiness to change was not associated with the number of sessions participants attended or premature dropout. Higher

readiness to change was associated with significantly higher life satisfaction and lower depression, anxiety, drive for thinness, body dissatisfaction, low self-esteem, and asceticism. Readiness to change is a poor predictor of treatment adherence in an outpatient sample of adults with eating disorders. Self-reported readiness to change may instead be a proxy for symptom severity. Clinical implications will be discussed.

*Learning Objectives:*

- ▶ Describe the literature on readiness to change in eating disorders.
- ▶ Assess the relation between self-reported readiness to change eating disorder behaviour and treatment adherence.
- ▶ Describe why self-reported readiness to change eating disorder behaviour is a poor predictor of treatment adherence.

**T-125**  
**Disordered Eating Screen for Athletes (DESA-6): A Proposed Self-report Brief Screening Tool for Disordered Eating in Athletes**

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Disordered eating is a growing problem among athletes that adversely affects physical and mental health and sport performance. Eating disorders are associated with increased risk for many psychiatric disorders and have the highest mortality rate of all mental disorders. There are screening tools for athletes currently available, but these tools were designed only for female athletes or female college athletes and are lengthy, consisting of 29 to 51 items. There is no brief screening tool available for use in both male and female adult athletes to identify athletes at risk. The aim of this study was to develop a screening tool to identify adult athletes of both genders and all ages who are at risk for disordered eating. With only 6 items, the DESA-6 potentially offers physicians and athletic trainers a quicker alternative for screening. Participants completed a survey that included demographic information, the DESA-6 and the EAT-26. The EAT-26 is a validated and reliable self-report questionnaire assessing the risk of disordered eating and was used to assess the validity of the DESA-6. A total of 304 athletes ages 18 to 74 years were recruited at the Michigan State University Sports Medicine Clinic in East Lansing, MI. The scoring system for the DESA-6 was developed by determining how strongly each item predicted disease, defined as a EAT-26 score  $\geq 20$ , and

weighting each item accordingly. A total DESA-6 score  $\geq 4$  produced a sensitivity of 84.2% and a specificity of 80.3% for correctly classifying being at risk for an eating disorder. The DESA-6 is a promising tool for risk assessment of disordered eating and eating disorders in athletes. As athletes face a unique variety of issues at all levels of training, a quick screening tool that can be used for all genders and all ages that is specific to athletes is necessary.

*Learning Objectives:*

- 1 Understand the possible complications of eating disorders and disordered eating specifically for athletes.
- 2 Understand the issues with current screening tools for eating disorders and disordered eating in athletes.
- 3 Understand the usefulness of a brief screening tool that is applicable to all athletes that could easily be used by physicians, athletics trainers, coaches and others working with athletes.

## T-126

### Compulsive and Compensatory Exercise: Exploring Unique Relations between Exercise Presentations and Core Eating Disorder Symptoms

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Unhealthy exercise (UE) is a debilitating symptom associated with eating pathology. Research suggests there may be two different UE presentations: compulsive exercise (i.e., rigid, rule-driven exercise) and compensatory exercise (i.e., exercise to negate the effects of recent food intake on weight/shape). Indeed, in one study, compulsive and compensatory exercise were independently associated with eating pathology, and only 20.4% of the sample presented with both UE forms. However, due to minimal research on UE, the distinctness of compulsive and compensatory exercise and their relation to core eating disorder symptoms remains elusive. The current study examined correlations among compulsive and compensatory exercise and considered whether these two forms of exercise differentially relate to core eating disorder symptoms in women with dietary restriction ( $n = 27$ ), binge eating ( $n = 31$ ), and healthy controls ( $n = 71$ ). Questionnaires (i.e., Compulsive Exercise Test and Reasons for Exercise Inventory) and interview assessments of compulsive and compensatory exercise were employed. Subscales assessing compulsive exercise features were more strongly correlated to one another than with compensatory exercise subscales, and vice versa. On the interview, 13% of the sample endorsed

compulsive exercise, 26% endorsed compensatory exercise, and 6.9% endorsed both. Both the Restricting and Binge Eating groups scored higher on all UE features than the Control group. Although not statically significant, small effect sizes suggested compulsive exercise may be higher in those with restriction than those with binge eating whereas compensatory exercise may be higher in those with binge eating than with restriction. Results support the potential distinctness of compulsive and compensatory exercise. Future research should examine a clinical sample with higher rates of UE to further differentiate facets of UE and associations with eating pathology.

*Learning Objectives:*

- 1 Introduce two different forms of unhealthy exercise as symptoms of eating disorders.
- 2 Identify ways to assess and capture the unique constructs of compulsive and compensatory exercise.
- 3 Examine difference in unhealthy exercise between individuals with distinct eating pathology.

## T-127

### Better, Worse, or the Same? A Comparison of Diagnostic Crossover of DSM-IV and DSM-5 Eating Disorders

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A key goal of the DSM-5 Eating Disorders (ED) Work Group was to establish more meaningful diagnostic categories and reduce rates of diagnostic migration (i.e., the movement of individuals among ED diagnoses over time). However, few studies have compared rates of diagnostic migration between the DSM-IV and DSM-5 criteria to see if the stability of ED diagnoses has improved. The goal of the current study, therefore, was to test the stability of ED diagnoses using DSM-IV and DSM-5 criteria in a community recruited sample of adults with EDs ( $N=92$ ; 80.4% female). Participants were assessed with semi-structured diagnostic interviews at baseline and one-year follow-up. Using DSM-IV criteria, 100% of participants with anorexia nervosa (AN), 50% of those with bulimia nervosa (BN), and 5.7% of those with eating disorder not otherwise specified (EDNOS) crossed over to a new diagnosis over the one-year follow-up period. Applying DSM-5 criteria to the same sample, 100% of participants with AN, 50% of those with BN, 100% of those with binge eating disorder (BED), and 23.9% of those with other specified feeding or eating disorder (OSFED) crossed over into a different diagnosis. Results indicate that OSFED had the least amount of diagnostic migration over a year. There was a significant association among diagnoses at baseline and year one using DSM-IV criteria,

suggesting significant diagnostic crossover between time points,  $X^2(4) = 27.26, p < .001$ . However, there was a not significant association among diagnoses at year one and two using DSM-5 criteria,  $X^2(12) = 15.34, p > .05$ . Results indicate that diagnostic crossover among individuals with EDs is greater in DSM-IV (vs. DSM-5) criteria and the new diagnostic schema in the DSM-5 has increased diagnostic validity over time. Although it is promising that the field has increased the stability of ED diagnoses, observed rates of diagnostic migration remain high, limiting their clinical utility. In the future, it may be worthwhile for research to incorporate dimensional or transdiagnostic perspectives into the current nosological schemes in order to continue progression toward more valid ED diagnoses.

*Learning Objectives:*

- ▶ Understand the issue of diagnostic crossover in the field of eating disorders.
- ▶ Assess the validity of the current diagnostic system for eating disorders.
- ▶ Consider the utility of incorporating dimensional or transdiagnostic approaches into the current diagnostic system for eating disorders.

**T-128**  
**Bridging the Research Practice Gap in the Field of Eating Disorders: Evaluation of a Training Program to Support Evidence-based Screening**

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A training program on the topic of eating disorders (EDs) screening was assessed in order to promote the use of evidence-based knowledge by health care providers working in first-line services in Quebec (Canada). Post-training (3 months) semi-structured interviews conducted with 13 health care providers who received training indicate that they used the acquired knowledge in various ways (instrumental, conceptual and persuasive utilization of knowledge). Factors influencing the adoption of the presented evidence-based practices were also identified such as factors associated with training, screening tools, health care providers and their work environment. Results suggest the importance of tailoring practices to region's ecological context as a way to support knowledge utilization in the field of eating disorders.

*Learning Objectives:*

- ▶ Describe in what forms evidence-based knowledge can be used according to a Knowledge Transfer framework.

- ▶ Identify factors that could influence the uptake of evidence-based knowledge by eating disorders clinicians.
- ▶ Explain future directions for adapting knowledge transfer strategies to region's context when training eating disorders clinicians.

**T-129**  
**Beyond Inappropriate Compensatory Behaviors: Testing the DSM-5 Severity Categories and an Expanded Model of Severity as Predictors of Impairment in Bulimia Nervosa**

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It is important for clinicians to have information about eating disorder (ED) severity in order to plan treatment and refer patients to the most appropriate level of care. The DSM-5 introduced a new severity index for bulimia nervosa (BN) severity based on the average number of inappropriate compensatory behaviors (ICBs) that occur per week. However, few studies have examined the utility of the BN severity categories for predicting clinical impairment. The purpose of the current study was to evaluate the categorical DSM-5 severity index as a predictor of ED-related clinical impairment. A secondary goal was to test the incremental validity of select Eating Pathology Symptoms Inventory (EPSI) scales to bolster categorical severity ratings. Participants were adults recruited from the community with current sub- or full-threshold BN ( $N = 190$ ; 82.6% women). Linear regression models were used to test whether: 1) DSM-5 BN severity categories predicted ED-related clinical impairment and 2) EPSI Body Dissatisfaction, Binge Eating, and Cognitive Restraint scales provided incremental validity above-and-beyond BN severity ratings in predicting ED-related clinical impairment. Results indicated that the DSM-5 BN severity index significantly predicted ED-related clinical impairment, accounting for 6.2% of the variance in clinical impairment scores. Moreover, Body Dissatisfaction, Binge Eating, and Cognitive Restraint accounted for an additional 15.4% of the variance in clinical impairment. Although the DSM-5 severity categories for BN predicted ED-related clinical impairment in our sample, our results also suggested that measuring body dissatisfaction, binge eating, and cognitive restraint could improve clinicians' ability to predict ED-related clinical impairment associated with BN. Thus, it is important for clinicians to assess not only frequency of ICBs, but also underlying cognitive symptoms and binge eating behaviors when considering how BN severity leads to impairment.

*Learning Objectives:*

- ▶ Evaluate the DSM-5 severity index for bulimia as a predictor of eating disorder-related clinical impairment in a community sample with bulimia.
- ▶ Assess how much more of the variance in eating disorder-related clinical impairment might be captured by the addition of body dissatisfaction, binge eating, and cognitive restraint to the severity model for bulimia.
- ▶ Describe the role of both eating disorder-related behaviors and cognitive factors in bulimia severity and clinical impairment.

**T-130****The Development and Validation of the Physical Appearance Comparison Scale-3 (PACS-3)**

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Appearance comparison processes are implicated in the development of body image disturbance and disordered eating. The Physical Appearance Comparison Scale-Revised (PACS-R) assesses the simple frequency of appearance comparisons, however, research suggests that other aspects of appearance comparisons (e.g., comparison direction) may moderate the association between comparisons and their negative outcomes. In the current study, the PACS-R was revised to examine aspects of comparisons with theorized or demonstrated relevance to body image and eating outcomes. Specifically, the measure was modified to examine (a) dimensions of physical appearance relevant to men and women (i.e., weight/shape, muscularity, and overall physical appearance), (b) comparisons with proximal and distal targets, (c) upward versus downward comparisons, and (d) the acute emotional impact of comparisons. The newly revised measure, labeled the PACS-3, was administered to 1,533 college men and women, along with existing measures of appearance comparison, body satisfaction, eating pathology, and self-esteem. Exploratory and confirmatory factor analysis were conducted to examine the factor structure of the PACS-3. In addition, the reliability, convergent validity, and incremental validity of PACS-3 scores were examined. The final PACS-3 is comprised of 27 items and nine subscales: Frequency: Proximal, Frequency: Distal, Frequency: Muscular, Direction: Proximal, Direction: Distal, Direction: Muscular, Effect: Proximal, Effect: Distal, Effect: Muscular. PACS-3 subscale scores demonstrated good reliability and convergent validity. Moreover, PACS-3 subscales greatly improved the prediction of body satisfaction and disordered eating relative to existing measures of appearance comparison, particularly among men. Multiple regression analyses indicated that engaging in upward

comparisons and experiencing negative emotional states following comparisons was most predictive of negative outcomes, suggesting that targeting these aspects of comparisons in treatment may be most beneficial.

*Learning Objectives:*

- ▶ Discuss the role of appearance comparisons in the development and maintenance of body image and eating disturbance.
- ▶ Evaluate the strengths and limitations of existing measures of appearance comparison.
- ▶ Identify elements of comparison processes with the greatest impact on body image and disordered eating.

**T-131****Gender Bias in the Identification of Eating Disorder Symptoms in College Students: A Vignette Study**

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This vignette study examined perceptions of college students regarding other specified (OSFED) and unspecified feeding and eating disorders (UFED) in their male and female peers. Perceptions of both lower and higher severity OSFED and UFED symptoms were assessed. A random sample of two hundred and thirty-seven male and female undergraduate students participated in the present study. Multilevel modeling was used to assess if there were gender differences in the ways college students perceived symptoms of OSFED and UFED in male and female vignette characters. Vignette character gender and symptom severity level (high versus low) were entered as Level 1 predictors of eating disorder ratings; the interaction tested whether gender bias varied as a function of vignette severity. Results showed that participants endorsed the female character as having an eating disorder to a greater extent than the male character, regardless of symptom severity. Participant gender was added as a Level 2 predictor. Relative to female participants, males were more likely to endorse the female vignette characters as having an eating disorder than the male vignette characters. This perception was more pronounced for the more ambiguous, lower severity condition. Thus, gender bias appeared to operate differently for men versus women with eating disorders. In this study, college women were more pathologized for their eating disorder behaviors than men. However, college men in the present study had their eating disorder symptoms regarded more so as efforts to

manage weight, not an eating disorder. This pattern might reflect a tendency to underestimate and overlook eating disorder pathology in college men, especially in a lower severity condition. Given gender bias in perception of men versus women with OSFED and UFED symptoms in this study, this presentation will discuss ways in which gender-specific outreach strategies for eating disorder prevention and early identification on college campuses need to focus on and combat gender bias and gender-specific stereotypes about eating disorders.

*Learning Objectives:*

- ▶ Describe ways in which male and female college students with OSFED and UFED symptoms are perceived by their peers.
- ▶ Analyze the impact of gender bias on peer identification of OSFED and UFED symptom presentations in college students.
- ▶ Discuss gender-specific eating disorder outreach strategies that focus on gender bias and gender stereotypes about eating disorders on college campuses.

### T-132

#### Facets of Perfectionism, Impulsivity and their Associations with Eating Disorder Symptoms: A Latent Profile Analysis

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Classifying ED patients based on personality traits has shown clinical utility and revealed valuable information about the otherwise heterogeneous sample of ED patients. We aimed to find latent profiles based on dysfunctional and functional impulsivity, maladaptive and adaptive perfectionism dimensions and disordered eating behavior (restrained eating, binge eating, purging and preoccupation with body image and body weight). The latent profile analysis was performed on a sample of 274 women, of whom 164 were patients with ED enrolled in the inpatient treatment program (79 BN-P, 59 AN-R, 11 AN-BP, 13 BED, respectively) and 110 healthy controls. Using Frost Multidimensional Perfectionism Scale, Dickman Impulsivity Inventory and Eating Disorder Assessment Scale we identified the 5-class model to be the best fit. The five emerged classes were named: 1) resilient (low perfectionism/moderate impulsivity levels; n=23), 2) healthy (low perfectionism/low impulsivity levels; n=142), 3) restrictive (moderate perfectionism/low impulsivity levels; n=53), 4) emotionally dysregulated (high perfectionism/high impulsivity levels; n=16), 5) behaviorally dysregulated (moderate perfectionism/high impulsivity levels; n=40) class. As expected, the emerged classes resembled the well established three classes: overcontrolled, undercontrolled and high functioning

class. However, the undercontrolled class divided into emotionally and behaviorally dysregulated class. The behaviorally dysregulated class was characterized by multi-impulsive behavior, e.g. higher purging scores and frequency of substance use disorders, while the emotionally dysregulated class was characterized by higher maladaptive perfectionism, restrained eating, and frequency of mood and anxiety disorders. Most of the patients with AN-R belonged to the restricting class, but a significant proportion was also classified to the healthy class, which may indicate possible minimization of ED symptoms. Most of the patients with BN belonged to the dysregulated classes, but also to the resilient class, confirming the heterogeneity of ED symptoms and comorbid traits. Our future studies will focus on associations between class membership and treatment response.

*Learning Objectives:*

- ▶ Identify perfectionism, impulsivity and ED symptom based profiles of ED patients.
- ▶ Describe how those profiles differentiate on personality traits and ED symptoms.
- ▶ Discuss how this knowledge can contribute to ED treatment.

### T-133

#### Eating Disorders and Social Skills: Study of the Assessment of Social Repertory

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Fellipe Augusto de Lima Souza, Specialist  
Rosa Guedes, Specialist  
Isabelle Tortorella, Family Therapy Specialist  
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The last update of the structured protocol for cognitive behavioral therapy developed a transdiagnostic model of treatment. The current version describes that most patients with eating disorders present deficits in social interactions which are improved as the patient be rehabilitates from the psychopathology. However there is a group of patients that do not evolve in social functioning even after total or partial remission of the Anorexia, Bulimia and Eating Compulsion's symptoms. The DSM-5 reports that interpersonal stress can intensify restriction, purging and/or binge behaviors as a functional consequences of the eating disorders. In addition, patients present social isolation, emotional inhibition and difficulties in maintaining social roles. Thus, the aim of this study is to evaluate the social skills repertoire of patients with eating

disorders and the need for social skills training. The sample consisted of 102 patients of both sexes, aged between 18 and 60 years old and diagnosed with eating disorder. The interviews with the patients and the Social Skills Inventory (SSI-Del-Prete) were used as assessment instruments. In the SSI-Del-Prete total score, 60% of the sample presented a below average repertoire, 25% showed a good social repertoire, 9% had a very elaborate repertoire and 6% a highly elaborated repertoire. The behavioral classes with greatest social impairment in this population are the expression of positive feelings - F2 (receiving compliments, praising relatives, participating in conversation, defending others in the group and expressing positive feelings); conversation and social disinhibition – F3 (refusing abusive requests, ending a conversation, asking for favors, speaking in public, engaging in a conversation, and approaching authorities); and self-control of aggression - F5 (dealing with criticism, cheating, nicknames and greeting strangers). According to the data obtained in this research, we conclude that is necessary to train the social skills in order to rehabilitate deficit behaviors (F2, F3 e F5), contributing to the social adjustment and improvement of social relations of patients with eating disorders.

*Learning Objective:*

- ▶ The aim of this study is to evaluate the social skills repertoire of patients with eating disorders and the need for social skills training.

### **T-134** **Clinical and Therapeutic Applicability of a Body Image Dimension Test in Brazilian Adolescents with Eating Disorders**

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The purpose of this study was to assess body image distortion in adolescents with eating disorders (ED). The Image Marking Procedure test (IMP) evaluates one's self-perceived body dimension by classifying it as adequate, underestimated (subjects perceive themselves smaller) and overestimated (subjects perceive themselves larger). The measurements taken during the IMP yield the Body Perception Index (BPI), categorized as adequate perception (accuracy ranging from 99.4% to 112.3%); moderate (BPI 123% to 349.7%) and severe distortion (BPI  $\geq$ 150.0%). The latter is subcategorized into mild, moderate and severe. To our knowledge, no studies have evaluated the dimensional aspects of body image distortion in adolescents with ED. Ten male and female patients (mean age 14 years) currently being treated at the

Child and Adolescent Eating Disorder Program (PROTAD) - University of Sao Paulo School of Medicine were tested. Overestimation was detected in 60% of the sample and 4 subjects had BPI  $\geq$ 150%. Three subjects presented with underestimated perception and only 1 had a BPI in the adequate range. The IMP has shown to have advantages over body-related questionnaires since it is the only instrument that specifically evaluates the perceptual component of body image by providing numerical values that classify it. It can also identify which body segments (hip, waist, shoulders) the patient perceives as more distorted. These characteristics reinforce the clinical applicability for the evaluation of body image distortion and the development of specific therapeutic procedures for the treatment of body image distortion.

*Learning Objectives:*

- ▶ Recognize the classification of body image distortion.
- ▶ Interpret the findings of the different kind's of body image distortion.
- ▶ Detect the applicability of the body image test.

### **T-135** **Examination of Approach Motivation Using the Line Bisection Task**

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Increasing approach behavior and decreasing avoidance behavior are frequent targets of treatment for individuals with eating disorders (EDs). The increasing focus on neurobiological targets of change in treatment highlights our need to assess approach motivation with methods other than self-report. Ideally we would be able to use behavioral measures known to be correlated with brain activation indicative of approach motivation. The Line Bisection Task is a reliable noninvasive measure correlated to biological responses in the brain; specifically activation of the left frontal hemisphere for approach motivation and activation of the right frontal hemisphere for avoidance. The Line Bisection task requires an individual to indicate the middle of a series of lines. Bisection of the lines that is reliably to the right of the true center indicates a left brain hemisphere bias in activation and thus greater approach motivation. This study examined the correlation between a computerized line bisection task and common

measures of approach and avoidance previously used in studies on EDs. Participants were 137 adults recruited via Amazon's mTURK. Average age was 35.13 (SD=10.05), average BMI was 26.52 (SD=6.35); 38% of the sample was male and 87% were right handed. The average EDE-Q restraint scale score was 1.84 (SD=1.84) and global score was 1.88 (SD=1.48). 54% of female and 46.2% of male participants were in the clinical range on the restraint sub-scale. There were no significant correlations between the line bisection and measures of approach/avoidance (all  $p > .05$ ). As expected, measures of avoidance significantly correlated with each other in the expected direction. Scores on the EDE-Q were moderately correlated with a number of measures of avoidance, but not the line bisection task. Overall, it does not appear as if the computerized version of the line bisection task used is a measure of approach motivation as assessed with these common self-report measures.

*Learning Objectives:*

- 】 Describe the rationale for the use of the line bisection task.
- 】 Summarize the relationship between the line bisection task and self-report measures of avoidance.
- 】 Discuss the utility of continued research on the use of the line bisection task as a behavioral measure of avoidance.

### T-136

#### Dimensional Personality Model and Eating Disorders: An Aid in Assessment and Treatment Planning

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The current study examines the performance of scales from the PID-5 Inventory comparing and contrasting primary diagnoses of Anorexia Nervosa and Bulimia Nervosa within a partial hospital eating disorder treatment setting. The Personality Inventory of the DSM-5 (PID-5) is a self-report measure of maladaptive personality traits that was developed in accordance to the alternative model of personality disorders. The PID-5 assesses 25 personality trait facets and five broader trait domains comprised of specific groups of traits. The PID-5 has been heavily researched following its publication; however, missing from the current literature is the clinical application of the alternative model of personality in a setting for eating disorders. The main purpose of this study is to examine associations among eating disorders and the PID-5. Data was obtained through self-report and psychological assessment from patients enrolled in a treatment center. The current sample consists of all females, ages

18 to 54 (88% Caucasian). Descriptive statistics and independent-samples t-tests were conducted to examine significant differences between diagnoses of anorexia and bulimia. For both diagnoses, the highest facet scale was Anxiousness ( $M = 2.00$ ,  $SD = .52$ ), and the highest global scale was Negative Affectivity ( $M = 1.61$ ,  $SD = .53$ ). For the most notable differences, individuals diagnosed with bulimia scored significantly higher than individuals diagnosed with anorexia on Attention Seeking  $t(7) = -1.02$ ,  $p = .003$ ,  $r = .36$ , Deceitfulness  $t(7) = -1.465$ ,  $p < .001$ ,  $r = .48$ , and the global scale Antagonism  $t(7) = -1.4$ ,  $p = .001$ ,  $r = .47$ , all which represent a medium effect size. These results support associations with bulimia and character traits of novelty-seeking, risk-taking, and subterfuge in prior research. Results are expected to aid in diagnostic clarification for eating disorders, treatment planning, case conceptualization, and predictions in patient outcome.

*Learning Objectives:*

- 】 Provide background on and review of the alternative model of personality in the DSM-5 and its assessment measure the Personality Inventory of the DSM-5.
- 】 Examine associations among Anorexia Nervosa and Bulimia Nervosa and the Personality Inventory of the DSM-5.
- 】 Discuss clinical utility of the Personality Inventory of the DSM-5 in assessment and treatment planning for Anorexia Nervosa and Bulimia Nervosa.

### T-137

#### Validation in Mexican Women of Eating Attitudes Test (EAT-26): Confirmatory Analysis and Cut-off Point

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Anorexia nervosa and bulimia nervosa are the third most common chronic diseases which affects mainly young people between 15 and 19 years old, for this reason several instruments have been developed for their assessment, the most representative is the Eating Attitudes Test (EAT-26). For this reason, the aim of the present study was to know the psychometric properties of the EAT-26 in Mexican women, to validate it through

confirmatory factor analysis and to obtain the cutoff point. The sample consisted of 1144 female participants, aged among 12 and 27 years ( $SD = 2,945$ ), from educational institutions of the metropolitan area of Mexico City and a clinical group comprised of 56 female participants, aged among 11 and 40 years ( $SD = 5.79$ ). Regarding the results, the instrument obtained a Cronbach's alpha of .91 and the construct validity yielded four factors that explained 53.07% of the total variance. To corroborate the adequacy of the factor structure, a confirmatory factor analysis was performed, yielding the following adjustment indexes:  $GFI = 0.923$ ;  $CFI = 0.924$  and  $RMSEA = 0.058$ . Finally, the cut-off point  $\geq 84$  was determined by means of sensitivity (0.71) and specificity (.81). In conclusion, we can say that the EAT-26 is an adequate and valid instrument for the detection of symptoms related to anorexia and bulimia nervosa.

*Learning Objectives:*

- ▶ To know the psychometric properties of EAT-26 in Mexican women.
- ▶ To perform the confirmatory factor analysis of EAT-26 in Mexican women.
- ▶ To value a cut-off point of the EAT-26 for Mexican women.

binges ( $p = .298$ ). Frequency of bingeing for positive reinforcement was not significantly associated with either of the aforementioned measures ( $p = .343$  and  $p = .684$ , respectively). Despite many participants endorsing both negative and positive reinforcement motivation, our results indicate that these two distinct motivators relate differentially to binge eating. Results also confirm the clinical importance of primarily addressing motivation driven by the reduction of negative emotions in the therapeutic setting in order to reduce the frequency of binge episodes. We highlight the importance of further investigating sources of motivation behind binge eating and provide suggestions for future research regarding the differential power these sources have over treatment outcomes and the perpetuation of the binge-purge cycle.

*Learning Objectives:*

- ▶ Differentiate between negative and positive reinforcers that frequently motivate binge eating.
- ▶ Understand the differential impact these separate reinforcers have on frequency of binge eating episodes.
- ▶ Explain the importance of having clinicians address with their clients the negative reinforcement and emotions that motivate binge behavior.

### T-138 Negative Reinforcement Motivation is Uniquely Associated with Frequency of Objective Binge Eating Episodes in Women with Bulimia Nervosa

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Although binge eating is a core component of bulimia nervosa (BN), the motivations underlying this behavior have been found to vary significantly amongst afflicted individuals. This study explored the relationships between frequency of motivations for binge eating (measured by the Functional Assessment of Maladaptive Behaviors, FAMB) and frequency of both objective and subjective binge episodes over the past month (measured by the Eating Disorder Examination, EDE) in a sample of women with BN ( $n = 94$ ). The FAMB has previously been used in research to assess binge motivation in women and asks participants to rate items on a likert scale to indicate the extent to which each motivator—classified as either negative reinforcement (“to relieve stress”) or positive reinforcement (“to get attention”)—applies to their loss of control episodes. Linear regression analyses indicated that frequency of bingeing for negative reinforcement was significantly associated with the number of objective binges ( $p = .004$ ) but not the number of subjective

### T-139 Cross-Sectional Associations between Types of Media Use and Level of Weight Bias Internalization in Young Adults

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The purpose of this study was to determine if types of media used (television [TV], social media [SM], and video games [VG]) are associated with weight bias internalization (WBI), or the degree to which individuals internalize societal messages of weight bias. Participants were recruited online through Amazon Mechanical Turk Service. WBI was assessed using the Modified Weight Bias Internalization Scale (WBIS – M), and was analyzed as a binary variable (high vs low score) based on the observed median value. Media use was assessed using three separate questions for each type assessing frequency of use (For example: “Thinking back over the past week, how much time did you usually spend watching TV/DVDs/videos on a typical day? Include total time spent on all devices”), and analyzed as binary variables based on high vs low use, (High: TV – 2 or more hours per day, VG – plays daily, SM – 2 or more hours per day). Adjusting for age, sex, race/ethnicity, and parental education, we ran univariate logistic regression models to examine whether media use predicted WBI. We then stratified these regressions by weight category comparing individuals of underweight and normal weight

status to individuals with overweight or obesity (OW/OB). Participants were excluded from the analyses if they had missing information for any of the above variables. The final sample (N=97) was 52.6% male and 47.4% female, had a mean age of 23.9 years, and was 75.3% Caucasian. After controlling for covariates, no significant association was found between VG and WBI. Individuals who watched at least two hours of TV per day had higher odds of having high WBI scores, OR: 3.35 (95% CI: 1.33, 8.45,  $p < 0.05$ ), but after stratification this was only significant in those with OW/OB, OR: 15.3 (95% CI: 1.43, 163.0,  $p < 0.05$ ). Those who endorsed SM use at least two hours per day were trending towards having a high WBI score, OR: 2.48 (95% CI: 0.927, 6.64,  $p = 0.07$ ). Further research is needed to determine if the content of TV, VG, or SM may help explain these associations.

*Learning Objectives:*

- ▶ Following the training, participants will be able to summarize and define weight bias internalization and how it is relevant to disordered eating.
- ▶ Following the training, participants will be able to differentiate how different types of media use are associated with weight bias internalization.
- ▶ Following the training, participants will be able to question contributors to weight bias internalization and how they may be associated with media use.

### T-140

#### Knowledge of Caloric Content of Foods Eaten and Tracking of Caloric Intake Associated with Increased Eating Disorder Risk and Disordered Eating Among College Students

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Caloric information is widely available, and emerging technologies that allow for tracking of caloric intake have become popularized among young adults. Because little is known about how having this knowledge impacts eating disorder risk, we examined the cross sectional relationships between knowledge of the caloric content of foods eaten and tracking of caloric intake and eating disorder risk using data from the Healthy Bodies Study, an online survey conducted among undergraduate and graduate students at 12 universities in the U.S. and Canada from 2013-2015 ( $n = 7,357$ ). Eating disorder risk was assessed using individual questions from the EDE-Q pertaining to disordered eating behaviors including dietary restriction, self-induced vomiting, and compulsive exercise as a means to control their weight or shape, binge eating, as well as global EDE-Q score. In binary

logistic regressions correcting for race/ethnicity, parental education, BMI, gender, and age, we found that those who knew the caloric content of the foods they ate were more likely to restrict (OR=2.071, 95% CI: 1.824, 2.352), binge eat (OR=1.711, 95% CI: 1.510, 1.939), vomit (OR=2.743, 95% CI: 2.167, 3.472), compulsively exercise (OR=2.198, 95% CI: 1.966, 2.458), and have an EDE-Q score  $\geq 3$  (6.073, 95% CI: 3.701, 9.966). Similarly, individuals who tracked their caloric intake were at even higher risk for dietary restriction (OR=2.873, 95% CI: 2.470, 3.342), binge eating (OR=2.199, 95% CI: 1.852, 2.610), vomiting (OR=3.675, 95% CI: 2.875, 4.697), compulsive exercise (OR=3.064, 95% CI: 2.661, 3.528), and having an EDE-Q score  $\geq 3$  (OR=9.142, 95% CI: 5.680, 14.715). These results indicate that knowledge and tracking of calories may put individuals at increased risk for an eating disorder. Future research is needed to understand the longitudinal relationships between tracking of caloric intake and eating disorder risk.

*Learning Objectives:*

- ▶ Summarize the prevalence of knowing the caloric content of foods eaten and tracking of caloric intake among college students.
- ▶ Describe the extent to which knowing the caloric content of foods eaten and tracking of caloric intake is associated eating disorder risk.
- ▶ Discuss how on gender, race/ethnicity, and weight status modifies this relationship.

### T-141

#### Self Perception of Risk Factors for Eating Disorders: Survey on a Large Sample of Adolescents in Sicily ( South Italy)

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The characteristics of eating behavior and body image have been far more studied in the general population of Northern Italy in comparison with Southern Italy and Islands communities. Aim of the present research was to explore, in a general population of southern adolescents, the self perception regarding the following topics: weight, body image, weight concerns, eating behavior, food selection, binge eating, food restriction. Familiar attitudes towards weight and body shape were also taken into

account. The survey was organized in 22 upper secondary schools by the Public Eating Disorder Unit of Siracusa (Sicily) in March 2017. 600 students, 15-17 years old, were recruited: the sample represented the 10% of all students attending the involved schools. A questionnaire with open answers was administered. Preliminary data indicate that most students considered themselves to be normal weight, but a not negligible percentage of students, particularly females, thought to be underweight; only a small number reported to be overweight or obese. Body dissatisfaction resulted more present in females. Most students did not report emotional eating or eating behavior disorders. Finally most students of both genders did not perceive any concern of the family about their weight or body shape. Our study is the first large survey carried out in a student adolescent population of Sicily. The preliminary data require more detailed investigations to better understand the real attitudes of this adolescent population towards Body Image and Eating Behaviour in this area as well as the possible influence of specific characteristics due to the territory.

*Learning Objectives:*

- ▶ The aim is to study the self perception regarding body image and eating behaviour in a sample of adolescents of Sicily (southern Italy).
- ▶ The study highlights the need to study the risk factors for eating disorders in young population.
- ▶ The study aim to better understand the real attitudes of this adolescent population towards Body Image and Eating Behaviour in the young populations in south Italy as well as the possible influence of specific characteristics due to the territory.

## T-142

### Exploring the Relationship between Reward Sensitivity and Disordered Eating Symptoms

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Data indicate that sensitivity to reward is associated with eating disorders. Specifically, patients with binge eating disorder and bulimia nervosa tend to show higher reward sensitivity than controls. Alterations in reward sensitivity have also been found in patients with anorexia nervosa, but the direction of effects varies based on presence or absence of binge-purge behaviors, measurement methods, and state of illness. Although examining links between reward sensitivity and full-threshold eating disorders is important, etiologic processes like reward sensitivity may be more closely linked to specific core symptoms than to broad eating disorder diagnoses.

Thus, the current study examined the relationship between reward sensitivity and several key disordered eating symptoms that are present across eating disorder diagnoses. Participants were 202 female college students. Body dissatisfaction, binge eating, cognitive restraint, dietary restriction, and excessive exercise were assessed with the Eating Pathology Symptoms Inventory. Reward sensitivity was measured via the Sensitivity to Punishment Sensitivity to Reward questionnaire. Reward sensitivity was positively associated with body dissatisfaction, binge eating and excessive exercise, but was not significantly associated with cognitive restraint or restriction. Notably, the link between higher reward sensitivity and binge eating remained even after controlling for other disordered eating symptoms (i.e., body dissatisfaction and excessive exercise), whereas the predictive effects of reward sensitivity on body dissatisfaction and excessive exercise were diminished after controlling for binge eating. Findings remained unchanged when BMI was included as an additional covariate. These data highlight specificity effects between reward sensitivity and binge eating and suggest that the associations between reward sensitivity and other disordered eating symptoms are likely driven by their co-occurrence with binge eating.

*Learning Objectives:*

- ▶ Understand prior findings regarding associations between reward sensitivity and full-threshold eating disorders.
- ▶ Recognize the etiologic relevance of examining disordered eating symptoms rather than exclusively focusing on full-threshold disorders.
- ▶ Explain the relationship between reward sensitivity and specific disordered eating symptoms.

## T-143

### Sociocultural Pressures to Meet Appearance Ideals: Differences across Genders

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According to the tripartite influence model (Thompson, Heinberg, Altabe, & Tantleff-Dunn, 1999), individuals are pressured by social agents, such as media, peers, and family, to conform to relevant appearance ideals of that society. Although there is research indicating that the appearance ideals may differ across genders (i.e., thinness for women and muscularity for men; Schaefer et al., 2015), research comparing sources of appearance pressure across genders remains limited. In the present study, 236 males and 507 females (Mage = 19.57, SD

= 3.48; MBMI = 23.72, SD = 4.40) were recruiting from a large university in Hawai'i. Participants completed the Sociocultural Attitudes Towards Appearance Questionnaire (SATAQ-4; Schaefer et al., 2015). Three independent sample t-tests were conducted to compare means across genders for the three categories of appearance pressures: media, family, and peers. On average, females (M = 10.18, SE = 0.20) reported significantly higher rates of pressure from family than did males (M = 8.80, SE = 0.27),  $t(500.15) = -4.04, p < .001, r = .18$ . Females (M = 14.17, SE = 0.22) also reported significantly higher rates of pressure from the media than males (M = 10.29, SE = 0.32),  $t(741) = -10.07, p < .001, r = .35$ . However, females (M = 8.21, SE = 0.17) and males (M = 8.18, SE = 0.26) reported similar rates of pressure from peers,  $t(741) = -.09, p = .93, r = .003$ . Results suggest that while women feel significantly more pressure from their families and the media to conform to appearance ideals, the amount of pressure felt from peers is similar for both men and women. Currently, most peer-related interventions seem to be targeted towards young women explicitly. However, results of the present study suggest men feel a similar level of appearance-related pressure from their peers and therefore may warrant either the adaptation of existing interventions or the development of a separate peer-related intervention designed to alleviate this peer pressure.

*Learning Objectives:*

- ▶ Describe the role pressure plays on appearance ideals.
- ▶ Describe the differences in appearance pressure across genders.
- ▶ Describe the treatment implications of appearance pressures across genders.

### T-144

#### The Lived Experience of Trans Individuals with Eating Disorders: A Qualitative Study of Disordered Eating and Transgender Identity

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Transgender (or trans) individuals with eating disorders face severe and potentially fatal health risks, yet there is little known research on the needs of this vulnerable population. The goal of this research study is to identify how trans individuals experience eating disorders; how they understand and define their own experience of the intersection of transgender identity and disordered eating; and what their recommendations are for future research and trans-inclusive clinical guidelines for eating disorder management. The presentation will review the key themes derived from 60-minute one-on-one semi-structured interviews with up to 10 transgender individuals with eating disorders over age 18. The presentation will

also put forward the suggestions of study participants for improvements in clinical management of eating disorders for the transgender population. Research to date suggests that transgender people may suffer disproportionately from disordered eating, and has shown the attempted suicide rate among trans individuals to be five-to-ten times higher than the general population. When transgender identity and eating disorders co-occur, the individuals experiencing this intersection face a high risk of suicide, self-harm, and mortality. No known research has been published on management of eating disorders in the transgender population. The creation and implementation of vitally important gender-affirming guidelines for transgender eating disorder management must begin with understanding the lived experience of transgender individuals with eating disorders.

*Learning Objectives:*

- ▶ Recognize the unique experience of transgender individuals with eating disorders.
- ▶ Distinguish transgender individuals' experience eating disorders from cisgender individuals' experience with ED.
- ▶ Consider how to modify current practice to be more trans-inclusive and gender-affirming.

### T-145

#### Associations between Eating Expectancies and Eating Disorder Symptoms in Men and Women

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Eating expectancies, or learned expectations that an individual has about eating, prospectively predict eating disorder (ED) symptoms. However, most studies examining eating expectancies have been in relation to bulimic symptoms and only included women. It is unclear whether associations between eating expectancies and ED symptoms vary in men and women and extend to other ED symptoms. The current study (N = 197 and 249 undergraduate men and women, respectively) investigated gender variance in a model of eating expectancies and ED symptoms, including factors known to be covariates (i.e., negative urgency, negative affect, alcohol use, drug use, and body mass index [BMI]). Gender variance was tested using path analysis in a model including eating expectancies and covariates, with excessive exercise, negative attitudes toward obesity, restricting, cognitive

restraint, binge eating, purging, muscle building, and body dissatisfaction as dependent variables. Model fit was excellent (CFI = .99, TLI = .97, RMSEA = .03, SRMR = .03). Constrained (i.e., constraining paths across men and women) and unconstrained (i.e., unconstrained paths across men and women) models were tested. The unconstrained and constrained models differed significantly ( $\chi^2[54] = 115.33, p < .001$ ), indicating that the models varied by gender. For both sexes, eating expectancies were salient predictors of ED symptoms. For men, eating manages negative affect ( $bs^*^3 .18, ps < .044$ ) emerged as an important eating expectancy that spanned across ED symptoms. In contrast, for women, the eating expectancy that eating leads to feeling out of control ( $bs^*^3 .15, ps < .036$ ) was associated with the most ED symptoms. Previous findings regarding eating expectancies and ED symptoms in women are not generalizable to men. Intervening on eating expectancies in a sex-specific way may help target specific eating disorder symptoms.

*Learning Objectives:*

- ▶ Identify how different eating disorder symptoms are associated with eating expectancies.
- ▶ Explain how associations between eating expectancies and eating disorder symptoms differ by gender.
- ▶ Describe how intervening on eating expectancies in a sex-specific way may help target specific eating disorder symptoms.

## T-146

### Appearance Concerns and Eating Pathology in Racially Diverse College Women: Looking Beyond the Thin Ideal

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Prior research suggests there are racial and ethnic differences in body dissatisfaction and disordered eating. Specifically, White and Asian women have demonstrated heightened thin-ideal internalization, shape and weight concerns, and eating pathology. Consequently, some studies conclude that Black women may be protected from cultural pressure to attain a thin ideal, and thus are more satisfied with their bodies. However, newer statistics suggest that the prevalence of disordered eating is similar across racial/ethnic groups. The purpose of this study was to examine racial differences in appearance related-concerns and disordered eating behaviors in a diverse sample of college women. A total of 428 women (58% White, 25% Black, and 17% Asian) completed surveys assessing eating behaviors and attitudes. Two one-way ANOVAs examined group differences on appearance-

related concerns (i.e., thin-ideal internalization, media pressure, and shape/weight concerns) and eating pathology (i.e., dietary restraint, loss-of-control eating, and purging behaviors). There were significant group differences in thin-ideal internalization ( $p < .001$ ) and media pressure ( $p = .04$ ). Post-hoc analyses (Bonferonni) demonstrated Black women reported significantly lower thin-ideal internalization than both White and Asian women and significantly less media pressure than White women. However, no significant group differences emerged in shape or weight concerns or eating pathology. These results demonstrate the need to further explore variables that influence body dissatisfaction and eating pathology in Black women. Though Black women reported less internalization of thin beauty ideals and less media pressure, they still experienced comparable rates of image concerns and disordered eating. Emerging research suggests that multiple appearance ideals exist and often differ across racial/ethnic groups. Thus, focusing primarily on the thin ideal in diverse samples could lead to spurious results.

*Learning Objectives:*

- ▶ Summarize the literature on eating and weight-related concerns across racial groups.
- ▶ Discuss potential reasons for observed similarities and differences in eating and weight-related concerns across groups.
- ▶ Appraise the need for considering diverse beauty ideals and their contribution to eating and weight-related concerns.

## T-147 - Poster Withdrawn

## T-148

### Gender Differences in Appearance Related Pressures and Perfectionism

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Perfectionism is associated with eating pathology and body image concerns in women. However, less is known about the role of perfectionism in men. Men are experiencing higher rates of body dissatisfaction likely due to both increased appearance pressure and more awareness. Thus, it is important to examine correlates of negative body image and disordered eating in this group. The purpose of this study was to examine whether peer/family appearance pressures and aspects of perfectionism (doubts about actions and concern over mistakes) explained unique variance in men's and women's eating pathology. Undergraduate students ( $N = 700, M = 19.27$  years) completed measures assessing

appearance-related pressures (SATAQ-4), perfectionism (Frost-MPS), and eating attitudes and behaviors (EDE-Q). Women ( $n = 521$ ) reported greater family pressure ( $p = .001$ ) and disordered eating symptomatology ( $p < .001$ ) than men ( $n = 179$ ) but no other significant differences emerged. All pressure and perfectionism variables were significantly positively correlated with global EDE-Q score in both men and women. Separate multiple regressions were conducted for men and women to assess the shared and unique contributions of appearance-related pressures and perfectionism to eating pathology. The overall model was significant for both men and women ( $p < .001$ ). Though dimensions of perfectionism were significantly positively correlated with eating pathology in men, only peer pressure explained significant variance in the model ( $p = .002$ ). Conversely for women, all variables except doubts about actions contributed significantly to EDE-Q scores. Though preliminary, these results suggest that peer pressure might be a particularly salient source of appearance-related pressures for men and could be an important target for prevention and intervention efforts in this group.

*Learning Objectives:*

- ▶ Understand gender differences in perfectionism and disordered eating.
- ▶ Explore contributions of appearance pressures and perfectionism to eating pathology in men and women.
- ▶ Discuss variables that might be particularly relevant to disordered eating in men.

### T-149

#### Sex Differences in the Neuro/Biology of Eating Disorders: State of the Literature and Directions for Future Research

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While eating disorders have historically been categorized as female disorders, there has been an increased focus on the etiology, prevalence, presentation, and biology of eating disorders in males. Advancements in biomedical sciences, including genetics, neurology, endocrinology, and neuropsychology, have led to increased focused on biological factors involved the development and maintenance of eating disorders. Sex differences in these areas have not been fully explored; yet current evidence indicates that sex differences may exist. A deeper understanding of sex differences in eating disorders has

the potential to shed light on mechanisms that increase risk of developing an eating disorder or having a longer course of illness. The purpose of this review is to identify areas where sex differences have been or may need to be explored. We will highlight current research and identify gaps in the literature where additional research is needed. While we will briefly touch upon sex differences in the clinical presentation and psychosocial factors affecting males and females with eating disorders, our primary focus will be on work conducted in the fields of genetics, gonadal hormones, reward circuitry, and neuropsychological factors. Our discussion will be grounded in research on the neurodevelopment of healthy adolescents, highlighting areas in which there are known neurobiological differences between sexes and the implication for understanding the development of eating disorders. Current drawbacks of existing data, including small sample sizes, equivocal findings, a lack of eating disorder assessments validated with males, and few studies including pediatric/adolescent populations will be reviewed. A discussion of future directions for understanding the role of sex in eating disorder research will be included.

*Learning Objectives:*

- ▶ Describe the current state of the literature on sex differences in eating disorders.
- ▶ Discuss three key areas where future research is needed.
- ▶ Review potential difficulties in including sex as a variable in eating disorder research.

### T-150

#### Internalization of Sociocultural Standards of Attractiveness and the Drive for Muscularity in Sexual Minority Males: Examining the Role of Internalized Homonegativity

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Prior research supports the link between the internalization of sociocultural standards of attractiveness and maladaptive outcomes including body dissatisfaction and eating disturbances. In addition, it has been noted that certain groups—specifically sexual minority men—are disproportionately affected. While increased internalization of sociocultural standards of attractiveness (i.e., “gay culture”) has been identified as a potential a risk factor for this group, this relationship is not conclusive and further investigation is merited. The current study explored the role of internalized homonegativity (HOM) in the link between internalization of sociocultural standards of

attractiveness (INT) and the drive for muscularity (DMS). To evaluate the current study's aims, sexual minority males (N=208) were recruited through Amazon Mechanical Turk and asked to complete self-report measurements of these variables. Multiple regression analyses conducted using Hayes' PROCESS macro yielded a model accounting for 12% of the variance in DMS,  $F(4, 203) = 6.78, p < .01$ . There was a significant main effect for INT,  $B = -.24, se = .07, p < 0.01$ , as well as HOM,  $B = -.17, se = .07, p < 0.01$ . The interaction between INT and HOM,  $B = .15, se = .07, p < .05$ , was significant, such that INT demonstrated a positive association with DMS only among individuals with levels of HOM at or above the mean. Moreover, the interaction between INT and HOM yielded a significant model change,  $R^2 = .02, F(1, 203) = 21.79, p < 0.05$ . These results highlight the role of internalized homonegativity in sexual minority health issues and, in particular, body image disturbances. Future research should evaluate these relations prospectively and examine additional variables specific to sexual minority health that may better explain the associations noted in the present study.

*Learning Objectives:*

- ▶ Review existing literature concerning associations between internalization of sociocultural standards of attractiveness and body image and eating pathology.
- ▶ Evaluate the role of internalized homonegativity in relations between internalization of sociocultural standards of attractiveness and the drive for muscularity.
- ▶ Highlight the results that test these relations in a sample of adult sexual minority males.

## T-151 The Many Faces of ARFID

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Avoidant/restrictive food intake disorder, or ARFID, was first introduced in the Diagnostic and Statistical Manual of Mental Disorders, 5th edition (DSM-5) in 2013. Since that time, evidence and clinical experience suggest that there is no "typical" pediatric case of ARFID and that this relatively new classification includes a heterogeneous group of children and adolescents with distinct clinical phenotypes. The literature proposes that children and adolescent can be phenotypically characterized in terms of apparent lack of interest in eating or food; very limited food intake connected to sensory or other characteristics of food; or avoidance of food intake based on concern

about aversive consequences of eating, such as choking or vomiting. The overall goal of this workshop is to review new national and international evidence focusing on the classification of children and adolescents with ARFID who present with varying clinical histories and physical findings. A multidisciplinary team of pediatric clinician investigators will facilitate an interactive case-based discussion focusing on the following questions: Do ARFID subtypes help clinicians better understand and identify such varied clinical presentations? Do these presentations have diverse developmental trajectories? Is the motivation for food avoidance relevant in distinguishing subtypes? Does this subtype classification inform treatment? Do different subtypes require different treatments? Do these subtypes uphold across the lifespan and overtime? To help answer these questions, we will use results from a recently completed latent class analysis of 300 children and adolescents diagnosed with ARFID and a separate cohort study of 77 adolescents with ARFID. In addition, pilot data from an acceptance-based interoceptive-exposure based treatment for 5-9 year old children that aims to teach children with ARFID to be curious investigators of body sensations (i.e., Feeling and Body Investigators – FBI agents) will be used to examine outcomes in children with varying presentations. Ample time will be provided for questions and discussion and participants will be encouraged to share their own clinical experiences and/ or research findings.

*Learning Objectives:*

- ▶ Summarize the current literature on ARFID that provides a framework for phenotypic variability observed in this population.
- ▶ Describe specific clinical characteristics and features of ARFID that help promote a better understanding of proposed sub types.
- ▶ Discuss how outcomes for treatments tested and currently under study may be influenced by case-specific characteristics present in children and youth with ARFID.

# EDUCATIONAL SESSION III

In this session, attendees have **14 different options** to choose from: **7 Workshops, 5 Paper Sessions, and 2 SIG Panels**

**FRIDAY, APRIL 20**

11:15 AM - 12:45 PM

## EDUCATIONAL SESSION III

### Workshop Session 3

#### W3.1

**Targeting Emotion in Eating Disorders Treatment: The Use of Behaviorally-Based Psychotherapy Techniques to Facilitate Emotion Regulation**

*Simultaneously translated to Spanish*

**Carol Peterson, PhD FAED**<sup>1</sup>  
**Stephen Wonderlich, PhD, FAED**<sup>2</sup>  
**Lucene Wisniewski, PhD, FAED**<sup>3</sup>  
**Emily Pisetsky, PhD**<sup>1</sup>

<sup>1</sup> Department of Psychiatry, University of Minnesota, Minneapolis, MN, USA

<sup>2</sup> Univ. of North Dakota School of Medicine and Neuropsychiatric Research Institute, Fargo, ND, USA

<sup>3</sup> Lucene Wisniewski, PhD LLC, Cleveland Heights, Ohio, USA

Emotions play a critical role in the development and maintenance of eating disorder behaviors. However, emotion-focused interventions vary widely across treatments. This workshop will focus on targeting emotion in eating disorders using behaviorally-based treatments that emphasize emotion regulation. Specifically, this workshop will provide an empirical approach to understanding the importance of identifying “momentary” emotions that precipitate eating disorder behaviors along with empirically supported behavioral approaches that can be used to improve emotion regulation. Dr. Wonderlich will initially provide a conceptual overview with empirical support for the role of emotions in eating disorders (10 minutes). Dr. Wisniewski will then discuss how Dialectical Behavior Therapy (DBT) techniques can be used to address emotions in the context of eating disorder treatment, including rationale and case descriptions (15 minutes). Dr. Peterson will then present Integrative Cognitive-Affective Therapy (ICAT) and describe how this treatment focuses on the functions of emotions in the treatment of eating disorders, including the theoretical model informing ICAT and clinical examples (15 minutes). The final portion of the workshop (50 minutes) will be led by Dr. Pisetsky (along with Drs. Wonderlich, Wisniewski, and Peterson serving as panelists), who will present several case examples and facilitate an interactive discussion with workshop attendees to illustrate the specific application of these techniques to address emotions and facilitate emotion regulation in the context of

eating disorders treatment.

*Learning Objectives:*

- ▶ Describe the role of emotions as precipitants of eating disorder behaviors.
- ▶ Apply evidence-based behavioral approaches to target emotions in eating disorders treatment.
- ▶ Assess the functional role of eating disorder behaviors in the context of emotion regulation.

#### W3.2

**Project ECHO® Eating Disorders: Connecting Primary Care, College Health, and Behavioral Health Providers to Eliminate Eating Disorders**

**Mary Tantillo, PhD PMHCNS-BC FAED**<sup>1</sup>  
**Richard Kreipe, MD, FAAP, FSAHM, FAED**<sup>2</sup>  
**Taylor Starr, DO, MPH, FAAP**<sup>2</sup>

<sup>1</sup> University of Rochester School of Nursing, Rochester, New York, USA

<sup>2</sup> University of Rochester Medical Center, Rochester, New York, USA

This workshop will immerse participants in the Project ECHO® Eating Disorders Clinic (PE-EDC), an innovative telementoring model designed to enable local health care professionals to provide best-practice care for patients with eating disorders in their community. PE-EDC, hosted by the Western New York Comprehensive Care Center for Eating Disorders (WNYCCCED) at the University of Rochester Medical Center, is the first—and currently only—such Extension for Community Healthcare Outcomes Project. This model can reduce health care disparities, variations in health care delivery, and acute care costs due to earlier recognition of illness and quicker referral and intervention. PE-EDC leverages its “hub and spoke knowledge-sharing networks” to formally connect an expert Eating Disorder team of specialists at an academic central “hub” with front-line primary care, college health, and behavioral health care providers in local community “spokes”. During the workshop, attendees will participate as a learning community in an abbreviated, 30 minute mock ECHO session (usually streamed via Zoom™ videoconferencing). Workshop presenters will assume the roles of members of the expert team engaging in a review of a de-identified case, providing mentoring, and promoting inter-professional learning regarding effective team functioning. Before and after the mock PE-EDC, 30-minutes of didactic instruction will demonstrate how each session “moves knowledge, not people” as often occurs with highly centralized services in large urban centers. By permitting patients and families to be treated in their communities, this model reduces the need for extensive travel and anxiety-provoking transitions, while facilitating evidence-based

comprehensive, continuous, and integrated medical and behavioral care. The workshop will conclude with discussion of steps required to replicate PE-EDC, preliminary results from PE-EDC's program evaluation, and a question and answer period (30 minutes).

*Learning Objectives:*

- ▶ Identify two ways Project ECHO Eating Disorders Clinic promotes integrated, continuous, and comprehensive medical and behavioral health care.
- ▶ Describe the components of a typical Project ECHO Eating Disorders Clinic and steps required to replicate Project ECHO Eating Disorders Clinic in your community.
- ▶ Discuss how Project ECHO Eating Disorders Clinic promotes interprofessional learning about effective Eating Disorder treatment team functioning.

### W3.3

#### Recovering Together: Approaching Eating Disorder Recovery from Multiple Perspectives

**Beth McGilley, PhD, FAED, CEDS<sup>1</sup>**  
**Andrea Lamarre, PhD (ABD), MSc., BAHons<sup>2</sup>**  
**Judy Krasna, BA<sup>3</sup>**

<sup>1</sup>University of Kansas School of Medicine, Wichita, KS, USA

<sup>2</sup>University of Guelph, Guelph, Canada

<sup>3</sup>Stern College/Yeshiva University, Bet Shemesh, Israel

For years, clinicians, researchers, people with lived experience and caregivers have shared in the frustration of lacking a consensus definition for eating disorder recovery. Accordingly, we lack a mutual understanding of what eating disorder recovery entails, how to best measure it for clinical and research purposes, and how to describe it to people with eating disorders and their supporters (McGilley, 2010). Existing studies reveal differences in understandings of recovery amongst clinicians and people with eating disorders (e.g., Noordenbos, 2011). Further, clinicians and researchers differ in their perspectives on what constitutes recovery, whether full recovery is possible, and what outcome criteria should be employed. There is a persistent orientation to recovery as “more than” symptom remission (e.g. Bardone-Cone et al., 2010), but what the “more than” constitutes remains unclear. People in recovery may thus be unsure what it means, and orient to the concept differently based on what they have seen and heard about recovery (Holmes, 2016). The absence of definitional clarity leads some to feel recovery is unattainable (LaMarre & Rice, 2015; LaMarre & Rice, 2017; Malson et al., 2011). Finally, little work has been conducted on supporters' characterization of recovery, representing a major gap in our understanding of this concept. In this workshop, we explore what recovery means from the perspective of clinicians, researchers, people with lived experience, and supporters. Attendees will actively share in a process of establishing priorities for better recovery research. This interactive format will allow for a rich, nuanced discussion of what constitutes recovery, how all relevant stakeholders can contribute to

an empirically derived consensus definition, and the steps needed to then test, translate and disseminate these findings in the clinical and lay literature.

*Learning Objectives:*

- ▶ Identify the impact of the lack of a consensus definition on ED recovery on clinicians, researchers, people with ED's and their caregivers.
- ▶ Identify characteristics of what constitutes recovery based on the available literature.
- ▶ Assess ways of talking about recovery in a respectful way that leaves the concept open to multiple audiences.

### W3.4

#### Clinical Practice and Research Opportunities. How is it to be an Eating Disorders Professional in Your Country?

**Ashish Kumar, MD, Child Psychiatrist<sup>1</sup>**  
**Melanie Jacob, RDN<sup>2</sup>**  
**Gry Kjaersdam, Telleus, PhD<sup>3</sup>**  
**Bernou Melisse - Vernailen, MSc Psychologist<sup>4</sup>**

<sup>1</sup>Wigan Bolton and Mid Mersey Eating Disorder Services, North West Boroughs, UK

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<sup>4</sup>Leiden University Medical Center, Netherlands & Noura bint Abdulrahman University, Saudi Arabia

The working realities of eating disorders professionals are very diverse around the world. In spite of the process of globalization that prevails in scientific activities today, the lack of knowledge of the local realities of each country by colleagues from other regions of the world contributes to diminishing the possibilities of integration and collaboration among specialists. In order to continue the task of achieving reciprocal integration and knowledge between Eating Disorders professionals and in harmony with the spirit of ICED 2018, in the present workshop the Partnership, Chapter and Affiliate Committee will invite colleagues from different parts of the world to comment on their work situations both in the areas of clinical care and research/ education. Each speaker will answer a series of guiding questions about his local reality and summarize the pros and cons of the reality of his country. Following each presentation there will be audience discussion including identification of similarities and differences in reality in different parts of the world. The final part of the workshop will be devoted to a discussion with the audience on how to use the positive aspects of each local reality to increase international collaboration among colleagues.

*Learning Objectives:*

- ▶ Let each presenter describe the local reality on different aspects of the practice of a specialist in eating disorders. Special emphasis will be placed on clinical activities, learning opportunities, teaching and access to research, and the social role of the Eating disorders professional in the community.
- ▶ Find similarities and differences on the subject in the

different regions of the world and exchange views between the panelists and the audience.

- ▶ To promote the exchange of skills and the compensation of the deficiencies of each local reality. Contribute to the creation of international alliances both in the clinical and research fields between the different countries.

### W3.5

#### Parent-Based Prevention for Parents with Eating Disorders

**Shiri Sadeh-Sharvit, PhD<sup>1,3</sup>**  
**Cristin Runfola, PhD<sup>1</sup>**  
**Lilya Osipov, PhD<sup>1</sup>**  
**James Lock, MD, PhD<sup>1</sup>**

<sup>1</sup>Stanford University, Stanford, CA, USA

<sup>2</sup>Center for Mental Health, Palo Alto University, Palo Alto, CA

<sup>3</sup>Baruch Ivcher School of Psychology, The Interdisciplinary Center, Herzliya, Israel

Parents with eating disorders share a common set of concerns and challenges in their parenting. While many families nowadays feel bombarded with conflicting messages about their children's eating and weight, a personal history of or a present eating disorder in a parent may impede parents' comfort, confidence, knowledge, and available skills in supporting the development of healthful eating habits in their children. Health care professionals working with parents and their partners are often unsure how best to talk with them about the cognitions and behaviors related to parental eating, weight and shape concerns. Providers may also find it challenging to address effectively possible associations between the parental eating disorder, parenting practices, and the family's transactions around body image, food, and wellness. To increase provider competence in navigating these challenges, information presented in this workshop will help participants learn about the Parent-Based Prevention, a manualized, 12-session program designed to help parents with eating disorders and their partners to reduce risk of eating disorders in offspring. The workshop will a) describe theoretical considerations and empirical findings underlying this intervention and b) outline strategies and best practices that have led to better outcomes for these families. The workshop will begin by outlining the mechanisms impacting parents and how they are addressed in the intervention (30 minutes). Two case-studies will be used to illustrate and guide interactive discussion using active-learner techniques (e.g., role plays). The case-studies will aim to help providers practice evaluating whether, when, and to what extent parental eating disorder history affects parents' interactions with their children, and develop strategies to support parents in addressing identified challenges (45 minutes). In the last 15 minutes, workshop participants will have the opportunity to present cases for consultation.

*Learning Objectives:*

- ▶ Discuss parental cognitions, behaviors, and interactions related to eating and weight that may affect offspring

healthy eating, body image, and weight management behavior.

- ▶ Conduct a thorough evaluation on the role of parental eating, weight practices, and family dynamics on offspring health and wellness in their clinical practice.
- ▶ Intervene effectively on maladaptive familial patterns, cognitions, and behaviors to help reduce risk of eating disorders in offspring.

### W3.6

#### When Family Therapy May Not Cut It Alone — Assessment, Formulation and Treatment Options for Young People with Comorbid Eating Disorders and Self-harm

**Keren Smith, DCLinPsy**  
**Mima Simic, MRCPsych**  
**Katrina Hunt, DCLinPsy**  
**Rhian Parham, DCLinPsy**  
**Lindsay Smith, DCLinPsy**  
**Elizabeth Godard, DCLinPsy**  
**Julian Baudinet, DCLinPsy**

South London and Maudsley NHS Foundation Trust, London, UK

Eating disorder focused family therapy (FT-ED) has been shown to be efficacious with most adolescents with eating disorders (NICE 2017). However a substantial number of young people do not achieve full recovery following FT-ED (Lock, 2015). Self-harm is a common comorbid clinical presentation of young people with an eating disorder (Koutek, Kocourkova & Dudova, 2016). Within clinical settings, this can be a significant factor moderating the efficacy of FT-ED and additional treatment options are needed for young people who present with comorbid eating disorders and self-harm. This clinical skills workshop will focus on relevant factors to consider in the assessment, formulation and treatment of young people presenting with both eating disorder and self-harm symptomatology. There will be an emphasis on the way eating disorder symptoms and self-harm interact and how together they can function to prevent young people and families from progressing towards recovery. The evidence base to date regarding this comorbid presentation will be reviewed (10 minutes) followed by an experiential group task relating to assessment and formulation of young people based on clinical presentations seen at the Maudsley Hospital (30 minutes). A brief presentation will explore the assessment of under-controlled or over-controlled emotion regulation and its role in case formulation to determine the treatment pathway that may include either Dialectical Behaviour Therapy (DBT) or Radically Open DBT (RO-DBT) as a treatment option (30 minutes). Participants will also be invited to discuss their own case examples and clinical dilemmas regarding assessment, formulation and treatment of young people with comorbid eating disorders and self-harm. (20 minutes)

*Learning Objectives:*

- ▶ To consider relevant factors in the assessment of young people presenting with comorbid eating disorders and self-harm.
- ▶ To explore the role of under-controlled or over-controlled emotion regulation in developing functional formulations which inform potential treatment pathways.
- ▶ To problem-solve clinical dilemmas relating to young people presenting with comorbid eating disorders and self-harm.

**W3.7****Adults Only: Parent-Focused Treatment for Restrictive Eating Disorders in Youth****Katharine L. Loeb, PhD, FAED**<sup>1</sup>**Daniel Le Grange, PhD, FAED**<sup>2</sup>**Martin Pradel, MClInFT**<sup>3</sup>**Elizabeth Hughes, PhD**<sup>3,4</sup><sup>1</sup>Fairleigh Dickinson University, Teaneck, NJ, USA<sup>2</sup>University of California, San Francisco, CA, USA<sup>3</sup>Royal Children's Hospital, Melbourne, Australia<sup>4</sup>University of Melbourne, MCRI, Melbourne, Australia

Traditionally, Family-Based Treatment (FBT) is delivered as a conjoint model whereby the whole family is seen together in session. This allows the therapist to directly observe and intervene in family interactions, although it also raises challenges. The content of sessions may not be appropriate for all family members, aspects of illness behaviors may interfere with the therapeutic process, and there is prior evidence that families with high expressed emotion may fare better in a separated form of FBT.

Recently, the Royal Children's Hospital in Melbourne conducted a randomized controlled trial (RCT) comparing FBT with a variant model, Parent Focused Treatment (PFT). In PFT, the therapist meets with only the parents, while a nurse attends to monitoring the adolescent's weight, mental and medical status, and provides brief (~10-min) supportive counseling. Results of this RCT showed that remission rates were higher in the PFT group (43.1% v 21.8%) at the end of treatment. This workshop, presented by an international panel of PFT researchers and practitioners, will (a) elucidate the background of and rationale for a separated format of family treatment leading to the design of PFT (5 minutes); (b) highlight the key differences between FBT and PFT and discuss whether moderator data guide the selection of one format or the other for particular families (5 minutes); (c) interpret the results of the RCT against the backdrop of prior FBT-related research (5 minutes); (d) illustrate PFT in practice through case examples and group-based role-plays with workshop participants (45 minutes); and (e) review challenges (clinical and service-based) in real-world implementation of the PFT model. These themes will be generated interactively from the audience based on the role-play experience, and modeled by unscripted

dialogue between a PFT clinician and supervisor reflecting on invited case material from participants (20 minutes). The workshop will conclude with a question-and-answer segment (10 minutes).

*Learning Objectives:*

- ▶ Summarize the fundamental distinctions between FBT and PFT.
- ▶ Demonstrate a working knowledge of the practice of PFT as a variant of FBT.
- ▶ Identify challenges in the implementation of PFT.

**FRIDAY, APRIL 20****11:15 AM - 12:45 PM****EDUCATIONAL SESSION III****Paper Session 3****P3.1****GENDER, ETHNICITY, AND CULTURE***Co-Chairs***Jerel Calzo, PhD, MPH and Stuart B. Murray, PhD****P3.1.1****A Comparison of Eating Disorder Examination Questionnaire (EDE-Q) Scores in Transgender Youth and Adolescents with Anorexia Nervosa****Abigail Matthews, PhD****Claire Peterson, PhD**

Cincinnati Children's Hospital Medical Center, Cincinnati, OH, USA

Transgender (TG) adolescents are a high-risk population with alarming rates of suicide and attempts; significant emotional distress; and poor social support. Further, preliminary findings from qualitative data and case reports suggest body image concerns and eating disorder (ED) symptoms in this demographic. A recent systematic review suggested that body dissatisfaction is central to the distress that TG youth experience and that this dissatisfaction increases risk for developing disordered eating. Given the lack of research in this area, this study sought to examine ED symptoms of TG youth ( $n = 267$ ;  $M$  age = 16.94,  $SD = 2.55$ ) compared to patients diagnosed with a restrictive ED ( $n = 112$ ;  $M$  age = 16.06,  $SD = 2.12$ ). Participants in the ED sample were patients with anorexia nervosa ( $n = 91$ , 81.3%) and atypical anorexia nervosa ( $n = 21$ , 91.1%) treated within the ED Clinic at a large urban hospital. Participants in the TG group were Female-to-Male (FTM;  $n = 194$ , 72.7%) and Male-to-Female (MTF;

n = 73, 27.3%) patients seen in the TG Clinic for medical transition at the same hospital. All participants completed the Eating Disorder Examination Questionnaire (EDE-Q) at initial presentation. There were no significant differences in EDE-Q Global or subscale scores between MTF and FTM participants. Participants in the ED group scored higher on the EDE-Q Global ( $t = 12.19, p < .001$ ), Restraint ( $t = 13.21, p < .001$ ), Eating Concerns ( $t = 12.19, p < .001$ ), Shape Concerns ( $t = 8.05, p < .001$ ), and Weight Concerns ( $t = 9.28, p < .001$ ). There were no significant differences between TG and ED participant responses on several specific items of the EDE-Q suggesting that TG patients experience as much difficulty with weight dissatisfaction, and preoccupation with weight and shape, as patients with a restrictive ED. The results of this study have implications for assessment and interventions targeting body dissatisfaction and disordered eating in this high-risk population.

*Learning Objectives:*

- ▶ Identify areas of risk for transgender youth, including body dissatisfaction and disordered eating.
- ▶ Describe weight and shape concerns prevalent among transgender adolescents.
- ▶ Identify differences and similarities in EDE-Q scores between transgender youth and adolescents with anorexia.

### P3.1.2

#### Family Connection as a Moderator of the Relationship between Discriminatory Stress and Binge Eating Episodes and Body Shame among Latinas with a History of an Eating Disorder

**M. K. Higgins Neyland, PhD**  
**Anna Bardone-Cone, PhD, FAED**

University of North Carolina at Chapel Hill, Chapel Hill, NC, USA

Latinas place a strong emphasis on family relationships and embrace familism, a core value that encompasses upholding the honor of one's name, interdependence, support, and submissiveness in regard to family. Due to the large impact of family relationships in the lives of Latinas, we wanted to investigate whether family connection could serve as a buffer of the discriminatory stress/disordered eating relationship. To test this hypothesis, we recruited a female sample of 78 Latinas who reported a history of eating disorders. We gathered data on participants' perceptions of family connection, lifetime discriminatory stress, number of binge eating episodes in the past month, and body shame. Correlations revealed that there was a significant negative correlation between family connection and body shame such that more family connection was related to less body shame. There were significant positive correlations between discriminatory stress and number of binge eating episodes in the past month, as well as body shame. Regression analyses revealed that family connection and

discriminatory stress interacted to identify the highest levels of binge eating and body shame, although not in the expected direction: the combination of high family connection and high discriminatory stress was associated with the highest levels of binge eating episodes and body shame. Potential reasons for this finding (e.g., high expressed emotion), cultural implications, and suggestions for interventions related to family connection and discriminatory stress will be discussed. This study highlights the importance of family connection and discriminatory stress in identifying binge eating and body shame among Latinas with a history of an eating disorder.

*Learning Objectives:*

- ▶ Describe the roles of familism and family connection in Latin culture and their impact on disordered eating.
- ▶ Understand the impact of discriminatory stress on disordered eating among Latinas, both individually and in combination with family connection.
- ▶ Discuss the cultural implications of our findings and identify interventions related to family connection and discriminatory stress among Latinas with a history of eating disorders.

### P3.1.3

#### Thin-ideal Internalization and Eating Pathology among Black and White Women: A Meta-Analysis

**Alice S. Lowy, MA<sup>1</sup>**  
**Ani Keshishian, BA<sup>2</sup>**  
**Jennifer J. Thomas, PhD, FAED<sup>2</sup>**  
**Kamryn T. Eddy, PhD, FAED<sup>2</sup>**  
**Debra L. Franko, PhD, FAED<sup>2</sup>**  
**Rachel F. Rodgers, PhD<sup>1</sup>**

<sup>1</sup>Northeastern University, Boston, MA, USA

<sup>2</sup>Eating Disorders Clinical and Research Program at Massachusetts General Hospital, Boston, MA, USA

Recent research highlights the prevalence of eating disorders among Black women. However, the determination of related risk factors among this population is still poorly understood. Several investigators have suggested that thin-ideal internalization may not be as prominent in Black women relative to White women, and that its relationship with eating pathology may not be as strong as it is within cultures that value thinness. Thus, the purpose of this meta-analysis was to compare the strength of the relationship between thin-ideal internalization and eating pathology between Black and White females. We identified nine studies that provided descriptive and correlational data for both groups. Random-effects models revealed that, across studies, White women scored significantly higher than Black women on both thin-ideal internalization ( $g = -.94, 95\% \text{ CI}[-1.19, -.69], p < .001$ ) and eating pathology ( $g = -.51, 95\% \text{ CI}[-.67, -.34], p < .001$ ). However, the strength of the relationship between thin-ideal internalization and eating pathology did not differ between groups ( $r(\text{Black}): .39, 95\% \text{ CI} [.24, .52], p < .001$ ;  $r(\text{White}): .49, 95\% \text{ CI} [.37, .60]$ ,

$p < .001$ ;  $Q\text{-value}(1) = 1.19$ ,  $p = .28$ ). These findings suggest that, although Black women exhibit lower thin-ideal internalization and eating pathology than White women overall, thin-ideal internalization is still associated with eating pathology among both groups. Our results provide support for prevention programs that target thin-ideal internalization to protect both Black and White women from eating pathology.

*Learning Objectives:*

- 】 To examine whether Black and White women differ in thin-ideal internalization and eating pathology.
- 】 To compare the strength of the relationship between thin-ideal internalization and eating pathology between Black and White women.
- 】 To discuss the importance of addressing thin-ideal internalization in future prevention interventions to protect both Black and White women from eating pathology.

### P3.1.4

#### Beyond Teasing and Harassment: The Effect of the Quality of Relational Experiences on Body Esteem, Experience of Embodiment, Objectified Body Consciousness, and Alexithymia

Niva Piran, PhD FAED<sup>1</sup>  
Tanya Teall, PhD<sup>2</sup>  
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<sup>1</sup>University of Toronto, Toronto, Canada

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<sup>3</sup>York University, Toronto, Canada

The present investigation aimed to expand the inquiry of the impact of relational variables on women's experiences of living in their bodies, beyond the exclusive emphasis on teasing and harassment. Sample included 411 women ages 18-45 ( $M = 24.33$ ,  $SD = 7.24$ ), of those 41.8% were Asian-Canadians, 6.3% African-Canadians, and 38.9% White. Women completed an online battery of: (a) Four measures of body experiences: Body Esteem Scale (BES), Experience of Embodiment Scale (EES), Objectified Body Consciousness – Surveillance Subscale (OBC-S), and the Toronto Alexithymia Scale (TAS); and (b) Four scales of the quality of relational experiences: Teasing, Harassment, and Discrimination (THD); Empowering Relational Connections (ERC); Appearance-based Social Power (ABSP); and Gender Equity (GE). Four separate hierarchical regression models examined the impact of the relational variables on BES, EES, OBC-S, and TAS. Each of the models accounted for a significant proportion of variance (BES:  $R^2 = .42$ ; EES:  $R^2 = .51$ ; OBC-S:  $R^2 = .11$ ; TAS:  $R^2 = .13$ ). In all models, THD was entered as the first step and ERC, ABSP, and GE were entered as a second step. Both steps were statistically significant, ( $p < .001$ ), suggesting that THD is an important predictor of women's experiences of living in their bodies, but also that other relational variables contribute significantly over and above teasing and harassment. While ERC and ABSP

were significant predictors of all four measures of body experiences, GE was a significant predictor of only BES and OBC-S. While indeed reinforcing the adverse role of teasing and harassment on women's experiences of living in their bodies, the study also suggests expanding the lens of inquiry beyond teasing and harassment to other dimensions of relational experiences, including social power and relational acceptance; such an expanded understanding has implications to the prevention of negative body image and disrupted embodiment.

*Learning Objectives:*

- 】 Describe association between teasing and harassment and varied measures of the way women live in their bodies.
- 】 Integrate the impact of teasing and harassment on body esteem with the effect of other relational experiences, in particular: empowering relational connections, appearance-based social power, and gender equity.
- 】 Relate social experiences that shape body esteem to the practice of prevention of negative body image and disrupted embodiment.

### P3.1.5

#### Black Beauty Ideals: Protection against Eating Pathology?

Alice S. Lowy, MA  
Elizabeth S. Cook, MS  
Debra L. Franko, PhD, FAED  
Rachel F. Rodgers, PhD

Northeastern University, Boston, MA, USA

Existing instruments assessing body dissatisfaction often reflect Eurocentric body features that may not capture nuances of other racial or ethnic standards of beauty. Such measures may inaccurately reflect body dissatisfaction among Black women who may endorse more culturally-specific features. We examined the factor structure and construct validity of a new measure assessing beliefs about what Black women consider to be ideal body features, as well as their personal investment in those beliefs. The Black Beauty Ideals Scale (BBIS) is a 60-item measure that includes two subscales (Beliefs and Investment), which equally reflect Eurocentric and culturally-specific features. A sample of 201 Black female college students (61.6% African American, 12.9% African, 27.7% Caribbean/West Indian, 6.3% Afro-Latina), mean age = 27.2 (6.6) years, completed an online questionnaire, including the BBIS, Racial Body Image Questionnaire (RBIQ), Eating Disorder Diagnostic Scale-DSM-5 Version (EDDS-5), Sociocultural Attitudes Towards Appearance Questionnaire (SATAQ-3 and SATAQ-4), and Ideal Body Stereotype Scale-Revised (IBSS-R). Exploratory factor analyses revealed two factors for each subscale: (1) Eurocentric features, and (2) culturally-specific features. The BBIS subscales were also significantly associated with the SATAQ scales and IBSS-R ( $r = .19-.47$ ,  $p < .01$ ), as well as EDDS-5 scores ( $r$

= .15-.32,  $p < .05$ ). Body dissatisfaction was significantly associated with endorsement of Eurocentric features (Beliefs  $r = .25$ ,  $p = .001$ ; Investment  $r = .28$ ,  $p < .001$ ), but not with the culturally-specific features on these subscales. Findings suggest that although endorsement of culturally-specific features may protect Black women from body dissatisfaction, beliefs and investment in both sets of cultural ideals are still associated with eating pathology. Such results highlight the importance of utilizing culturally-sensitive measures to assess and identify eating pathology in this population.

*Learning Objectives:*

- ▶ To explore whether Black women endorse culturally-specific ideals as well as Eurocentric ideals.
- ▶ To examine the relationships among body dissatisfaction, drive for thinness, eating disorder symptoms, and distinct cultural body ideals.
- ▶ To discuss the importance of utilizing culturally-sensitive measures to identify risk factors of eating pathology among Black women.

### P3.1.6

#### Title: Attitudes about Aging as a Moderator of the Relationship between Menopause Status and Disordered Eating Behaviors and Body Image Concerns among Middle-Aged Women

**Katherine Thompson, BA**  
**Anna Bardone-Cone, PhD**

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Research suggests that the menopause transition, particularly the peri-menopausal period, may be a critical window of vulnerability for the exacerbation of disordered eating behaviors and body image concerns given the changes to body shape, weight, and appearance caused by fluctuating hormones. Yet no study has examined which women may be particularly at-risk during this period. This study explored group differences in disordered eating and body image by menopausal status, and whether appearance-related aging concerns moderated these relationships. Participants were 310 women, age 40-68, who completed an online survey about their menopausal status (pre-menopause, peri-menopause, post-menopause), aging concerns, disordered eating (general eating pathology, bulimic symptoms, dietary restraint), and body image concerns (weight concern, shape concern). MANCOVA/MANOVA models indicated that the three menopausal status groups did not significantly differ on either disordered eating or body image concerns. Tests of moderator models yielded a significant interaction between menopausal status and aging concerns in relation to dietary restraint, such that at low levels of aging concerns, peri-menopausal women reported greater dietary restraint than pre-menopausal women. We also found marginally significant interactions

( $p < .06$ ) between menopausal status and aging concerns for weight concern and shape concern, whereby at low levels of aging concerns, peri-menopausal women reported greater weight concern and shape concern than pre-menopausal women. These findings suggest that the effects of menopause on dietary restraint and body image may be stronger for some women compared to others. Future work should examine these ideas prospectively to further understand the development of these constructs during the menopause transition.

*Learning Objectives:*

- ▶ Comprehend the effects of menopausal status on disordered eating behaviors.
- ▶ Identify women who may be most at risk for developing disordered eating behaviors during menopause.
- ▶ Compare the risk of disordered eating behaviors to women before and after menopause.

## P3.2

### TREATMENT OF EATING DISORDERS II (ADULT) AND OTHER

*Co-Chairs:*

**Heather Thompson-Brenner, PhD, FAED and Josie Geller, PhD, RPsych, FAED**

#### P3.2.1

#### Treatment Attitudes and Barriers to Seeking Treatment among Individuals with Diagnosed and Undiagnosed Eating Disorders: A Quantitative Analysis

**Scott Griffiths, PhD**

University of Melbourne, Melbourne, Australia

We examined treatment attitudes and barriers to seeking treatment in three groups: individuals with diagnosed eating disorders and in treatment ( $n = 178$ ), individuals with diagnosed eating disorders and not in treatment ( $n = 100$ ), and individuals with undiagnosed eating disorders and not in treatment ( $n = 127$ ). Participants completed a survey assessing treatment attitudes and barriers in addition to eating disorder symptoms and quality of life. Across groups, participants were broadly more positive toward elements of dominant eating disorders treatment models (e.g., one-on-one therapy delivered in-person by highly-trained specialists) than non-dominant treatment models (e.g., smartphone and Internet-delivered therapy). The strongest barriers to treatment-seeking were fear of change and fear of losing control, followed by treatment cost. Regarding treatment attitudes, the largest between-group differences were greater positivity among undiagnosed individuals toward Internet and smartphone-delivered treatments. Regarding barriers to treatment,

undiagnosed individuals rated as stronger several barriers relating to eating disorders mental health literacy. Efforts to develop novel non-dominant forms of eating disorders treatment must be accompanied by research on individuals' attitudes towards these treatments. Eating disorders-related mental health literacy is an important target for efforts to promote rates of help seeking and diagnosis among individuals with undiagnosed eating disorders.

*Learning Objectives:*

- ▶ Assess what types of individuals are amenable to novel therapies (e.g., Internet-delivered CBT) versus traditional therapies.
- ▶ Describe the most salient barriers to treatment seeking among individuals with eating disorders.
- ▶ Distinguish the treatment attitudes and treatment barriers of individuals with undiagnosed eating disorders versus diagnosed eating disorders.

### P3.2.2

#### Improvements in Emotion Regulation Skills Predict Improvements in Eating Disorder Cognitions in a Clinical Sample of Individuals with Binge Eating

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 Carolyn M. Pearson, PhD<sup>2</sup>  
 Kathryn E. Smith, PhD<sup>3</sup>  
 Li Cao, MS<sup>3</sup>  
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Although deficits in emotion regulation have been implicated in the maintenance of binge eating, few prospective studies have examined whether improvements in emotion regulation are associated with decreases in eating disorder symptoms in clinical samples. Moreover, it is unclear whether emotion regulation is associated with treatment outcome above and beyond improvements in negative affect or whether specific dimensions of emotion regulation are more or less important to treatment outcome. Using a naturalistic design, the current study assessed whether changes emotion regulation predicted change in binge eating and eating disorder cognitions during treatment in a heterogeneous sample of individuals with binge eating (N=97). Participants completed the Eating Disorder Examination Questionnaire, Difficulties in Emotion Regulation Scale, and Positive and Negative Affect Scale at five assessment points (covering 10 weeks of treatment) to assess eating disorder symptoms, emotion regulation, and negative affect, respectively. Results from regression analyses indicated that after controlling for body mass index, baseline eating disorder

symptoms, and improvements in negative affect, emotional acceptance, access to emotion regulation strategies, and ability to engage in goal-directed behavior when distressed were associated with improvements in eating disorder cognitions. Neither improvements in emotion regulation skills nor negative affect predicted change in binge eating frequency. Findings suggest that targeting specific emotion regulation deficits along with negative affect during eating disorder treatment may improve eating disorder psychopathology.

*Learning Objectives:*

- ▶ Describe associations among emotion regulation deficits, negative affect, and binge eating.
- ▶ Compare the relative impact of emotion regulation deficits and negative emotionality on eating disorder symptoms.
- ▶ Identify specific facets of emotion regulation that may predict change in eating disorder psychopathology in naturalistic treatment settings.

### P3.2.3

#### Comparison of Individual CBT for Relapse Prevention and Group-Based Maintenance Treatment for Bulimia Nervosa and Purging Disorder

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 Traci McFarlane, PhD<sup>1</sup>  
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 Mike Thibodeau, PhD<sup>2</sup>  
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Although relapse is a significant problem, there are few investigations related to the effectiveness of maintenance therapies focused on relapse prevention. This study compared the effectiveness of a group-based maintenance treatment (MT) to individual CBT for relapse prevention in supporting ongoing symptom control for individuals with bulimia nervosa or purging disorder. Participants were 193 patients who had a BMI of 18.5 or more and at least 4 episodes of bingeing or vomiting in the 4 weeks before day hospital (DH) treatment and made significant improvements during DH. Group-based MT consisted of two to five group sessions per week for up to 16 weeks. Individual CBT consisted of 16 sessions over 14 weeks. This was a sequential cohort design with only one of the two maintenance treatments available at any time. Assessments were conducted before and after DH, after MT and 6 and 12 months after DH. Measures included bingeing and vomiting frequencies, BMI and the Overvaluation of Weight and Shape items of the EDE. Survival analysis indicated that participants who received individual CBT were less likely to relapse following DH ( $\chi^2=3.87$ ,  $p<0.05$ ,  $OR=2.4$ ). At 12 months, relapse rates were 21% and 36%. The groups did not differ on

binge frequency or the importance of weight and shape but vomiting frequency at 12 months was lower ( $p < .02$ ) for the individual CBT group. Group-based MT provided more treatment time, and more structure for patients, while individual CBT emphasized autonomy and decision-making and was associated with better outcomes in the months after treatment ended.

*Learning Objectives:*

- ▶ Describe some of the challenges in helping patients avoid relapse.
- ▶ Discuss different approaches to relapse prevention.
- ▶ Identify the conceptual model underlying different approaches to relapse prevention.

### P3.2.4 Comparison of Longer and Shorter Inpatient Treatment Protocols on Outcome in Adults with Anorexia Spectrum Disorders: Preliminary Results

**Annie St-Hilaire, PhD<sup>1</sup>**  
**Chloé Paquin-Hodge, PsyD<sup>1</sup>**  
**Michelle Azzi, DEC<sup>2</sup>**  
**Esther Kahan, BSc<sup>1</sup>**  
**Mimi Israel, MD<sup>1</sup>**  
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Beyond medical stabilization, there is a lack of consensus regarding the benefits of extending length of hospitalization until weight restoration is reached. The aim of this study was to compare the treatment outcome of two inpatient protocols: a longer treatment oriented toward weight normalization (Protocol 1) and a shorter treatment focused on medical stabilization and rapid return to outpatient treatment (Protocol 2). Thirty-two Inpatients completed Protocol 1 and 18 completed Protocol 2. Inpatients in both protocols filled out the Eating Disorder Examination Questionnaire (EDE-Q) and the Behavior and Symptom Identification Scale-32 (BASIS-32) at admission, discharge and follow-up. Body mass indices (BMIs) were also obtained at these different time points. At discharge, Protocol 1 led to significantly improved BMI and BASIS-32 total score, but similar EDE-Q total score, compared to Protocol 2. At follow-up, both protocols led to similar treatment outcomes in terms of BMI, EDE-Q total score and BASIS-32 total score. Preliminary results of this study suggest that shorter inpatient stay focused on medical stabilization and a rapid return to outpatient treatment does not compromise treatment outcome.

*Learning Objectives:*

- ▶ Review the literature on inpatient treatment in anorexia nervosa.
- ▶ Present new findings comparing longer and shorter inpatient treatments of adults with anorexia nervosa spectrum disorders.

- ▶ Discuss the indications favoring shorter versus longer inpatient treatment for adults with anorexia nervosa.

### P3.2.5 - Training Imperfection: Can Cognitive Bias Modification Reduce Maladaptive Perfectionism and Disordered Eating?

**Dorian Dodd, MA**  
**Lauren Forrest, MA**  
**Elizabeth Velkoff, BA**  
**Shelby Ortiz, BA**  
**April Smith, PhD**

Miami University, Oxford, OH, USA

Perfectionism contributes to the risk and maintenance of eating disorders (EDs), and past research shows that treatment of perfectionism helps to reduce ED pathology even when treatment addresses perfectionism only and not ED concerns. The present study provides a pilot test of a novel, computerized, cognitive bias modification interpretation retraining (CBM-I) intervention for perfectionism. College students ( $N=66$ ) completed baseline questionnaires and then were randomly assigned to complete two sessions (separated by 2-3 days) of either a control or active retraining version of the CBM-I program. Afterwards, participants completed a battery of questionnaires identical to baseline, an impossible anagram task designed to elicit perfectionistic concerns, and a measure of confidence and desire to re-do items on the anagram task. Results indicate that after the intervention, the active retraining CBM-I group had lower perfectionistic interpretations of novel situations relative to their baseline levels [ $t(29) = 5.47, p < .01$ ], and relative to the control group [ $t(64) = 2.7, p = .01$ ]. On the impossible anagram task the groups had comparably low levels of confidence in their performance ( $p = .47$ ), but the retraining group endorsed wanting to re-do significantly fewer items than the control group [ $t(64) = 2.81, p = .01$ ], suggesting greater acceptance of flawed, imperfect performance (i.e., lower perfectionistic performance concerns). Contrary to expectations, the groups did not differ in their levels of ED symptomatology following the intervention. However, across the sample as a whole, reductions in perfectionistic interpretations predicted lower levels of one, but not most, measures of ED symptomatology post intervention. If reductions in perfectionistic interpretations are a mechanism by which symptoms improve, it may be that a greater dose of treatment is needed to extend the effects of improved perfectionism to downstream changes in psychopathology. Additional research is needed, but these initial results show that CBM-I has promise as an effective, accessible tool to treat perfectionism, and at greater doses may also have the potential to improve related psychopathology.

*Learning Objectives:*

- ▶ Describe the relation between perfectionism and eating disorder pathology.

- Describe the basic premise of cognitive bias modification interpretation retraining interventions (CBM-I), as well as the basic structure of the commonly used CBM-I scenarios task.
- Summarize the effectiveness of this novel cognitive bias modification interpretation retraining (CBM-I) for reducing perfectionism and related psychopathology.

### P3.2.6

#### Awareness and Tolerance of Emotional Experience as Mechanisms of Change among Patients Receiving Transdiagnostic, Intensive Eating Disorder Treatment

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This study sought to examine whether change in the hypothesized mechanisms of a transdiagnostic, emotion-focused, cognitive-behavioral eating disorder (ED) treatment mediate immediate and long-term treatment outcomes for patients with severe EDs. Hypothesized mechanisms of action of the treatment included mindfulness, anxiety sensitivity, and experiential avoidance. Adolescent and adult female patients (N = 1064) presenting routinely for residential ED treatment completed self-report measures of hypothesized mechanisms (Southampton Mindfulness Scale; Anxiety Sensitivity Index; Brief Experiential Avoidance Questionnaire) and ED symptoms (Eating Disorder Examination Questionnaire) at admission, discharge, and 6-month follow-up (6MFU). Multiple linear regression was used to evaluate whether residual change in mechanisms during treatment predicted ED symptom outcome from admission to discharge (covariates: baseline ED severity, comorbidity, and length of stay). Structural equation modeling was used to examine whether change in mechanisms during treatment mediated long-term ED symptom outcome (at 6MFU). From admission to discharge, change in all three mechanisms was significantly positively associated with ED symptom improvement ( $p_s \leq .0005$ ); together, mechanisms explained an additional 15% of variance in outcome ( $\Delta R^2 = 0.15$ ,  $p < .0001$ ; final model:  $F(7, 765) = 125.1$ ,  $p < .0001$ ,  $R^2_{adj} = .53$ ). Parallel mediation analysis revealed no significant mediating effect of each individual mechanism on ED symptom improvement from admission to 6MFU ( $p_s \geq .21$ ); however, the total combined mediating effect of all mechanisms was significant ( $b = 0.03$ ,  $SE_b = 0.01$ ,  $p < .01$ ). Results suggest that patients who

make greater gains in mindfulness, anxiety sensitivity, and experiential avoidance during residential ED treatment have better immediate treatment outcome. Further, combined change in all three of these variables mediates long-term outcome observed at 6MFU. Results support the relevance of these constructs as mechanisms of change in ED treatment, and suggest they may work synergistically rather than independently.

*Learning Objectives:*

- Describe the relationship between mindfulness, anxiety sensitivity, experiential avoidance, and transdiagnostic eating disorder symptoms.
- Assess the extent to which changes in mindfulness, anxiety sensitivity, and experiential avoidance predict immediate eating disorder treatment outcome.
- Assess the extent to which changes in mindfulness, anxiety sensitivity, and experiential avoidance mediate long-term eating disorder treatment outcome.

### P3.3

#### BINGE EATING DISORDER AND OBESITY

*Co-Chairs:*

Jacqueline C. Carter-Major, DPhil, FAED and Tiffany M. Stewart, PhD

#### P3.3.1

##### Development of an Externally Valid Delay Discounting Task with Personalized Food Stimuli in Individuals with Binge Eating Disorder

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Sandy Ding

Stephanie Manasse, PhD

Stephanie Goldstein, MS

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Delay discounting has mixed evidence for its role in the development and maintenance of binge eating. This is likely because existing delay discounting tasks (DDTs), which assess preference for lesser immediate rewards instead of greater delayed rewards, are heterogeneous (e.g., varying time delays with some delays in years) and typically employ monetary rewards in place of disorder-specific stimuli. Therefore, the current study aims to develop a DDT that is personalized and externally valid (i.e., generalizable to the experiences of those with binge eating disorder [BED]). Participants choose a food stimulus based on what they would be most likely to binge on (e.g., brownie, pizza), with varying quantities (i.e., 0-12 pieces) to be hypothetically consumed immediately or after a delay (i.e., 30 minutes, 1 hour, 3 hours, 8 hours, 1 day, 3 days, 1 week). We modified an existing computerized DDT to be specific to binge eating

by incorporating food stimuli, easily comprehensible food amounts, and reasonable time delays. Participants (n=17; projected N=20 by November 2017; treatment-seeking adults with BED) complete interviews on DDT generalizability. Results from the current sample indicate most participants (94.2%; n=16) endorse that task stimuli represent foods they have binged on or enjoy. Most (82.4%; n=14) understood food quantity increments, but many (41.2%; n=7) expressed 12 pieces was too large (mean typical binge size reported=6.3 pieces; SD=1.48). Most (82.4%; n=14) reported understanding time delays, while 11.8% (n=2) misunderstood instructions or reported literal interpretation (e.g., if schedule would allow them to eat later). Results from the current study support preliminary external validity of modified task elements. Participant feedback, as well as future studies to examine content- and criterion-related validity, will inform task revisions to create an innovative, valid measurement tool to appropriately capture reward-related decision making in BED.

*Learning Objectives:*

- 】 Discover how delay discounting tasks can be used in binge eating disorder research.
- 】 Become familiar with a novel delay discounting task for binge eating disorder research.
- 】 Learn about the development of the delay discounting task, including selection of elements to maximize external validity and acceptability of the task.

### P3.3.2 Preliminary Efficacy of a Pilot Paediatric Day Hospital Program Project to Address Severe Mental Illness and Binge Eating

**Seena Grewal, MD, FRCP(C)**  
**Elizabeth Dettmer, PhD CPsych**  
**Cathleen Steinegger, MD**  
**Kaley Roosen, PhD**  
**Andrea Regina, PhD CPsych**  
**Kelsey Gallagher, RD**  
**Katie Stadelman, MSW**  
**Jill Hamilton, MD**

Hospital for Sick Children (SickKids), Toronto, Canada

Similar to youth with eating disorders, youth living with obesity are at increased risk for trauma, depression, anxiety and disordered eating. Although symptoms of binge eating disorder (BED) are common in pediatric obesity management programs, they are often not identified or addressed within treatment. At The Hospital for Sick Children (SickKids), a tertiary care pediatric hospital in Toronto, Canada, adolescents with obesity are treated in an interdisciplinary outpatient clinic, SickKids Team Obesity Management Program (STOMP). SickKids also has a specialized Eating Disorder Program (EDP). However, neither program has a specialized BED clinic. In order to address an identified gap in

services, a collaboration was formed between STOMP, the Acute Care Psychiatry Services (AIDE) and the EDP. The aim of this collaboration was to provide an enhanced treatment arm within our General Psychiatry Day Hospital Program that addresses both the mental health issues and the health challenges common to youth with obesity and binge eating. Participants in year one of the two-year pilot project included 16 youth aged 14-18 and their caregivers/parents. Each youth participated in daily group therapy, academics and structured mealtimes. The therapeutic interventions were informed by clinical practice in both obesity and eating disorder programs. The groups are primarily skills-based and are informed by cognitive/dialectical behavioural therapies. Weekly family therapy and individual therapy as well as weekly medical appointments with a psychiatrist, nurse, dietician and exercise therapist are provided to establish normalized eating and healthy lifestyle behaviours. Outcomes were evaluated using measures of mental health, anthropometrics, metabolic status, and healthcare satisfaction. Results indicated significant improvements across measures of depression, quality of life, and decreased dietary restriction, eating disordered thoughts and number of binge eating episodes as well as weight stabilization over the course of four months of treatment. Discussion will review mechanisms of change hypothesized as necessary for replicating this program in other youth-based treatment centres as well as how eating disorder programs can be collaborating with colleagues in other areas of mental health.

*Learning Objectives:*

- 】 Participants will be better able to assess binge eating and disordered eating patterns within general psychiatry populations among adolescents.
- 】 Participants will learn how to better address binge eating within a population of youth living with obesity.
- 】 Participants will learn how to address healthy lifestyle issues without triggering increased disordered eating thoughts and behaviours among adolescents living with obesity.

### P3.3.3 Depression Moderates the Association between Difficulties in Emotion Regulation and Binge Frequency in Binge Eating Disorder

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**Christopher Singleton, BA (hons)**  
**Jacqueline Carter, DPhil**

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While past research suggests there is significant association between emotion regulation (ER) and binge eating disorder (BED) symptoms, there is a lack of research exploring the nature of this relationship. The present study aimed to clarify the association between ER and BED symptoms in a community sample of

individuals with BED and to examine depression as a possible moderator of this association. Data was collected from an adult community sample meeting the DSM-5 criteria for BED and adults with no history of an eating disorder. Participants completed measures of difficulties in ER, eating disorder psychopathology, and negative affect. Individuals with BED reported significantly higher emotion dysregulation compared to those without an eating disorder after controlling for BMI, age, depression, and anxiety. Moreover, difficulties in ER predicted unique variance in binge frequency and eating disorder psychopathology in individuals with BED. Depression moderated the association between ER and binge frequency such that emotion dysregulation and binge frequency were positively associated in those reporting high, but not low, depression levels. The association between difficulties in ER and eating disorder pathology suggests that treatments focusing on ER enhancement could be effective in treating BED. The moderating effect of depression, however, underscores the need for research on individual differences and treatment moderators. Possible implications and directions for future research will be discussed.

*Learning Objectives:*

- ▶ Describe the association between difficulties in emotion regulation and binge eating disorder.
- ▶ Understand the moderating effect of depression on the association between difficulties in emotion regulation and binge frequency in binge eating disorder.
- ▶ Critically consider the importance of researching individual differences and treatment moderators.

### P3.3.4

#### Associations between Loss of Control Eating and Bariatric Surgery Weight Loss Outcomes

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Loss of control eating (LOC), a central feature of binge eating, is prevalent among individuals with obesity, and is related to poorer long-term weight outcomes among individuals who undergo bariatric surgery (BS). While extant evidence also suggests that weight outcomes differ across surgery types, thus far no study has examined whether the relationship between LOC and postoperative weight change varies according to surgery type. Therefore, the objectives of this study were to examine the association between LOC on percent weight loss

following BS and to evaluate whether this effect differs by surgery type (i.e., adjustable gastric banding [AGB] or Roux-en-Y gastric bypass [RYGB]). This study included participants (N=2156; 76% female) from the multicenter Longitudinal Assessment of Bariatric Surgery – 2 (LABS-2) study who underwent RYGB (n=1640 RYGB) or AGB (n=516). Participants completed assessments of LOC and BMI prior to BS and annually for up to seven years after BS. There was a significant concurrent association between LOC and percent weight change, in which participants who reported LOC experienced approximately 2% less weight loss compared with participants who did not report LOC, irrespective of surgery type (est. = -2.10,  $p < 0.001$ ). After controlling for baseline BMI and LOC, there was a significant difference between surgery type in percent weight loss and LOC across time, as well as significant interaction between LOC and surgery type that indicated that LOC effects on weight loss were greater for the RYGB group as compared with the AGB group (est. = .809,  $p = 0.017$ ). Taken together with previous research, there is consistent evidence that LOC is indicative of poorer prognosis among BS patients up to 7 years after surgery. These results highlight the importance of ongoing assessment of eating psychopathology among BS patients and demonstrate that LOC may be particularly problematic in terms of weight loss for those who undergo RYGB.

*Learning Objectives:*

- ▶ Following the training, participants will be able to describe the frequency of loss of control eating in bariatric surgery patients prior to surgery and up to 7 years after surgery.
- ▶ Following the training, participants will be able to describe the interaction between loss of control eating and bariatric surgery type on percent weight loss.
- ▶ Following the training, participants will be described the association between loss of control eating and percent weight loss in post-bariatric surgery patients.

### P3.3.5

#### Executive Functions Deficits in Binge Eating Disorder: A Systematic Review and Meta-Analysis

**Maria Elisa Gisbert Cury Bittencourt, Master**

**Arthur Berberian, Doctorate**

**Bruno Sini Scarpato, Master**

**Angélica Claudino, Post-doctoral**

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Research on the cognitive profile of people with binge eating disorder (BED) suggest that they present deficits in executive functions, but the evidence is still scarce and inconclusive. This study aimed to systematically review and conduct meta-analyses of the available evidence from studies that examined executive functioning in people with BED. Searches were conducted in PubMed, Scopus and PsycINFO (up to May 19th, 2017) following the PRISMA

statement guidelines. Eighteen case-control studies and 5 systematic reviews (out of 2.689 studies) fulfilled criteria for inclusion in this review, i.e. experimental case-controlled studies or clinical trials published in English, Spanish or Portuguese, which recruited adults of both sexes and compared individuals with BED to a control group without the disorder using any outcome measure that could be classified under the domain of executive functions. Results of the meta-analyses conducted suggest worse performance in people with BED compared to obese or normal weight controls without BED in: 1. decision-making (SMD = -0.63; 95% CI: -0.95; -0.32); 2. cognitive flexibility: two meta-analyses performed, one with studies that used the Trial Making Test (MD = 18.06; 95% CI: 10.79; 25.34) and another with studies which used the Wisconsin Card Sorting Test and the Penn Conditional Exclusion Task: (SMD = 0.36; 95% CI: 0.10; 0.61); 3. working memory (MD = -0.85 ; 95% CI: - 1.58; - 0.11). When groups with BED were compared only with obese controls without BED, those with the disorder also showed worse performance in problem solving (SMD = -0.65; 95% CI: -0.98;-0.32). Effect sizes were moderate to strong in magnitude in 4 of the meta-analysis conducted. Although limited by few studies and small samples, this review supports further exploration in this field and provides guidance for future studies.

*Learning Objectives:*

- ▶ Discuss the relationship between executive functions and binge eating disorder symptoms.
- ▶ Learn about the state of art of research that examined executive functions in people with BED.
- ▶ Consider recommendations for futures studies in this field.

**P3.3.6**  
**Development of a Family-Based and Motivational Approach for a Childhood-Obesity Intervention Targeting Self-Regulation and Problem-Solving Skills: A Pilot Study in Primary Care**

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 Tatiana LaCruz, MSc, PhD<sup>1</sup>  
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 Marta Rojo, MSc<sup>2</sup>  
 Yolanda Martín-Peñador, Doctor in Paediatrics<sup>3</sup>  
 Eva Leal, Nurse Coordinator<sup>4</sup>  
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Childhood obesity is a major concern in Public Health. Spain is one of the countries with the highest prevalence rate in Europe. The program has been developed as a metaphor of a healthy train- trip, targeting emotional-regulation, home environment, parenting styles and modeling of healthy behaviors. The aims of the study were: 1) To develop and evaluate the feasibility and acceptance of the "EnTREN-F Program" program in Primary Care aimed at children 8 to 12 years old who are overweight / obese (it consists of 12 group sessions with children and 8 separate group sessions with the families), through a pilot study from a multidisciplinary approach. This intervention was compared to the same "EnTREN" program (12 group sessions of children without family intervention); 2) To evaluate the efficacy of the intervention in individual anthropometric variables (body image, self-esteem, eating habits and attitudes, physical exercise, emotional regulation), and family variables (well-being, family functioning, expressed emotion, food and physical exercise habits). A sample of 25 children was collected (M = 10 yr) for each group and their families. They completed pre, post-intervention and at 6 months follow-up measures. At the end of the program, the experimental group had significant reductions ( $p < 0.05$ ) in Z-BMI, as well as in arm and waist circumference. Similarly, the anxiety and depression levels of children in both groups had reduced, being significant in the family intervention group ( $p < 0.05$ ). These changes were maintained at 6 months. The program was highly valued by all family members (8/10), although adherence levels were significantly higher ( $p < 0.05$ ) in the family skill-based group (80% vs 60%). The ENTREN-F program has shown an adequate acceptance and feasibility for the intervention from Primary Care and highlights the role of the family as an agent of change and promotes the adherence to treatment of this pathology.

*Learning Objectives:*

- ▶ Following the oral communication, participants will be able to learn the content of the childhood obesity program for children and for the parents (i.e., biological, family, psychosocial, cultural, etc.).
- ▶ Following the paper, participants will be able to understand the model approach and the family-based techniques and motivational tasks for children and parents.
- ▶ Following the paper, participants will be able to discern whether the intervention is feasible in Primary Care and its efficacy to improve the commitment with healthy habits.

**P3.4**  
**COMORBIDITY**

*Co-Chairs:*

**Pamela K. Keel, PhD, FAED and Denise E. Wilfley, PhD, FAED**

## P3.4.1

### The Association between Weight Suppression and Non-suicidal Self-Injury through Body Dissatisfaction: A Proof of Concept Study

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Previous cross-sectional research suggests that weight suppression (WS; the difference between one's highest and current weight) is associated with lifetime non-suicidal self-injury (NSSI) through drive for thinness and depressive symptoms. We conducted a proof-of-concept study, which sought to reduce NSSI by improving body esteem and reducing depressive symptoms in individuals with WS. Using the Body Project 4 All script, we modified the eBody Project to be relevant for a mixed gender audience. Participants were recruited primarily via social media. Eligibility criteria included past month NSSI and at least 5 pounds WS. Participants (n=59; 75% retained at follow-up, mean age: 22 years, 47.4% heterosexual, 81% female) were randomly assigned to either the intervention condition (mixed gender adaption of the eBody Project) or a waitlist control condition. Participants' weight and shape concerns, depressive symptoms, and ratings of future likelihood of NSSI were assessed at pre- and post-intervention or at baseline and two-week follow-up, respectively. Compared to the waitlist control, participants in the active condition showed significantly greater decreases in likelihood of future NSSI ( $p = .02$ , between group  $d = -.034$ ), body dissatisfaction ( $p < .001$ , between group  $d = -1.22$ ), depressive symptoms ( $p = .01$ , between  $d = -1.09$ ), and significantly greater improvements in appearance ( $p = .04$ , between group  $d = 1.08$ ) and weight esteem ( $p = .001$ , between group  $d = 1.27$ ). Findings suggest that an intervention that reduces body dissatisfaction and depression may reduce risk for NSSI.

#### Learning Objectives:

- ▶ Following the training, participants will be able to discuss the possibility of self-harm reduction through improvement in body esteem.
- ▶ Following the training, participants will be able to identify potential mediators between weight suppression and self-harm.
- ▶ Following the training, participants will be able to discuss potential transdiagnostic uses of cognitive-dissonance based eating pathology prevention programs.

## P3.4.2

### ADHD Symptoms and Overeating in Youth with Obesity: Loss of Control May Not be the Only Answer

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There is growing evidence that Attention Deficit/Hyperactivity Disorder may be critically linked to obesity in both children and adults. One main hypothesis explaining this association in children is that loss of control eating (LOC) may be a driving factor, serving as a mediator between ADHD symptoms and zBMI. Despite the growing body of literature investigating links between ADHD symptoms and LOC, little research has been done to further an understanding of the independent contributions of LOC and episode size in these associations. The current study examined the relation between ADHD symptoms and eating behaviors by evaluating three different types of episodes: objectively large LOC episodes (OBE), subjectively large binge episodes (SBE), and objectively large overeating episodes without LOC (OO). This study evaluated a diverse sample (40% non-white, 37% male) of 385 youth (M age=10.89, SD=2.25) drawn from five different research protocols at institutions across the U.S. The majority of participants were overweight (M zBMI = 2.26, SD = 0.34). Participants and their parents completed self-report questionnaires to assess for ADHD symptoms (Child Behavior Checklist; CBCL – parent-report) and eating behaviors (Eating Disorder Examination or Child Eating Disorder Examination; EDE – self-report). Negative binomial regression analyses revealed that ADHD symptoms were significantly associated with OBE,  $X^2(1) = 16.61$ ,  $p < .001$ , and with OO,  $X^2(1) = 10.64$ ,  $p < .01$ . Contrary to expectations, they were not associated with SBE. These results underscore the importance of evaluating possible shared mechanisms (e.g., impulsivity) underlying associations between ADHD symptoms, OBE, and OO in future study. Likewise, the results of this study emphasize

the need for more research on OO without LOC to continue understanding the mechanisms that distinguish OO from OBE as well as to understand the predictive validity of both conditions.

*Learning Objectives:*

- ▶ Describe the overlap of ADHD symptoms and dysregulated eating behavior.
- ▶ Assess the differential associations between inattention/impulsivity and loss of control with and without a binge episode.
- ▶ Review the merits of evaluating psychopathology associated with objective overeating without loss of control to aid in the understanding of binge eating.

### P3.4.3

#### Restrictive Eating, but not Binge/Purge Behaviors, Predicts Suicidal Ideation in Adolescents with Low-Weight Eating Disorders

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Individuals with eating disorders (EDs), and particularly low-weight EDs, are at significantly heightened risk for suicide. Joiner's (2005) interpersonal theory of suicide offers a hypothesis for understanding these increased rates, and suggests that extreme restrictive eating resulting in starvation and low-weight may desensitize individuals to painful stimuli, leading to an acquired capability for suicide. However, not all individuals with low-weight EDs report suicidal ideation (SI), and little is known about factors that increase SI in this high-risk population. Although it has been suggested that binge-eating and purging behaviors may be particularly linked to SI due to their impulsive nature, chronic exposure to extreme physical pain via severe restricting (even among restrictive eaters) may strongly habituate individuals to the fear of death. Therefore, the current study examined whether severity of restricting, binge eating, or purging, assessed by the Eating Disorder Examination Interview, predicted SI. Participants were females with low-weight EDs (N=56) aged 11 to 22. A multiple logistic regression analysis found that restricting (B=.71, p=.003), but not binge eating (p=.98) or purging (p=.48) predicted SI. This is the first study to date to examine associations between behavioral features of EDs and SI in a low-weight

ED sample. Findings indicate that severity of restricting is an important factor that influences risk for SI in patients with low-weight EDs, providing support for Joiner's (2005) hypothesis. Although healthcare providers may be more likely to screen for suicidal and nonsuicidal self-injury in patients with binge eating and purging, our findings indicate that clinicians should regularly assess suicide and self-injury in patients with severe restricting. Future research examining the pathways by which individuals progress from experiencing SI to making a suicide attempt can further enhance our understanding these causes of mortality in EDs.

*Learning Objectives:*

- ▶ Describe the influence of restricting, binge eating, and purging on suicidality among individuals with low-weight eating disorders.
- ▶ Explain why restricting might increase risk for suicidality through acquired capability.
- ▶ Identify the potential clinical benefits of assessing suicidality among patients with restrictive eating.

### P3.4.4

#### Eating Disorder Comorbidity at 22-Year Longitudinal Follow-up: Examining Major Depressive and Substance Use Disorders

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Eating disorders (EDs) are highly comorbid with other mental health disorders. Although some psychodynamic theories of eating disorders suggest that symptom substitution may occur after short-term resolution of symptoms, less is known about comorbidity in relation to ED recovery in the long-term. Therefore, we examined comorbidity, specifically major depressive disorder (MDD) and substance use disorder (SUD), in a sample of women with intake diagnoses of anorexia nervosa and bulimia nervosa over an average of 22 years. To assess recovery, 176 of the 228 surviving participants (77.2%) were re-interviewed 22 years after study entry using the Longitudinal Interval Follow-up Evaluation. The Structured Clinical Interview for DSM-IV questions were used to assess MDD and SUD at 22 years. Of the 176 participants, 36% had not recovered from their eating disorder, 16% met criteria for MDD, and .05% met criteria for SUD at 22 years. In a binary logistic regression controlling for the presence of MDD and SUD at intake, MDD at 22 years was significantly associated (OR = 3.02, 95% CI [1.26, 7.23], p = .01) and SUD at 22 years was associated at trend-level (OR = 4.90, 95% CI [.92, 26.16],

$p = .06$ ) with having an ED at 22 years. Of note, MDD and SUD were not significantly associated with one another at 22 years ( $X^2 = 2.92, p = .09$ ). These results suggest that those who recover from ED are likely to recover from MDD and SUD as well. Future studies should examine whether symptom substitution occurs in the long term with other maladaptive behaviors, as well as whether there may be a transdiagnostic mechanism underlying recovery that could be targeted in treatment.

#### *Learning Objectives:*

- ▶ To examine eating disorder comorbidity at 22 year longitudinal follow up.
- ▶ To determine whether those who recovered from their eating disorder at 22 years also recovered from major depression disorder or substance use disorder.
- ▶ To explore the implications of eating disorder recovery at 22 years.

### P3.4.5

#### Concern over Mistakes Prospectively Predicts Obsessive Compulsive Disorder and Anorexia Nervosa Symptoms in Eating Disorder Patients after Discharge from Intensive Treatment

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Anorexia nervosa (AN) and obsessive-compulsive disorder (OCD) are highly comorbid. Epidemiological evidence has long suggested a shared etiology between AN and OCD. However, the relationship between OCD and AN across time is poorly understood, as are the factors that account for this comorbidity. Concern over mistakes is an aspect of perfectionism that has been shown to inhibit treatment response in individuals diagnosed with OCD and is associated with increased anxiety and depression. Cross-sectionally concern over mistakes has been shown to be a vulnerability for both AN and OCD. In the current study we tested if concern over mistakes was a shared prospective transdiagnostic factor contributing to both OCD and AN symptoms. Patients ( $N = 168$ ; 71.4% with a diagnosis of AN) who had recently discharged from an eating disorder facility completed a self-report assessment of concern over mistakes, as well as measures of OCD and drive for thinness at two time points one month apart after discharge. We used structural equation modeling to test if concern over mistakes at Time 1 predicted drive for thinness and OCD symptoms at Time 2, one month later. The model exhibited excellent fit ( $CFI = 1.00, TLI = 1.00, RMSEA = .01$ ). As hypothesized, Time 1 concern over mistakes significantly predicted both Time 2 OCD

symptoms (Estimate = .11,  $p = .028$ ) and Time 2 drive for thinness (Estimate = .11,  $p = .050$ ). In this model, drive for thinness and OCD symptoms did not predict each other across time ( $ps > .053$ ). Concern over mistakes is a prospective predictor of both OCD and AN symptoms. This finding is important because concern over mistakes is a potentially modifiable psychological construct, which could be reduced by psychological interventions such as exposure therapy and cognitive restructuring. Interventions that focus on targeting concern over mistakes may help decrease symptoms of both OCD and AN, thereby preventing relapse in eating disorder patients after their discharge from intensive treatment programs.

#### *Learning Objectives:*

- ▶ Discuss the high comorbidity between anorexia nervosa and OCD.
- ▶ Provide information on concern over mistakes and how it relates to anorexia nervosa and OCD across time.
- ▶ Discuss how interventions that target concern over mistakes may address symptoms of both AN and OCD.

### P3.4.6

#### Restrictive Eating and Nonsuicidal Self-injury in a Nonclinical Sample: Co-occurrence and Associations with Emotion Dysregulation and Interpersonal Problems

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Disordered eating frequently co-occurs with nonsuicidal self-injury (NSSI), and evidence suggests that their co-occurrence is associated with greater emotion dysregulation and interpersonal problems. Although it has been suggested that restrictive eating may be a particularly constant and painful behavior associated with acquired capability for escalating self-injury, little is known about the relationship between restrictive eating and NSSI, and the significance of their co-occurrence. The current study examined associations between restrictive eating, NSSI, and putative mechanisms of emotion regulation and interpersonal problems in a nonclinical sample. Hierarchical logistic regression analyses indicated that restrictive eating was associated with NSSI ( $B = 1.92, p < .001$ ), and that this association persisted even after accounting for other disordered eating behaviors (i.e., binge eating, purging) that have been consistently linked with NSSI. In addition, multivariate analyses of variance revealed that the co-occurrence of restrictive eating and NSSI was associated with greater difficulties accessing

and implementing effective, rather than impulsive, emotion regulation strategies when distressed, as well as generally elevated problems with interpersonal functioning ( $ps < .05$ ). Our findings highlight the seriousness of restrictive eating even within a nonclinical sample, as it is associated with heightened probability of NSSI and severity among those who engage in NSSI. Healthcare providers should regularly screen for NSSI among individuals with disordered eating, and particularly for those with restrictive eating. In addition, a specific focus on developing emotion regulation and interpersonal skills may enhance intervention efforts for co-occurring restrictive eating and NSSI. Future research clarifying the shared underlying mechanisms of restrictive eating and NSSI can have important treatment implications for individuals with these serious and destructive behaviors.

*Learning Objectives:*

- ▶ Explain the role of restrictive eating and other disordered eating behaviors in nonsuicidal self-injury (NSSI).
- ▶ Describe the significance of co-occurring restrictive eating and NSSI behaviors on specific emotion regulation strategies and interpersonal problems.
- ▶ Identify the potential clinical benefits to assessment of NSSI among individuals who engage in restrictive eating.

### **P3.5** **CHILDREN AND ADOLESCENTS**

Co-Chairs:

**Marian Tanofsky-Kraff, PhD, FAED and Rollyn M. Ornstein, MD**

#### **P3.5.1** **Unhealthy Weight Control Practice among Female High School Adolescents in Addis Ababa, Ethiopia**

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Unhealthy weight control practices are a serious concern with clinical implication as a potential risk factor for eating disorder. Despite recent epidemiological studies indicate a high prevalence of unhealthy weight control practices in developing countries, there is lack of such knowledge in Ethiopia. This is the first Ethiopian study aimed to determine the magnitude of unhealthy weight control practice among female high school adolescents in Addis Ababa, Ethiopia. We conducted a school based cross-sectional study among randomly selected 721

adolescents in private and government schools. We used a nine item question to measure engagement in unhealthy weight control practice. We also used an eight item body part satisfaction scale to measure body part dissatisfaction. The body part satisfaction scale was translated into the local Amharic language and tested for face validity. Logistic regression was used to calculate odds ratios for predictors of unhealthy weight control practice. The magnitude of engagement in unhealthy weight control practice at least once a week in the last one month was 232 (33.8%). The overall prevalence of purging and non-purging behavior was 10(1.5%) and 222(32.3%), respectively. Factors that were significantly associated were perceived overweight [AOR=2.88, 95%CI=1.08-7.69], being overweight [AOR =2.84; 95% CI =1.31-6.17], severe depression [AOR =1.98; 95% CI =1.17- 3.35], family influence to lose weight [AOR= 1.59; 95% CI= 1.03-2.45] and being wealthy [AOR=2.09; 95% CI= 1.24-3.52]. This study revealed a high prevalence rate of unhealthy weight control practices including both purging and non-purging behaviors among female adolescents in Addis Ababa, Ethiopia. Such findings imply that public health systems should pay attention to these behaviours and design prevention and intervention strategies.

*Learning Objectives:*

- ▶ Following the training participants will be able to understand the high prevalence of unhealthy weight control practice including both purging and non purging behavior in Addis Ababa, Ethiopia.
- ▶ Following the training participants will be able to identify the most commonly practiced unhealthy weight control methods, purging and non purging behaviors among female high school adolescents in Addis Ababa, Ethiopia.
- ▶ Following the training participants will be able to identify main predicting factors that are significantly associated with engagement in unhealthy weight control practice.

#### **P3.5.2** **Naturalistic Assessment of Negative Affect and Hunger Related to Overeating, Loss of Control Eating and Binge Eating in Overweight Youth**

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Previous research suggests that physiological (e.g., hunger) and psychological (e.g., negative affect) factors are related to binge eating, and that these might be

differentially related to aspects of a binge (loss of control vs. overeating). However, naturalistic research on the role of these factors in various eating behaviors is limited in pediatric overweight/obese samples without significant eating pathology. The purpose of this study was to examine antecedent and consequent negative affect and hunger related to dysregulated eating behaviors (overeating [OE], loss of control eating [LOCE], and binge eating [BE]) among overweight youth. Forty children (8-14 years) completed multiple daily ratings of negative affect, hunger, loss of control, and overeating during two weeks of ecological momentary assessment. Mixed linear models examined the trajectories of negative affect and hunger before and after each form of dysregulated eating. Negative affect increased before OE ( $p < .05$ ) and decreased after OE ( $p < .001$ ). There was no significant linear change in negative affect before LOCE episodes ( $p = .21$ ); however, negative affect decreased over time after the occurrence of LOCE ( $p < .05$ ). There were no significant linear changes in negative affect when looking at BE ( $ps > .15$ ). Hunger decreased before OE ( $p < .01$ ), LOCE ( $p < .001$ ), and BE ( $p < .001$ ) and increased after LOCE ( $p < .05$ ) and BE ( $p < .05$ ). Results suggest that changes in negative affect are related to OE among overweight children, regardless of the experience of LOC. This is consistent with previous EMA research in children, which has failed to find an association between affect and LOCE. Further, results suggest that dysregulated eating behaviors are not related to an increased physiological drive to eat due to hunger, similar to findings in overweight adults. Pediatric obesity interventions would benefit from teaching affect regulation skills surrounding eating episodes, even in the absence of loss of control or binge eating.

#### *Learning Objectives:*

- ▶ Describe the value of naturalistic research/ecological momentary assessment.
- ▶ Assess the role of negative affect and hunger in overeating, loss of control eating, and binge eating episodes.
- ▶ Consider how interventions for pediatric obesity could integrate affect regulation skills.

### P3.5.3

#### Family Treatment Apartments. Long Term Follow Up Of Family Treatment Apartments Compared with Child Psychiatric Inpatient Treatment

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The aim of the study was to investigate whether the long term prognosis differs from those who have been in Family Treatment Apartments (FTA) compared with those who only have been in more traditional inpatient treatment at a Child Psychiatric Clinic (CPC). The use of

family therapy when the patient is severely ill and in need of inpatient care, is not well studied. FTA was developed as an intensive family therapy at the Eating Disorders Unit in Lund to be an alternative to psychiatric inpatient treatment for the young patient with severe anorexia nervosa. All patients who had been in FTA between 1990 and 2009 were invited to participate in the follow-up. All diagnosed with anorexia nervosa who had been admitted to inpatient care at the CPC in Malmö during the same period were also invited. The follow-up consisted of a semi structured clinical interview, a SCID interview, 6 questionnaires and measurement of height and weight. 44 former patients who had been in FTA, and 25 former patients who had been in CPC were followed up after an average of 14,2 years after admission to treatment (15,4 years for the FTA group and 12,6 years for the CPC group;  $p = .021$ ). At follow-up 32 % had still an eating disorder, without any difference between the groups. We found no difference in eating disorder pathology between the two groups, as measured with EDEq and EDI-3. But we found a better result for the FTA group on general psychiatric and psychological measures. There was a larger proportion in the FTA group who had no psychiatric diagnosis compared to the CPC group (52,3% compared to 36,0%). According to Morgan Russell Scale, the FTA group had a better outcome on Average Outcome Score (9,9 compared to 8,6,  $p = .021$ ). On Global Psychological Maladjustment on the EDI-3, the FTA group had a better outcome (366,5 compared to 424,6,  $p = .001$ ), which they also had on SCL-90 (0,53 compared to 0,89,  $p = .002$ ). The FTA was more intensive, family-based and shorter than the CPC, which may make a difference for the outcome. Other factors that may affect the difference in outcome are that many patients had other inpatient treatments during the follow-up period and that the time from treatment to follow-up was longer for the FTA group.

#### *Learning Objectives:*

- ▶ Describe Family Treatment Apartment in the treatment of severe anorexia nervosa in the young patient in compared to the CPC ward.
- ▶ Analyse the effectiveness of Family Treatment Apartments in the treatment of adolescent anorexia nervosa compared with the CPC ward.
- ▶ Evaluate the long-term course of the former patients treated in FTA and the CPC ward, respectively.

### P3.5.4

#### Parental Deployment and Its Association with Disordered Eating Among Adolescent Military Dependents Seeking Prevention of Eating Disorders and Adult Obesity

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Studies investigating psychological functioning among military dependents are largely predicated on the assumption that parental deployment is associated with increased stress that leads to disordered eating. However, despite data suggesting military youth with disordered eating may present with more distress than their matched civilian counterparts, there has been no study investigating the links between parental deployment and disordered eating in adolescent military dependents. We, therefore, studied 109 adolescent (14.39±1.76y) military dependents (45% male; 44.95% Non-Hispanic White; BMIz = 2.00±.44) prior to entry into an obesity prevention trial. Participants were administered the Eating Disorder Examination Interview to assess loss of control (LOC) eating episodes in the past three months and disordered eating attitudes and behaviors (Restraint and Eating, Shape and Weight Concern). Parents reported on deployment history. Fifty-two percent of participants had experienced a parental deployment at least once. BMIz did not differ between youth who did and did not experience a parental deployment ( $p = 1.00$ ). Regression analyses accounting for BMIz revealed that having had a parent deployed was associated with more LOC eating episodes ( $R^2 = .09$ ,  $p = .02$ ) and greater Shape Concern ( $R^2 = .05$ ,  $p = .02$ ). No differences were observed for the Restraint or Eating and Weight Concern subscales ( $ps > .10$ ). Furthermore, neither length, total number of deployments, nor combat-exposure during deployment were significantly associated with child disordered eating behaviors or attitudes ( $ps > .06$ ). These preliminary data suggest that parental deployment may be associated with certain aspects of disordered eating among adolescent military dependents seeking prevention for eating disorders and adult obesity. Prospective data are needed to determine whether parental deployment impacts the natural course of disordered eating and response to intervention outcomes.

*Learning Objectives:*

- ▶ Understand how parental deployment impacts disordered eating.
- ▶ Recognize that adolescent military dependents may be at especially high risk for eating disorders.
- ▶ Elucidate how adolescent military dependents may differ from civilian adolescents in terms of risk for eating disorders.

### P3.5.5

#### The Influence of Child Obesity on Parental Attitudes about Eating and Body Image: A Vignette Study

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Parents are key stakeholders in children's health and can influence their child's eating behavior and body image. Previous research has found that parents' desire to encourage children's weight loss can manifest as restriction of the child's diet and more frequent comments on children's body and weight. Unfortunately, such practices are paradoxically associated with increased likelihood of unhealthy weight gain and disordered eating. The literature on parents' opinions about parenting related to weight and eating behaviors is limited. This study used an experimental vignette design to examine whether parents' perceptions of parent-child interactions around body image and eating were influenced by child weight. Parents (N=233, 27.5% fathers and 72.5% mothers) were randomly assigned to read one of six vignettes that varied child weight and tone of parent-child interactions, and subsequently provided opinions on body image, eating behavior, and weight-loss recommendations. When the vignette child had overweight, parents were more likely to believe that the parent should comment on her body ( $p < .05$ ), seek help for her about weight ( $p < .001$ ), and choose her restaurant food order ( $p < .001$ ). Parents were more likely to recommend weight-loss efforts that they could implement themselves rather than those requiring professional assistance ( $p < .05$ ). The tone of the parent-child interactions did not influence parents' opinions. This study represents one of the first experimental explorations of parents' opinions on weight and eating behaviors. Additionally, this study is unique in its examination of parents' opinions of parenting practices related to weight and eating, which are both sensitive and essential to improving body image and health of youth. The findings may inform prevention and treatment applications. Future research should study ways to help align parents' existing opinions about weight and eating with evidence-based health-promoting strategies.

*Learning Objectives:*

- ▶ Identify parents' opinions of body image and eating behaviors and how these vary by child weight.
- ▶ Describe potential parenting strategies related to weight that parents are inclined to encourage.
- ▶ Discuss merits of understanding parents' opinions in the context of treatment development and child health promotion.

## P3.5.6

## Development of the Youth Disordered Eating Screen: The YoDES

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Common precursors amongst those with eating and weight related disorders are the tendency to engage in disordered eating (DE) thoughts and practices. Early identification and intervention for individuals with weight preoccupation and DE improves overall outcomes and helps decrease the likelihood that an eating or weight related issue will develop, or that these conditions will endure and become chronic. The objective of the present study was to develop and validate an empirically-driven, concise screening tool (Ottawa Disordered Eating Screen for Youth; ODES-Y) that allows for early identification of DE practices in children and youth. An initial two-question screen was conceptualized by clinician-scientists from tertiary-care pediatric eating and weight related clinics, and corresponding questions from measures utilized in a separate longitudinal community-based study called Research on Eating and Adolescent Lifestyles (REAL study) were identified for validation purposes. The aim of the validation process was to utilize previously collected data to provide preliminary evidence of the discriminant validity, sensitivity and specificity of our screening tool to accurately detect DE in adolescents. The sample (n=3043) consisted of 1789 (58.8%) females and 1254 (41.2%) male youth with a mean age of 14.19 years (SD=1.61, range=11.08 to 20.75 years). The weighted sensitivity, specificity, positive predictive value and negative predictive value of the screen when contrasted against a positive finding on a well-validated self-report eating disorder diagnostic scale was 77.6%, 76.8%, 21.8 and 97.6 respectively, suggesting that the ODES-Y has clinical utility as a screen for adolescents with DE and EDs. These findings have important implications for primary health care settings and surveillance studies. Further research is required to best determine how the screen can be delivered to youth across various health care settings, in clinically sensitive pragmatic ways.

*Learning Objectives:*

- ▶ To learn of the few existing screening tools for eating disorders, and utility of these screeners.
- ▶ To gain experience with a 2-item screening tool to detect disordered eating practices in youth.
- ▶ To understand how and where best to apply such a screening tool.

FRIDAY, APRIL 20

11:15 AM - 12:45 PM

## EDUCATIONAL SESSION III

## SIG Panels

## SP3.1

**Incorporating Parents as Members of the Team in the Treatment of Children and Adolescents with Eating Disorders**

## Presented by:

Family Based Treatment and Child & Adolescent

Roxanne Rockwell, PhD<sup>1</sup>  
 Stephanie Jacobs, PhD<sup>2</sup>  
 Rebecka Peebles, MD<sup>3</sup>  
 Erin Reeves, MS, RD<sup>1</sup>  
 JD Ouellette, MS<sup>1</sup>  
 Jocelyn Lebow, PhD<sup>4</sup>  
 Mindy Soloman, PhD<sup>5</sup>

<sup>1</sup>University of California, San Diego, CA, USA

<sup>2</sup>Icahn School of Medicine at Mount Sinai, New York, NY, USA

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<sup>4</sup>Mayo Clinic, Rochester, MN, USA

<sup>5</sup>University of Colorado School of Medicine, Aurora, CO, USA

The Family Based Treatment (FBT) and Child and Adolescent Special Interest Groups' panel will discuss how incorporating parents as members of the treatment team is integral to effective treatment in young people with eating disorders. The fundamental assumption is that the patient has the best chance at recovery through the synthesis of parental and professional expertise in a variety of treatment modalities (e.g. Family Based Treatment, Dialectical Behavioral Therapy, Emotion-Focused Family Treatment, etc.). This panel will focus on how to incorporate parents as members of the team while acknowledging and respecting each of the multidisciplinary team members' areas of expertise (e.g. adolescent medicine physician, therapist, dietitian, parent/caregiver, etc.). Presenters will include the diverse perspectives of providers from a range of orientations and parents. The panel will begin with a brief overview of fundamental concepts that provide the foundation for incorporating parents/caregivers in collaborative communication alongside the treatment team. Provider and parent perspectives will be discussed in the context of what has been effective and ineffective in actual clinical experience. Threats to parental self-efficacy, and common misconceptions about treatment teams that include parents and caregivers will be addressed. Role plays and other interactive modalities will be used to illustrate the concepts to foster discussion with the audience.

*Learning Objectives:*

- ▶ Following the panel discussion and training, participants will be able to identify concrete ways to include parents as part of the multidisciplinary treatment team.
- ▶ Following the panel discussion and training, participants will be able to discuss what bolsters parent self-efficacy vs. what undermines parent self-efficacy.
- ▶ Following the panel discussion and training, participants will be able to synthesize varying clinical perspectives with parental expertise to maximize outcomes.

**SP3.2**

### Exploring Recovery through a Health at Every Size(R) and Fat Acceptance Lens: What We Can Learn from Recovered Professionals Who Identify as HAES(R)-Oriented and Fat Positive

**Presented by:**

Health at Every Size(R) and Recovery & Professionals

**Rachel Millner, PsyD, CEDS** <sup>1</sup>

**Erin Harrop, MSW, CPP** <sup>2</sup>

**Aaron Flores, RDN** <sup>3</sup>

**Carmen Cool, MA, LPC** <sup>4</sup>

**Mikalina Kirkpatrick, BS** <sup>5</sup>

<sup>1</sup>The Children's Hospital of Philadelphia, Philadelphia, PA, USA

<sup>2</sup>University of Washington School of Social Work, Seattle, WA, USA

<sup>3</sup>Balance Variety and Moderation RDN and Center for Discovery, Calabasas, CA, USA

<sup>4</sup>Boulder, CO, USA; <sup>5</sup>Portland, OR, USA

Diet culture, fat phobia, and weight bias negatively impact society at large, as well as those trying to recover from eating disorders (EDs). Specifically, weight bias has been linked with numerous social and economic consequences, in addition to deleterious health and psychological impacts, including disordered eating. Recovering ED clients frequently cite that cultural messages about eating, "health," and weight make recovery even more difficult. The Health at Every Size(HAES(R)) and fat acceptance movements provide an alternative paradigm to dominant cultural messages about food, weight, and health. HAES(R) and fat acceptance offer a different perspective than diet culture and question the value placed on thinness for achieving wellbeing. Additionally, these perspectives offer tools that increase resilience and help to achieve and maintain full recovery. As more professionals in the ED field speak openly about their own recovery processes, it is important to examine what helped and hindered those processes. This panel discussion is co-sponsored by the HAES(R) and Recovery Special Interest Groups and focuses on the role of HAES(R) and fat acceptance in the recovery process. We will explore how a HAES(R)-based approach can be helpful personally and professionally, and discuss the importance of having a HAES(R) and fat acceptance community. We will look

at the impact of internalized weight stigma, the path to body-acceptance, and explore why it is important for ED professionals to explicitly identify as HAES(R)-oriented and fat positive. We will also discuss the limits of these perspectives, and discuss how these paradigms could become more intersectional in their understanding of oppression and social justice. Additionally, we will discuss resources that were instrumental in panel member's recovery process and provide a HAES(R) and fat acceptance resource list for attendees. This panel will include time for each panel member to speak as well as time for questions and discussion.

*Learning Objectives:*

- ▶ Describe the primary components of Health at Every Size(R) and fat acceptance.
- ▶ Explain ways that HAES(R) and fat acceptance can be helpful to people trying to achieve full recovery from an eating disorder.
- ▶ Identify reasons why it's important for eating disorder professionals to identify as HAES(R) oriented and fat positive.



# EDUCATIONAL SESSION IV

In this session, attendees have **14 different options** to choose from: **7 Workshops**, **5 Paper Sessions**, and **2 SIG Panels**

**FRIDAY, APRIL 20**

**2:00 PM – 3:30 PM**

## EDUCATIONAL SESSION IV

### Workshop Session 4

#### W4.1

#### Dialectical Behavior Therapy Guided Self-Help for Binge Eating Disorder

**Jacqueline C. Carter, DPhil, FAED<sup>1</sup>**  
**Debra L. Safer, MD<sup>2</sup>**  
**Therese E. Kenny, MSc<sup>3</sup>**  
**Christopher W. Singleton, BA (Hons)<sup>1</sup>**

<sup>1</sup> Memorial University of Newfoundland,  
St. John's, Canada

<sup>2</sup> Stanford, Palo Alto, CA, USA

<sup>3</sup> University of Guelph, Guelph, Canada

Binge eating disorder (BED) was recently added to the Feeding and Eating Disorders section of the DSM-5 to describe individuals who experience recurrent binge eating in the absence of extreme compensatory behaviors and who suffer significant distress and impairment as a result. Dialectical Behavior Therapy (DBT), based on the affect regulation model of binge eating, is an evidence-based treatment approach for BED that is not widely available. Self-help approaches to DBT may be an effective means of disseminating this treatment more widely due to access-to-care barriers such as rural environments, lack of trained therapists, and cost. In this interactive workshop, we will begin with an introduction to DBT for BED and a brief review of the treatment research on DBT for BED (10 minutes). We will then describe the new DBT guided self-help (GSH) program for BED that we have recently developed and tested in a randomized controlled trial. This approach is based on a new DBT self-help manual for BED (Safer, Adler & Masson, in press) and investigated the use of secure videoconferencing to administer GSH sessions in rural areas. Detailed case examples will be presented including segments from videotaped DBT-GSH sessions with BED participants. Role-plays and experiential exercises will be used to demonstrate key DBT-GSH strategies as well as challenges that we have encountered (60 minutes). Preliminary results of our trial evaluating this approach will be presented (10 minutes). We will leave 15 minutes at the workshop's conclusion for questions and discussion.

#### Learning Objectives:

- ▶ To describe a new Dialectical Behaviour Therapy (DBT) guided self-help (GSH) program for binge eating disorder (BED).

- ▶ To demonstrate the implementation of DBT-GSH using case examples and video-taped sessions.
- ▶ To practice DBT-GSH strategies through role plays and experiential exercises.

#### W4.2

#### Developing Research-Practice Integration of Trauma/PTSD Focused Treatments in an Eating Disorders Program

**Douglas Bunnell, PhD, FAED, CEDS<sup>1</sup>**  
**Melissa Coffin, PsyD, CEDS<sup>1</sup>**  
**Timothy Brewerton, MD, FAED, DFAACAP, HCEDS<sup>2</sup>**

<sup>1</sup> Monte Nido & Affiliates, New York, NY, USA

<sup>2</sup> Medical University of South Carolina, Monte Nido and Affiliates, Charleston, SC, USA

There is evidence that PTSD and trauma reactions are critical perpetuating factors in ED. In a representative national sample, 90-100% of subjects with ED reported a history of trauma and a recent meta-analysis confirmed that child maltreatment is a significant risk factor. Clinicians are often ill-equipped to treat concurrent ED and PTSD and there are few reports of models for concurrent treatment in intensive ED treatment programs. This workshop will review the design and implementation of integrated trauma and ED treatment protocols in a large multi-site residential and partial hospital ED program. Having identified the need to shift from a sequential model that prioritized treatment of the ED prior to addressing trauma reactions, the new concurrent model required program wide training and development of consistent assessment methods and psychoeducational resources. Cognitive Processing Therapy (CPT) was identified as the best fit with the existing treatment protocols, which already target transdiagnostic factors such as emotional/experiential avoidance, core beliefs underlying the ED urges and behaviors, and cognitive distortions. The latter stage CPT modules on trust, intimacy and self-esteem also align with the program's focus on interpersonal capabilities as key components of recovery. The first 30 minutes of this workshop reviews the overlap of PTSD and ED and the basics of CPT. In the next 30 minutes, we will survey attendees on their comfort and familiarity with trauma-focused approaches then follow with a description of the challenges of introducing a highly manualized evidence based treatment into existing residential and partial hospital protocols. The final interactive section discusses specific case examples and reviews preliminary empirical data on changes in trauma reactivity and eating symptomatology before concluding with recommendations about training, supervision, and program evaluation of this model for concurrent treatment of PTSD and ED.

*Learning Objectives:*

- Describe the role of PTSD as a perpetuating factor in eating disorders.
- Describe three key psychoeducation teaching points to help patients understand the link between their eating disorder and trauma reactions.
- Design a process for integrating evidence based trauma treatment protocols into their existing treatment protocols for eating disorders.

**W4.3****When Diversity of Opinion Leads to Gridlock: Why the Eating Disorders World Struggles to Find a Common Voice**

**Laura Collins Lyster-Mensch, MS<sup>1</sup>**  
**Carolyn Costin, MA, Med, LMFT, CEDS, FAED<sup>2</sup>**  
**Stephanie Bauer, PhD<sup>3</sup>**  
**Eric van Furth, PhD, FAED<sup>4</sup>**  
**Carolyn Black Becker, PhD, FAED<sup>5</sup>**

<sup>1</sup>F.E.A.S.T., Warrenton, VA, USA

<sup>2</sup>Carolyn Costin Institute, Malibu, CA, USA

<sup>3</sup>University Hospital Heidelberg, Heidelberg, Germany

<sup>4</sup>Rivierduinen Eating Disorders Ursula, Leiden, Netherlands

<sup>5</sup>Trinity University, San Antonio, TX, USA

Eating disorders (EDs) exist in a prism of different disciplines, stakeholder perspectives, healthcare systems, and public perceptions. The Academy for Eating Disorders represents the largest international body to promote ED science and professionalism. AED members represent so many views and perspectives that it can be a struggle to form or maintain common positions. This situation is not unique to AED or to eating disorders, but this lack of consensus blocks outreach, collaboration, and engagement between otherwise allied organizations. Further, a lack of shared core understandings regarding ED etiology, treatment, and outcome also leads to silos of association and thought. For AED to show leadership, attract members, to achieve consensus, and speak with a shared voice we must improve communication. Factors contributing to lack of consensus include a desire to create a “big tent” aimed at welcoming all in the field, a history of distrust among stakeholder groups, as well as a desire to avoid conflict. Yet some consensus is needed so that AED can help eating disorder professionals and researchers gain credibility in their own professional environments for the purposes of policy and funding. A clear voice also is needed on the global stage as well to support individuals and their families in advocating for their own care. This panel will respectfully engage with one another and with the workshop participants to identify three core points of consensus as a start, and a demonstration of the opportunities. Open, civil, courageous dialogue will be facilitated and required.

*Learning Objectives:*

- Identify three points of consensus shared across the eating disorders professional community.

- Practice and model civil engagement on contentious issues.
- Demonstrate pathways to communicate these shared beliefs within the community.

**W4.4****The Interplay of Chronic Health Conditions and Eating Disorders: Identification and Treatment Implications**

**Deborah Glasofer, PhD<sup>1</sup>**  
**Karen Rosewater, MD<sup>2</sup>**  
**Laurel Mayer, MD, FAED<sup>1</sup>**  
**Matthew Shear, MD<sup>3</sup>**  
**Janet Schebendach, PhD/RD<sup>1</sup>**  
**Evelyn Attia, MD, FAED<sup>4</sup>**

<sup>1</sup> Columbia/New York State Psychiatric Institute, New York, NY, USA

<sup>2</sup> Adolescent Young Adult Medicine, New York, NY, USA

<sup>3</sup> NY Presbyterian/Weill Cornell Medical College, White Plains, NY, USA

<sup>4</sup> Columbia/NYState Psychiatric Institute/NY Presbyterian/Weill Cornell, New York, NY, USA

Eating disorders and somatic complaints often go hand in hand, and present unique challenges for the clinician. Significant medical illnesses may have unique features that can contribute to the development of, mask the symptoms of, or otherwise complicate the treatment of both the medical condition and the eating disorder. A treatment team can help distinguish medical illness from eating disorder or in the absence of such clarity, identify reasonable targets for behavior and cognitive change in treatment alongside medical monitoring. In this workshop, a multidisciplinary panel will present illustrative case material. We will discuss the interaction of medical conditions including diabetes, celiac disease, irritable bowel syndrome, food allergies, and gastroesophageal reflux disease with a range of feeding and eating disorders including anorexia nervosa, bulimia nervosa, ARFID, and rumination disorder. Identification of these conditions in adolescents and young adults, and the challenges in proper diagnosis, patient education and engagement in appropriately targeted treatment interventions, will be highlighted, with an emphasis on the ways in which our interventions may influence subsequent illness trajectory.

*Learning Objectives:*

- Identify examples of chronic health conditions that may co-occur with eating disorders.
- Identify the eating behaviors and somatic symptoms related to the presentation and treatment of chronic health conditions that may overlap with eating disordered behaviors and symptoms and complicate diagnosis and treatment.
- Think creatively about how to target eating disorder symptoms in the presence of these chronic health conditions.

**W4.5****Optimizing Voluntary Engagement in Eating-Disorder Treatment: Autonomy Support, Mindfulness and Compassion in Action****Howard Steiger, PhD, FAED<sup>1</sup>****Josie Geller, PhD, RPsych, FAED<sup>2</sup>**<sup>1</sup> Douglas Mental Health University Institute, Montreal, Canada<sup>2</sup> St. Paul's Hospital, Vancouver, Canada

Most schools of psychotherapy for eating disorders (EDs) include, as a cornerstone, a therapist stance that is non-coercive and collaborative--in which there is emphasis upon such things as: Accepting and acknowledging peoples' personal frame of reference; refraining from pressuring and controlling; informing and educating; and helping people become engaged in a way they can personally endorse. Not only is the position described compatible with most therapists' intuitions about what is "therapeutic", it is increasingly supported by empirical evidence. Paradoxically, in real-world clinical situations, we (ED clinicians) often drift, instead, towards directive or coercive interventions. This workshop treats various aspects of the paradox we have outlined: 1) Beliefs that lead us to feel obliged to force change, 2) Clinical situations that induce us to diverge from an optimally therapeutic stance, and 3) The empirical rationale for working from a non-coercive, autonomy supportive position. Workshop leaders will review core concepts from literatures on Motivational Enhancement, Self-Determination Theory, Compassion-Focused Therapy, and Mindfulness, as applied to ED treatment--with the goal being to provide therapists with techniques that help mobilize the intrinsic desire to change, in a freely chosen manner, in the people they treat. Various clinical vignettes will illustrate autonomy supportive interventions that are available in clinical situations that commonly occur in ED treatment (including refusal of weight gain, suicidality, medical instability, etc.). Workshop participants will be invited to bring examples from their own clinical practices to enrich a group discussion on facilitators and barriers to reliance upon autonomy supportive practices

*Learning Objectives:*

- ▶ Describe determinants of a collaborative stance and review factors that contribute to discrepancies between intentions and actions
- ▶ Learn strategies to overcome barriers to maintaining a collaborative stance as clinicians
- ▶ Understand empirical findings relating the concepts of autonomy support, motivational enhancement, self-compassion and mindfulness to voluntary engagement in eating-disorder treatment.

**W4.6****15 Years of the Australian and New Zealand Academy of Eating Disorders. Reflections on Successfully Mobilising the Australian and New Zealand Eating Disorder Community to Bringing Eating Disorders into the Public Consciousness****Sloane Madden, MBBS (Hons), PhD, FAED<sup>1</sup>****Phillipa Hay, PhD, FAED<sup>2</sup>****Anthea Fursland, PhD, FAED<sup>3</sup>****Chris Thornton, PhD<sup>4</sup>**<sup>1</sup> The Children's Hospital at Westmead, Sydney, Australia<sup>2</sup> Western Sydney University, Sydney, Australia<sup>3</sup> WAEDOCS, Perth, Australia<sup>4</sup> The Redleaf Practice, Sydney, Australia

With no budget and a large tin of instant coffee The Australian and New Zealand Academy of Eating Disorders (ANZAED) held its first academic meeting in 2003 in the lecture theatre of a Teaching Hospital in Western Sydney to a handful of curious medical and allied health professionals. In August 2017 ANZAED returned to Sydney to hold its 15th Conference to an Audience of over 450 eating disorder professionals, advocates, politicians, carers and consumers to discuss the key theme of Building Connections. This workshop involving four past presidents of ANZAED with discuss key strategies that have allowed the organisation to develop into a financially secure organisation with over 320 members with key partnerships with national carer and consumer advocacy groups, roles on national and state-based advisory bodies directing government health policies and the development of Australia's own eating disorder journal, the *Journal of Eating Disorders*. The workshop will spend the first 20 minutes discussing the Australian and New Zealand eating disorder environment and successful interventions in the development of year round professional development, helping to shape positive health policy, increasing public awareness and reducing stigma for this under served group. The workshop will encourage audience members to bring their experiences of their local eating disorder organisations and reflect on successes and struggles in advocating for professionals, carers and consumers. The workshop will break into smaller groups to discuss common struggles, discuss innovative solutions for eating disorder education and advocacy and look for synergies between organisations to continue to place eating disorders at the centre of the health policy debate.

*Learning Objectives:*

- ▶ Participants will learn about successful strategies to unite eating disorder professionals through the provision of professional developments and networking opportunities.
- ▶ Participants will learn about successfully partnering with professionals, carers and consumers, politicians and advocates to raise public awareness and reduce stigma in eating disorders.
- ▶ Participants will learn about successful strategies to influence health policy in their local settings.

**W4.7****Outpatient Medical Considerations in Anorexia Nervosa, Bulimia Nervosa, and Binge Eating Disorder: Best Practices for the Measurable, the Unmeasurable, and All Points in Between****Jennifer Gaudiani, MD, CEDS, FAED**

Gaudiani Clinic, Denver, CO, USA

Patients with eating disorders in the outpatient setting, of all genders, all ages, and all shapes and sizes, suffer from a wide variety of medical issues. Some occur directly due to their eating disorder, and some present as other unrelated, primary diagnoses that nonetheless are unified by the presence of a very strong mind-body connection. Many patients with eating disorders are viewed with bewilderment or suspicion by the primary care system, where lack of awareness of eating disorder medicine by providers is a barrier that is reinforced by the somatic, often unmeasurable nature of symptoms patients experience. However, excellent outpatient care of patients with eating disorders must include thoughtful, evidence-based, and non-assumptive diagnosis and treatment. In this case-based workshop, medical issues that occur in outpatients with eating disorders will be reviewed in a way that will allow attendees to become better advocates and clinicians for these patients. Furthermore, the better we focus on objective evidence of body suffering in those with eating disorders, the more convincingly we can persuade patients that they aren't "fine," and indeed deserve treatment and a respite from their eating disorder behaviors. The full spectrum of eating disorders will be covered in this workshop, forming a representative body of knowledge needed by outpatient practitioners. Cases will include patients with binge eating disorder, those with atypical anorexia nervosa who restrict and exercise just as much as others but remain in larger bodies, those with bulimia nervosa, athletes, as well as those with orthorexia. Topics include classic medical problems that must be well diagnosed, treated, and communicated, such as vital sign changes, gastroparesis, and relative energy deficiency in sport (RED-S). In addition, cases will include the less measurable but equally pressing subjects of intractable nausea and vomiting, postural orthostatic tachycardia syndrome, mast cell activation, irritable bowel syndrome, and pelvic floor dyssynergia. The medical problems of those in larger bodies will be further placed in the context of weight stigma and social justice themes.

*Learning Objectives:*

- 1 Identify the symptoms of both measurable and unmeasurable medical issues that pertain to outpatients with eating disorders..
- 2 Feel confident recognizing appropriate workup and management of these issues.
- 3 Communicate findings and contextualize medical issues effectively to optimize the recovery process, whether on an ongoing basis as an outpatient, or in referral to a higher level of care.

**FRIDAY, APRIL 20****2:00 PM - 3:30 PM****EDUCATIONAL SESSION IV****Paper Session 4****P4.1****STIGMA***Co-Chairs***Bryn Austin, ScD, FAED and Gail McVey, PhD, CPsych, FAED****P4.1.1****The SWAG Stereotype: Disparities in Eating Disorder Diagnosis and Treatment among College Students****Kendrin Sonnevile, ScD, RD<sup>1</sup>  
Sarah Lipson, PhD<sup>2</sup>**<sup>1</sup>University of Michigan School of Public Health, Ann Arbor, MI, USA<sup>2</sup>University of Michigan, Ann Arbor, MI, USA

Eating disorders have historically been thought to afflict "skinny, white, affluent girls" (the SWAG stereotype). As such, higher-weight individuals, racial/ethnic minorities, those from socioeconomically disadvantaged backgrounds, and males may not be properly screened for eating disorders and/or may not be referred to treatment. The purpose of this study was to examine variations in prevalence of eating disorder diagnosis and past-year eating disorder treatment according to weight status, race/ethnicity, socioeconomic status, and gender. Among undergraduate and graduate students with symptoms of a diagnosable eating disorder participating in the Healthy Bodies Study (N=3,563), we used multivariable logistic regression models adjusting for age and sexual orientation to estimate the odds of diagnosis and past-year treatment. Among students with symptoms of a diagnosable eating disorder, 2% were underweight, 80% were white, 19% were affluent, and 74% were female. Weight status was a significant predictor of both diagnosis and past-year treatment. Compared to their underweight peers (body mass index <18.5), individuals categorized as overweight (body mass index 25.0-29.9) were significantly less likely to be diagnosed (OR=0.22, 95% CI=0.12, 0.41) and to receive treatment (OR=0.19, 95% CI=0.10, 0.35). Students of color were less likely than their white peers to be diagnosed (OR=0.61, 95% CI=0.40, 0.93) and treated (OR=0.60, 95% CI=0.40, 0.90) for their eating disorder symptoms, and students from non-affluent backgrounds were less likely to receive treatment (OR=0.55, 95% CI=0.40, 0.77). Males were less likely than females to be diagnosed (OR=0.12, 95%

CI=0.06, 0.23) and treated (OR=0.43, 95% CI=0.29, 0.64) for their eating disorder symptoms. At a population-level, the unmet need for eating disorder treatment appears disproportionately affect certain groups. Stereotypes about who develops eating disorders could contribute to disparities in eating disorder treatment.

#### Learning Objectives:

- 1 Describe the prevalence of eating disorder diagnosis among college students with symptoms of an eating disorder according to weight status, race/ethnicity, socioeconomic status, and gender.
- 1 Describe the prevalence of past-year eating disorder treatment among college students with symptoms of an eating disorder according to weight status, race/ethnicity, socioeconomic status, and gender.
- 1 Discuss how stereotypes about who develops eating disorders could contribute to disparities in eating disorder treatment.

### P4.1.2 Gender Differences in Weight Bias Attitudes in Preschool Children

**Luedke Madeline, HS diploma<sup>1</sup>**

**Madeline Wick, BS<sup>2</sup>**

**Jennifer Harriger, PhD<sup>1</sup>**

<sup>1</sup>Pepperdine University, Malibu, CA, USA

<sup>2</sup>Florida State University, Tallahassee, FL, USA

While research consistently demonstrates that weight bias is present in children as young as 3-years-old, the literature examining gender differences is inconsistent and inconclusive. The purpose of the current study was to further explore gender differences in weight bias attitudes in a sample of children between the ages of three and five. Participants included 222 children (127 males and 95 females; Mage = 3.82) recruited from preschools in Southern California who completed two separate measures of weight bias (an adjective attribution task and the selection of a best friend task). Collectively, participants demonstrated a preference for thin and average-sized targets and an aversion to fat targets. Significant gender differences emerged for the adjective attribution task ( $F(2, 219) = 3.97, p = .02$ ). Males attributed significantly more positive adjectives towards the overweight target ( $M = 1.46$ ) compared to females ( $M = .99$ ), ( $t(215) = 6.14, p = .014$ ), while females attributed more positive adjectives towards the thin target ( $M = 2.78$ ) compared to males ( $M = 2.27$ ), ( $t(215) = 3.17, p = .07$ ). Additionally, females were significantly more likely to select a thin target as their best friend compared to an average sized target ( $2(1, N = 176) = 3.97, p < .05$ ) and a fat target ( $2(1, N = 145) = 9.0, p < .01$ ) compared to males. The results demonstrate that, while weight bias is prevalent in mixed gender samples of preschool-age

children, pro-thin and anti-fat attitudes are stronger in girls. Future preventative strategies and interventions will be discussed.

#### Learning Objectives:

- 1 Describe common weight bias attitudes found in preschool children.
- 1 Discuss gender differences found in weight bias attitudes in the current study.
- 1 Explore future directions in the prevention of weight bias in young children.

### P4.1.3 What Prevents Young People from Seeking Help? Barriers Towards Help-seeking across at Risk and Clinical samples

**Kathina Ali, BSc, MSc Psychology<sup>1</sup>**

**Daniel Fassnacht, PhD<sup>1</sup>**

**Louise Farrer, PhD<sup>1</sup>**

**Elizabeth Rieger, PhD<sup>1</sup>**

**Markus Moessner, PhD<sup>2</sup>**

**Kathleen Griffiths, PhD<sup>1</sup>**

**Stephanie Bauer, PhD<sup>2</sup>**

<sup>1</sup>The Australian National University, Canberra, Australia

<sup>2</sup>University Hospital Heidelberg, Centre for Psychotherapy Research, Heidelberg, Germany

Current evidence suggests that a minority of individuals with eating disorders seek and receive professional help. Several potential factors have been identified to impede help-seeking, including stigma and shame, denial of the problem, low motivation to change, negative attitudes towards seeking help, lack of knowledge about help resources, and practical barriers (e.g., cost). However, there is a paucity of quantitative research examining barriers towards seeking help for eating disorders, especially among young people across at risk and clinical samples. Data was collected using an online survey among 18-25 year-old individuals in Australia (ongoing recruitment). Overall, 315 participants at risk or with an eating disorder completed measures of disordered eating behaviours and attitudes, help-seeking barriers, intentions, and behaviour. The majority of participants reported denial, the belief that they should solve their own problem (self-sufficiency), a fear of losing control over the illness and not wanting others to worry about their problems as the greatest barriers towards seeking help. After controlling for eating disorder symptomatology and attitudes towards professional help seeking, stigma and shame, self-sufficiency, the fear of losing control over the illness, and not wanting others to worry uniquely predicted low help seeking from a professional source. The findings highlight the importance to educate young people about

the severity of the illness and emphasizing the need to seek professional help for their problems. Further clinical implications include increasing the awareness of the barriers individuals endorse before seeking professional help.

*Learning Objectives:*

- ▶ Understanding barriers towards seeking help for eating disorders.
- ▶ Describing specific barriers across different eating disorder symptomatology groups and those at risk.
- ▶ Discussing clinical implications of the barriers individuals endorse when seeking treatment.

**P4.1.4**

**Managing Eating Disorder Stigma in the Workplace: A New Theoretical Model**

**Jaclyn Siegel, BA, MS**

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Stigma theory posits that individuals with perceivably deviant characteristics may fall victim to pejorative attitudes and actions by community members. To avoid potential scrutiny, many with invisible, stigmatized characteristics, such as mental illnesses, choose to hide their conditions, though nondisclosure does not necessarily protect them from stigma, and concealment is associated with many negative psychological consequences. Conversely, many who decide to “come out” reap the benefits of authenticity, legal protection, and relief from hypervigilant self-monitoring. Unlike most psychological disorders, eating disorders (EDs) often have both visible and invisible components, so it can be difficult for those with EDs to hide their conditions. Despite the prevalence of EDs in adult populations and the large body of literature suggesting the stigmatization of individuals with EDs, the literature has largely been silent on the ways in which those with EDs are stigmatized in the workplace. The present study sought to fill these gaps with rich, qualitative data. 88 adults with work experience who self-identified as having an eating disorder (70 female, 18 male) were recruited via social media to engage in 45-90 minute semi-structured interviews discussing the ways in which their EDs interacted and interfered with their careers. Participant’s perceived high levels of stigma in the workplace regardless of whether or not the disorder was disclosed and spoke to the ways in which stigma influenced their personal and professional lives. Rooted in grounded theory, this study forms an initial framework for the examination of EDs in the workplace. The data analysis led to the delineation of a theoretical model, which explains the relationships between key study constructs including individual demographic factors which enhanced the likelihood of experiencing stigma, stigma-exacerbating factors within organizational culture,

perceived and felt stigma in the workplace, stigma management techniques leveraged in order to navigate work life, and personal and organizational outcomes of different stigma-management techniques. Theoretical and practical implications for individuals with EDs and organizations are discussed.

*Learning Objectives:*

- ▶ Identify potential triggers for individuals with eating disorders at work.
- ▶ Describe the personal and organizational toll that active eating disorders take on workplace life.
- ▶ Assist individuals with eating disorders in maximizing their ability to succeed in the workplace through legal protection and effective stigma management strategies.

**P4.1.5**

**Are There Risks to “Over-Biologizing” Eating Disorders? A Comparative Analysis of Different Psychoeducational Messages on Self-Stigma and Attitudes toward Treatment**

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In an effort to reduce self-stigma among eating disorder (ED) sufferers, there has been noticeably increased promotion of EDs as “biologically-based illnesses.” However, there has been little study of the effect of these biologically-driven messages or other credible alternatives. The purpose of the present research was to compare three different forms of ED psychoeducation on individuals’ attitudes regarding self-stigma of EDs and seeking treatment. An analogue sample of participants (N = 216) endorsing clinically-elevated ED symptoms was randomly assigned to receive one of three types of psychoeducation from an experimenter on the development and maintenance of EDs: (a) a biological condition (n = 71) emphasizing genetics and brain chemistry, (b) a malleable biology condition (n = 72) emphasizing the influence of environmental factors on the expression of biology, and (c) a cognitive-behavioral condition (n = 73) emphasizing maladaptive patterns of thinking and behavior. All participants then completed outcome measures assessing self-blame for ED symptoms, prognostic expectations, and self-efficacy in overcoming ED symptoms. Finally, all participants were given an identical explanation of cognitive-behavioral therapy (CBT) for EDs before completing measures of perceived credibility and efficacy of CBT. Results showed that the three groups did not differ on self-blame. As hypothesized, psychoeducation emphasizing either the malleability of biology or cognitive-behavioral factors produced higher prognostic optimism and self-efficacy in overcoming symptoms than biological psychoeducation ( $p < .01$ ). Perceived credibility and efficacy of CBT was the highest among participants who received

psychoeducation emphasizing cognitive-behavioral factors ( $p < .001$ ). Given the increased dissemination of biological models of EDs, these findings raise caution about the utility of these biological models and suggest that alternative, viable models may yield better effects on several key treatment-relevant variables in the context of CBT.

*Learning Objectives:*

- ▶ Describe several self-stigmatizing attitudes that are frequently endorsed by individuals with eating disorders, including that one is to blame for his/her symptoms and is unlikely to overcome the eating disorder (i.e., poor prognostic expectancy).
- ▶ Recognize the recent increased dissemination of biologically-driven etiological models of eating disorders with the aim of reducing self-stigmatizing attitudes amongst individuals with eating disorders.
- ▶ Explain several of the documented drawbacks to overemphasis on biology in providing ED-oriented psychoeducation and how two alternative, viable psychoeducational approaches are helpful in minimizing these drawbacks.

#### P4.1.6 Eating Disorder Myths and Their Influence on Stigma

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Stigma towards eating disorders is widespread and often negative attitudes are greater towards individuals with eating disorders compared to other mental health conditions. While increased eating disorder literacy has the potential to mitigate stigma, deeply rooted false beliefs (e.g., myths about the etiology of eating disorders, their treatment, and prospects for recovery) might exacerbate stigma which consequently impacts help-seeking. The current study aimed to investigate the relationships between stigma, eating disorder literacy and myths among young people in Australia with and without eating disorder symptomatology. A sample of 320 participants (recruitment ongoing) completed self-report measures of eating disorder symptomatology, stigma towards individuals with eating disorders, literacy and false beliefs about eating disorders. Individuals without eating disorder symptomatology expressed both significantly greater stigmatizing attitudes towards as well as myths about

eating disorders. However, eating disorder literacy did not significantly differ between groups. The relationship between eating disorder symptomatology and stigma was mediated by eating disorders myths but not literacy. No moderating effects for gender were found for the relationships between eating disorder symptomatology, myths and stigma. Results indicate an urgent need to reduce stigma in the community by further increasing efforts to tackle eating disorder myths that are commonly held in the broader population.

*Learning Objectives:*

- ▶ Describing eating disorder myths.
- ▶ Understanding the relationship between eating disorder myths and literacy.
- ▶ Discussing the relationship between eating disorder myths and stigma.

### P4.2 TREATMENT OF EATING DISORDERS I (CHILD AND ADOLESCENT)

*Co-Chairs*

**Richard Kreipe, MD and Wendy Spettigue, MD, FRCPC**

#### P4.2.1 From “world-class” to “total nightmare”: A Warts-and-All Look at Parent and Adolescent Experience of Family-based Treatment for Anorexia Nervosa

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The introduction of family-based treatment (FBT) for adolescent anorexia nervosa (AN) at Melbourne Royal Children’s Hospital has resulted in improved patient outcomes and lower hospital admissions. However, not all adolescents recover, and even when treatment is successful, the process of FBT can be extremely stressful for many families. Examining the consumer experience can help identify service strengths and weaknesses that can be targeted to improve engagement in treatment and ultimately patient outcomes. We therefore invited all parents and adolescents who participated in FBT at our service in 2013-2015 to complete a survey regarding their experience of care. Of the 144 parents and 85

adolescents who participated, the majority (89% parents, 72% adolescents) reported high levels of satisfaction with the overall program. Parents particularly valued the expertise of a specialist multidisciplinary team and good communication with and within the team. Some parents felt there was a lack of support in several areas (e.g., managing parent and adolescent distress). Parents who reported their child had not recovered, had poorer experience of care; although overall satisfaction remained high regardless of clinical outcome. Adolescents generally reported lower satisfaction compared to the parent sample. Areas of particular concern for adolescents were in regard to communication, managing distress, and discharge planning. Adolescents who reported being more satisfied with their experience of care had significantly better clinical outcomes at the end of FBT, as indicated by lower Eating Disorder Examination (EDE) score ( $p = .002$ ) and greater likelihood of remission (i.e.,  $\geq 95\%$  mBMI & EDE within 1SD of norms;  $p = .044$ ). Weight at end of FBT was not significantly related to adolescents' overall experience of care ( $p = .061$ ). Overall, the study demonstrated high levels of satisfaction, but also revealed several areas for improvement. While AN and its treatment will always be a stressful and challenging time for families, the findings of studies such as this are integral to developing programs which provide the most supportive environment possible.

*Learning Objectives:*

- 】 Describe the importance of consumer perspectives in service delivery.
- 】 Evaluate differences and similarities in adolescent and parent experiences of care in family-based treatment for anorexia.
- 】 Consider how clinical outcomes are related (or not) to positive and negative experience of treatment.

#### P4.2.2

### A Systematic Review of Medication Efficacy for Children and Adolescents with Eating Disorders

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Psychotropic medications are often used for children and adolescents with eating disorders in clinical practice without sufficient evidence to guide treatment decisions. The goal of the current study was to systematically review the literature pertaining to the efficacy of

psychotropic medication for this population. The following databases were searched up until 2017 using the search terms "eating disorders" and "SSRIs" or "SNRIs" or "antipsychotics" or "mood stabilizers": psycinfo, embase, medline, cinahl, Cochrane central and Cochrane SR. Inclusion criteria were: 1) meta-analyses, systematic reviews, randomized controlled trials, open trials, case series, and case reports, 2) involving children and adolescents (under age 18 years) with eating disorders, 3) focusing on psychotropic medications, 4) reporting on patient outcomes (weight, binge/purge frequency, psychological symptoms). Two reviewers agreed upon each article for inclusion with a third resolving disputes. The following number of articles were reviewed: SSRIs 866, SNRIs 176, Antipsychotics 195, and mood stabilizers 380. With respect to articles pertaining to SSRIs, there were 14 studies included (four open trials, ten case reports). Regarding articles pertaining to antipsychotics, there were 25 studies included (two RCTs, four open trials, 19 case reports). Regarding mood stabilizers five case reports were found. There were no studies pertaining to SNRIs. Only one prior systematic review focused on medication in this population could be located. The results of these studies indicate that olanzapine is generally effective for children and adolescents with Anorexia Nervosa in terms of weight gain and improvement in psychological symptoms. The evidence base for SSRIs, is weaker, with some studies reporting improvements in Bulimia Nervosa and Avoidant/Restrictive Food Intake Disorder. Evidence for the efficacy of other psychotropic medications in this population is extremely limited.

*Learning Objectives:*

- 】 Discuss the available evidence for the use of antipsychotics in children and adolescents with eating disorders.
- 】 Discuss the available evidence for the use of SSRIs in children and adolescents with eating disorders.
- 】 Describe the evidence base for other psychotropic medications in the treatment of children and adolescents with eating disorders including mood stabilizers, and SNRIs.

#### P4.2.3

### The Study of Refeeding to Optimize iNpatient Gains (StRONG) Protocol: A Multi-Center Randomized Controlled Trial of Refeeding in Anorexia Nervosa

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The standard of care for anorexia nervosa (AN) inpatient refeeding, lower calorie refeeding (LCR), is associated with slow weight gain and prolonged hospital stay. Limited studies suggest that higher calorie refeeding (HCR) may improve outcomes without increased risk of refeeding syndrome. The purpose of Study of Refeeding to Optimize iNpatient Gains (StRONG) is to compare LCR and HCR in a large randomized controlled trial (RCT) (ClinicalTrials.gov Identifier NCT02488109). Participants (N=120) are recruited upon admission to the inpatient eating disorders programs at University of California San Francisco and Stanford University. Inclusion criteria are ages 12-24, AN or atypical AN, and medical instability. Patients < 60% median BMI are excluded. LCR begins with 1400 kcal/d and increases by 200 kcal every other day; HCR begins with 2000 kcal/d and increases by 200 kcal per day through meals only. Dietary intake, weight, vital signs and serum electrolytes are measured daily in hospital, with follow up at 10 days, 1, 3, 6, and 12 mo. Main outcomes: 1) Efficacy: resolution of vital signs and clinical remission at 12 mo. [weight > 95% median BMI and Eating Disorder Examination Questionnaire score within 1 SD of community norms]; 2) Safety: hypokalemia, hypophosphatemia, and hypomagnesemia; and 3) Cost Effectiveness: direct and indirect costs over 12 mo. per patient recovered, using hospital billing data and a novel Health Care Utilization & Missed School survey. Primary data analysis will be intention-to-treat (ITT) comparing the log time and proportion in clinical remission with generalized linear mixed effect models, accounting for clustering by site and subject. This is the first RCT in the U.S. and the largest internationally to compare refeeding approaches in AN. If equally efficacious and safe, HCR may be an alternative to LCR in this patient population. Findings from this RCT will contribute to future evidenced-based refeeding guidelines.

#### Learning Objectives:

- ▶ Provide the rationale for comparing refeeding approaches in patients with AN.
- ▶ Describe the methods of this RCT.
- ▶ Discuss the potential impact of the evidence provided by this study on current approaches to refeeding.

#### P4.2.4

### The role of the primary care provider in the management of paediatric eating disorders: A scoping review

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*Background:* Children and youth with eating disorders are often managed in pediatric tertiary care centers by specialized inter-disciplinary teams. Increased primary care involvement in eating disorder management may be preferred due to better access and resource availability, cost-related concerns, and continuity of care. The role of primary care in pediatric eating disorder management remains unclear.

*Objective:* To comprehensively assess and synthesize the literature on effective primary care interventions and the role of the primary care provider (PCP) in the management of eating disorders affecting children and youth.

*Methods:* Sources were identified by entering search terms in 10 databases: CINAHL, CMA Infobase, Cochrane, Embase, OVID Medline, National Guideline Clearing House, Proquest Dissertations & Theses, Psych Info, and Web of Science. The search was not limited by geography or year. Eligible sources were English publications that focused on interventions and management of eating disorders in children and youth (<24 years) by PCPs or in primary care settings.

*Results:* A total of 5,521 unique citations were identified, yielding 65 sources included in our review, spanning the years 1980-2015. The sources fell into two main categories: (1) primary research studies (n=2) and (2) literature reviews with general recommendations for PCPs (n=63). Primary studies outlined potential opportunities for primary care interventions such as initiating family-based therapy, conducting modified cognitive behavioural therapy, and providing guided self-help. Review articles revealed a number of potential roles for the PCP, including education, assessing the need for hospitalization, weight restoration, health maintenance and follow up, monitoring and managing medical complications, and making referrals and coordinating a multi-disciplinary team.

*Discussion:* There are multiple approaches for PCP involvement in the care of children and youth with eating

disorders, however, there is limited evidence to guide effective primary care treatment interventions, despite PCPs being ideally situated to provide high-quality, continuous, family-centered care. Future research is needed on developing and evaluating interventions to improve the management of eating disorders in primary care settings.

*Keywords:* scoping review, children and adolescents, paediatric, eating disorders

#### P4.2.5 Using Bivariate Latent Basis Growth Curve Analysis to Better Understand Treatment Outcome in Youth with Anorexia Nervosa

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This study explored the relation between eating-related obsessionality and weight restoration utilizing bivariate latent basis growth curve modeling. Eating-related obsessionality is a moderator of treatment outcome for adolescents with anorexia nervosa (AN). This study used secondary data analysis to examine the degree to which the rate of change in eating-related obsessionality was associated with the rate of change in weight over time in Family-Based Treatment (FBT) and individual adolescent focused therapy (AFT) for AN. Data were drawn from a two-site randomized controlled trial that compared FBT and AFT for AN. Bivariate latent basis growth curves were used to examine the differences of the relations between trajectories of body weight and symptoms associated with eating and weight obsessionality. This type of analysis can be used to estimate between-person differences in within-person change. It may be particularly useful for analysis of variables which may impact treatment outcome, because it allows researchers to estimate trajectories of change in multiple variables over time, and to assess how these trajectories are related to each other. In FBT, the slope of eating-related obsessionality scores and the slope of weight were significantly (negatively) correlated. This finding indicates that a decrease in overall eating-related obsessionality is significantly associated with an increase in weight for individuals who received FBT. However, there was no relation between change in obsessionality scores and change in weight in AFT. Results suggest that FBT has a specific impact on both weight gain and OCD behavior that is distinct from AFT. Given the significant association between increase in weight gain and decrease in eating related obsessionality, it may be beneficial to explore additional targeted interventions to decrease ritualistic behaviors in treatment of youth with AN.

*Learning Objectives:*

- ▶ Recognize the utility of using bivariate latent basis growth curve modeling as an analytic tool for variables which may impact eating disorder treatment outcome.
- ▶ Examine how changes in obsessional thoughts and ritualized behaviors regarding weight and food are associated with changes in weight gain over time in two treatments for anorexia nervosa.
- ▶ Describe the potential benefits of exploring and evaluating targeted interventions to decrease ritualistic behaviors in treatment of youth with anorexia nervosa.

#### P4.2.6 Cost-effectiveness of Models of Care for Young People with Eating Disorders (CostED)

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The purpose of this study was to evaluate the cost, effectiveness and cost-effectiveness of generic and specialist community-based models of service provision for child and adolescent anorexia nervosa (AN). The study had a naturalistic surveillance design, which used the Child and Adolescent Psychiatric Surveillance System (CAPSS) to identify all new community-based incident cases of AN in young people aged 8-17 in the United Kingdom (UK) and the Republic of Ireland (RoI) over an 8-month period from 1st February 2015 to end Sept 2015. Data were collected from clinicians who reported new cases of AN and completed brief questionnaires at baseline, to assess case eligibility, and after 6 and 12 months. The data was used to: 1) classify the model of community-based care provided for each case identified at baseline and map models of care across the British Isles; 2) calculate the relative cost of all incident cases of child and adolescent AN in the UK and RoI and determine the cost, effectiveness and cost-effectiveness of different models of care provision at 6-month and 12-month follow-up; and 3) explore the impact on cost and cost-effectiveness of potential changes to the provision of specialist services in the UK and RoI. We received 997

positive case notifications over the 8-month surveillance period. After exclusions (due to reporting errors, clinician withdrawals, clinicians failing to return baseline questionnaires to assess case eligibility, cases failing to meet inclusion criteria, and duplicate notifications), 307 incident cases of anorexia nervosa were included in the analysis. Data analysis is ongoing.

*Learning Objectives:*

- ▶ Describe the distinction between generic and specialist child and adolescent mental health services for anorexia nervosa.
- ▶ Assess the comparative value of generic versus specialist child and adolescent mental health services for anorexia nervosa.
- ▶ Explain the purpose of economic evaluation of health services.

### P4.3 DIAGNOSIS, CLASSIFICATION, AND MEASUREMENT

*Co-Chairs*

**Carol B. Peterson, PhD, FAED and Ross D. Crosby, PhD, FAED**

#### P4.3.1 A Comparative Network Analysis of Eating Psychopathology and Co-occurring Depression and Anxiety Symptoms before and after Treatment

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Network analysis is an emerging approach in the study of psychopathology, yet few applications have been seen in eating disorders (EDs). Furthermore, no studies

have examined changes in ED network structures after interventions. Therefore the purpose of the present study was to examine the network structures of ED and co-occurring depression and anxiety symptoms before and after treatment for EDs. Participants were patients from residential or partial hospital ED treatment programs (N=446) who completed assessments upon admission and discharge. Weighted undirected admission and discharge networks were constructed using items from the Eating Disorders Examination-Questionnaire (EDE-Q), Quick Inventory of Depressive Symptomatology (QIDS), and State-Trait Anxiety Inventory (STAI). Results identified ED symptoms of central importance, which included desire to lose weight, guilt about eating, shape overvaluation, and wanting an empty stomach. Restlessness, self-esteem, lack of energy, and decision-making bridged ED to depression and anxiety symptoms. Comparisons between admission and discharge networks indicated the global network strength and importance of symptoms did not change significantly, though symptom severity decreased. In addition, participants with denser networks upon admission evidenced less change in ED symptomatology during treatment. Overall, findings suggest that symptoms related to shape and weight concerns and guilt represent potent targets of ED interventions, while physical symptoms, self-esteem, and decision-making are links that may underlie comorbidities in EDs. Results provided some support for the predictive validity of network approaches, in that admission networks conveyed prognostic information. However, the lack of correspondence between symptom reduction and change in network structure during treatment suggests future research is needed to examine network dynamics in the context of intervention and relapse prevention.

*Learning Objectives:*

- ▶ Understand the principles of network theory and analysis and the relevance of this approach in EDs.
- ▶ Using a network approach, describe centrally important symptoms of in a transdiagnostic ED sample and the ED symptoms that are most directly linked to co-occurring depression and anxiety symptoms.
- ▶ Understand how network structures convey prognostic value in treatment, and consider future research directions that will enhance the utility and understanding of network dynamics in EDs.

#### P4.3.2 Adapting the Eating Disorder Examination for Parents as Symptom Informants: Psychometric Properties and Influence on Diagnosis

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There are several challenges to case identification of anorexia nervosa (AN) in youth, including increased denial and minimization of core symptoms relative to adult counterparts. Developmental considerations highlight the need for additional, adult informants in diagnosing restrictive eating disorder (ED) pathology in children and adolescents. This two-part study examined case identification methods in youth with clinically significant restrictive ED symptoms, with a focus on the impact of including parental report using the Parent Eating Disorder Examination (PEDE), an adaption of the EDE developed to incorporate caregiver perspectives in ED diagnosis. First, psychometric properties of the PEDE were established in a multisite sample of 522 youth (89.7% female) with restrictive ED symptoms (age 12-18). There were significant medium-sized positive correlations between the corresponding PEDE and Eating Disorder Examination (EDE) subscales. The internal consistencies of the four original PEDE subscales were on par with established ranges for the EDE in adult samples ( $\alpha = .44$  to  $.85$ ). However, exploratory factor analysis determined a three-factor model to be a better fit to the PEDE data. Second, a subsample of youth with high-risk AN-spectrum presentations ( $N = 59$ ), who had never met full diagnostic criteria based on traditional diagnostic methods, were used to investigate the impact of informants (PEDE vs EDE) and newer, more developmentally sensitive AN criteria (DSM-5 vs DSM-IV-TR) on reducing diagnostic ambiguity in this vulnerable group. There was a significant increase in the proportion of cases identified by DSM-5 criteria based on self-report ( $p = .008$ ), with the largest proportion of cases meeting DSM-5 criteria for AN when using parent report (40.7%). Results suggest that the PEDE is a standardized measure that could enhance sensitivity during screening for restrictive EDS and improve efforts towards early case identification and treatment.

*Learning Objectives:*

- 】 Describe challenges in diagnosing restrictive eating disorders in youth and cite the potential benefit of including parental report when screening for clinically significant symptoms.
- 】 Summarize particular psychometric properties of the Parent Eating Disorder Examination, which was developed to increase case identification in youth.
- 】 Determine the impact of revised diagnostic criteria (DSM-IV-TR vs DSM-5) and the additional of caregiver informants (EDE vs PEDE) on reducing diagnostic ambiguity in a high risk sample of youths with anorexia nervosa spectrum presentations.

### P4.3.3 Factorial Integrity and Validation of the Eating Pathology Symptoms Inventory (EPSI)

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The Eating Pathology Symptoms Inventory (EPSI) is a 45-item self-report measure of eating psychopathology developed to address limitations common to widely used assessments of disordered eating, via assessment of symptoms that may be more prevalent in men and individuals across age and weight spectrum. The EPSI has yet 1) to be tested beyond the extreme severity of eating psychopathology present in inpatient and partial hospitalization programs, and 2) to be externally replicated in college and community samples, thus limiting its utility. The present study represents the first study to test the EPSI factor structure in an outpatient eating disorder clinic sample and the first external validation study of the EPSI and its psychometric properties. We tested the internal consistency (Cronbach's alpha) and factor structure of the EPSI using three separate samples from an outpatient eating disorder clinic ( $N=284$ ), a large southeastern college ( $N=296$ ), and the community ( $N=341$ ), with ages ranging from 10-78 years old. We used exploratory factor analysis to compare the resulting factor structure to the original factor structure. Parallel analysis revealed between 7 (college and community) and 8 (outpatient clinic) factor structures for each of the three samples. Despite some deviations in the Muscle Building, Cognitive Restraint, and Excessive Exercise subscales, our findings largely replicated those of the original development study. Further, although the EPSI was originally validated for individuals ages 14 and up, our findings indicate that the factor structure remains largely intact when individuals as young as 10 are included. Overall, our results provide support for the EPSI's original factor structure and subscale construction. Future studies should look to determine clinical cutoff scores for each subscale to further enhance utility.

*Learning Objectives:*

- 】 Identify the limitations of current popular measure of eating psychopathology, and the ways in which the EPSI addresses these limitations.

- Recognize that the three samples in the present study largely replicated the existing factor structure of the original EPSI development study.
- Advocate for the continued use of the EPSI in both clinical and research settings, given its sound psychometric properties and valuable clinical information.

#### P4.3.4 Development and Validation of the Eating Disorder Fear Questionnaire and Interview

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Eating disorders are characterized by high levels of fear and anxiety. Fear of weight gain, fear of food, and over-evaluation of weight and shape are theorized to be core symptoms that contribute to the development and persistence of eating disorders. However, it is unknown how these specific food and weight fears relate to and impact eating disorder behaviors and cognitions, making it difficult to treat these fears in therapy. Part of this problem is due to the fact that there is no direct assessment of eating disorder fears. The current study developed both a self-report (Eating Disorder Fear Questionnaire; EFQ) and interview (Eating Disorder Fear Interview; EFI) assessment of eating disorder fears in two samples (undergraduates;  $N = 397$  and a clinical sample of individuals with an eating disorder;  $N = 105$ ). We examined the factor, convergent, and construct validity of these two assessments. The EFQ and EFI both exhibited a good factor structure for a theorized four-factor model ( $CFI = .93$ ;  $TLI = .92$ ;  $RMSEA = .13$ ). Subscales in this four-factor model are: fear of food, fear of weight gain, fear of social consequences of eating, and fear of uncomfortable feelings from eating and weight gain. Subscales correlated as expected with existing measures of fear of food, social anxiety, eating disorder symptoms, and shape and weight concerns ( $r_s > .43$ ,  $ps < .034$ ). Furthermore, the EFQ correlated with anxiety experienced when imagining the most anxiety provoking eating disorder fear identified with a therapist using the EFI ( $r_s > .25$ ,  $ps < .032$ ). In initial developmental work, the EFI and EFQ exhibited strong psychometric properties. The EFQ and EFI can assist in the identification and understanding of eating disorder-related fears and anxiety, which could potentially lead to better, more targeted interventions, to address these fears.

##### *Learning Objectives:*

- Describe the role of eating disorder related anxiety and fear in the eating disorders.
- Describe the development and assessment of an interview and self-report questionnaire that assesses eating disorder fears.

- Discuss the clinical and research implications of the usage of the eating disorder fear interview and questionnaire.

#### P4.3.5 Initial Development and Validation of the Deliberate Denial of Disordered Eating Behaviors Scale

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The purpose of this study was to develop a self-report measure of deliberate denial of disordered eating behaviors (i.e., conscious omission, concealment, or misrepresentation of behavior related to an eating disorder). Study 1 involved item generation and review by focus groups composed of women with disordered eating ( $N = 13$ ) and an expert panel of five eating disorder researchers and clinicians. In Study 2, the scale and validity measures were administered to 311 undergraduate women with disordered eating via an online survey. Initial items were refined based on focus group and expert panel feedback, resulting in an 18-item scale. In Study 2, a direct oblimin exploratory factor analysis (EFA) was conducted ( $KMO = .96$ , Bartlett's Test of Sphericity:  $2(136) = 11,541.40$ ,  $p < .001$ ), and items were reviewed for redundancy based on inter-item correlations and factor loadings. This resulted in a 12-item Deliberate Denial of Disordered Eating Behaviors scale (DDEBS-12); a quartimax EFA was conducted on the DDEBS-12 and confirmed a unidimensional scale (loading range = .67-.86, eigenvalue = 6.46). The DDEBS-12 possessed excellent internal consistency ( $\alpha = .94$ ). It was correlated positively with concealment, disordered eating, and body dissatisfaction, and negatively with disclosure, suggesting criterion, convergent, and divergent validity. It was not associated with social desirability, suggesting discriminant validity. This novel 12-item scale can be used to examine the role of denial in disordered eating. Denial of disordered eating likely increases interpersonal problems, which may, in turn, increase disordered eating and decrease help seeking behaviors, highlighting a need to address denial in the identification and prevention of disordered eating.

##### *Learning Objectives:*

- Define deliberate denial of disordered eating behaviors.
- Understand how a reliable and valid measure of deliberate denial of disordered eating behaviors was developed.
- Hypothesize about the role denial may play in the onset and maintenance of eating disorders, and how this information could be used to address denial in the identification, prevention, and treatment of disordered eating.

### P4.3.6 - Physical Activity and Sedentary Behavior in Brazilian Eating Disorders Patients

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Individuals with eating disorders (ED) tend to engage in compulsive exercise as a way to compensate for binge eating and manage body weight. The purpose of this study was to evaluate exercise practice and sedentary behavior in outpatients with anorexia nervosa (AN) and bulimia nervosa (BN) in a Brazilian leading reference center for ED treatment - Program of Eating Disorders (AMBULIM), from Psychiatric Institute of University of Sao Paulo Medical School. There was made a transversal descriptive and comparative analysis of 27 patients with AN, 31 patients with BN and a control group (CG, n=13). Data was obtained through use of accelerometer (GT3x ActiGraph® model), and submitted to Kruskal Wallis analysis to check differences between groups for time per day expended in light physical activity (LPA), moderate to vigorous physical activity (MVPA) and sedentary behavior. BN group showed the longest time expended on LPA (182.5 minutes/day), in comparison to the other groups (AN= 134.0 minutes/day; CG=104.9 minutes/day; p<0,001). In BN group, MVPA lasted in average 18.9 minutes/day, and AN group (14.4min/day; p<0,008) and in CG was 30.1 minutes/day. Sedentary time was 225 minutes/day in AN, 228.9 minutes/day in BN and 162 min/day in CG (p<0,28). In conclusion, our data showed levels of physical activity (PA) which differ from data found in literature, and further studies using accelerometer should check for compliance of subjects to the use of the device. Evaluating time expended in sedentary behavior might be an interesting alternative on the investigation of PA time, since ED outpatients may not reveal their actual and usual PA, due to fear of disapproval and prohibition by the treatment team, since these are compensatory activities. This information may have more fidedignity on both clinical settings and behavior evaluation studies.

#### Learning Objectives:

- ▶ To describe physical activity level in patients in a low income country.
- ▶ To compare physical activity in anorexia and bulimia patients.
- ▶ To suggest include sedentary behavior as an interesting variable in physical activity studies.

## P4.4 RISK FACTORS FOR EATING DISORDERS

Co-Chairs

Helen Sharpe and Melissa J. Atkinson

### P4.4.1 An Experimental and Naturalistic Assessment of Affect Regulation Models of Binge Eating

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Consistent evidence supports negative affect (NA) as an antecedent of binge eating (BE) episodes, but a dearth of experimental research has tested whether BE reduces NA and the timing of this reduction. We examined the relief components of two models of BE: escape theory and affect regulation model. Following a 5-hour fast, current binge eaters (N=139, 78% female) consumed a 100kcal preload and underwent a NA induction prior to being randomized to consume an entire pint of ice cream (BE conditions) or as much of the pint as they would during a typical snack (control condition). Those consuming the entire pint were further randomized to eat with (BE + self-awareness condition) or without (BE condition) a visible video camera pointed at them to induce self-awareness. Participants rated their guilt at four time points in the laboratory and then in the natural environment via Palm Pilot over the next four hours. While adjusting for post-NA induction guilt, a group (BE and BE + self-awareness conditions) x time (before, during, and after BE episode) mixed measures ANOVA revealed a main effect of time ( $F(1.37, 112.12)=3.76, p=.04; \eta^2=.04$ ); guilt increased immediately following eating ( $F(1, 81)=9.02, p<.01, \eta^2=.10$ ) but did not decrease during eating ( $F(1, 81)=1.72, p=.19, \eta^2=.02$ ) as posited by escape theory. A group (BE and control conditions) x time (after BE episode and 4x in the natural environment) generalized linear mixed effects model revealed decreased guilt in both conditions in the four hours following eating ( $b=-.20, t=-3.00, p<.01$ ). The BE condition experienced reductions at a faster initial rate with more slowing over time ( $b=.21, t=2.11, p=.04$ ), providing support for the relief component of affect regulation model and the role of negative reinforcement in maintaining BE. Future studies should enhance ecological validity and improve design to ensure eating episodes represent binge and normal eating episodes occurring outside of the laboratory.

#### Learning Objectives:

- ▶ Describe two affect regulation models of binge eating: escape theory and affect regulation model.

- Understand findings implicating the role of guilt in maintaining binge eating.
- Consider strategies for enhancing ecological validity of future experimental studies of binge eating.

#### P4.4.2

### Does 5-HTTLPR Genotype Moderate Association between Childhood Abuse and Disinhibited Eating in a Nationally Representative Sample of U.S. Young Adults?

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The purpose of this study was to examine whether the serotonin transporter polymorphism (5-HTTLPR) moderates the association between childhood abuse (CA) and disinhibited eating. This study used data from the National Longitudinal Study of Adolescent to Adult Health (N=11,698). Emotional, physical, and sexual abuse by a caregiver prior to age 18 years were assessed via retrospective self-report, and 5-HTTLPR genotype (categorized as LL, SL, or SS) was examined using biallelic and triallelic classifications. Disinhibited eating was defined as overeating and/or loss of control eating in the past seven days as assessed via self-report. Latent class analysis (LCA) was performed to identify distinct CA profiles. Logistic regression models were adjusted for demographic covariates, and analyses stratified by race/ethnicity were also conducted. In young adulthood (mean age=21.78 years), the prevalence of disinhibited eating was 7.2%. LCA revealed two classes: Class 1 ("low probability of CA," 83.1% of the sample) and Class 2 ("high probability of CA," 16.9% of the sample). Class 2 was associated with greater odds of disinhibited eating (odds ratio: 1.46; 95% confidence interval: 1.18, 1.82). In the whole sample, there was no evidence of an interaction between 5-HTTLPR genotype and CA using the biallelic classification ( $p=.21$ ), but an interaction approached significance using the triallelic classification ( $p=.06$ ). In analyses stratified by race/ethnicity, the association between CA and disinhibited eating differed by 5-HTTLPR genotype using biallelic ( $p=.04$ ) and triallelic ( $p=.01$ ) classifications only among non-Hispanic white participants, supporting previous findings that moderation by 5-HTTLPR may differ by race/ethnicity. In contrast with previous findings which suggest the L allele confers resilience against eating pathology in the context of CA, the findings from this study suggest the L allele may confer risk for disinhibited eating in the context of CA.

#### Learning Objectives:

- Recognize childhood abuse as a likely risk factor for disinhibited eating.
- Explain the utility of latent class analysis for abuse exposure.
- Express how a candidate gene may moderate the association between childhood abuse and disinhibited eating.

#### P4.4.3

### Negative Affect Differentially Influences the Urge to Eat in Individuals With and Without Binge Eating

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Research suggests that negative mood decreases the urge to eat among healthy undergraduates (e.g., Loxton, Dawe, & Cahill, 2011). Our study aims to understand how affect influences an individual's desire to continue eating in adults who do and do not binge eat. Participants (N= 76) reported past-month objective binge episodes (OBE+; 38%) or no history of OBEs (OBE-; 62%). They were randomized to a guilt induction or control condition, after which they consumed up to 960kcal of a meal replacement shake in an ad lib paradigm. Participants rated their affect at baseline, before consumption, and following consumption. Participants also rated their urge to eat after the consumption task using a visual analogue scale. A generalized linear model indicated main effects of condition ( $\beta = -0.74$ ,  $SE = 0.33$ ,  $t = -2.24$ ,  $p = .023$ ), negative affect prior to the task ( $\beta = 0.12$ ,  $SE = 0.04$ ,  $t = 3.00$ ,  $p = .010$ ), and negative affect after the task ( $\beta = -0.27$ ,  $SE = 0.11$ ,  $t = -2.45$ ,  $p = .011$ ) on urge to eat following the consumption task. There was an interaction between OBE status and negative affect post-consumption ( $\beta = 0.21$ ,  $SE = 0.10$ ,  $t = 2.1$ ,  $p = .043$ ), such that greater negative affect was related to lower urges to eat more strongly for OBE- individuals than OBE+. Our results imply that individuals experiencing high negative affect after eating as much as they desired differentially experience an urge to continue eating depending on the presence of previous binge eating. These results suggest that those who do not binge eat are unlikely to cope with negative affect by eating, as their urge to eat is low, while those who do binge eat are more susceptible to continue eating in the presence of higher negative affect. Further research should explore how the urge to eat following a meal may lead to binge-eating episodes in individuals with OBEs, and whether this urge is aimed at reducing negative affect.

#### Learning Objectives:

- Identify the influence of negative affect following an eating episode.

- 】 Differentiate the relationship between negative affect and urge to eat in individuals with and without binge eating.
- 】 Recognize the necessity of understanding how affect after eating may differentially influence an individual's desire to continue eating beyond what they desire.

#### P4.4.4 Beyond the Dichotomy – Eating Disorder Risk in Bisexual Female College Students

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Emerging research suggests that sexual minority women may experience elevated risk of eating disorder symptoms as compared to heterosexual women, but findings are inconsistent. Furthermore, little is known about eating disorder risk factors that may be unique to specific subgroups of sexual minority women. In particular, bisexual populations can experience unique stressors resulting from marginalization by both heterosexual and gay communities; however, how this may relate to eating disorder risk is still uncertain. The purpose of this study is to examine eating disorder risk in female college students identifying as bisexual and questioning. A secondary analysis was conducted on data from the Healthy Bodies Study, which collected data on a random sample of students from 12 US colleges (n=6198). Among female respondents, n = 333 (5.4%) identified as bisexual, n = 103 (1.7%) identified as lesbian and n = 121 (2.0%) identified as questioning. Participants completed a survey assessing eating disorder symptoms using the Eating Disorder Examination Questionnaire (EDE-Q). An independent t-test revealed that the average global EDE-Q score for females identifying as bisexual (M=1.87, SD=1.4) was significantly higher than females identifying as heterosexual (M=1.65, SD=1.27, p > .01). There was no significant difference between EDE-Q scores for females identifying as lesbian or questioning when compared to heterosexual females. These findings indicate there may be unique risks to developing eating disorder symptoms specific to bisexual women and highlight the need for prevention efforts tailored to this group. Continued research focused on understanding differences in eating disorder risk among women with different sexual orientation identities is needed to increase resources available to them and inform targeted interventions.

##### *Learning Objectives:*

- 】 Consider gaps in the current literature on eating disorder risk and prevalence among women identifying as bisexual, unsure or questioning.

- 】 Discuss the importance of understanding prevalence and risk factors for eating disorders among sexual minority college students.
- 】 Identify and evaluate potential factors increasing risk for eating disorders among individuals identifying as bisexual.

#### P4.4.5 Exploring Pathways to Compensatory Exercise among Individuals Who Binge Eat: Emotion Dysregulation as a Potential Mechanism

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Compensatory exercise, defined as exercise to counteract the effects of recent food intake on weight/shape, may be an important form of unhealthy exercise for bulimia nervosa (BN). Indeed, one of the diagnostic criteria for BN is engagement in compensatory behaviors to negate the effects of binge eating episodes. However, research on compensatory exercise is limited; only one study has distinguished compensatory exercise from the more commonly examined compulsive exercise. Unlike compulsive exercise, compensatory exercise may result from the specific emotion regulation difficulties that are most characteristic of BN; namely, difficulties maintaining impulse control and goal-directed behavior when distressed. The current study examined differences in compensatory exercise and emotion dysregulation (i.e., difficulties maintaining impulse control and goal-directed behavior when distressed) between females with (n = 47) and without binge eating (n = 51), and whether emotion dysregulation mediated the relation between binge eating presence and compensatory exercise. Results indicated significantly higher scores on compensatory exercise (Cohen's ds = 0.68-0.98) and emotion dysregulation (ds = 0.84-0.90) in the Binge Eating group, relative to Controls. Significant correlations between emotion dysregulation and compensatory exercise features also emerged. However, emotion dysregulation failed to mediate the relation between binge eating presence and compensatory exercise, and associations between difficulties maintaining impulse control and goal-directed behavior when distressed and compensatory exercise were non-significant when accounting for binge eating presence. Future longitudinal research should explore alternative models to explain associations among emotion dysregulation, binge eating, and compensatory exercise. Instead, emotion dysregulation may increase risk for binge eating, which may then predict compensatory exercise.

##### *Learning Objectives:*

- 】 Explore maintenance factors for the symptom of compensatory exercise.

- Identify the link between emotion dysregulation and compensatory exercise.
- Increase awareness on compensatory exercise as an important area of study.

#### P4.4.6 - Eating Disorders and Pediatric Chronic Illnesses Requiring Dietary Management: A Systematic Review

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Pediatric chronic illnesses (CI) can affect a child's mental health. Chronic illnesses with treatment regimens that specify a child's diet may place the child at increased risk for disordered eating and specific eating disorders (ED). The aim of this review is to examine the relation between diet-treated CI and disordered eating and to determine the order of onset to infer directionality. Diet-treated CI is hypothesized to precede and be associated with disordered eating. A comprehensive search of empirical articles examining the relation between diet-treated CI (diabetes, cystic fibrosis, celiac disease, gastrointestinal disorders, and inflammatory bowel diseases) and disordered eating was conducted in Medline and PsycINFO using the Preferred Reporting Items for Systematic Reviews and Meta-Analyses guidelines. Tables of the sample's characteristics, ED measures, major pertinent findings, and the onset of CI in relation to ED were provided. Diet-treated CI was associated with disordered eating and ED. Diet-treated CI had onset prior to disordered eating in most studies, except for inflammatory bowel diseases. Disordered eating and unhealthy weight restriction practices put children at risk for poor medical outcomes. Interventions for diet-treated CI require a focus on diet and weight, but may increase the risk for disordered eating. Future research must elucidate the mechanisms that transform healthy treatment practices into pathological eating, including child characteristics and behaviors of the parents, family, and treatment providers. Interdisciplinary clinical teams are recommended to address the complex medical and mental health concerns of children with diet-treated CI.

##### *Learning Objectives:*

- Identify four childhood illnesses associated with increased eating disorder risk.
- Describe the relationship between childhood illness and eating disorder risk.
- Identify mechanisms that transform healthy treatment practices into pathological eating behaviors.

## P4.5 NEUROSCIENCE AND NEUROIMAGING

*Co-Chairs*

Eric Stice, PhD and Howard Steiger, PhD, FAED

### P4.5.1 Novel Damaging Variants in the SLC17A7 Gene are Associated with the Risk of Developing Anorexia Nervosa

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The risk of developing an eating disorder is highly heritable suggesting that damaging genetic variants may be an important contributing factor. However at this time our understanding of the genes affected by these damaging variants remains incompletely understood. We have recently identified two rare, highly damaging mutations in the ESRRA and HDAC4 genes that increase the risk of developing an eating disorder. The protein products of these genes form a transcriptional complex that regulates the expression of genes involved in the synthesis of pre-synaptic glutamate. As disruption in glutamatergic signaling in the brain has been observed in patients with eating disorders, we hypothesized that rare damaging variants in genes within the ESRRA/HDAC4 transcriptional network may also predispose to the development of an eating disorder. To test this hypothesis we analyzed whole-exome sequencing results from 53 patients with anorexia nervosa for novel damaging variants in genes within this pathway compared to sequencing results in the ExAc database as a control population. After correcting for multiple testing, we found that the SLC17A7 gene (which codes for the VGLUT1 protein) had a significantly higher burden of novel damaging mutations than expected. Furthermore, one novel mutation identified in our sample was inherited through a father and grandmother with a previous history of an eating disorder suggesting familial transmission. Bioinformatic analysis indicate that the variants are non-conserved amino acid substitutions clustered in the N-terminal portion of the protein that is required for vesicular trafficking. Pre-clinical studies in mice heterozygous for the SLC17A7 gene find behavioral deficits in feeding, bodyweight homeostasis, sucrose preference, and depression-like behaviors consistent with symptoms experienced by patients with anorexia nervosa. Finally, optogenetic stimulation of VGLUT1-positive/ESRRA-expressing neurons in the medial pre-frontal cortex stimulate consumption of high fat chow in mice. Together these studies implicate rare, damaging mutations in SLC17A7 in the development of anorexia nervosa, perhaps by impairing feeding responses modulated by neurons in the medial prefrontal cortex.

*Learning Objectives:*

- Following the training, participants will be able to describe the role of glutamatergic neurons in feeding behaviors.
- Following the training, participants will be able to explain the role of VGLUT1 in the function of glutamatergic neurons.
- Following the training, participants will be able to discuss with families how genetic variants can increase the risk of developing an eating disorder by perturbing brain function.

#### P4.5.2 Estrogen Moderates Genetic Influences on Binge Eating during Puberty: A Disruption of Normative Processes?

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**Laura Mayhall, BA<sup>1</sup>**  
**Cheryl Sisk, PhD<sup>1</sup>**  
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Puberty is a critical period for changes in genetic effects for binge eating in girls. Previous twin studies show increases in genetic influences on binge eating from pre-puberty (~0%) to mid-puberty and beyond (~50%). However, little is known about the factors that drive these shifts in genetic effects. A small pilot study showed that pubertal activation of estrogen may contribute to increases in genetic influences, possibly via hormonally induced changes in gene expression. However, large-scale studies investigating hormone effects on genetic risk are lacking. Thus, the purpose of the present study was to examine the effects of estrogen on genetic influences for binge eating in 964 female twins (ages 8-16 years) from the Michigan State University Twin Registry. Binge eating was assessed with the Minnesota Eating Behaviors Survey, while afternoon saliva samples were assayed for estradiol levels using standard enzyme immunoassays. Twin moderation models showed substantial differences in genetic influences on binge eating across estradiol levels. Stronger genetic effects were observed at lower (rather than higher) estradiol levels, even when controlling for the effects of age, body mass index, the physical changes of puberty, and the onset of menses. Overall, findings suggest that comparatively lower levels of estradiol during this critical period may disrupt normative developmental processes and enhance genetic influences on binge eating.

*Learning Objectives:*

- Describe past studies examining the effects of puberty on genetic risk.

- Examine the role of estrogen and progesterone in pubertal increases in genetic effects.
- Describe how study findings can inform biological and hormonal models of eating disorders.

#### P4.5.3 Hormone Levels Predict Gray Matter Differences in Anorexia Nervosa

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Endocrine dysfunction is a hallmark feature of anorexia nervosa (AN) that is hypothesized to contribute to maintenance of the disorder via direct effect on the brain and behavior. Gonadal hormones in particular have been shown to alter both brain morphology and behavior. Acute AN is associated with reduction in both gray and white matter in the brain, but the mechanisms of such changes as well as the extent to which brain volume is fully restored with recovery is unknown. The goal of our study was to use voxel-based morphometry to identify whether gonadal hormones (estradiol, testosterone, and progesterone) were associated with regional differences in gray matter volume in adolescents with AN compared to healthy controls (HCs). We analyzed T1-weighted images of six females with AN (mean age = 17.23 years, SD = 3.09) and seven female HCs (mean age = 16.55 years, SD = 2.53). Estradiol, testosterone, and progesterone levels were associated with regional differences in gray matter volume (uncorrected  $p < .001$ ), with significant interaction found between eating disorder status and hormone levels in predicting gray matter volume (uncorrected  $p < .001$ ). Specifically, the interaction between hormones and group indicated that adolescents with AN had weaker associations between gray matter and hormone in distinct brain regions. Results from this pilot study suggest that gonadal hormones differentially affect AN in brain regions implicated in the pathogenesis of the disease.

*Learning Objectives:*

- Describe differences between adolescents with anorexia nervosa and healthy controls found in brain morphometry.
- Understand the relationship between gonadal hormones and anorexia nervosa.
- Identify brain regions in which the association between gray matter volume and gonadal hormones differs in individuals with anorexia nervosa versus healthy controls.

## P4.5.4

## Neuroimaging of Adolescents females with Anorexia Nervosa : MRI study

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**Stephanie Trinh, MSc**<sup>2</sup>  
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Anorexia nervosa (AN) often begins in adolescence. It is the third-most common chronic disease in adolescents usually characterized by distorted body image perception, extreme fear of weight gain and a restriction of energy intake leading to excessive weight loss. AN has a multifactorial causes mainly genetic, hormonal changes during puberty, cultural influences and stressful life events as well as brain development-related factors. Recent meta-analysis revealed an average 3.2% reduction of Grey Matter (GM) and a 4.0% reduction of white matter (WM) in adults with AN, whereas adolescents exhibited a 10.8% decrease in GM and a 3.1% decrease in WM. Twenty four Egyptian female Anorexia Nervosa patients diagnosed according to DSM IV with age range from 14 to 18 years old under go clinical examination and EDI and MRI study. We used diffusion tensor imaging (DTI) to investigate microstructural white matter (WM) brain changes in 12 adolescent female AN patients. We found increased Fractional Anisotropy (FA) in bilateral frontal and temporal areas in AN patients. These findings reveal different pattern of WM microstructural changes in adolescent AN compared to adult AN. References K.E. Travis, N.H. Golden, H.M. Feldman, M.Solomon, J. Nguyen, A. Mezer, J.D. Yeatman, R.F. Dougherty Abnormal white matter properties in adolescent girls with anorexia nervosa *NeuroImage Clin.*, 9 (2015), pp. 648-659

*Learning Objectives:*

- ▶ Highlight the brain structure behind AN
- ▶ Evaluation the difference between adolescent and adult brain of AN patient
- ▶ To shed a light on new marker( state or trait ) for AN

## P4.5.5

## Sex Differences in Binge Eating and Neural Reactivity to Palatable Food: A Role for Perinatal Testosterone and Consumption of Palatable Food in Adolescence?

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<sup>2</sup>Western Psychiatric Institute and Clinic, University of Pittsburgh Medical Center, Pittsburgh, PA, USA

<sup>3</sup>Michigan State University, East Lansing, MI, USA

Exposure to testosterone during perinatal development permanently alters the brain and contributes to sex-differentiated behaviors after puberty, including binge eating risk (females > males). In addition, repeated consumption of sucrose during adolescence evokes long-lasting sex-differentiated changes in reward processing at the behavioral and neural level. Sucrose-exposed female rats exhibit increased behavioral motivation to obtain sucrose as adults, whereas male rats display decreased behavioral motivation in adulthood. These sex-differentiated behavioral alterations are associated with sex-specific neural changes in the nucleus accumbens (NAc; e.g., decreased activation in males) – a key brain region involved in the “wanting” and “liking” of reward stimuli and known to be sex-differentiated from perinatal testosterone. Such findings point to an intriguing hypothesis: the absence of testosterone exposure early in life and repeated consumption of palatable foods (PF: high-sugar/high-fat) during adolescence may influence the female bias in binge eating, as both processes would enhance reward sensitivity to PF in adulthood. To test this hypothesis, a sample of 49 Sprague-Dawley rats (n = 18 control females, n = 14 control males, n = 17 females treated with testosterone in the perinatal period) were intermittently exposed to PF across development; consistent consumption of high levels of PF was an indicator of binge eating. PF exposure occurred prior to sacrifice and Fos expression was a marker of neural activation in the NAc. As expected, NAc activation was significantly higher in control females compared to control males and testosterone-treated females, and notably, this pattern of effects was potentiated in animals high on binge eating. Findings point to sex differences in neural correlates of binge eating, which likely arise from sex-differentiated exposure to testosterone early in life and an environmental milieu marked by high PF intake during adolescence.

*Learning Objectives:*

- ▶ Describe the impact of perinatal testosterone exposure on sex differences in the development of the central nervous system and behaviors.
- ▶ Assess the role of perinatal testosterone exposure on reward-related neural activation to palatable food.
- ▶ Recognize that neural correlates of binge eating may differ between males and females.

## P4.5.6

### Differential Expression of Salivary MicroRNA in Anorexia Nervosa and Anxiety Disorders

Rollyn Ornstein, MD<sup>1</sup>  
 Anna Scipioni, BA<sup>2</sup>  
 Steven Hicks, MD, PhD<sup>1</sup>

<sup>1</sup>Penn State Children's Hospital, Hershey, PA, USA

<sup>2</sup>Penn State College of Medicine, Hershey, PA, USA

Micro ribonucleic acids (miRNAs) block protein translation and are essential in the developing brain. They are altered in psychiatric disorders, making them ideal candidate biomarkers for anorexia nervosa (AN), a disorder with both an environmental and psychiatric basis. The purpose of this study was to identify miRNAs unique to AN, that may offer diagnostic and therapeutic targets. Participants were females, age 11-21 years, with: 1) restrictive-type AN at the outset of partial hospitalization treatment; 2) anxiety disorder (AX) without eating disorder, participating in group therapy; and 3) female healthy controls (HC). Morning pre- and post-prandial salivary samples were collected through expectoration. RNA was extracted and quantified using high throughput sequencing. Mature miRNAs were quantified with alignment to the human genome in Partek Flow. We compared miRNA levels between 10 AN samples, 6 AX samples, and 10 HC samples, using Kruskal-Wallis testing. Partial least squared discriminant analysis identified biomarker candidates. The miRNAs of interest were functionally interrogated with DIANA miRPath software. Of the 345 miRNAs present in saliva, one showed significant differences across AN, AX, and HC groups ( $p=1.3E-4$ ;  $FDR = 0.04$ ). This miRNA had minimal expression in the AN samples, moderate expression in the AX samples, and was highly expressed in HC. It also trended upwards in post-prandial samples. The miRNA of interest targets pathways related to estrogen signaling ( $p=0.005$ ) and energy production (5' adenosine monophosphate-activated protein kinase;  $p=0.004$ ). Reduced miRNA levels in patients with AN may compensate for altered hormonal signaling and metabolic activity that results from a cachectic state. Investigation with larger sample sizes is warranted to further ascertain miRNAs uniquely expressed in patients with AN, and delineate the relative contributions of co-morbid anxiety and chronic malnutrition.

#### Learning Objectives:

- 1 Describe how and why microRNAs could be useful as biomarkers in anorexia nervosa.
- 2 Identify a salivary microRNA that is differentially expressed in anorexia nervosa samples versus anxiety and healthy control samples.
- 3 Explain the significance of this microRNA with respect to the symptoms and clinical findings seen in anorexia nervosa.

## FRIDAY, APRIL 20

11:15 AM - 12:45 PM

### EDUCATIONAL SESSION IV

#### SIG Panels

##### SP4.1

#### Safety as an Outpatient: Assessment, Conceptualization and Treatment of Suicidal and Self-injurious Behaviors in Adolescents and Adults with Eating Disorders across Levels of Care

##### Presented by:

Dialectical Behavior Therapy (DBT) and Suicide, Child & Adolescent Eating Disorders

Loren Prado, MS, LPC-S<sup>1</sup>  
 Ellen Astrachan-Fletcher, PhD, CEDS<sup>2</sup>  
 Anne Cusack, PsyD<sup>3</sup>  
 Mindy Solomon, PhD<sup>4</sup>  
 Michelle Lupkin, PhD<sup>5</sup>

<sup>1</sup>Center for Dialectical and Cognitive Behavioral Therapies, San Antonio, TX, USA

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<sup>3</sup>UCSD Eating Disorders Treatment and Research Clinic, San Diego, CA, USA

<sup>4</sup>University of Colorado School of Medicine, Aurora, CO, USA

<sup>5</sup>Montefiore Medical Center, Bronx, NY, USA

Research indicates that there is a high prevalence of suicidality and self-injury (NSSI) in both adult and adolescent populations with eating disorders. Individuals with eating disorders and NSSI also tend to have more severe presentations of eating disorder symptoms (Kostrá, *Journal of Eating Disorders*, 2014). Within clinical samples of eating disorders, NSSI occurs with frequency estimates ranging from 13.6% to 68.1% (Svirko & Hawton, 2007). Additionally, regardless of specific diagnosis, individuals with eating disorders have strikingly high rates of suicidal ideation (SI). Adolescents with eating disorders may be particularly vulnerable to NSSI and SI behaviors, with one study showing 40.8% of a large sample reporting NSSI (Peebles et al, 2008). It is essential that clinicians working with eating disorders conduct regular and thorough assessments of suicidality and self-harm in their patients, and understand a variety of strategies for intervention with these problems (Linehan, 1993). Many eating disorder treatment centers and professionals struggle to manage NSSI and SI. Patients frequently are placed in acute hospitals to manage these symptoms, only to have their eating ignored. Frequent changes in levels of care can disrupt treatment and may lead to treatment resistance (Arcelus, Mitchell, Wales, & Nielsen, 2011). Even when suicidality and self-harm are addressed at

higher levels of care, they frequently re-emerge when the patient returns to their home environment, requiring generalization of new skills to manage new dysregulating environmental cues (Muehlenkamp et al., 2009; Smyth et al., 2007). This panel will discuss all of these factors combined to address the management of suicidality and self-harm behaviors at the lowest level of care possible. This panel will outline evidence-based approaches in assessment and intervention with suicidality and self-harm, and discuss how to adapt and utilize these strategies with both acutely and chronically suicidal eating disorder patients. The speakers will explore how Dialectical Behavioral Therapy, Radically Open Dialectical Behavior Therapy, and standard best practice treatments conceptualize, assess, and manage suicidality and self-harm for both adolescent and adult eating disorder populations across levels of care.

*Learning Objectives:*

- ▶ Provide education regarding the comorbidities between eating disorders (AN, BN, ARFID, OSFED) and suicidality, suicide attempts and non-suicidal self-injury.
- ▶ Compare different theoretical methods (treatment as usual, Dialectic Behavior Therapy, Radical Openness) of assessing and treating suicidality and non-suicidal self-injury (inpatient, residential, partial hospitalization, intensive outpatient, outpatient).
- ▶ Identify differences in assessing and treating adults and adolescents with life-threatening behaviors.

#### SP4.2

### International Forum on Integrated Treatment for Eating Disorder Patients with Co-morbid Substance Use Disorders: Service Delivery and Access to Care

**Presented by**

Eating Disorders and Substance Use Disorders

**Amy Baker Dennis, PhD, FAED<sup>1</sup>**

**Tamara Pryor, PhD, FAED<sup>2</sup>**

**Umberto Nizzoli, MPH, PhD<sup>3</sup>**

<sup>1</sup> University of South Florida, Department of Psychiatry, Bloomfield Hills, MI, USA

<sup>2</sup> EDCare, Denver, CO, USA

<sup>3</sup> University of Bologna and Modena IPU, Bologna, Italy

Substance Use Disorders (especially opiate and cannabis abuse) are on the rise in North America and a significant minority of eating disorder patients present for treatment with co-morbid alcohol and/or drug problems. However, to date, very few specialized eating disorder programs, at any level of care, provide integrated treatment for this co-morbid population. The lack of availability of integrated treatment services for eating disorder patients with co-morbid substance use disorders is not only a significant issue in North America, but also a global concern. During our SIG meeting at ICED 2017 in Prague, treatment providers from Russia, Malaysia, Europe, Japan, the United Kingdom and elsewhere, discussed the lack of evidence based treatment protocols, the lack of cross-

trained treatment providers and the limited access to care in their countries. The Forum will continue the discussion on how we as an international professional community can more effectively address the treatment needs of the co-morbid patient. The long-range goal of the ED/SUD SIG is to develop an international research consortium that will collaborate on finding evidence based protocols for our dual diagnosed patients.

*Learning Objectives:*

- ▶ Present preliminary data on the availability of integrated treatment for eating disorder patients with co-morbid substance use disorders in the United States and Italy
- ▶ Discuss outcome data from an integrated ED/SUD program and identify issues that impede successful recovery from both disorders
- ▶ Provide a “round table” discussion with SIG participants to further the development of an international consortium designed to promote access to integrated treatment and promote research on evidence-based interventions for the co-morbid population



# EDUCATIONAL SESSION V

In this session, attendees have **14 different options** to choose from:

**Special Town Hall Event, 5 Workshops, 6 Paper Sessions, and 1 SIG Panel**

**SATURDAY, APRIL 21**

9:30 AM - 11:00 AM

## EDUCATIONAL SESSION V Special Town Hall Event

### **Gathering for Good:**

**A Town Hall Event with the Eating Disorders Coalition for Research, Policy & Action**

*Moderators:*

**Chase Bannister, MDiv, MSW, LCSW, CEDS<sup>1&3</sup>  
Jillian Lampert, PhD, MPH, RD, LD, FAED<sup>2&3</sup>**

<sup>1</sup>The VERITAS Collaborative, Durham, NC, USA

<sup>2</sup>The Emily Program, Saint Paul, MN, USA

<sup>3</sup>Eating Disorders Coalition, Washington, DC, USA

The primary mission of the Eating Disorders Coalition for Research, Policy & Action (EDC) is to advance the recognition of eating disorders as a public health priority throughout the United States. The EDC is proud to represent its members and stakeholders—including national organizations such as NEDA, AED, iaedp, REDC, and the Alliance for Eating Disorders Awareness—in vital dialogue with the legislative, executive, and judicial branches of the United States government, acting as a central conduit for federal advocacy on eating disorders.

In this town hall event, members of the EDC Board of Directors will briefly outline the recent work of the EDC, such as the successful inclusion of eating disorders policy in the 21st Century Cures Act—marking the first mention of eating disorders in the history of federal law.

A core belief of the EDC is that effective advocacy starts with effective listening. The central component of the town hall will be devoted to looking forward together, engaging participants in conversation about policy and legislative issues of consequence to all whose lives are touched by eating disorders illness.

As an interactive session, participants are encouraged to bring and share ideas, perspectives, possibilities, and hopes with the EDC as it formulates priorities and critical pathways for federal advocacy on behalf of the field. Lend your voice and join the conversation – you are invited, and there's a place at the table for you!

**SATURDAY, APRIL 21**

9:30 AM - 11:00 AM

## EDUCATIONAL SESSION V Workshop Session 5

### **W5.1**

**Incorporating Mindfulness into Eating Disorder Research and Treatment**

**Margarita Sala, MA<sup>1</sup>**

**Irina Vanzhula, BA<sup>2</sup>**

**Adrienne Juarascio, PhD<sup>3</sup>**

**Kristine Vazzano, PhD<sup>4</sup>**

**Cheri Levinson, PhD<sup>2</sup>**

<sup>1</sup> Southern Methodist University, Dallas, TX, USA

<sup>2</sup> University of Louisville, Louisville, KY, USA

<sup>3</sup> Drexel University, Philadelphia, PA, USA

<sup>4</sup> Bloomfield Hills, MI, USA

Mindfulness is paying attention on purpose to present-moment experiences with an attitude of acceptance and non-judgmental awareness (Baer et al., 2006; Kabat-Zinn, 1994). Mindfulness-based interventions have been shown to be effective in the treatment of various psychological disorders, including eating disorders (e.g., Kristeller et al., 2014). This workshop will teach strategies for incorporating mindfulness into eating disorder research and treatment. The workshop will begin with a discussion on the definition of mindfulness (5 minutes). Afterwards, one panelist (Sala) will present background research on mindfulness and how it relates to eating disorders. She will also present her findings on how mindfulness differs in individuals with eating disorders and controls, as well as on how trait mindfulness relates to eating disorder psychopathology (5 minutes). A second panelist (Juarascio) will present her experiences in developing treatments for eating disorders that incorporate mindfulness elements, commenting on how to incorporate mindfulness into standard behavioral treatment for eating disorders (10 minutes). Afterwards, participants will have a discussion on directions for future research (5 minutes). Afterwards, three panelists will present real-world examples of mindfulness-based treatment options that clinicians can use when working with individuals with eating disorders. One panelist (Vazzano) will present on the use of mindfulness meditation in the treatment of eating disorders, specifically anorexia nervosa and bulimia nervosa, as well as how she approaches the topic of mindfulness with patients (10 minutes). Another panelist (Levinson) will present on the use of mindfulness-based stressed reduction in the

treatment of eating disorders (5 minutes). A third panelist (Vanzhula) will present on the use of mindful eating in the treatment of binge eating disorder (10 minutes). As part of this portion of the presentation, participants will engage in experiential mindfulness exercises (e.g., mindful eating, mindfulness meditation) (30 minutes). Afterwards, participants will have a discussion on how they can incorporate mindfulness in the treatment of eating disorders (5 minutes). Finally, workshop participants will have an opportunity to ask questions (5 minutes).

*Learning Objectives:*

- ▶ Participants will learn about the construct of mindfulness.
- ▶ Following the presentation, participants will have a greater understanding of the relationship between mindfulness and eating disorders.
- ▶ Participants will learn how to deliver mindfulness-interventions to individuals with eating disorders and how to approach the topic of mindfulness with patients.

## W5.2

### Why Go It Alone? How Family-based Treatment of Young Adults with Anorexia is Possible and Productive in Reaching a Full Recovery

**Rebecka Peebles, MD<sup>1</sup>**

**Therese Waterhous, PhD, RDN, CEDRD<sup>2</sup>**

**Tabitha Farrar, BsC<sup>3</sup>**

**Rachel Millner, PsyD, CEDS<sup>4</sup>**

<sup>1</sup> The Children's Hospital of Philadelphia, Philadelphia, PA, USA

<sup>2</sup> Willamette Nutrition Source LLC, Corvallis, OR, USA

<sup>3</sup> Active Eating Disorder Recovery for Adults, Boulder, CO, USA

<sup>4</sup> The Children's Hospital of Philadelphia, Yardley, PA, USA

Historically, adult treatment models for anorexia nervosa and bulimia nervosa rely on individual and group therapy and the therapeutic relationship in motivating change. Parents and significant others are often asked to support treatment on the sidelines. Additionally, many providers feel uncomfortable navigating the roles of parents and family in treatment. This is often compounded by older paradigms which assert that parental attachment and enmeshment can play a role in the development of the eating disorder. Finally, adult treatment models often rely so much on working 'with' patients that the treatment benchmark goals are set lower and there is often a standard of being 'less ill' rather than truly 'well.' This presentation will explore ways in which parents and family members are often well-equipped to support restoring age-appropriate independence by being involved in care. We will provide an overview of Family Based Treatment (FBT), and discuss what we know from the research on FBT. We will share two personal stories of recovery from anorexia utilizing a FBT informed approach, and share clinical case examples of using this approach with adults. We will discuss what elements of FBT need to be

changed when working with adults, and what aspects are consistent in treatment regardless of age. We will explore common concerns when using a FBT informed approach with adults, and brainstorm ways to leverage parent support in treatment in a way that honors adult autonomy as it re-emerges after being stolen by the disease. Presenters include a psychologist, recovery coach, adolescent and young adult physician, and a dietitian all with expertise in treating these disorders in adults. Two presenters have recovered from anorexia using a FBT informed approach, and one has supported their young adult child in recovering. This presentation will include a combination of didactic learning, personal and clinical examples, facilitated discussion, and time for questions and answers.

*Learning Objectives:*

- ▶ Identify the 3 most critical aspects of treatment that change when a person reaches young adulthood.
- ▶ Explain ways to utilize a FBT informed approach with adults while still respecting autonomy and independence.
- ▶ Describe 3 strategies for including parents/caregivers in treatment with young adults.

## W5.3

### From Clinical Practice to Brain Research and Back—Anxiety in the Assessment and Treatment of Eating Disorders

*Simultaneously translated to Spanish*

**Walter Kaye, MD, FAED<sup>1</sup>**

**Heather Hower, MSW, LICSW, QCSW, ACSW<sup>2</sup>**

**Guido Frank, MD, FAED<sup>3</sup>**

<sup>1</sup> University of California, San Diego, CA, USA

<sup>2</sup> Brown University, Providence, RI, USA

<sup>3</sup> University of Colorado Anschutz Medical Campus, Aurora, CO, USA

Various manifestations of anxiety are very common in eating disorders (EDs). Often, anxiety is present in childhood, before the onset of an ED, is exacerbated during illness, and persists after recovery. Exaggerated anxiety is thought to predict poor outcome. In addition, there is little evidence that medications thought to be helpful for reducing anxiety (e.g., benzodiazepines) are useful in ED related fears. In the past decade, there has been a substantial increase in understanding how behavior is encoded in the brain in humans and animals. In turn, this is leading to new insights into neurobiological (brain) mechanisms underlying anxious behaviors in humans. As we learn more about how the brain works, there will be new ways of describing how behavior is encoded in neurons. Still, it is important to recognize that humans have limited ways of expressing symptoms. For example, there are many different causes (e.g., tumor, virus, bacterial) of a cough. Each requires a different treatment approach. Similarly, anxiety may reflect many different brain mechanisms. In particular, we will discuss new insights into constructs thought to be encoded

in neural circuits that may contribute to anxiety. We will also examine whether constructs (e.g., sensitivity to loss, uncertainty, novelty, change, or punishment; altered prediction error, exaggerated anticipation of consequences, fear), reflect similar or different neural mechanisms. In addition, we will consider whether perfectionism and self-control play a compensatory role. Finally, we will explore how this information is enabling better targeting of behavioral and medication approaches to treating such symptoms. This workshop will use an introductory to intermediate format to review symptoms experienced in ED, and how they may be explained by new insights into neurobiological mechanisms. This workshop targets front-line clinicians who have little background knowledge about how the brain encodes behavior.

*Learning Objectives:*

- ▶ Upon completion of the workshop, participants will be able to discuss specific aspects of anxiety that can be measured in individuals with eating disorders.
- ▶ Participants will be able to describe neurobiological (brain) mechanisms that underlie anxiety processing.
- ▶ Participants will be able to discuss how behavioral and medication treatments may target directly (and specifically) high anxiety in individuals with eating disorders.

#### W5.4

##### #EDHack:

#### Social Media and Start up Thinking and Strategies for Clinicians, Research, and Knowledge Translation

**Zali Yager, PhD**

Victoria University, Melbourne, Victoria, Australia

Drawing on the theme of 'innovation' for ICED 2018, this workshop will follow the format of a mini 'hack-a-thon', to inspire clinicians, researchers, and other professionals to innovate in this field. Traditionally used for software development and coding, a hack-a-thon is where people from different disciplines and backgrounds come together to collaborate intensively to create innovative solutions to common problems. This workshop will begin with an overview of the ways that researchers and clinicians can use blogs, social media, and start up thinking to innovate and meet their practice goals. The presenter will use her recent Body Positive Mums Project, and research blog to illustrate the opportunities in this space. Working in groups, participants will then bring their knowledge around eating disorder prevention, treatment, and research to brainstorm and develop innovative potential solutions to the big issues in the body image and eating disorders field. Participants will pitch and share their ideas with the group. Those attending will therefore develop an understanding of potential processes, tools, and strategies that they could use to innovate on their return to their workplace, and will also extend their network of collaborators in this field.

*Learning Objectives:*

- ▶ Identify the opportunities for innovation in the eating disorders field, and the potential application of social media and start-up thinking.
- ▶ Plan and prepare ideas for innovation in the prevention, early intervention, and treatment of eating disorders.
- ▶ Plan and propose their ideas to the group

#### W5.5

#### Examining Evidence for Medication Efficacy for Children and Adolescents with Eating Disorders: An Essential Update for Clinicians

**Wendy Spettigue, MD, FRCP(C)**<sup>1</sup>

**Mark Norris, MD, FRCP(C), FAED**<sup>1</sup>

**Jennifer Couturier, MD, FRCP(C), FAED**<sup>2</sup>

**Leanna Isserlin, MD, FRCP(C)**<sup>1</sup>

<sup>1</sup> Children's Hospital of Eastern Ontario, Ottawa, Canada

<sup>2</sup> McMaster University, Hamilton, Canada

Psychotropic medications are commonly prescribed to children and adolescents with eating disorders (EDs) without sufficient evidence to guide practice. There are substantial challenges involved with gold standard medication trials for the treatment of EDs, especially in the pediatric population, and as such, many questions remain unanswered. The goal of the present workshop is to highlight the results of a recently completed systematic review of the literature examining the efficacy of psychotropic medications for the treatment of pediatric EDs. As well, our findings from a recently completed trial involving olanzapine for youth with anorexia nervosa will be reviewed and used to highlight the many challenges that researchers face in their attempts to answer such important questions. Using results from the systematic literature review, the authors will present outcomes of relevant medication trials in this population, employing a user-friendly format which will help ensure attendees will be left with an improved awareness of the existing evidence for the role of psychotropic medications in the treatment of youth with EDs. The authors will focus on the evidence for the role of SSRIs, SNRIs, mood stabilizers, benzodiazepines and antipsychotic medications for treating children and adolescents with anorexia nervosa, bulimia nervosa, binge eating disorder and ARFID. In addition, the authors will present results from their own chart review of clinicians' use of SSRIs for treating youth with EDs. This workshop promises to offer an excellent balance of 40 minutes devoted to relevant evidence-informed treatment information, combined with 50 minutes reserved for case examples, questions to and from the audience, anecdotes from clinical experience, and lively discussions of evidence versus practice, suitable for clinicians at every stage of practice.

*Learning Objectives:*

- ▶ Provide a brief overview of how a systematic review is completed in order to ensure that all attendees understand basic methods involved in answering questions that relate to best practice

- Describe the evidence base for medication use in the treatment of children and adolescents with eating disorders, including SSRI's, SNRIs, mood stabilizers, antipsychotics and other psychotropic medications.
- Describe challenges that researchers encounter when completing medication trials in this population with an aim to better educate attendees on why present research gaps may exist.

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**SATURDAY, APRIL 21**

9:30 AM - 11:00 AM

## EDUCATIONAL SESSION V

### Paper Session 5

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#### P5.1 PREVENTION

*Co-Chairs*

**Rachel Calogero, PhD, FAED and Helena Lewis-Smith**

##### P5.1.1 Modeling the Health Impact and Cost-Effectiveness of School-based Eating Disorder Screening

**Michael Long, SD<sup>1</sup>**  
**Davene Wright, PhD<sup>2</sup>**  
**Zachary Ward, MPH<sup>3</sup>**  
**Xindi Hu, MPH<sup>3</sup>**  
**S. Bryn Austin, SD<sup>3</sup>**

<sup>1</sup>Milken Institute School of Public Health, The George Washington University, Washington DC, USA

<sup>2</sup>University of Washington, Seattle, WA, USA

<sup>3</sup>Harvard T.H. Chan School of Public Health, Boston, MA, USA

The study aim is to evaluate the potential health impact and cost-effectiveness of annual school-based eating disorder screening among a hypothetical cohort of adolescents 12-18 years of age attending schools in the United States compared to the status quo of no screening. We developed a gender-stratified Markov cohort model starting at age 12 years and running for 10 years to simulate the epidemiology of anorexia nervosa, bulimia nervosa, binge eating disorder, and otherwise specified feeding and eating disorders. We used the best available epidemiologic data to populate the model and calibrated it to gold-standard eating disorder prevalence targets from the National Comorbidity Survey Replication (NCS-R) and Adolescent Supplement (NCS-A). We applied estimates of the annual healthcare costs for those with (\$6,701) and without (\$4,534) eating disorders from the Medical Expenditure Panel Survey, 2007-2011. Sensitivity (Mean:

0.78; 95% Uncertainty Interval (UI): 0.66, 0.90) and specificity (Mean: 0.88; 95% UI: 0.85, 0.92) were estimated for implementation of the SCOFF brief self-administered classroom screening tool. We estimated quality-adjusted life years (QALYs) for the intervention and status quo scenario using published estimates of the health-related quality of life associated with each eating disorder. We report incremental cost per person, incremental QALYs per person and the incremental cost effectiveness ratio of cost per QALY gained. We discounted health outcomes and costs at 3% annually. All results are reported in 2015 US dollars. Annual school-based screening was associated with a ten-year per-person incremental cost of \$57.10 (95% UI: -29.50, 126.00) and a ten-year per-person gain of 0.0129 QALYs (95% UI: 0.0067, 0.0232) for an ICER of \$4,420 per QALY gained (95% UI: cost-saving, \$13,600). We found that school-based screening would be a cost-effective approach to reducing the health and healthcare cost burden associated with eating disorders.

*Learning Objectives:*

- Describe the integration of epidemiologic data into simulation models of eating disorders prevention.
- Assess the cost-effectiveness of school-based eating disorders screening as a secondary prevention approach among adolescents.
- Evaluate the use of simulation modeling for eating disorders prevention policy planning.

##### P5.1.2 Internet-based Mindfulness Intervention for Reducing Eating Disorder Risk Factors: Results from a Randomized Controlled Pilot Study in Young Adult Women

**Melissa Atkinson, PhD<sup>1</sup>**  
**Phillippa Diedrichs, PhD, FAED<sup>2</sup>**  
**Tracey Wade, PhD, FAED<sup>3</sup>**  
**Nichola Rumsey, PhD<sup>2</sup>**

<sup>1</sup>University of Bath, Bath, United Kingdom

<sup>2</sup>University of the West of England, Bristol, UK

<sup>3</sup>Flinders University, Adelaide, Australia

Mindfulness-based eating disorder (ED) prevention has received support when face-to-face, however dissemination is impeded by limited uptake and a reliance on expert facilitators. Online interventions may help to overcome these barriers. This study assessed the efficacy of an online mindfulness-based intervention for improving ED risk factors in young adult women. British undergraduate women (N= 174, Mage = 20.34, SD = 1.67; Mbmi = 23.78, SD = 4.97) were allocated to a self-guided online mindfulness intervention (3 x 30min modules) or active control (general body image tips). ED symptoms, risk factors and related outcomes were assessed at baseline, post-intervention and 3-months. Of 87 allocated to mindfulness, only 25% completed all three

modules and 40% at least the first module. Per-protocol analysis using multilevel models revealed a significant interaction for negative affect. Those who completed all modules showed lower negative affect than control by 3-month follow-up (Cohen's  $d = 0.69$ ). A similar pattern was observed for weight and shape concerns ( $d = 0.39$ ), ED symptoms ( $d = 0.27$ ), and psychological inflexibility ( $d = 0.39$ ), however these differences were not statistically significant. No effects of condition were found for dietary restraint or media internalisation. Participants who completed only the first module showed higher levels of anxiety than control at post-intervention, which may have contributed to drop out. These findings highlight the sleeper effects of mindfulness practice, and the need to inform users of the potential for initial discomfort in order to help prevent early drop out. Despite some promise for reducing ED risk factors, and negative affect in particular, poor compliance resulted in a lack of power to detect significant effects, and indicates limited feasibility of the intervention in this format. Future implementation and evaluation will require intervention adaptations to increase and maintain engagement and maximise impact.

*Learning Objectives:*

- ▶ Describe the efficacy of an online mindfulness-based intervention for reducing eating disorder risk factors in young women.
- ▶ Identify the short vs longer-term effects of mindfulness practice.
- ▶ Assess the advantages and disadvantages of mindfulness-based online interventions.

### P5.1.3 Does Adherence Impact Disordered Eating and Dietary Intake Behaviors in the Brazilian Version of the New Moves Intervention?

**Karin Dunker, Post Doc<sup>1</sup>**  
**Marle Alvarenga, Post Doc<sup>2</sup>**  
**Angélica Claudino, Post Doc<sup>1</sup>**

<sup>1</sup>Federal University of São Paulo, São Paulo, Brazil  
<sup>2</sup>University of São Paulo, São Paulo, Brazil

The objective was to evaluate whether an increase in adherence in the Brazilian New Moves intervention was associated with a corresponding change in body shape concern, self-esteem, unhealthy weight-control behaviors (UWCB), eating patterns and dietary intake behaviors. Secondary data analysis of a previously cluster randomized controlled trial with adolescent girls (12 to 14 years old) from 10 schools was conducted. Frequency of participation was assessed using number of sessions presence (0 to 17). The association between measures and frequency were assessed using generalized estimating equations to account for each school level. Results were expressed as predicted means with 95% confidence intervals. A total of 270 adolescents (mean

age 13.4 years; SD 0.64) were included in this analysis. When including controls, most of participants (65.2%) did not attend sessions, 15.2% presented between 1 and 9 sessions, and 19.6% presented between 10 to 17 sessions. Frequency of sessions did not result in statistically significant differences in relation to body shape concern, self-esteem, UWCB, eating patterns (e.g. breakfast and pay attention to portion sizes habits) and dietary intake behaviors (e.g. intake of fruits and vegetables, sweetened beverages, artificial juices) all having overlapping confidence intervals in relation to their predicted means. A non-significant decrease trend was found in body shape concern as the frequency of participation increased. It is essential to evaluate adherence, due to evident difficulties in implementing interventions in schools of low- and middle-income countries, which may compromise results when quantitatively assessed. Using mixed methods designs, combining qualitative and quantitative approaches, might lead to insights that would enhance the likelihood of a successful intervention.

*Learning Objectives:*

- ▶ Describe disordered eating and dietary eating behaviors of a sample from Brazilian New Moves program.
- ▶ Evaluate impact of adherence to program in disordered eating and dietary eating behaviors.
- ▶ Discuss possible approaches to enhance the likelihood of a successful intervention in low- and middle- income countries.

### P5.1.4 The Relationship between Appearance Comparisons and Disordered Eating Behaviors: A Proposed Model and a Test of an Intervention

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One sociocultural factor that has been implicated as a risk factor in the development of eating disorders is a tendency to compare one's appearance to others' (appearance-related comparisons). The aims of the current study were to propose a detailed model of the relationship between appearance comparisons and disordered eating behaviors based on a review of previous literature and to experimentally test an intervention generated from this model. Previous research reports inconsistent findings regarding the potential differential impact of comparisons to universalistic (i.e., distant sources of influences) and particularistic (i.e., close sources of influence) targets. The intervention aimed to alter appearance comparisons to either media targets or peer targets to determine if there is a differential impact of a peer-target intervention and

a media-targeted intervention on body dissatisfaction, frequency of comparisons, and the relevance of the comparison target. The intervention was designed to help participants view themselves as dissimilar to their comparison targets, lowering their likelihood of making appearance comparisons and increasing appearance esteem and body image. Participants, undergraduate females, were randomly assigned to one of three conditions: peer-targeted intervention, media-targeted intervention, or a control group. Results revealed that both the media-targeted and peer-targeted interventions reduced the relevance of the comparison target, increased appearance esteem, and increased state body image. However, neither of the interventions reduced the frequency of appearance comparisons to peer or media targets in the week following the intervention. Theoretically, the current paper extends the literature by providing a comprehensive model of factors that link appearance comparisons to disordered eating behaviors. Clinically, the study provides a promising intervention for reducing the negative impact of appearance comparisons on body image, and potentially, eating behaviors.

*Learning Objectives:*

- ▶ Identify the factors that help explain the relationship between appearance comparisons and disordered eating behaviors.
- ▶ Evaluate the use of the proposed model in informing prevention and intervention efforts aimed at reducing the negative impact of appearance comparisons.
- ▶ Assess the effectiveness of the intervention in reducing the negative impact of appearance comparisons.

### P5.1.5

#### Can Yoga Improve Risk Factors for Eating Disorders in College Women Who do not Already Practice? A pilot RCT

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Body image concerns are potent risk factors for both weight gain and disordered eating, especially among college women. Yoga has been proposed as a strategy for improving body image and other risk factors for eating disorders, but there are very few randomized, controlled trials examining its impact on prevention. The purpose of this study was to examine the effects of a body-positive yoga intervention on body image in college women who

were not practicing yoga regularly. Fifty-two undergraduate students between the ages of 18 and 26 at an eastern university were recruited and randomized to a yoga group or control group. The yoga group was offered three 50-minute yoga classes per week for 10 weeks. Instructors were registered yoga teachers, who participated in a 3-day intensive training prior to study start. The yoga sequence was developed by modifying a sequence designed to improve outcomes in clinical eating disorder treatment and apply to a community setting. Outcome data were collected at baseline, after 5 weeks of intervention, and after 10 weeks of intervention. Data were analyzed using mixed models controlling for baseline levels of outcome variables. Initial analyses indicate that no significant between group intervention effects were found on body image (i.e. appearance orientation: estimated marginal means and standard errors: yoga =  $3.62 \pm 0.01$ ; control =  $3.47 \pm 0.01$ ,  $p = 0.07$ ); however, exploratory analyses indicate that after controlling for baseline levels, the yoga group had significantly higher positive affect than the control group (estimated marginal means and standard errors: yoga =  $32.77 \pm 1.04$ ; control =  $28.77 \pm 1.04$ ,  $p = 0.01$ ). These preliminary findings indicate that yoga may increase positive affect in college women. Further exploratory findings will be discussed as well as a description of the intervention, reasons for findings, and implications for future research.

*Learning Objectives:*

- ▶ Describe how yoga could be a useful tool for improving risk factors for eating disorders.
- ▶ Describe the implementation process for an on-campus yoga intervention.
- ▶ Explore next steps in understanding the potential for yoga to help with ED risk factors.

### P5.1.6

#### Female Athlete Body Project Intervention: Feasibility Trial with Professional Ballet

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As elite athletes, professional dancers have increased vulnerability for eating disorders (EDs), with three times higher risk than non-dancers. Among female athletes, generalized risk for EDs associated with internalization of female beauty ideals (i.e., the thin-ideal) in western culture is compounded by idealization of an activity-specific body ideal, a combination conferring unique vulnerability for eating pathology. Empirical support has

been established for a healthy weight intervention (HWI) that promotes body acceptance and reduces eating pathology; the present investigation employed a HWI tailored by Becker and colleagues to female athletes and further adapted in the current study for implementation among professional dancers. Participants from two elite ballet companies were randomized to control ( $n = 9$ ) and HWI ( $n = 10$ ) conditions; all participants were assessed for eating pathology and related outcome variables pre- and post- intervention (T2), and at 6-week follow-up (T3). Results indicated that dancers receiving the intervention demonstrated significant reductions in T2 and T3 body dissatisfaction (BD) (T2:  $p = .002$ ,  $r = -.63$ ; T3:  $p = .008$ ,  $r = -.63$ ), dietary restraint (T2:  $p = .006$ ,  $r = -.59$ ; T3:  $p = .008$ ,  $r = -.63$ ), and eating pathology (T2:  $p = .002$ ,  $r = -.63$ ; T3:  $p = .008$ ,  $r = -.63$ ). Reliable Change Index (RCI) calculations indicated meaningful improvement in BD amongst HWI dancers both post-intervention ( $\Delta T1-T2$ : 70% of HWI), and at follow-up ( $\Delta T1-T3$ : 100% of HWI); similar RCI results were indicated for meaningful improvement in ED pathology ( $\Delta T1-T2$ : 80%;  $\Delta T1-T3$ : 88% of HWI); Results provide preliminary evidence that the current HWI provides a potentially feasible, and effective means of eating disorder prevention in female professional ballet dancers. Future research should explore methods to increase participation and adoption of this program within other athlete samples.

*Learning Objectives:*

- ▶ Discuss a healthy weight intervention for the prevention of eating disorders in professional ballet dancers.
- ▶ Critically assess a method of intervention for preventing eating pathology in elite athletes.
- ▶ Identify risk factors for eating disorders among athletes that may be reduced with the use of a healthy weight intervention.

## **P5.2** **TREATMENT OF EATING DISORDERS I** **(CHILD AND ADOLESCENT)**

*Co-Chairs*

**Daniel Le Grange, PhD, FAED and Gina Dimitropoulos, PhD, RSW**

### **P5.2.1** **Moderators and Mediators of Remission in Family-Based Programs Offering Higher Levels of Care for Eating Disorders**

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Several randomized controlled trials (RCTs) have been published that provide evidence as to the efficacy of traditional family-based treatment (FBT) for anorexia nervosa (AN). This has led to efforts to incorporate FBT principles into higher levels of care. While two studies have explored moderators and mediators in manualized outpatient FBT, similar research has not been carried out on FBT-based programs offering higher levels of care. The present study sought to assess mediators and moderators of treatment outcome in an FBT-based partial hospitalization program plus intensive outpatient program (PHP+IOP), and an FBT-based intensive outpatient program (IOP). Positive treatment outcome was defined as weight gain and participants scoring within 1SD of Eating Disorder Examination Questionnaire (EDE-Q) norms. One hundred and thirteen adolescent and young adult patients (M age=16.3 years, SD=3.0) diagnosed with AN ( $n=89$ , 78.8%) or subthreshold AN ( $n=24$ , 21.2%) who were participating in either FBT-based PHP+IOP or FBT-based IOP were included in the analyses. Mixed effects modeling indicated that among the 16 variables examined as potential moderators, duration of illness ( $p < .001$ ), baseline level of depressive symptomology (CDI:  $p < .001$ ; CESD;  $p < .001$ ), restraint over eating (EDEQ-Restraint;  $p < .001$ ), and paternal critical comments (FQ-CC;  $p = .008$ ) were found to be statistically significant moderators of treatment outcome from baseline to 3-month follow-up. No significant mediators were identified. These results indicate that patients with longer duration of illness and higher scores on the CDI/CESD, EDEQ-Restraint, and FQ-CC benefited more from PHP+IOP than IOP and highlight the importance of assessing these variables when determining appropriate level of care. Implications for assessment and treatment will be discussed.

*Learning Objectives:*

- ▶ Describe ways in which family-based treatment (FBT) principles for anorexia nervosa (AN) can be incorporated into a more intensive treatment setting such as a partial hospitalization program plus based intensive outpatient program (PHP+IOP) or intensive o.
- ▶ Recognize the need for investigating the effects of mediators and moderators on treatment outcome for this patient population.
- ▶ Discuss moderators and/or mediators of treatment outcome in FBT-based PHP+IOP and IOP.

## P5.2.2

### Current Approaches to Refeeding Malnourished Patients with Eating Disorders: Results of an International Survey

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Emerging data are challenging the standard of care for refeeding inpatients with eating disorders (ED), which is lower calorie refeeding (LCR) starting around 1200 kcal/d and advancing by 200 kcal every other day. Limited studies of higher calorie refeeding report faster weight gain and shorter hospital stay, however data are insufficient to support new evidence-based refeeding guidelines. The purpose of the present study was to examine clinical approaches to refeeding in patients with ED. We surveyed 44 International inpatient programs for adolescents and young adults who are medically unstable with malnutrition due to ED. An online survey queried kcal levels, route of feeding, electrolyte correction and length of stay. If a kcal range was reported, the median was used; if kcal/Kg body weight was reported, 43 Kg was used to represent the average participant in previous studies of refeeding. Descriptive statistics were computed with STATA 12. Results are based on 36 respondents (82%). Mean (SD) starting kcals were 1579 (339) kcal/d advancing by 220 (103) kcal/d. Meal-based refeeding was used in 29 programs (81%); 7 (19%) used combined enteral and oral feeding. Calories were started at a defined threshold in 26 programs (72%), a range in 5 programs (14%), and 40 kcal/kg in 3 programs (9.3%). Compared to LCR, 24 programs (67%) began > 1200 kcal and 34 (94%) advanced faster. Length of stay was 14.1 (8.8) days; discharge kcal were 3003 (461) per day. For phosphate repletion, 21 programs (58%) used a serum threshold of 3.0 (0.3) mg/dL, 18 (50%) used a declining trend, 7 (19%) used prophylaxis, and 14 (58%) used multiple methods. In conclusion, this purposeful sample of inpatient ED programs is beginning with higher kcals and increasing faster than current recommendations, with wide variations electrolyte management. This may reflect a systemic shift in clinical practice and underscores the pressing need for research to develop new evidenced-based refeeding guidelines.

#### Learning Objectives:

- 1 Describe current recommendations for refeeding adolescents and young adults with malnutrition secondary to ED.
- 2 Compare current clinical practice to existing recommendations.
- 3 Discuss research priorities to support evidenced-based treatment of patients with malnutrition secondary to ED.

## P5.2.3

### Parental Self-Efficacy in Two Family Therapies for Adolescent Anorexia Nervosa

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Data suggest that family therapy is effective for adolescent anorexia nervosa (AN), but how family therapy brings about improvements is not well established and may differ between types of family therapy approaches. Family-Based Treatment (FBT) is a highly focused approach designed to empower parents to employ AN-interfering behaviors and facilitate weight gain, while Systemic Family Therapy (SyFT) explores family communication patterns and dilemmas and does not specifically target weight or other eating disorder behaviors. Both treatments have shown efficacy in treating adolescents with AN, but FBT demonstrates earlier weight gain, fewer hospitalizations and lower cost. Preliminary data suggest that improvements in parental self-efficacy (SE) in FBT is a possible mechanism underlying early parental behavioral changes that block severe dieting and over exercise and thus lead to weight gain. Thus for the current exploratory study, we hypothesized that changes in parental SE would mediate early weight gain in FBT, but not SyFT. To examine this hypothesis, we used data from 158 families of adolescents with AN (12-18 years old; 89% female) who had been randomized to receive either manualized FBT or SyFT (16 sessions over 9 months) at 6 treatment sites across the US and Canada. Parental SE was measured at baseline and sessions 2, 4, 6 and 8. Linear mixed models indicated that only parents in FBT reported significantly improved SE early in treatment ( $p = .000$ ). Further, mediation analyses found that in FBT but not SyFT

change in maternal SE by session 8 mediated weight gain by session 10. Change in paternal SE served as a non-specific predictor, but not a mediator of the adolescent's weight gain. Overall, these data support our primary hypothesis that improvements in parental SE underlie early weight gain in adolescent treatment with FBT, but not SyFT. Future confirmatory studies are needed to further understand mechanisms leading to change.

*Learning Objectives:*

- ▶ Demonstrate an understanding of how parental self-efficacy is associated with treatment outcome in eating disorders.
- ▶ Assess how different treatment models for adolescent anorexia nervosa utilize family therapy strategies.
- ▶ Interview parents about their expected efficacy in supporting their adolescent who recovers from anorexia nervosa.

#### P5.2.4

### Integrating Family-Based Treatment (FBT) into a Higher Level of Care Predicts Lower Rate and Days of Readmission

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The present study aimed to explore the effects of infusing the principles of Family-Based Treatment (FBT), the leading intervention for child and adolescent eating disorders, into a higher level of care at an adolescent medicine center. Rates of readmission for children and adolescents ( $n = 326$ ;  $M = 15.03$  years,  $SD = 2.35$ ) who received treatment in a partial hospitalization program (PHP) at the Pediatric Eating Disorders Center at Atlantic Health System (PEDCAHS) were measured for three years before (2011-2014;  $n = 162$ ) and after (2014-2017;  $n = 164$ ) FBT was introduced. PEDCAHS incorporated FBT into its full range of care levels, from the medical stabilization inpatient unit, to the PHP and to the intensive and standard outpatient programs. A majority of patients presented with a primary diagnosis of anorexia nervosa, restricting type. Rates of readmission were significantly lower for patients who received care in the FBT-infused PHP (2%) as compared to the traditional PHP prior to the implementation of FBT philosophies and strategies (12%) [ $2(1, 326) = 12.69, p < .001$ ]. Furthermore, among the subset who were readmitted, number of readmission days was lower for patients treated in the FBT-infused PHP ( $M = 16.67, SD = 14.36$ ) relative to the traditional PHP ( $M$

$= 21.10, SD = 13.87$ ). Overall, days of readmission were significantly lower for the patients treated in the FBT-infused PHP (Mann-Whitney,  $U = 11983.00, p < .001$ ). In summary, the patterns of readmission pre- and post FBT implementation suggest that incorporating FBT into higher levels of care for the treatment of adolescent eating disorders may reduce rates and days of readmission. This adds to the growing body of literature supporting the integration of FBT into higher levels of care, in efforts to reduce length of hospitalizations and encourage continuity of care as families step up or down in treatment intensity.

*Learning Objectives:*

- ▶ Summarize a successful application of FBT to a higher level of care.
- ▶ Evaluate the utility of integrating FBT into a higher level of care.
- ▶ Consider novel applications of FBT and other evidence-based treatments.

#### P5.2.5 - The Picky Eaters Club: A Pilot Trial of a 6-session Outpatient Group Behavioral Intervention for Parents of School-aged Children with Excessive and impairing Picky Eating

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The purpose of this study was to examine outcomes of 21 school-aged children (ages 4-11) described by their parents as extremely picky eaters who met criteria for ARFID not associated with a developmental disorder, other eating disorder, or other eating-related anxiety disorder (e.g., Specific Phobia of Vomiting or Choking). Seven cohorts of 2-4 families each took part in a 6-session manualized parent-only group treatment in an outpatient setting. This group treatment focused on training parents to serve as effective coaches for daily in-home exposures to non-preferred foods as well as in components of parent management training (PMT) to reduce problematic mealtime behaviors. Parents completed standardized feeding measures to assess picky eating and associated problem mealtime behaviors at pretreatment, posttreatment, and at 3-month follow-up, as well as a satisfaction measure at posttreatment. Results showed excellent feasibility and adherence by parents and high parent satisfaction with treatment. Paired t-tests to measure within-group change showed significant pre-posttreatment reductions in picky eating scales with moderate-to-large effect sizes. Results also showed that gains were maintained at 3-month follow-up with moderate-to-large effect sizes. Findings indicate that a relatively brief group treatment that focuses narrowly on training parents to facilitate and carry out food exposures and contingency management procedures is associated

with reductions in functionally impairing picky eating and related negative mealtime behaviors in elementary school-aged children.

*Learning Objectives:*

- ▶ Describe the rationale behind a parent-only, group-based approach to outpatient behavioral treatment of school-aged children with impairing picky eating.
- ▶ Describe the theorized active ingredients of exposure and contingency management of this parent-only, group-based behavioral treatment of children with impairing picky eating.
- ▶ Describe results -- including reduced picky eating, greater enjoyment of food, feasibility, and parent-adherence -- of this pilot study of behavioral treatment of children with impairing picky eating.

### P5.2.6 DBT Skills Group as an Adjunct to FBT for Adolescents with Restrictive Eating Disorders

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Dialectical behavior therapy (DBT) is commonly used in the treatment of EDs; however, few studies have explored clinical outcomes of DBT when used as an adjunct to FBT in treating restrictive EDs. Thus, we sought to examine the preliminary efficacy of a DBT skills group as an adjunct to evidence based treatment for restrictive EDs. The sample included 18 adolescent girls ages 13-18 ( $M = 15.3$ ,  $SD = 1.64$ ) undergoing treatment for restrictive eating disorders. All participants were concurrently receiving FBT for restrictive eating disorders. The sample consisted of 10 individuals with AN (restricting type and binge eating/purging type), 5 with AAN, and 3 with OSFED (all subclinical AN). Of the 18, 12 completed the 6-month DBT skills group. Participants who dropped from the group were significantly younger ( $M = 14.2$ ,  $SD = 1.2$ ) versus those who completed group ( $M = 15.9$ ,  $SD = 1.6$ ;  $t = -2.41$ ,  $p < .05$ ). Baseline negative urgency (the tendency to act out rashly in response to negative mood) was significantly associated with baseline EDE-Q Global scores ( $r = .58$ ,  $p < .05$ ) and self-induced vomiting ( $r = .51$ ,  $p < .05$ ). For the 12 individuals who completed the 6-month DBT skills group, there were large effect sizes for both increases in adaptive skills ( $d = .71$ ) and decreases in general dysfunctional coping strategies ( $d = .85$ ) from pre-treatment to post-treatment. There were small to medium effect sizes for decreases in binge eating ( $d = .40$ ) and increases in % IBW ( $d = .32$ ). Finally, there were small effects sizes in decreases in global EDE-Q scores ( $d = .26$ ), EDE-Q restraint ( $d = .29$ ) and CDI scores ( $d =$

.28). An adjunctive DBT skills group appears to be feasible for adolescent girls undergoing treatment for restrictive EDs with some promising preliminary data. Importantly, this group may be more appropriate for older adolescents. Feasibility and tailoring a DBT skills group to an outpatient treatment program are discussed.

*Learning Objectives:*

- ▶ Summarize the pilot results of an adjunct DBT skills group to FBT for adolescents with restrictive eating disorders.
- ▶ Discuss logistics, feasibility of implementing an adjunct DBT skills group to an outpatient treatment program for restrictive eating disorders.
- ▶ Review next steps in examining DBT skills as a feasible adjunct to FBT for adolescents with restrictive eating disorders.

## P5.3 BINGE EATING DISORDER AND OBESITY

*Co-Chairs*

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### P5.3.1 Effort Expenditure for Rewards Task Modified for Food: A Novel Behavioral Measure of Willingness to Work for Food and Associations with Binge Eating

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Effort valuation/willingness to work (i.e., tendency to overcome response costs to obtain a reinforcer) is a component of approach motivation or reward "wanting" in the RDoC matrix. The Effort Expenditure for Rewards Task (EEfRT) is a behavioral measure of willingness to work; participants choose between low-cost/low-reward (LC/LR) and high-cost/high-reward (HC/HR) options on trials associated with different probabilities of winning and monetary reward values. Given the utility of this translational task for examining reward processing in other psychiatric populations and an increasing recognition of reward processing in eating disorders, we modified the EEfRT to examine willingness to work for food reward. Participants were 65 female students recruited across the spectrum of severity of binge eating. Each competed for one of four palatable foods and was shown the equivalent of one portion size prior to completing the paradigm.

Participants self-reported engagement in the task, working hard at LC/LR and HC/HR tasks, and making choices based on reward probability and magnitude. As with the original EEfRT, both the probability of winning and the HC/HR reward magnitude predicted the likelihood of choosing the HC/HR task. Binge eating symptoms interacted with reward magnitude, such that those with high binge eating used reward magnitude more to make trial choices than those with low binge eating. The 3-way interaction between binge eating, reward magnitude, and probability was trend-level significant, such that those with high binge eating were more likely to use probability to make trial choices when reward magnitude was high. Finally, self-reported wanting for the food reward predicted HC/HR choices, but self-reported liking did not. These data provide initial support for the validity of the EEfRT modified for food as a behavioral measure of willingness to work for food reward. Future research should test this paradigm in individuals with eating and weight disorders.

*Learning Objectives:*

- ▶ Describe the Effort Expenditure for Rewards Task for assessing effort valuation/willingness to work.
- ▶ State modifications to the Effort Expenditure for Rewards Task to assess willingness to work for food reward.
- ▶ Discuss performance on modified EEfRT based on reward magnitude, probability, and binge eating symptoms.

### P5.3.2

#### Problematic Eating Behaviors and Psychopathology: The Mediating Role of Loss of Control Eating

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**Marta de Lourdes, MSc**  
**Ana Pinto-Bastos, MSc**  
**Sofia Ramalho, MSc**  
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This study compares different problematic eating behaviors (PEBs; objective(OBE)/subjective(SBE) binge eating and compulsive (CG)/non-compulsive (NCG) grazing) in relation to the levels of loss of control (LOC) and psychopathology. We also investigate the role of LOC as a mediator between PEBs and psychopathology. This cross-sectional study assessed 163 bariatric surgery candidates and 131 postoperative bariatric patients after 12 (M= 26.37; SD=10.05) months. Face-to-face assessment: Eating Disorders Examination diagnostic items for binge eating; and the Rep(eat) for grazing. LOC was measured by 5 questions driven from published EMA studies to be answered in a 5-point Likert scale (> .87). Self-report measures: ED-15; TFEQ21; Rep(eat)-Q; UPPS; DASS. OBE were reported by 26(8.8%); SBE by 31(10.5%); CG by 37(12.6%) and NCP by 40(13.6%) of patients. The different PEBs differed significantly in the

level of LOC ( $F(3,120)=21.21, p<.001$ ) with OBE and NCG being associated with the highest and lowest LOC levels, respectively. No differences were found between SBE and CG. Patients with PEBs scored significantly higher in all self-report measures ( $(F(3,120)=21.21, p<.001)$ ;  $(F(3,120)=21.21, p<.001)$ ;  $(F(3,120)=21.21, p<.001)$ ) than those without. Patients reporting OBE showed the highest scores, but only significantly higher than PCnc. Models tested were significant (ex(ED-15):  $F(1,100)=8.93, p<.01, R^2=.08$ ). LOC was found to be a full mediator between PEBs and psychopathology. The path between PEB and ED-15/TFEQ21/DASS lost significance when the indirect path (LOC) was considered [ex(ED-15):  $C=2.53, p<.001$ ;  $C'=.09, n.s.$ ]. The indirect path accounted for > 74% (95% CI [.28-2.28] for ED-15) of the relation between PEB and psychopathology. We show evidence for the conceptualization of different PEB, including grazing, in a continuous scale of LOC. Regardless of the behavioral manifestation of the PEB, it is the sense of LOC that better explains the degree of psychopathology.

*Learning Objectives:*

- ▶ To describe different problematic eating behaviors in relation to loss of control eating.
- ▶ To identify similarities between binge eating and grazing.
- ▶ To predict psychopathology based on levels of loss of control eating.

### P5.3.3

#### Rumination and Eating Styles in Patients with Overweight: A Preliminary Ecological Momentary Assessment Study

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**Kamila Czepczor-Bernat, PhD student**  
**Monika Kornacka, PhD**

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The aim of the present study was (1) to examine what is the link between the general tendency to ruminate and maladaptive eating strategies in normal weight and overweight participants and (2) to explore the interplay between rumination, maladaptive eating behaviours and mood using daily sampling and to run a preliminary research giving first insights to the role of momentary mood and repetitive thinking in the use of emotional eating in participants everyday life. The sample was composed of 38 individuals with overweight and 50 participants with normal body weight. Participants filled in a series of trait questionnaires (the Perseverative Thinking Questionnaire (PTQ), the Three-Factor Eating Questionnaire (TFEQ-R18)) and used EMA application measuring momentary mood, rumination and emotional eating (the State Mood Evaluation (SME), the Momentary Ruminative Self-focus Inventory (MRSI), the TFEQ-R18). Further to correlations,

the all eating styles higher are, the higher total score of perseverative thinking and core features are, but only among group with normal body weight. The group status moderates the relation between PTQ mental load and emotional eating and uncontrolled eating, but not the cognitive restraint. The results suggest that there was a significant model of moderated mediation of the link between PTQ mental load and: (1) snacking and (2) uncontrolled eating through emotional eating, moderated by group status. The EMA shows that when both daily rumination and sad mood are entered to the model predicting daily emotional eating at level 1, only rumination remains significant predictor. Among the trait predictors of daily emotional eating and rumination, the only significant predictor is emotional eating predicting daily level of emotional eating.

#### *Learning Objectives:*

- ▶ Gain better insight into the role of rumination in the context of overweight.
- ▶ Assess the role of rumination in participants' mood and eating behaviors in their everyday life.
- ▶ Describe the role of momentary mood and repetitive thinking in the use of emotional eating in participant's everyday life.

#### **P5.3.4**

### **Does Momentary Distress Tolerance Moderate the Relation between Negative Affect and Subsequent Loss-of-control Eating? An EMA study.**

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Given growing interest in the role of distress tolerance in the maintenance and treatment of binge eating, we conducted the first-ever examination of momentary distress tolerance and binge eating using ecological momentary assessment (EMA). In an ongoing study, treatment-seeking adults with clinically significant loss-of-control (LOC) eating ( $n=15$ , projected  $n=20$ ) completed a smartphone-delivered EMA protocol for two weeks. Six times per day, participants answered questions regarding their current levels of negative affect, distress tolerance, and degree of LOC eating. We used generalized linear models and generalized estimating equations to examine: (1) time-varying nature of momentary distress tolerance; (2) ability of distress tolerance at time 1 (T1) to predict episodes of LOC at time 2 (T2); and (3) interaction between momentary negative affect and distress tolerance at T1 in predicting LOC at T2. We found distress tolerance, on average, decreased throughout the day, even when accounting for negative affect ( $p = .03$ ). T1 distress

tolerance did not significantly predict T2 LOC ( $ps > .05$ ). At lower levels of momentary distress tolerance, feeling more guilty, bored, or sad (relative to one's average level) was associated with later LOC eating ( $ps = .01-.04$ ). Overall, our results support the value of assessing distress tolerance on a momentary level, as it may be a state, rather than trait variable. Additionally, it appears to moderate the prospective relation between negative affect and binge eating. Targeting distress tolerance in treatment may be beneficial in preventing LOC episodes for individuals with binge eating by increasing a patient's ability to tolerate uncomfortable feelings, especially boredom, guilt or sadness. Future research should further examine the role of emotion-specific distress tolerance in the treatment of binge eating.

#### *Learning Objectives:*

- ▶ Describe the time-varying nature of distress tolerance as measured by EMA.
- ▶ Examine the role of momentary distress tolerance in predicting subsequent binge eating.
- ▶ Assess the moderating role of distress tolerance in the relation between negative affect and binge eating.

#### **P5.3.5**

### **Depression Partially Mediates the Relationship between Health-related Quality of Life and Binge Eating Disorder Diagnosis.**

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**Therese Kenny, MSc<sup>2</sup>**

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Multiple studies have found that individuals with binge eating disorder (BED) report significantly worse health-related quality of life (HRQoL) compared to those without eating disorders. Moreover, research suggests that psychological symptoms, rather than physiological symptoms (i.e., increased body mass index), largely influence the relationship between BED and HRQoL. However, to our knowledge there have been no studies exploring whether certain psychological symptoms may act as mediators between BED diagnosis and HRQoL. The present study aimed to address this gap by comparing a community sample of adults meeting DSM 5 criteria for BED ( $n=71$ ) and a community sample of individuals with no history of an eating disorder (NED;  $n=79$ ). Participants completed self-report measures of HRQoL (Short-Form 6D), eating disorder psychopathology (Eating Disorder Examination Questionnaire), and symptoms of anxiety and depression (Brief Symptom Inventory). Consistent with previous studies, those with BED reported significantly lower HRQoL compared to those with NED after controlling for age, body mass index, anxiety scores, and depression scores. Moreover,

depression scores partially mediated the association between BED diagnosis and HRQoL. The present findings suggest that BED is meaningfully linked to HRQoL deficits. This relationship may be partially accounted for by depressive symptoms, which have been found to frequently co-occur with BED. These results point to the necessity of specifically addressing depression in BED treatment in order to help improve patients' well-being.

*Learning Objectives:*

- ▶ Critically consider the complexities of the relationship between health-related quality of life and binge eating disorder, with a particular emphasis on psychological factors that may contribute to this association.
- ▶ Recognize the potential influence of depressive symptoms on health-related quality of life in binge eating disorder, and reflect on possible ways through which depression may be detrimental to health-related quality of life in binge eating disorder.
- ▶ Describe certain gaps in the extant literature on health-related quality of life and binge eating disorder, and identify certain topics that warrant further attention to help shed further light on this important issue.

### P5.3.6

#### Weight and Waiting for Reward: Behavioral and Neural Correlates of Delay Discounting and Reward Evaluation in Obesity and Binge Eating Disorder

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Expanding our perspectives on cognitive mechanisms implicated in other disorders to eating and weight disorders may have relevance for advancing our knowledge of eating and weight disorders. For example, difficulty delaying gratification for larger-later rewards (i.e., impaired delay discounting) is a trans-diagnostic cognitive process implicated in addictions, obesity, and, more recently, eating disorders characterized by binge eating. Delay discounting data in persons with binge eating disorder (BED) are limited, and neural correlates of delay discounting have not been studied in BED. This study tested whether behavioral and neural correlates of delay discounting differed among

normal-weight healthy controls (HCs; n=12; mean body mass index [BMI]=22.69), persons with obesity (n=9; mean BMI=34.31), and persons with BED (n=6; mean BMI=37.19). Participants completed a hypothetical monetary delay discounting task before an fMRI scan and a reward evaluation task during an fMRI scan; monetary tasks were used to test generalized versus disease-specific (e.g., food) delay of gratification. Area-under-the-curve (AUC) analyses indicated that persons with obesity demonstrated a slightly greater preference for smaller-sooner (vs. larger-later) rewards than persons with BED (Cohen's d=0.267) and HCs (Cohen's d=0.377); however, delay discounting rates did not significantly differ among groups. BMI was significantly correlated with increased preference for smaller-sooner rewards in persons with obesity only. Region-of-interest fMRI analysis will examine associations among delay discounting AUC scores and activations in regions associated with reward evaluation (e.g., ventral striatum and ventromedial prefrontal cortex). fMRI results will provide insights into the neural underpinnings of delay discounting and reward evaluation for BED and may help to guide treatment development for obesity and BED. Our preliminary results support continued investigations of novel neurocognitive treatments and non-invasive neuromodulation techniques (e.g., transcranial magnetic stimulation) for obesity, as these treatments have shown preliminary efficacy in normalizing delay discounting. Increasing ability to delay gratification may help to promote more healthful eating behaviors and body weight.

*Learning Objectives:*

- ▶ Understand how delay discounting applies to binge eating disorder and obesity, and eating disorders more broadly.
- ▶ Describe the behavioral and neural correlates of delay discounting and reward evaluation in both persons with binge eating disorder and obesity.
- ▶ Evaluate the potential for delay discounting study results to inform novel eating-disorders and weight-disorders treatments

## P5.4

### PERSONALITY AND COGNITION

*Co-Chairs*

Unna Danner, PhD and Anna M. Bardone-Cone, PhD, FAED

#### P5.4.1

#### Sleeping Beauty: Eating Disorders and Personality Maturation

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 Claes Norring, PhD<sup>1</sup>

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Personality matures in adulthood and affects physical and mental health, as well as longevity (Ozer & Benet-Martinez, 2006; Turiano et al., 2015). However, there are considerable individual differences in maturational patterns. This study investigated patterns of personality maturation in eating disorders (ED). Anorexia nervosa (AN) and bulimia nervosa (BN) patients were recruited from two multisite international genetic studies and categorized as either currently ill ( $n = 1052$ ) or remitted ( $n = 387$ ). Patients were compared to healthy controls of similar age ( $n = 691$ ) on the NEO Personality Inventory Revised (NEO PI-R). Mean trait scores were compared between groups with ANOVA and cross-sectional age differences were investigated using multi-group structural equation modeling with age as a predictor. Significant between-group differences were found on 25 of 30 personality traits, with remitted ED patients generally scoring between currently ill patients and healthy controls. Remitted patients differed significantly from currently ill patients on 16 traits and from controls on 20 traits (all  $ps < .01$ ). Remitted patients also showed normative patterns of personality maturation, while those who were currently ill did not. Results suggest that ED may lead to arrested personality development and that treatment has the potential to promote healthy personality maturation. Greater attention needs to be directed at how such maturation can be promoted.

*Learning Objectives:*

- ▶ Provide a new perspective on eating disorder by comparing with normal development.
- ▶ Give an introduction to personality and how it can be of value for the study of eating disorder.
- ▶ Assess the role of personality and its development in anorexia nervosa and bulimia nervosa.

**P5.4.2**  
**Emotional Instability as Risk Factor for Eating Disorder Behaviors in Adolescents: A Large-scale Prospective Study**

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**Ayelet Hochman, BS**  
**Nadia Micali, MD/PhD**

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The etiology of eating disorders (EDs) involves a complex interplay of biopsychosocial factors, including personality. Few prospective, large-scale longitudinal studies have spanned early life onto adolescence to identify risk factors for EDs, including gender-specific patterns. Personality and temperament traits of negative emotionality/neuroticism and perfectionism, which involve reciprocal interaction of heritable, biologically based and sociocultural factors, are known as risk factors for EDs across diagnostic categories. Understanding the developmental pathways for EDs via temperament and personality may elucidate their etiology, onset, and maintenance. We investigated temperament/personality risk factors for ED behaviors in 1437 adolescents using data from a large-scale, prospective study (ALSPAC). Using parent and youth self-report, we measured the association between early childhood temperament (3 years), borderline personality features (11 years), sensation seeking (11.5 years), big five personality factors (13 years), depression (13.5 years), and binge eating and purging (14 and 16 years) using logistic regression models. Structural equation modeling (SEM) analyzed causal pathways between predictors and outcomes. Higher levels of borderline personality, depression, and neuroticism predicted both binge eating and purging in females and males ( $p < 0.01$ ). SEM revealed a significant developmental pathway for females only in which heightened emotionality in early childhood predicts emotional instability and depression in adolescence, which predicts binge eating and purging. Results suggest that temperament/personality traits represent risk factors for EDs in both females and males, and a trait-based risk pathway via emotional instability is specifically relevant to females. This has important implications for prevention.

*Learning Objectives:*

- ▶ Describe temperament and personality features that are relevant in eating disorders.
- ▶ Understand hypothesized gender specific developmental pathways for eating disorders.
- ▶ Understand implications for prevention of eating disorders.

**P5.4.3**  
**A Comparison of Cognitive and Experienced Flexibility in Anorexia Nervosa and Obsessive-Compulsive Disorders**

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**Lot Sternheim, PhD<sup>2</sup>**  
**Alexandra Dingemans, PhD<sup>3</sup>**  
**Boris van Passel, MD, MSc<sup>4</sup>**  
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Accumulating evidence suggests that anorexia nervosa (AN) and obsessive-compulsive disorders (OCD) share underlying cognitive inefficiencies, most notably encompassing cognitive inflexibility. Yet few studies on cognitive inefficiencies included both patients with AN and OCD. The present study aims to test differences in cognitive and experienced flexibility between patients with AN and OCD and in comparison to control participants. A total sample of 200 participants (AN=61, OCD=72, HC=67) performed several neurocognitive tests (measuring set-shifting (Trail Making Test (TMT), Intradimensional/Extradimensional Test (ID/EDS), Color Word Interference Test (CWIT) including 4th card, Group Embedded Figure Task (GEFT)) and reported on experienced flexibility (DFlex) and clinical characteristics. Age was entered in all analyses as covariate. Results showed set shifting problems on the TMT for both patients groups and on the CWIT for the OCD group in comparison to control participants, but no differences with the control group were found on the ID/EDS. Contrary to our expectations, control participants had a stronger detail orientation than the OCD and AN groups. Experienced rigidity and detail orientation (DFlex) was much worse for both patients groups than for control participants. These results suggest that cognitive flexibility is worse in OCD patients than in AN patients, but it clearly matters how this is tested. Differences are most notable on tests using reaction times. Interestingly, experienced flexibility is very poor in both patients groups and seems different from actual flexibility problems as measured with the neurocognitive tests. These outcomes are potentially very interesting for interventions aimed to target flexibility such as Cognitive Remediation Therapy as it may be even more important to enhance experienced flexibility than ensuring improvement in actual cognitive skills.

*Learning Objectives:*

- 】 Following the presentation, participants will be able to describe the similarities between patients with anorexia nervosa and obsessive-compulsive disorders regarding cognitive flexibility.
- 】 Following the presentation, participants will be able to explain the difference between cognitive and experienced flexibility.
- 】 Following the presentation, participants will be able to relate different components of flexibility to interventions targeting thinking styles.

#### P5.4.4

### Proactive and Reactive Inhibitory Control in Eating Disorders

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**Iain Campbell, DSc<sup>2</sup>**

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Altered inhibitory control has been implicated in the development and maintenance of eating disorders (ED), however it is unclear how different types of inhibitory control are affected across the EDs. We explored whether individuals with bulimia nervosa (BN), binge eating disorder (BED) and anorexia nervosa (AN) differed from healthy individuals (HC) on two types of motor inhibitory control: proactive inhibition (related to the preparation/initiation of a response) and reactive inhibition (withholding a response in reaction to a signal). Ninety-four women (28 AN, 27 BN, 11 BED, 28 HC) completed two neuropsychological tasks (a cued reaction time task and a stop signal task), and questionnaires assessing clinical variables, mood, anxiety, and inhibitory control. Self-reported inhibitory control was poorer in women with BN compared to the HC and AN groups, but greater in women with AN compared to all other groups. However, no group differences in reactive inhibition were observed. Proactive inhibition was augmented in women with AN compared to HC, and this was related to self-reported intolerance of uncertainty. The findings suggest that proactive inhibition may be a relevant target for behavioural interventions for AN, and call for further research into the relationship between intolerance of uncertainty and proactive inhibition.

*Learning Objectives:*

- 】 Consider how studying behavioural concepts can be useful in developing more targeted treatments.
- 】 Describe the difference between inhibitory control subtypes.
- 】 Learn that choice of methodology may affect results.

#### P5.4.5

### Experimental Investigation of Non-Verbal Communication in People with Eating Disorders

**Amy Harrison, MPsych, PhD, DClinPsy**

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Individuals with eating disorders report difficulties with their work and social functioning and these difficulties may continue into recovery. At the same time, qualitative

studies highlight the vital role played by social support in recovery. The aim of this observational study was to develop and use an innovative and ecologically valid means of further elucidating the interpersonal difficulties postulated by contemporary models of eating disorders to maintain the illness. Fifty women with a mean age of 23.4 (SD=4.4; 25 diagnosed with Anorexia Nervosa and 25 controls) were asked to have a real life social interaction with the researcher and this was filmed. A behavioural coding system which encompassed 20 different forms of non-verbal communication was developed drawing on similar investigations in the autism spectrum disorder literature. The behavioural codes were then analysed using Observer Pro software which permitted comparisons to be made between the groups and the results indicate that women with eating disorders make less use of non-verbal communication during real life social interactions than individuals without eating disorders. Clinical implications of these findings will be discussed in the context of how individuals with eating disorders could be supported to make more use of the subtle social cues that enable effective social interactions.

#### *Learning Objectives:*

- ▶ Following the training, participants should be able to better understand the importance of social skills for recovery.
- ▶ Following the training, participants should be able to understand how observational methodology can be used to investigate how people use their non-verbal communication in everyday social interactions.
- ▶ Following the training, participants should be able to reflect on how coaching efficient social skills might be used to make more of social support in recovery.

#### **P5.4.6**

### **How Soon is Now? : Delay Discounting and Impulsivity across Eating Disorders**

**Trevor Steward, MSc<sup>1,2</sup>**

**Gemma Mestre-Bach, MSc<sup>1,2</sup>**

**Cristina Vintró-Alcaraz, MSc<sup>1,2</sup>**

**Zaida Agüera, PhD<sup>1,2</sup>**

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Delay discounting (or temporal discounting) refers to the degree to which one prefers immediate rewards over larger delayed rewards, and specifically to how rewards lose value as the expected delay to receipt increases. Evidence points to eating disorder patients displaying nonstandard rates of delay discounting. For example,

patients with anorexia nervosa (AN) are believed to have an increased capacity to delay reward, which is representative of their ability to override the drive to eat. Contrarily, patients with binge eating disorder (BED) are associated with a reduced predisposition to delay gratification. Here, we investigated monetary delay discounting and impulsivity in 80 adult women with EDs (56 AN and 24 BED), diagnosed according to DSM-5 criteria, and in 80 healthy female controls (HC). A commonly used monetary incentive delay discounting task was administered to patients upon admission to outpatient treatment. Impulsivity was assessed by means of the UPPS-P scale. AN-restrictive (AN-R) subtype patients showed less steep discounting rates than BED and AN-bingeing/purging (AN-BP) subtype patients. Compared to HCs and AN-R patients, BED and AN-BP patients presented higher delay discounting rates, and positive and negative urgency levels. Our findings raise the question as to whether reduced caloric intake in AN-R patients is associated with disproportionate self-control and whether bingeing behaviors may be primarily driven by emotional states and impulsive choice.

#### *Learning Objectives:*

- ▶ Describe how decision making and choice behavior are related to eating disorder pathology.
- ▶ Clarify the relevance of delay discounting within the realm of eating disorders and specify its correlates with different conditions.
- ▶ Highlight the differences between patients with anorexia nervosa restrictive-subtype and patients with bingeing/purging subtype in terms of delay discounting.

#### **P5.5**

### **DIAGNOSIS, CLASSIFICATION, AND MEASUREMENT**

#### *Co-Chairs*

**Scott Crow, MD, FAED and Jennifer E. Wildes, PhD, FAED**

#### **P5.5.1**

### **Driven Exercise versus Other Purging Methods in the Context of Purging Disorder**

**Megan Shea, Student<sup>1</sup>**

**Janet Lydecker, PhD<sup>2</sup>**

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Purging disorder (PD) is characterized by recurrent purging in the absence of objectively large binge-eating episodes. Previous research has suggested that

individuals who “purge” by driven exercise (i.e., use exercise as an extreme weight-control method) have less eating-disorder psychopathology than those who purge by vomiting or laxatives. This research, however, has relied on small sample sizes, defined PD with low frequency thresholds, and defined exercise without weight-compensatory or driven elements. The current study compared three groups: individuals who purge regularly by exercise specifically for the purpose of weight control (PD-E, n=299), individuals who purge regularly by inducing vomiting or misusing laxatives (PD-VL, n=60), and individuals without eating-disordered behaviors (NED, n=1658). Participants completed the Eating Disorder Examination Questionnaire (EDE-Q) brief version, Patient Health Questionnaire, and Godin Leisure Time Exercise Questionnaire. The two PD groups had significantly higher EDE-Q Global ( $p < .001$ ), Restraint ( $p < .001$ ), Dissatisfaction ( $p < .001$ ), Overvaluation ( $p < .001$ ), and Godin Strenuous ( $p < .001$ ) and Moderate Exercise ( $p < .001$ ) scores compared with NED participants. The two PD groups did not differ significantly from each other on any of these scales (all  $p > .05$ ). PD-VL participants had higher depression scores and more frequent purging than PD-E and NED participants (all  $p < .001$ ). Additionally, PD-E participants had higher scores than NED participants on these scales (all  $p < .001$ ). These findings suggest that among participants who regularly purge in the absence of objective binge-eating episodes (PD), those who purge by exercise alone have similar psychopathology as those who purge by vomiting or laxative misuse, but differ in depression and overall frequency of purging. Clinicians and researchers should recognize the severity of driven exercise as a purging method, and the need of further epidemiological and treatment research.

*Learning Objectives:*

- ▶ Recognize the similarities and differences in eating disorder psychopathology between those with purging disorder that use excessive exercise as their only purging behavior and those that purge by vomiting or misusing laxatives.
- ▶ Acknowledge the severity of psychopathology associated with purging by exercise.
- ▶ Conceptualize the potential importance of examining purging by exercise in research on treatment development and effectiveness.

**P5.5.2**

**The Hierarchical Taxonomy of Internalizing Dimensions for Eating Disorders (Hi-TIDE): A Powerful New Approach for Classifying Eating, Mood, Anxiety, Obsessive-Compulsive, and Trauma-Related Issues**

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**Benjamin Kite, PhD<sup>1</sup>**

**Danielle Chapa, BS<sup>1</sup>**  
**Brittany Bohrer, MA<sup>1</sup>**  
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One of the major barriers to treating eating disorders (EDs) is that the current diagnostic system for EDs, in many cases, does not do what it was intended to do – inform treatment planning and predict clinical outcomes. Thus, there is a critical need for alternative classification models that can be used in clinical practice to inform clinical-decision making and prognosis. Until new approaches to ED diagnosis are developed, clinicians will remain unable to make informed decisions regarding the necessity and optimal timing of stepped-care treatments that, in turn, are needed to prevent chronicity and mortality and improve outcomes. To address this need, we constructed a (multi-level) dimensional model, the Hierarchical Taxonomy of Internalizing Dimensions for Eating Disorders (Hi-TIDE). In contrast to past classification studies of EDs, our model was constructed from the “bottom up.” The first step identifies and groups together related symptoms to derive homogeneous symptom dimensions. In the next “step up,” the hierarchy combines symptom dimensions into sub-factors. The final step combines sub-factors into higher-order spectra. We used Goldberg’s “bass-ackwards” method and exploratory structural equation modeling to identify a hierarchical model of internalizing in community-recruited adults with EDs (N=207). The lowest level of the hierarchy was characterized by 15 factors. At the top of the hierarchy, we identified a broad Internalizing factor that reflected diffuse symptoms of eating, mood, anxiety, OCD, and trauma-related dimensions. Internalizing branched into three sub-factors: Distress, Fear-Avoidance (obsessions/fears of certain stimuli and behaviors to neutralize obsessions/fears, including ED behaviors designed to reduce fear of weight gain), and Body Dissatisfaction, which was nested within Distress. The lowest level of the hierarchy predicted 67.7% of the variance in clinical impairment. In contrast, all DSM eating, mood, anxiety, OCD, and trauma-related disorder diagnoses combined predicted only 10.6% of the variance in impairment. In conclusion, Hi-TIDE is a promising new diagnostic system that incorporates processes relevant to the full-spectrum of internalizing psychopathology and is six times more predictive of clinical impairment due to an ED than the DSM-5.

*Learning Objectives:*

- ▶ Describe limitations of the current categorical system of eating-disorder diagnoses.
- ▶ Describe the predictive validity of the Hi-TIDE diagnostic system compared to the DSM-5, and its relevance to routine clinical practice.
- ▶ Understand ways in which the Hi-TIDE system can be applied in both clinical and research settings.

## P5.5.3

### Application of Mixture Modeling to Characterize Anorexia Nervosa: Integrating Personality Traits and Eating Disorder Psychopathology and Behaviors

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Alternative classification systems for anorexia nervosa (AN) have been proposed, including varying patterns of eating disorder (ED) or personality psychopathologies that may have meaningful scientific and clinical implications. However, previous studies used statistical methods that assume either latent dimensions or latent categories, and do not provide information as to whether AN is best modeled as a discrete or continuous disorder. This study tested AN as a categorical, dimensional, or hybrid categorical-dimensional diagnosis based on both comorbid personality psychopathology and ED symptoms. Participants (N = 194) were individuals with AN receiving inpatient or day treatment who completed the Eating Disorder Examination and the Schedule for Nonadaptive and Adaptive Personality questionnaire at admission. Mixture modeling was used to determine the best model of AN. Results indicated that a 3-class solution with one severity dimension provided the best-fitting model. Latent class 1 (n = 12) and latent class 2 (n = 36) resembled the AN binge-eating/purging subtype, but were distinguished by greater frequency of purging in latent class 1. Latent class 1 had elevated scores on Self-Harm indicating low self-esteem and emotion regulation difficulties. Latent class 2 had elevated scores on Self-Harm and moderately high scores on Aggression and Impulsivity, reflecting low self-esteem, emotion regulation difficulties, trouble controlling anger and recklessness. Latent class 3 (n = 145) resembled the AN restricting subtype and had less purging and objective binge eating episodes compared to latent classes 1 and 2. Latent class 3 also had elevated scores on Self-Harm and moderately low scores on Exhibitionism, suggesting low self-esteem, emotion regulation difficulties and social inhibition. Overall, findings suggest that purging behaviors contribute to the categorical distinctiveness, whereas low self-esteem and emotion regulation difficulties occur across categories.

#### Learning Objectives:

- ▶ Identify an alternative approach to the classification of anorexia nervosa that integrates eating disorder symptoms and personality psychopathology.
- ▶ Describe the advanced statistical methodology used to evaluate alternative approaches to the conceptualization of anorexia nervosa.

- ▶ Describe the differences among profiles based on eating disorder symptoms and personality psychopathology.

## P5.5.4

### Impulsivity and Perfectionism Based Classification of Eating Disorders Predicting Treatment Response

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 K  rol Soidla, MA

University of Tartu, Institute of Psychology, Tartu, Estonia

Current categorical classification of ED has several limitations, including high symptom variability within diagnosis, lack of diagnostic stability, high rates of EDNOS diagnoses, and complications with predicting treatment response (Inselt et al., 2010; Keel, Brown, Holland, & Bodell, 2012). The aim of our study was by using latent profile analyses to classify ED treatment seeking individuals based on their ED symptoms and comorbid psychopathology traits (self-reported dysfunctional and functional impulsivity, maladaptive and adaptive perfectionism), and assess whether the class membership predicts changes in ED symptoms after inpatient treatment. The latent profile analysis was performed on a sample of 274 women, of whom 164 were patients with ED and 110 healthy controls. We identified the 5-class model to be the best fit. The five emerged classes were: 1) resilient (low perfectionism/moderate impulsivity levels), 2) healthy (low perfectionism/low impulsivity levels), 3) restrictive (moderate perfectionism/low impulsivity levels), 4) emotionally dysregulated (high perfectionism/high impulsivity levels), and 5) behaviorally dysregulated (moderate perfectionism/high impulsivity levels) class. The data for assessing changes in ED symptoms is currently available for a subsample of 39 ED patients, as well as for 25 healthy controls. Two-way mixed ANOVA was conducted to examine the effect of time and class membership on ED symptoms as measured by Eating Disorder Assessment Scale. The statistically significant two-way time and class membership (time x class) interaction effect emerged ( $F(4,33)=4.84, p=0.003, \eta^2=0.375$ ). The effect remained significant ( $p<0.05$ ) after controlling for possible interactions with days between measurements, BMI and depression scores. Significant reductions in ED symptoms like restricting, bingeing and purging emerged in the restrictive class and behaviorally dysregulated class, respectively ( $F(1,8)=21.6, p=0.002, \eta^2=0.730$ ) and ( $F(1,7)=16.2, p=0.005, \eta^2=0.698$ ). There was also a tendency for a decrease in ED symptoms in the resilient class, but this did not reach statistical significance ( $p=0.06$ ). Results suggest that complex interactions between perfectionism and impulsive traits may influence short-term treatment response.

#### Learning Objectives:

- ▶ Describe perfectionism, impulsivity and ED symptom based profiles of patients with ED.

- ▶ Discuss how alternative i.e personality based classification may contribute to ED treatment.
- ▶ Discuss the interaction of impulsive traits and perfectionism in predicting treatment response.

#### P5.5.5 Are ARFID Symptoms Overlooked in the Anxiety Clinic? Prevalence and characteristics of Interfering Picky Eating in a Pediatric OCD and Anxiety Treatment-seeking Sample

Hana Zickgraf, MA  
Anjeli Elkins, BA  
Simone Budzyn, BA  
Madelyn Silber, MEd  
Martin Franklin, PhD

University of Pennsylvania, Philadelphia, PA, USA

This study introduces the ARFID Diagnostic and Severity Interview (ADSI), a clinician-administered interview to assess symptoms of ARFID including 1) dietary range, 2) food intake, 3) supplement use, and 4) child/family interference from eating behavior. Parents of 173 children ages 5-17 in an outpatient anxiety/OC-spectrum clinic responded to a survey on picky eating. 54.4% were reported to be picky to at least some degree. Of these, 65 (69%) responded to the ADSI. Parents of children under 15 responded about their children (43, 66%); 22 adolescents (34%) responded about themselves. Participants were in treatment for an OC-spectrum or anxiety disorder, but eating was not a treatment target for any of them, and few had been asked about eating habits by their therapist or during their clinic intake. Although 86% of participants reported that the child's pediatrician had not raised concerns about eating, many endorsed interference due to limited intake or inadequate dietary variety in one or more areas. For example, 58% reported family conflict at mealtimes over the child's eating, and 55% reported avoidance of social and family events involving eating, including taking trips, going to parties, and attending sleepovers or playdates. No participant reported underweight or malnutrition, but 15% reported use of nutritional supplements for weight maintenance/nutritional adequacy, and 20% rated picky eating as a 6/10 or higher on a modified Impairment Rating Scale; 25% (9.8% of the screened sample) met one or both of these cut-offs. While these children appear to meet criteria for ARFID, future research is needed to establish the criterion validity of the ADSI. Even picky eating not associated with significant impairment/supplement dependence was described as interfering by both children and parents, but had been overlooked by both pediatricians and anxiety specialists. The implications of this research for non-eating disorder specialists will be discussed.

#### Learning Objectives:

- ▶ Describe clinical characteristics of children presenting for OC/anxiety disorder treatment with picky eating and symptoms of Avoidant/Restrictive Food Intake Disorder.
- ▶ Learn about screening instruments and questions to ask to identify children with interfering selective eating behavior who present for non-eating focused treatment.
- ▶ Learn about the ARFID Diagnostic and Severity Interview, a new clinician-administered interview to assess ARFID symptoms and collect clinical data.

#### P5.5.6 The Relationship between Sensory Reactivity and Eating Disorder Symptoms

Elysa Roberts, PhD  
Alison Lane, PhD  
Caitlin Argent-Schutz, BOccThy (Hons)

University of Newcastle, Newcastle, Australia

Eating disorders restrict the life activities of those affected by such conditions. With rates of eating disorders across the global and demographic spectrum remaining a significant concern, deepening our understanding of how eating disorders manifest can inform outcomes. Currently, treatment success for those with eating disorders is variable. Emerging evidence suggests sensory reactivity i.e., how well someone can modulate the intensity of their response to a stimulus in daily life, may impact the experience of an eating disorder. Therefore, we sought to: 1) characterise the relationship between sensory reactivity and eating disorder symptoms and 2) evaluate the mediating impact of anxiety and cognitive flexibility on this relationship. Participants (n = 459) included adults with history of eating disorder aged 18 – 62 years old from around the world. Participants completed an online survey consisting of demographics, questions about eating disorder experience and self-report measures of: sensory reactivity, anxiety, cognitive flexibility and eating disorder symptoms. Means associated with sensory reactivity behaviors were higher among participants than those from a sample from the general population. Overall, hyper-reactivity was endorsed more frequently than hypo-reactivity ( $F=16.1, p<0.001, \eta^2=0.67$ ). Preliminary mediation analysis indicated the total effect of sensory reactivity on eating disorder symptoms was only partially mediated through anxiety and cognitive flexibility suggesting that 48% to 77% of the relationship between sensory reactivity and eating disorder symptoms is direct. Implications of these findings and those associated with diagnostic group, socio-economic status, gender, age and whether participants were symptomatic or not at the time of data collection offer a clearer picture of how sensory reactivity relates to eating disorders. Findings offer novel insights into targeting sensory reactivity in therapies or self-management strategies.

*Learning Objectives:*

- 】 Describe sensory reactivity.
- 】 Explain the relationship between sensory reactivity and eating disorder symptoms.
- 】 Discuss the implications of understanding sensory reactivity's relation to eating disorder.

## P5.6 GENDER, ETHNICITY, AND CULTURE

*Co-Chairs*

**Niva Prian, PhD, FAED and Scott Griffiths, PhD**

### P5.6.1 Use of Evidence-Based Interventions with Spanish-Speaking Clients Suffering from Eating Disorders

**Marisol Perez, PhD<sup>1</sup>**  
**Jamie Josephs, none<sup>1</sup>**  
**Eva Trujillo, MD<sup>2</sup>**  
**Ana Ramirez, PhD<sup>3</sup>**

<sup>1</sup>Arizona State University, Tempe, AZ, USA

<sup>2</sup>Comenzar de Nuevo, Monterrey, Mexico

<sup>3</sup>University of California, San Diego Eating Disorders Treatment Center, San Diego, CA, USA

It has been shown that evidence-based practice is historically not very culturally sensitive or adaptable, but in recent years there have been efforts to incorporate multiculturalism in evidence-based practice (Morales & Norcross, 2010). Within the eating disorders literature, there is a gap in the literature regarding the effectiveness of evidence-based interventions for treating Spanish-speaking clients. Norcross (2008) proposes a decision-making model, for adopting (i.e., using the treatment techniques as designed), adapting (i.e., changing treatment techniques to make them more culturally appropriate), or abandoning (i.e., not using a treatment technique at all) specific components or modules of evidence-based interventions. Using Norcross' model, we sought to examine the extent to which clinicians' are adapting, adopting or abandoning the different components of evidence based interventions for their Spanish speaking clients presenting with Eating Disorders. Using data from 110 clinicians treating Spanish-speaking clients suffering from Eating Disorders in the United States, Spain and Latin America, we will discuss the adaptation, adoption, or non-use of Cognitive Behavioral Therapy (CBT), Dialectical Behavioral Therapy (DBT), Interpersonal Therapy (IPT), Family Based Therapy (FBT), and Acceptance and Commitment Therapy (ACT). The data was collected online over the period of 4 months from clinicians treating Spanish-speaking clients suffering from eating disorders. Surveys were anonymous and

took an average of 10 to 15 minutes to complete. Surveys were administered in both English and Spanish. CBT is the most commonly used evidence-based treatment across age and diagnosis, but is also the most adapted treatment. Meal plans and body image interventions within CBT manuals were consistently adapted for cultural reasons. DBT was the evidence based treatment adopted the most, whereas FBT was the treatment with the most abandoned components. Findings from this study can inform future psychotherapy research.

*Learning Objectives:*

- 】 Discuss the evidence-based treatments that clinicians are using with Spanish-speaking clients.
- 】 Describe the ways in which clinician's are adapting or abandoning different modules of evidence-based treatments.
- 】 Compare the effectiveness and clinician satisfaction of the various evidence-based treatments for eating disorders.

### P5.6.2 Inclusive Eating Disorder Risk Factor Reduction for College Students: A Randomized Pilot Trial of the EVERYbody Project

**Anna Ciao, PhD**  
**Bethany Munson, BA**  
**Kevin Pringle, BS**  
**Maggie Butler, BA**  
**Jacob Bassett, BS**  
**Janae Brewster, MA**

Western Washington University, Bellingham, WA, USA

Most evidence-based eating disorder risk factor reduction programs for college students are designed for female audiences, and yet eating disorder risk is not limited to female-identified individuals. Emerging research suggests that individuals in marginalized racial, gender, and sexual identity groups may be particularly vulnerable to sociocultural factors influencing disordered eating. Inclusivity within risk factor reduction programs could increase their disseminability. Focus groups informed an inclusive adaptation of the Body Project to include gender identity, race and ethnicity, sexual identity, disability, and age. The two-session universal EVERYbody Project included an explicit critique of diversity representation within cultural ideals and was co-facilitated by staff and students. College students (N = 98; M age = 20.39 years; 80% female, 14% male, 6% genderqueer/other) were randomized to the EVERYbody Project or a waitlist control. Around half of the sample self-identified in a marginalized category: 6% as gender minority (non-cisgender), 28% as sexual minority (non-straight), and 20% as racial minority (non-white). Results indicated significant reductions in several risk factors relative to waitlist control that were sustained at one-month follow-up: internalization of

cultural ideals ( $p = .001$ ,  $d = 0.36$ ), disordered eating attitudes and behaviors ( $p = .025$ ,  $d = 0.45$ ), and body dissatisfaction ( $p = .005$ ,  $d = 0.66$ ). There was no differential change over time in negative affect across groups ( $p = .15$ ). Exploratory follow-up found no statistical impact of marginalized group status on outcomes (all  $ps > .10$ ) and thematic analysis of interviews with participants of marginalized identities revealed multiple benefits to diverse groups and no significant concerns. While replication is needed, this pilot study provides initial support for an inclusive focus within eating disorders risk factor reduction programs with the potential to impact more diverse communities.

*Learning Objectives:*

- 】 Describe the role of brief interventions in reducing risk for eating disorders among college students.
- 】 Evaluate the process of creating an inclusive intervention designed to reduce eating disorder risk factors among college students.
- 】 Examine the efficacy of inclusive programs in reducing eating disorder risk among diverse individuals.

### P5.6.3 Greater Adherence to Asian Cultural Values is Associated with Loss of Control Eating in Asian/Asian American Men

Claire Guidinger, MA  
Gina Williamson, BA  
Nichole Kelly, PhD

University of Oregon, Eugene, OR, USA

The purpose of this study was to examine if adherence to traditional Asian cultural values was associated with loss of control (LOC) eating—the subjective experience of being unable to control how much or what is being eaten—among young men. Emotion dysregulation was evaluated as a potential moderator. This study included 266 Asian/Asian American men (18-30y;  $M_{age} = 24.4 \pm 3.6$ ). Participants completed an online survey assessing demographics and self-reported height and weight, from which BMI was calculated ( $M = 24.2 \pm 5.6 \text{ kg/m}^2$ ); Asian values (Asian Values Scale-Revised); emotion dysregulation (Difficulties in Emotion Regulation Scale); and LOC eating frequency (Eating Disorder Examination Questionnaire). Poisson regression models were conducted; BMI, education, and income were covariates. Greater adherence to Asian cultural values, including collectivism, conformity to norms, deference to authority figures, emotional restraint, hierarchical family structure, and humility, was positively associated with LOC eating frequency ( $p < .01$ ). With all emotion regulation strategies included in the model, non-acceptance of emotional responses and lack of emotional clarity demonstrated positive associations with LOC eating frequency ( $ps < .001$ ). The association between Asian

cultural values and LOC eating was moderated by impulse control difficulties and limited access to emotion regulation strategies ( $ps < .05$ ). While the link between Asian cultural values and LOC eating frequency appeared negligible among those with high emotional impulsivity, these variables demonstrated a negative association among those with low emotional impulsivity. The association between Asian values and LOC eating frequency was positive for those with less access to emotion regulation strategies, and negative for individuals with greater access to emotion regulation strategies. These findings suggest that greater adherence to traditional Asian cultural values is associated with more frequent LOC eating behaviors in Asian/Asian American males, particularly among individuals with low emotional impulsivity and less access to emotion regulation strategies.

*Learning Objectives:*

- 】 Describe Asian cultural values and why they might be associated with more frequent loss of control (LOC) eating.
- 】 Describe emotion regulation strategies associated with LOC eating among young Asian/Asian American men.
- 】 Consider how both Asian cultural values and emotion regulation strategies interact to increase the frequency of LOC eating among young Asian/Asian American men.

### P5.6.4 Co-occurring Alcohol Use and Disordered Eating Behaviors among a US National Sample of Heterosexual and Sexual Minority Adolescents

Jerel Calzo, PhD, MPH<sup>1</sup>  
Blair Turner, MPH<sup>2</sup>  
Rachel Marro, BA<sup>2</sup>  
Gregory Phillipps II, PhD, MS<sup>2</sup>

<sup>1</sup>San Diego State University, San Diego, CA, USA

<sup>2</sup>Feinberg School of Medicine, Northwestern University, Chicago, IL, USA

Alcohol use and disordered eating behaviors (DEB) frequently co-occur, potentially due to shared psychiatric comorbidities. Little is known about co-occurring alcohol use and DEB among sexual minority (i.e., nonheterosexual) youth, and whether comorbid psychiatric conditions, such as depressive distress, explain such associations. Using pooled data from 2009-2015 US Youth Risk Behavior Surveillance Surveys (322,687 students; 7.3% lesbian, gay, or bisexual [LGB]), gender-stratified, adjusted logistic regression models examined: (1) associations of age of onset of drinking and past month binge drinking with past year DEB (fasting, diet pill use, purging, steroid use); (2) effect modification by sexual orientation; (3) contributions of depressive distress to alcohol use and DEB. Alcohol use and sexual minority identity were independently associated with elevated odds for diet pill use and purging among females and

steroid use among males. Gay males who drank before age 13 had 6 times the odds of heterosexual males of using diet pills (95% CI: 2.7, 14.0). The prevalence of fasting increased with greater binge drinking among heterosexual females (from 12.1% among those who did not binge drink, to 25.3% among those who binge drank 3+ times in the past month). Yet, binge drinking was not linearly associated with fasting among LG women; fasting prevalence among LB females was higher compared to heterosexual females at all levels of binge drinking (25.0%-35.1%). The prevalence of purging increased with greater past month binge drinking among GB males, from 8.4%-12.1% among those who do not binge drink to 15.8%-18.1% among those who binge drink 3+ times in the past month. Furthermore, among males who did not binge drink, GB males had 3.5-4.5 times the odds of purging compared to heterosexual males. Sexual orientation differences in the association between alcohol use and DEB diminished, yet remained significant after accounting for depressive distress, thus indicating the need for more research on psychiatric and sociocultural factors underlying risk for alcohol use and DEB in youth of all sexual orientation identities.

*Learning Objectives:*

- ▶ Compare and contrast the associations between alcohol use and disordered eating behaviors among heterosexual and sexual minority adolescent males and females.
- ▶ Interpret the contribution of depressive distress as a potential mechanism underlying co-occurring alcohol use and disordered eating, particularly among sexual minority adolescents.
- ▶ Explain implications of the findings for understanding psychiatric and sociocultural risk factors for alcohol use and disordered eating behaviors among youth of diverse sexual orientations.

### P5.6.5 Body Image Concerns, Perceived Acculturation and Body Size are Associated with Loss of Control Eating in Young Latinx Men

Gina Williamson, BA  
Claire Guidinger, MA  
Nichole Kelly, PhD

University of Oregon, Eugene, OR, USA

The purpose of this study was to examine the associations among body image concerns, drive for muscularity, perceived acculturation, and loss of control (LOC) eating frequency in a large sample of Latinx men. Body mass index (BMI) was examined as a potential moderator. Participants (N=271; 18–30y; M=23.9±3.5y) completed an online survey and reported on general demographic characteristics (including height and weight, used to calculate BMI); body image concerns (The Revised Male Body Image Attitudes Scale); drive for muscularity

(Drive for Muscularity Scale); LOC eating frequency (Eating Disorder Examination Questionnaire); and perceived acculturation (The Short Acculturation Scale for Hispanics). Poisson regression models, controlling for BMI and income, were conducted. Higher levels of body image concerns and drive for muscularity were associated with more frequent LOC eating ( $p < .001$ ). Perceived acculturation was inversely associated with LOC eating frequency ( $p < .001$ ). BMI was a significant moderator in two models. Specifically, the positive association between body image concerns and LOC eating frequency was particularly robust among men with a low (20.6 kg/m<sup>2</sup>) versus high (32.3 kg/m<sup>2</sup>) BMI ( $p < .001$ ). Additionally, the association between LOC eating frequency and acculturation was positive among men with a high versus low BMI ( $p < .001$ ). The results of this study are consistent with prior investigations of primarily White/Caucasian men, which have also identified a positive association between body image concerns and LOC eating. Latinx men with a low BMI demonstrated a particularly robust link between these variables. Conversely, having a high BMI and greater perceived acculturation was associated with more frequent LOC eating. These data suggest that, among Latinx men, LOC eating behaviors may have unique maintenance factors dependent on body size and degree of perceived acculturation.

*Learning Objectives:*

- ▶ Describe the link between body image concerns and LOC eating behaviors among young Latinx men.
- ▶ Describe the link between perceived acculturation and LOC eating behaviors among young Latinx men.
- ▶ Consider the role of body size in modifying the associations for body image concerns and perceived acculturation with LOC eating among Latinx men.

### P5.6.6 Racial Differences in Weight Loss Outcomes and Eating-Disorder Psychopathology among Patients with Loss-of-Control Eating Following Sleeve Gastrectomy Surgery

Valentina Ivezaj, PhD<sup>1</sup>  
Emily Fu, BA<sup>2</sup>  
Carlos Grilo, PhD<sup>1</sup>

<sup>1</sup>Yale School of Medicine, New Haven, CT, USA

<sup>2</sup>Yale School of Public Health, New Haven, CT, USA

This study examined racial differences in clinical features (eating-disorder psychopathology and depression) and weight loss outcomes among patients with loss-of-control (LOC) eating following sleeve gastrectomy bariatric surgery. Participants were N=107 (68 White, 39 Black) who underwent sleeve gastrectomy surgery within the previous 4-9 months (M=6.1, SD=2.2) and reported LOC eating at least once weekly during the previous 28 days. The Eating Disorder Examination Interview-

Bariatric Surgery Version (EDE-BSV) assessed LOC eating and eating-disorder psychopathology and the Beck Depression Inventory (BDI-II) assessed depressive symptoms. Overall mean age, BMI, and percent excess weight loss were 46.9 (SD=10.7) years, 38.0 (SD=7.2) kg/m<sup>2</sup>, and 44.8 (SD=17.9), respectively. Black and White patients did not differ significantly in age ( $p=.114$ ), or in pre-surgical ( $p=.362$ ) BMI. Black patients had significantly less percent excess weight loss ( $p=.026$ ) at post-surgery but weight loss by six-months post-surgery did not differ significantly between Black and White patients ( $p=.066$ ). Black and White patients did not differ significantly in frequency of LOC eating episodes ( $p=.979$ ), age of LOC eating onset ( $p=.067$ ), or the time of onset of LOC eating post-operatively ( $p=.635$ ). Black and White patients did not differ significantly in eating-disorder psychopathology (EDE-BSV scales) ( $p=.503$ ) or depression level (BDI-II) ( $p=.544$ ); White participants were significantly more likely to meet criteria for lifetime binge-eating disorder ( $p=.007$ ; 66.1% versus 36.4%). Our findings suggest that there exist few racial differences in eating-disorder pathology or depression among patients with LOC eating 4-9 months following bariatric surgery (sleeve gastrectomy) despite differences in weight loss outcomes. Assessment of LOC eating and eating-disorder psychopathology should be implemented among both Black and White post-operative patients, regardless of prior history of binge-eating disorder.

*Learning Objectives:*

- ▶ To compare weight loss outcomes among Black versus White patients with loss-of-control eating following sleeve gastrectomy surgery.
- ▶ To compare frequency of loss-of-control eating and eating-disorder psychopathology among Black versus White patients with loss-of-control eating following sleeve gastrectomy surgery.
- ▶ To compare depressive symptoms among Black versus White patients with loss-of-control eating following sleeve gastrectomy surgery.

**SATURDAY, APRIL 21**

9:30 AM - 11:00 AM

**EDUCATIONAL SESSION V**

**SIG Panels**

**SP5.1**

**Biological Research on Eating Disorders:  
Moving the Field Forward**

**Presented by:**

Genes and Environment, Neuroimaging

**Karen Mitchell, PhD**<sup>1</sup>

**Zeynep Yilmaz, PhD**<sup>2</sup>

**Laura Berner, PhD**<sup>3</sup>

**Katherine Dunlop, BSc**<sup>4</sup>

**Sarah Fischer, PhD**<sup>5</sup>

**Jessica Baker, PhD**<sup>2</sup>

**Christina Wierenga, PhD**<sup>3</sup>

<sup>1</sup>VA Boston Healthcare System/Boston University School of Medicine, Boston, MA, USA

<sup>2</sup>University of North Carolina-Chapel Hill, Chapel Hill, NC, USA

<sup>3</sup>University of California San Diego, CA, USA

<sup>4</sup>University of Toronto, Toronto, Canada

<sup>5</sup>George Mason University, Fairfax, VA, USA

Eating disorders (EDs) are multifactorial disorders, with biological, psychological, and social factors contributing to their onset and maintenance. Currently, only approximately 50% of patients achieve symptom remission following psychotherapy for EDs, and we have few effective pharmacological treatments, underscoring the need for biological research on EDs that has the potential to lead to therapeutic advances. This panel discussion will present an overview of cutting-edge genetic and neuroimaging research on EDs. Three speakers will review new methods, and two will focus on new tasks and constructs in biological eating disorders research. (1) Dr. Yilmaz will discuss methods for and recent results of polygenic risk scores for EDs. (2) Dr. Berner will review non-food specific interoceptive anticipation and processing as a novel neural marker of anorexia and bulimia nervosa. (3) Dr. Dunlop will discuss innovative combinations of neuromodulation with fMRI to reveal neurobiological mechanisms and predictors of treatment response. (4) Dr. Fischer will discuss the integration of fMRI with ecological momentary assessment (EMA) as an exciting new method to elucidate the pathophysiology of eating disorder symptoms. (5) Finally, Dr. Baker's presentation will discuss the applicability and usefulness of including biomarkers in eating disorders research and the potential for identifying novel biomarkers. In particular, she will discuss the potential utility of biomarkers in treatment outcome research and the potential translatability of these findings. Dr. Wierenga

will discuss the potential for these exciting methods in biological research on EDs to move the field forward.

*Learning Objectives:*

- ▶ Participants will interpret findings from genetics and neuroimaging research on eating disorders.
- ▶ Participants will discuss the potential for these findings to advance the field of eating disorders.
- ▶ Participants will integrate genetics and neuroimaging methods for biological research on eating disorders.

## SP5.2

### Standardized Assessment in Residential and Partial Hospital Eating Disorder Programs: How Are We Doing and How Should We Measure It?

**Presented by:**

Assessment/Diagnosis, Psychodynamic/Integrative Psychotherapies, Residential/Inpatient

**Heather Thompson-Brenner, PhD, FAED**<sup>1</sup>

**Evelyn Attia, MD, FAED**<sup>2</sup>

**Kelly Bhatnagar, PhD**<sup>3</sup>

**Scott Crow, MD, FAED**<sup>4</sup>

**Hallie Espel-Huynh, MS**<sup>5</sup>

**Angela Guarda, MD, FAED**<sup>6</sup>

**Michael Lowe, PhD**<sup>7</sup>

**Douglas Bunnell, PhD, FAED**<sup>8</sup>

<sup>1</sup> Boston University, Boston, MA, USA

<sup>2</sup> Columbia University College of Physicians and Surgeons, New York, NY, USA

<sup>3</sup> The Emily Program, Cleveland, OH, USA

<sup>4</sup> The Emily Program, Minneapolis, MN, USA

<sup>5</sup> The Renfrew Program, Philadelphia, PA, USA

<sup>6</sup> Johns Hopkins Medicine, Baltimore, MD, USA

<sup>7</sup> Drexel University, Philadelphia, PA, USA

<sup>8</sup> Monte Nido and Affiliates, Westport, CT, USA

Researchers, advocates, third-party payers, and the press have called for more rigorous assessment and transparent reporting of outcomes in residential and partial hospital (PH) programs for eating disorders (Attia, Marcus, Walsh, & Guarda, 2017). Though this goal is essential, the challenges are numerous. Common research instruments were not developed or validated for intensive settings, where eating and behavioral symptoms are

structurally regulated. Full consideration and assessment of all interacting psychological and physiological, transdiagnostic outcomes is complex, particularly as lengthy intake/discharge procedures already burden patients. Post-discharge follow-up assessments are crucial, however, follow-up attrition is typically high. Despite these challenges, a number of residential/PH programs have successfully implemented standardized assessments over the past decade, with important lessons now emerging for the field. First, a research expert will introduce the importance of this topic from a scientific and ethical standpoint. Next, the leadership from one program that recently implemented a quality improvement/clinical outcomes battery will present an overview of their challenges and solutions. Research consultants from another program will present results from multiple years of assessment of interacting physiological and psychological variables, including outcome at discharge and follow-up, as well as within-treatment weekly assessment and mediators of change. Next, a researcher at a third program will present data pertaining to the definition of positive and negative outcomes for intensive treatment, and the relationship between outcome and emotional changes over the course of treatment. Finally, a clinical leader in the field will comment on the relationship between multi-modal intensive treatment, standardized outcome assessment, and evidence-based practice in coming years. Interactive discussion will follow panel presentations.

*Learning Objectives:*

- ▶ Understand the ethical and scientific arguments for increased standardized assessment and outcome reporting among residential/partial hospital programs, as well as the solutions that that residential/partial hospital programs have developed to address the these challenges.
- ▶ Identify key psychological and physiological symptoms and signs that should be assessed in the intensive treatment of eating disorders, and common measures of these variables appropriate to intensive treatment settings.
- ▶ Understand the results of analyses indicating interactions between behavioral change, change in weight suppression, psychological eating disorder symptoms, and emotional functioning in treatment outcome at discharge and follow up following residential treatment.



# EDUCATIONAL SESSION VI

In this session, attendees have **13 different options** to choose from: **6 Workshops**, **6 Paper Sessions**, and **1 SIG Panels**

**SATURDAY, APRIL 21**

11:15 AM - 12:45 PM

## EDUCATIONAL SESSION VI Workshop Session 6

### W6.1

**Learning How to Apply Compassion Focused Therapy for Eating Disorders (CFT-E) in an Outpatient Group Setting**

**Clodagh Dowling, BA, MSC, DClin Psych, SC<sup>1</sup>**  
**Georgina Mullen, BA, MSC<sup>2</sup>**  
**Jillian Doyle, BS, MSC, DClin Psych<sup>1</sup>**  
**Gary O'Reilly, PhD, MSC<sup>2</sup>**

<sup>1</sup> St Patrick's Mental Health Services, Dublin, Leinster, Ireland

<sup>2</sup> University College, Dublin, Leinster, Ireland

There is growing recognition that an evolving array of eating disorder (ED) symptoms, including those of a muscularity-oriented nature, are more common in men than previously understood. Critically, understanding how ED psychopathology and related attitudinal (e.g., body dissatisfaction) and behavioral symptoms (e.g., excessively rigid eating or exercise routines) may differentially manifest in males is critical to accurate diagnosis, assessment, and treatment. The central aims of this workshop are to provide an overview of contemporary directions and implications of research on traditional and muscularity-oriented ED symptoms among males, as well as addressing clinical considerations related to assessment and intervention. This workshop will focus on both research and clinical perspectives regarding the nature of ED symptoms among males, including traditionally-defined and muscularity-oriented ED features. Drs. Murray and Lavender will provide a brief historical overview of EDs in males, followed by a review of more recent conceptualizations of ED psychopathology and related conditions (e.g., muscle dysmorphia) in males [~25 minutes]. The presenters will also lead a discussion with attendees on factors related to unique ED presentations in males (e.g., distinct male body ideal, gender roles) [~25 minutes]. Drs. Murray and Lavender will then present on considerations and advances in the assessment of ED-related variables in males [~15 minutes], followed by a brief overview of contemporary issues and approaches to treatment of males with ED and related psychopathology [~15 minutes]. The remaining time will be allotted for a discussion facilitated by the presenters and questions from attendees.

*Learning Objectives:*

- ▶ To describe conceptualizations of traditional and muscularity-oriented eating disorder symptoms in males
- ▶ To review approaches and issues related to the valid assessment of eating disorder and related symptoms in males
- ▶ To discuss considerations (clinical and research) for working with males with eating disorder or related symptomatology

### W6.2

**Stakeholders United: Tools for Promoting Productive Partnerships between Professionals, Patients, and Carers Based on the AED's World Eating Disorders Healthcare Rights**

**Dasha Nicholls, MD, FAED, MBBS, MRC(Psych)<sup>1</sup>**  
**Judy Krasna, BA<sup>2</sup>**  
**Ashley Solomon, PsyD<sup>3</sup>**  
**Mirjam Mainland, MS<sup>4</sup>**

<sup>1</sup> St. Bartholomew's Hospital Medical College, London, UK

<sup>2</sup> Yeshiva University/Stern College, Bet Shemesh, Israel

<sup>3</sup> Xavier University, Cincinnati, OH, USA

<sup>4</sup> VU University School of Business & Management, Amsterdam, Netherlands, and Valencia, CA, USA

Patient and carer support and empowerment have been identified as key elements in the outcome of eating disorder treatment, and are beginning to receive elevated attention in our field. World Eating Disorders Healthcare Rights is an innovative document developed by the AED's Patient/Carer Committee in an effort to promote excellence in eating disorders care by leveraging patient, carer, and professional partnerships. It offers a global blueprint to help guide patients, carers, and professionals by outlining seven rights for patients and families which highlight important facets of treatment. Four stakeholders from different countries will unite to present this workshop—one former patient, one parent, and two clinicians from different treatment settings. The aim of this workshop is to showcase the benefit of implementing these rights in clinical practice by viewing them through multiple lenses, representing a spectrum of stakeholders and treatment cultures. Through their varied experiential perspectives on these rights, the presenters will outline how to forge and foster these beneficial patient-carer-professional partnerships and will illustrate how these partnerships enhance and improve eating disorder treatment. The presenters will invite guided and supportive discussion among participants regarding perceived barriers to the operationalization of these principles in their own work, as well as elicit and share creative strategies for doing

so. The presenters will also provide case examples and opportunities for interactive small group discussion to develop familiarity and mastery with putting the rights into action. Participants will learn not only how to use World Eating Disorders Healthcare Rights to better the practice of eating disorder treatment, but also why it is so important to do so based on the lived experience of the patient and carer presenters. Breakdown of the 90 minute time allotment: Lived experiences/examples of the impact of partnerships, short summation of research on relevance (10 minutes) History and development of the World Eating Disorder Healthcare Rights (5 minutes) Review of each right, including explanation, case examples, barriers, and discussion (50 minutes) Guided small group discussions regarding implementation strategies (15 minutes) Summary and questions (10 minutes)

*Learning Objectives:*

- ▶ Describe at least two benefits of capitalizing on professional-patient-carer partnerships and how they raise the standard of patient care.
- ▶ Identify at least three opportunities for implementation of patient/carers rights in clinical practice.
- ▶ Demonstrate the ability to evaluate one's own clinical practice standards to better facilitate partnering with patients and their families.

### W6.3

#### Unraveling the Enigma of Male Eating Disorders: Conceptualization, Assessment, and Intervention

**Stuart Murray, DClinPsych, PhD<sup>1</sup>**  
**Jason Lavender, PhD<sup>2</sup>**

<sup>1</sup> University of California, San Francisco, CA, USA

<sup>2</sup> University of California, San Diego, CA, USA

There is growing recognition that an evolving array of eating disorder (ED) symptoms, including those of a muscularity-oriented nature, are more common in men than previously understood. Critically, understanding how ED psychopathology and related attitudinal (e.g., body dissatisfaction) and behavioral symptoms (e.g., excessively rigid eating or exercise routines) may differentially manifest in males is critical to accurate diagnosis, assessment, and treatment. The central aims of this workshop are to provide an overview of contemporary directions and implications of research on traditional and muscularity-oriented ED symptoms among males, as well as addressing clinical considerations related to assessment and intervention. This workshop will focus on both research and clinical perspectives regarding the nature of ED symptoms among males, including traditionally-defined and muscularity-oriented ED features. Drs. Lavender and Murray will begin the workshop with a presentation of several case vignettes involving males with ED-related symptomatology, after which attendees will break into smaller groups for discussion before returning for a broader discussion between the presenters and all attendees (~20 minutes). Drs. Lavender and Murray will then provide a brief historical overview of EDs in males,

followed by a review of more recent conceptualizations of ED psychopathology and related conditions (e.g., muscle dysmorphia) in males (~15 minutes). The presenters will subsequently lead a discussion with attendees on factors related to unique ED presentations in males (e.g., distinct male model ideal, gender roles) (~20 minutes). Dr. Lavender will then present on considerations and advances in the assessment of ED-related variables in males (~12 minutes), after which Dr. Murray will provide a brief overview of contemporary issues and approaches to treatment of males with ED and related psychopathology (~12 minutes). The remaining time will be allotted for a discussion facilitated by the presenters and questions from attendees.

*Learning Objectives:*

- ▶ To describe conceptualizations of traditional and muscularity-oriented eating disorder symptoms in males.
- ▶ To review approaches and issues related to the valid assessment of eating disorder and related symptoms in males.
- ▶ To discuss considerations (clinical and research) for working with males with eating disorder or related symptomatology.

### W6.4

#### Food Exposure: Three Different Approaches in the Treatment of Eating Disorders

**Heather Thompson-Brenner, PhD, FAED<sup>1</sup>**  
**Julia Cassidy, MS, RDN, CEDRD-S<sup>2</sup>**  
**Deborah Glaschofer, PhD<sup>3</sup>**

<sup>1</sup> Boston University, Boston, MA, USA

<sup>2</sup> Center for Discovery, Los Alamos, CA, USA

<sup>3</sup> Columbia University College of Physicians and Surgeons, New York, NY, USA

In-session exposure to food can be an important component of treatment for eating disorders (EDs). Research has demonstrated the utility of food exposure; however, there are multiple approaches to this complex intervention. In-session exposure to foods is a common component of nutrition counseling, where clients practice eating with the dietitian with the goal of facilitating gains in ability to eat in the real world. Exposure and response prevention in this context can help address patients' resistance, sustain the therapeutic alliance, and facilitate progression toward treatment goals. Other approaches are derived from advances in cognitive-behavioral research, where the goals are somewhat different. For example, in Exposure and Response Prevention for Anorexia Nervosa (EXRP-AN), based on EXRP for obsessive compulsive disorder, the therapist aims to increase the experience of anxiety during and following the exposure, by removing avoidance and rituals, to facilitate the development of anxiety tolerance, disconfirm a feared consequence, and promote new learning about food and anxiety (Glaschofer, Albano, Simpson, & Steinglass, 2016). In the Unified Protocol for the Transdiagnostic Treatment of Emotional Disorders (UP), food exposures

are conducted with a similar goals and methods to EXRP-AN, but other emotions—such as shame, disgust, and sadness—are also explored within the context of transdiagnostic attention to EDs and comorbid disorders (Thompson-Brenner et al., 2017). In this workshop, the multi-disciplinary trainers will demonstrate these three distinct but related approaches to exposure, including their different rationales, evidence base, and application to specific cases. The training will address the integration of food exposure into various forms of counseling for clinicians from differing disciplines and theoretical backgrounds, and will include experiential exercises and interactive discussion.

*Learning Objectives:*

- ▶ Identify three distinct approaches to food exposure in the treatment of eating disorders.
- ▶ Understand key methods for reducing avoidance of emotion during exposure activities.
- ▶ Identify methods for developing emotional tolerance and promoting new learning via food exposure.

### **W6.5** **FBT-ARFID for Younger Patients: Lessons from a Randomized Controlled Trial**

*Simultaneously translated to Spanish*

**Shiri Sadeh-Sharvit, PhD**  
**Athena Robinson, PhD**  
**James Lock, MD, PhD, FAED**

Stanford University Department of Psychiatry and Behavioral Sciences, Stanford, CA, USA

Since the inclusion of Avoidant-Restrictive Food Intake Disorder (ARFID) in DSM-5, more families with children and young adolescents present for services at eating disorder (ED) clinics. However, no systematic data on the best approach to treat these patients and aid their parents is yet available. ARFID affects a non-traditional ED patient population. First, many patients are younger than average ED populations. Second, ARFID patients typically present to ED clinics after a relatively longer duration of symptoms and thus, parental self-efficacy to facilitate their child's recovery may be lower than in other ED populations. Therefore, the administration of a developmentally-minded, family-inclusive, treatment for ARFID could address these unique features, ideally eliminating eating pathology before it becomes further ingrained and precipitates additional health complications. This interactive workshop will present our experience working with ARFID patients (5-12 years old) and their families in a randomized controlled trial testing family-based treatment for ARFID (FBT-ARFID). FBT inherently incorporates many treatment principles with established effectiveness in younger individuals with EDs: involving the entire family in the intervention, focusing on parental empowerment and coaching, externalizing the illness, and promoting a graduated change in the family interactions around food and eating. We will discuss considerations and adaptations to implementing important FBT components,

including orchestrating an intense scene while instilling hope, holding a family meal and addressing comorbidities. Audience members will get an up-close look at FBT-ARFID administration, technique demonstration, and case reports' responsiveness to treatment. Specific workshop didactic formats will include lecture presentation (30 minutes), case reports (20 minutes), role plays, and video clips (20 minutes), as well as questions from and discussion with the audience (20 minutes).

*Learning Objectives:*

- ▶ Identify the unique characteristics of ARFID in children 5-12 years old.
- ▶ Incorporate Family-Based Treatment strategies in the treatment of children with ARFID and their families.
- ▶ Intervene effectively in maladaptive eating behaviors and family transactions to remedy the impact of ARFID on the child and their family.

### **W6.6** **“But What If My Patient Gets Fat?”: Research and Clinical Implications of Weight Stigma in Treating Higher-weight Patients with Eating Disorders**

**Erin Harrop, MSW<sup>1</sup>**  
**Julie Church, RDN, CD, CEDRD<sup>2</sup>**  
**Hilary Kinavey, MS, LPC, CDWF<sup>3</sup>**  
**Andrea LaMarre, PhD, MSc<sup>4</sup>**  
**Janell Mensinger, PhD<sup>5</sup>**  
**Chevese Turner, BA<sup>6</sup>**

<sup>1</sup> University of Washington, Seattle, WA, USA

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<sup>3</sup> Be Nourished, Portland, OR, USA

<sup>4</sup> University of Guelph, Guelph, ON, Canada

<sup>5</sup> Drexel University, Philadelphia, PA, USA

<sup>6</sup> Binge Eating Disorder Association, Severna Park, MD, USA

Eating disorders (EDs) manifest at all points on the weight continuum. Research shows that weight stigma in healthcare is correlated with decreased quality of care, including, delay of diagnosis, misdiagnosis, poor clinician rapport, healthcare avoidance, and poorer outcomes. Additionally, internalized weight stigma is linked to decreased psychological wellbeing and increased disordered eating. Unfortunately, ED clinicians are not immune to weight stigma; thus, addressing both patient and clinician weight stigma is important in ED clinical environments. This workshop will begin with a review of research on EDs diagnosed in higher weight individuals, including but not limited to atypical anorexia nervosa and binge eating disorder. Additionally, we will present primary data demonstrating how internalized weight stigma attenuates the effects of program benefits on disordered eating and other health-related behaviors. After presenting a model of healthcare avoidance based on social identity and stereotype threat, we will also feature digital stories from diverse higher-weight individuals sharing experiences with healthcare and ED treatment

to give voice to those most impacted by weight stigma. Examples of how these issues present in clinical contexts will be given, and small-group discussions will be utilized to help participants collectively address the scenarios using a weight-inclusive framework. Clinical issues for discussion will include: considerations in identification and diagnosis of higher-weight eating disorders, refeeding and weight-restoration in the context of higher BMI, communicating and collaborating with other healthcare professionals, addressing weight-bias in common clinical ED interventions, advocating with insurance companies for appropriate levels of care, combating weight bias among clinicians, cultivating a weight-inclusive clinical milieu among ED treatment peers, and clinician accountability and support.

*Learning Objectives:*

- ▶ Identify three ways clinician weight bias can negatively impact clinical care for individuals in larger bodies with eating disorders.
- ▶ Explain five clinical considerations in treatment of higher-weight eating disorders, and discuss ethical responses to these considerations.
- ▶ Learn three ways a weight-inclusive approach can enhance the treatment of eating disordered individuals.

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**SATURDAY, APRIL 21**

11:15 AM - 12:45 PM

**EDUCATIONAL SESSION VI**

**Paper Session 6**

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**P6.1  
EPIDEMIOLOGY**

*Co-Chairs*

**Kendrin Sonnevile, ScD, RD and Carols Grilo, PhD**

**P6.1.1  
18-Year Time Trends in Population Prevalence and Burden of Binge Eating**

**Deborah Mitchison, PhD, MCLinPsych, MSc, BPsych<sup>1</sup>**  
**Stephen Touyz, PhD<sup>2</sup>**  
**David Gonzalez-Chica, PhD<sup>3</sup>**  
**Nigel Stocks, PhD<sup>3</sup>**  
**Phillipa Hay, PhD<sup>4</sup>**

<sup>1</sup>Macquarie University, Sydney, Australia

<sup>2</sup>University of Sydney, Sydney, Australia

<sup>3</sup>University of Adelaide, Adelaide, Australia

<sup>4</sup>Western Sydney University, Sydney, Australia

The status of binge eating as a clinical problem at a population level remains uncertain, with previous findings

that it is becoming increasingly normative. We aimed to assess the time trends in binge eating prevalence and burden over time. Six cross-sectional surveys of the Australian adult population were conducted in 1998, 2005, 2008, 2009, 2014, and 2015 (N<sub>total</sub> = 15,126). Data were collected on demographics, 3-month prevalence of objective binge eating (OBE), mental and physical health-related quality of life, days out of role, and distress related to OBE. The prevalence of OBE increased 6-fold from 1998 (2.7%) to 2015 (13.0%). Health-related quality of life associated with OBE improved from 1998 to 2015, where it more closely approximated population norms. Days out of role remained higher among participants who reported OBE, although decreased over time. Half of participants who reported weekly (56.6%) and twice-weekly (47.1%) OBE reported that they were not distressed by this behaviour. However, the presence of distress related to OBE was associated with greater health-related quality of life impairment. Results pertaining to comorbid obesity will also be presented. As the prevalence of binge eating increases, associated disability has decreased. Implications for the diagnosis of disorders associated with binge eating are discussed.

*Learning Objectives:*

- ▶ Describe the changing population prevalence of binge eating.
- ▶ Describe changes in the psychosocial impairment associated with binge eating over time.
- ▶ Describe changes in comorbid obesity and binge eating over time.

**P6.1.2  
Lifetime and 12-Month Prevalence and Correlates of DSM-5 Eating Disorders: Findings from Nationally Representative Study of United States Adults**

**Carlos Grilo, PhD<sup>1</sup>**  
**Tomoko Udo, PhD<sup>2</sup>**

<sup>1</sup>Yale University School of Medicine, New Haven, CT, USA

<sup>2</sup>S.U.N.Y. Albany School of Public Health, Albany, NY, USA

There exist few population-based data on the prevalence of eating disorders (EDs) and this is especially needed because of recent changes to diagnoses in the DSM-5. This study aimed to provide lifetime and 12-month prevalence estimates of DSM-5 anorexia nervosa (AN), bulimia nervosa (BN), and binge-eating disorder (BED) from the National Epidemiologic Survey Alcohol and Related Conditions (NERSAC-III), a national sample of 36,306 U.S. adults assessed in 2012-2013 using structured diagnostic interviews (AUDADIS-5). Prevalence (standard error) estimates of lifetime AN, BN, and BED were 0.80% (0.07%), 0.28% (0.03%), and 0.85% (0.05%). 12-month estimates for AN, BN, and BED were 0.05% (0.02%), 0.14% (0.02%), and 0.43% (0.04%). Lifetime prevalence estimate for "comorbid" EDs (i.e., having

lifetime diagnoses of two or more specific EDs) was 0.22% (0.03%). Adjusting for age, race/ethnicity, and educational level, odds of lifetime and 12-month diagnoses of all three EDs were significantly greater for women than men. Adjusted odds ratios (AORs) of lifetime AN were significantly lower for non-Hispanic Black and Hispanic than for White participants. AORs of lifetime and 12-month BN did not differ significantly by race/ethnicity. AORs of lifetime and 12-month BED were significantly lower for non-Hispanic Black relative to non-Hispanic White participants; AORs of BED for Hispanic and non-Hispanic White participants did not differ significantly. AN, BN, and BED were characterized by significant differences in ages of onset, persistence and duration of episodes, and in rates of psychosocial impairment. These findings for DSM-5-defined EDs, based on the largest national sample of U.S. adults studied to date, indicate some important similarities and differences to earlier smaller nationally representative studies.

#### *Learning Objectives:*

- 】 Recognize the lifetime and 12-month prevalence estimates for DSM-5-defined eating disorders in U.S. adults.
- 】 Appreciate the varying distribution of eating disorders by sex and race in U.S. adults.
- 】 Recognize psychosocial impairment associated with eating disorders in U.S. adults.

### **P6.1.3** **Cohort Effects on Bulimia Nervosa Trajectories over 10-Year Follow-up**

**Pamela Keel, PhD/FAED<sup>1</sup>**  
**K. Jean Forney, MS<sup>1</sup>**  
**Madeline Wick, BA<sup>1</sup>**  
**Todd Heatherton, PhD<sup>2</sup>**

<sup>1</sup>Florida State University, Tallahassee, FL, USA

<sup>2</sup>Dartmouth College, Hanover, NH, USA

Epidemiological data from the Netherlands, UK, and US indicate significant changes in the proportion of women suffering from bulimia nervosa (BN). No prior study has examined whether these cohort effects translate into changes in outcomes associated with the illness. Three cohorts (70% female) originally assessed at a mean (SD) age of 20 (2) years for BN in 1982 (n=900), 1992 (n=800), and 2002 (n=783) were each followed 10 years later at a mean (SD) age of 30 (2) years (>75% retention). Computer algorithms of DSM-5 criteria for BN were used to ensure consistent diagnoses across cohorts and over time. Original results regarding a significant decline in DSM-III-R BN point prevalence were replicated when comparing DSM-5 BN point prevalence across cohorts at baseline;  $X^2(2)=47.12$ ,  $p<.001$ . With regard to trajectories of illness over time, significant cohort effects were found. Mirroring cohort differences in prevalence at baseline,

BN onset at follow-up was significantly higher in the 1982 cohort (3.3%) compared to the 1992 (0.8%) and 2002 cohorts (0.9%);  $X^2(2)=14.51$ ,  $p=.001$ . In contrast, BN maintenance was significantly greater in the 1992 cohort (33%) compared to the 1982 (4%) and 2002 cohorts (0%);  $X^2(2)=10.68$ ,  $p=.005$ . Results suggest that individuals born in the early 1960s carry increased risk for developing BN in late adolescence and adulthood but follow a more favorable course than those born in the early 1970s. Those born in the 1980s benefit from both lower risk for illness and greater chances of recovery, potentially reflecting progress in both prevention and treatment efforts over time.

#### *Learning Objectives:*

- 】 Describe how the prevalence of DSM-5 bulimia nervosa (BN) has changed over time.
- 】 Describe how the trajectory of BN has changed over recent decades.
- 】 Evaluate possible explanations for these population-based trends.

### **P6.1.4** **The Association between Binge Eating and Suicidality among African- and European American Young Adult Women**

**Vera Men, Masters of Public Health**  
**Molly Brown, MPH/MSW dual degree**  
**Kathleen Bucholz, PhD**  
**Pamela Madden, PhD**  
**Andrew Heath, DPhil**  
**Alexis Duncan, PhD**

Washington University in St. Louis, St. Louis, MO, USA

Suicide is the second leading cause of death among persons aged 10-34 in the US. Binge eating is a risk factor for suicide attempt; however, there have been few studies about the association between binge eating and suicidality, and past studies have not stratified by race/ethnicity, despite previous findings of racial/ethnic differences in other risk factors for suicidality. The objective of the current study was to examine the association between lifetime binge eating and lifetime suicidality (suicidal ideation, plan, or attempt) separately among African American (AA) and European American (EA) young adult women. Data on 3787 women (14.63% AA) drawn from Wave 4 of the Missouri Adolescent Female Twin Study (median age 22; age range: 18-29 years) were analyzed using chi-square and logistic regression. The lifetime prevalence of suicidality was 14.55% among AA women and 8.83% among EA women ( $p<.001$ ). The prevalence of binge eating also differed significantly between groups (AA: 4.20% vs. EA: 2.62%,  $p=.04$ ). In unadjusted logistic regression models, both AA and EA women who endorsed binge eating had significantly greater odds of reporting suicidality compared to their AA

and EA counterparts who did not (AA: odds ratio [OR], 4.49; 95% confidence interval [CI], 1.85–10.90; EA: OR, 5.79; 95% CI, 3.60–9.30). After adjusting for covariates, including depression, the strength of the association between binge eating and suicidality, though attenuated remained robust among AA (OR, 3.71; 95% CI, 1.30–10.59) and EA women (OR, 3.08; 95% CI, 1.80–5.26). Although the prevalence of both lifetime binge eating and suicidality differs significantly between AA and EA young adult women, binge eating is strongly and independently associated with suicidality among both racial/ethnic groups.

*Learning Objectives:*

- ▶ Identify the association between binge eating and suicidality.
- ▶ Evaluate the race differences in binge eating.
- ▶ Assess the role of depression in binge eating and suicidality.

### P6.1.5

#### Prevalence in Primary School Youth of Pica and Rumination Behavior: The Understudied Feeding Disorders

**Helen Murray, BA<sup>1</sup>**  
**Jennifer Thomas, PhD<sup>2</sup>**  
**Simone Munsch, PhD<sup>3</sup>**  
**Anja Hilbert, PhD<sup>4</sup>**

<sup>1</sup>Drexel University, Philadelphia, PA, USA

<sup>2</sup>Massachusetts General Hospital/Harvard Medical School, Boston, MA, USA

<sup>3</sup>University of Fribourg, Fribourg, Switzerland

<sup>4</sup>Department of Medical Psychology and Medical Sociology, University of Leipzig, Leipzig, Germany

Rumination disorder (RD) and pica are understudied conditions. Many individuals with RD or pica have a protracted course of illness without treatment. Health professionals may not inquire directly about pica or RD symptoms because their prevalence and comorbid relation with other feeding/eating disorders are unclear. Although prevalence rates of each disorder have been reported in specific groups (e.g., those with intellectual disabilities), little epidemiological evidence exists on RD and pica behavior in the population. We examined the prevalence of RD and pica behavior and presence of comorbid feeding/eating disorder symptoms among 1,442 youth (54.0% female) ages 7 to 13 in Switzerland. Participants completed the Children's Eating Disorder Examination-Questionnaire and the Eating Disorders in Youth Questionnaire (EDY-Q). From this sample, 12.9% reported RD behavior and 13.2% reported pica behavior. Of those who reported RD behavior, 13.1% had frequent avoidant/restrictive food intake disorder symptoms, 16.8% had any self-induced vomiting, and 12.9% had any laxative/diuretic abuse. Of those who reported pica

behavior, 11.5% had frequent avoidant/restrictive food intake disorder symptoms, 16.4% had self-induced vomiting, 10.0% had laxative/diuretic abuse. This is one of the first studies to report epidemiological data on RD and the first study to report pica behavior in the general population by self-report. Our findings suggest that pica and RD behavior are more common than previously thought. In addition, compared to pica behavior, RD behavior was just as commonly comorbid with other feeding/eating disorder symptoms. We suggest the field consider allowing comorbid diagnosis of RD with other feeding/eating disorders.

*Learning Objectives:*

- ▶ Become familiar with new epidemiological data for pica and RD behavior and the prevalence from our sample.
- ▶ Recognize the potential comorbidity between pica and RD and other feeding and eating disorders.
- ▶ Learn what screening assessment tools are available for pica and RD.

### P6.1.6

#### Symptom Connectivity Predicts Future Remission in Eating Disorders: A Network Approach to Eating Disorder Prognosis

**Russell DuBois, MS<sup>1</sup>**  
**Kendra R. Becker, PhD<sup>2</sup>**  
**Rachel Liebman, PhD<sup>2</sup>**  
**Debra L. Franko, PhD<sup>1</sup>**  
**Jennifer J. Thomas, PhD<sup>2</sup>**  
**Kamryn T. Eddy, PhD<sup>2</sup>**  
**Rachel F. Rodgers, PhD<sup>1</sup>**

<sup>1</sup>Northeastern University, Boston, MA, USA

<sup>2</sup>Massachusetts General Hospital, Boston, MA, USA

Network theories of psychopathology posit that mental health conditions exist as a system of temporally related cognitions, behaviors, and affective states, typically referred to as symptoms. In this way, disorders are maintained by the mutual reinforcement of their symptoms across time. According to these models, networks composed of highly connected symptoms are associated with persistence, whereas more loosely connected networks are predictive of remission. We tested this claim by examining if connectivity among eating disorder symptoms predicted future prognosis among individuals with eating disorders at yearly follow-ups for five years. We created within-subject symptom networks using longitudinal data collected weekly from individuals diagnosed with either anorexia nervosa or bulimia nervosa ( $n = 240$ ). We measured baseline (1 year) contemporaneous network connectivity for each individual and quantified remission as a psychiatric rating score of "partial recovery" or "recovery" on the Eating Disorders Longitudinal Interval Follow-Up Evaluation for each follow-up year. Logistic regression indicated that increased symptom connectivity at baseline significantly predicted

persistent eating disorder diagnosis at year 4 (Wald z-statistic = 2.84,  $p < .01$ , OR(95%CI) = 1.14[1.04-1.26]) and year 5 (Wald z-statistic = 2.4,  $p < .01$ , OR(95%CI) = 1.12[1.02-1.23]). Symptom connectivity was not a significant predictor of persistent eating disorder diagnosis for follow-up years 2 and 3. These findings support increased symptom network connectivity as a risk factor for poorer eating disorder prognosis. Thus, high symptom connectivity may represent an important early-stage indicator of eating disorder persistence over five years. Relatedly, results also suggest the usefulness of reducing symptom connectivity as a novel therapeutic goal in eating disorder treatment.

*Learning Objectives:*

- 1 Explain the network approach to mental disorders.
- 1 Understand symptom connectivity as it relates to eating disorder outcomes.
- 1 Connect the current study's results with evidence-based interventions for eating disorders.

## P6.2 TREATMENT OF EATING DISORDERS II (ADULT)

*Co-Chairs*

**Glenn Waller, DPhil, FAED and Anthea Fursland, PhD, FAED**

### P6.2.1 Treatment Seeking for Eating Disorders: Results from a Nationally Representative Study

**Brittany Bohrer, MA  
Ian Carroll, MA  
Kelsie Forbush, PhD  
Po-Yi Chen, MS**

University of Kansas, Lawrence, KS, USA

Eating disorders (EDs) are associated with substantial morbidity and mortality, yet up to 45% of individuals with EDs never receive treatment for their eating-related problems. The present study sought to identify whether comorbidity, suicidality, discrimination, family cohesion, employment status, income, sex, age, marital status, religious belongingness, and ED-specific variables (body mass index, past-year ED diagnoses) were associated with treatment seeking in a nationally representative sample of individuals with EDs (N=595; 77.8% women; 72.4% ethnic minority). Structural equation modeling was used to identify significant predictors of treatment seeking. In the full sample, age was associated with a greater probability of treatment seeking, and men had a lower probability of seeking treatment. No variables were

significant predictors of treatment seeking among the Hispanic or Caucasian subgroups. To our knowledge, this was the largest study to characterize predictors of treatment seeking in adults with EDs. Results from the present study were consistent with existing literature documenting age and sex differences in treatment seeking. Findings suggest a need for improved ED education and outreach—including greater mental health/ED literacy and decreased stigmatization for patients, providers, and the general public—as well as additional persuasive public-health messages to change community knowledge about treatment options for younger persons and men with EDs.

*Learning Objectives:*

- 1 Identify predictors of treatment seeking for adults with eating disorders.
- 1 Differentiate predictors of treatment seeking among various ethnic groups.
- 1 Identify need for education and outreach to bolster treatment engagement from individuals with eating disorders and identification/referral from treatment providers.

### P6.2.2 To deliver or NOT to deliver Cognitive Behaviour Therapy for Eating Disorders: Why are we Drifting Away from the Evidence-based Techniques?

**Alexandra Mulkens, PhD<sup>1</sup>  
Chloé de Vos, research master student<sup>2</sup>  
Anastacia de Graaff, MSc<sup>2</sup>  
Glenn Waller, Professor DPhil<sup>3</sup>**

<sup>1</sup>Maastricht University, Dept. of Clinical Psychological Science, Maastricht, Netherlands

<sup>2</sup>Maastricht University, Maastricht, Netherlands

<sup>3</sup>University of Sheffield, Dept. of Psychology, Sheffield, UK

Introduction Cognitive Behaviour Therapy (CBT) is the best available treatment for eating disorders. However, clinicians commonly “drift away” from using proven therapeutic techniques. Waller and colleagues (2012) examined the degree to which such drift occurs among CBT clinicians, working with adults with eating disorders. Results were disappointing: evidence-based CBT techniques were far less used than expected and desired. It raises the question if that is a common problem and how it's driven. We replicated and extended this study among a large pool of CBT-ED therapists in the Netherlands. Method Participants Eating disorders CBT therapists were asked to fill out an online survey. N=185 therapists started the survey, and the final sample consisted of N=139 (127 females) therapists. Survey The survey consisted of 4 parts: (1) Demographics; (2) What techniques they used as part of their CBT treatments in eating disorders. Each therapeutic technique presented in the survey (some of which were in fact non-evidence based) was

rated by the clinician on the proportion of being used as part of their CBT treatment; (3) Questionnaires to investigate the clinician's anxiety (IUS-12; Intolerance of Uncertainty Scale) and personality (TIPI; Ten Item Personality Inventory); (4) A rating of beliefs about the importance of the therapeutic alliance, questions about the clinician's skills, compared to other clinicians with similar qualification, and about the recovery rates of their patients. Research questions: - What CBT techniques and to what extent do therapists report using when delivering CBT for eating disorders? - What are the reasons for non-adherence to evidence-based practice? More specifically, how are clinicians' anxiety level, age, years of experience, beliefs about the role of the therapeutic alliance, beliefs about how good they are as a therapist, and personality, related to (non-) adherence? Results and Discussion Use of the specific CBT techniques was below the level one would expect. Clinician anxiety is a reliable predictor of therapist drift from CBT, particularly the more behavioral elements. Both clinicians' beliefs in the impact of the therapeutic alliance and their use of pre-therapy motivational enhancement approaches are also likely to result in poor use of core behavioral elements of CBT-ED.

#### *Learning Objectives:*

- ▮ Evaluate whether they are using evidence based CBT-ED techniques well enough.
- ▮ Recognize their own therapist drift, and what may be driving it (anxiety?).
- ▮ Use training and supervision to develop competence in core skills. Discuss therapist drift and prevention of therapist drift with their colleagues.

### P6.2.3

#### Why am I still ill? Severe and Enduring Eating Disorder Patients' Experiences of Specialized Treatment and its Role in the Maintenance of the Eating Disorder

**Yvonne von Hausswolff-Juhlin, Associate professor<sup>1</sup>**  
**Sanna Aila Gustafsson, PhD<sup>2</sup>**

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The aim of this study was to investigate severe and enduring eating disorder (SEED) patients' own experiences of specialized treatment and its role in the maintenance of the eating disorder (ED). This qualitative study is based on semi-structured interviews. Thematic Analysis was used to analyze data. Participants (n=21) had been diagnosed with eating disorders for 22.8 years on average with a mean BMI of 15. Over all the participants found specialized ED treatment inflexible and this uncompromising and inflexibility was expressed in five categories contributed to maintain the Eating disorder (ED): rule-governed, excluded liability, diagnose-focused,

coercive, and disrespectful. Patients felt they did not fit in under the specialized ED treatment directions. The results of this study suggests that ED treatment needs to become more flexible and individually adapted when evidence based interventions have failed. When evidenced based treatment has failed it must be able to change the way of treatment.

#### *Learning Objectives:*

- ▮ Describe more about of how SEED patients has experienced specialized ED treatment during the years. What has been helpful and what role has ED treatment played in the maintenance of the ED.
- ▮ Discuss SEED patients situation and evaluate when it is time to think in a different way of how to treat SEED patients.
- ▮ Relate to the presentation and the result of this study when listening to a patient with SEED and remember what has been said before – might this be helpful or not?

### P6.2.4

#### Improving Acting with Awareness May be the Key to Successful Mindfulness-Based Interventions for Eating Disorders.

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Mindfulness-based treatments for eating disorders (ED) are widely used, but research on the effectiveness of such interventions is mixed. Conflicting findings may be due to the multi-faceted and complex nature of mindfulness. For example, research shows that certain aspects of mindfulness (non-reactivity and acting with awareness) are most related to ED symptoms. A more thorough understanding of how specific aspects of mindfulness relate to ED symptoms over time may help to inform and improve mindfulness-based treatments. The current study aimed to: a) test which aspects of mindfulness impact ED symptoms over time; b) test if intervention on those aspects would decrease ED symptoms. In Study 1, we examined which mindfulness facets predicted ED symptoms across one month. Individuals with an ED diagnosis (N = 158; primary AN; 72%), completed measures of mindfulness at baseline and one month later. Using structural equation modeling, we found that higher acting with awareness prospectively predicted lower drive for thinness ( $\beta = -0.19, p = 0.004$ ) and bulimic symptoms ( $\beta = -0.10, p = 0.007$ ). Building upon these findings, in Study 2, we tested the efficacy of a 4-week Eating Awareness Training (EAT). Participants (current N = 6, expected N = 30), completed four sessions focused on the development of awareness skills. Specifically, EAT aims to increase awareness of hunger, fullness, and satiety cues by combining mindfulness meditation and

mindful eating practices. Participants showed significant reduction in shape concern ( $p = .02$ ), weight concern ( $p = .01$ ), and restraint ( $p = .04$ ) from baseline to 1-month follow-up. Our results suggest that interventions specifically targeting the acting with awareness facet of mindfulness may be effective in addressing core ED cognitions, such as weight and shape concern, and reducing maladaptive ED behaviors.

*Learning Objectives:*

- ▶ Participants will learn about different facets of mindfulness and how they related to eating disorders (EDs).
- ▶ Following the presentation, participants will have a greater understanding of how specific aspects of mindfulness relate to ED symptoms over time.
- ▶ Participants will learn how mindfulness interventions for ED may be informed by existing research and implemented effectively.

### P6.2.5 Self-Efficacy as a Predictor of Treatment Outcome in an Outpatient Eating Disorder Program

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This prospective pilot study examined the relationship between self-efficacy and treatment outcome in an adult outpatient eating disorder program. Data from 59 eating disorder outpatients were collected, including measures of self-efficacy, eating disorder symptom severity, negative emotions (depression, anxiety, and stress), body mass index, and duration of illness. Hierarchical regression was used to examine the impact of baseline self-efficacy, and early treatment changes in self-efficacy (i.e., baseline to 6-weeks), on end-of-treatment (EoT) eating disorder symptom severity and treatment dropout. Early change in self-efficacy during the course of treatment was found to predict EoT symptom severity when controlling for confounding variables. Furthermore, baseline self-efficacy was found to predict treatment dropout, but not end of treatment symptom severity. This is the first study (using a validated scale) to show that self-efficacy, and early changes in self-efficacy, may be an important predictor of treatment outcome for eating disorder outpatients. Implications and suggestions for future research are discussed.

*Learning Objectives:*

- ▶ Describe the current understanding of self-efficacy in

eating disorder treatment.

- ▶ Understand the possible role of self-efficacy as a predictor of eating disorder treatment outcome (based on the results of our study).
- ▶ Understand the potential importance of future research aimed at enhancing self-efficacy in eating disorder treatment.

### P6.2.6 The Short Treatment Allocation Tool for Eating Disorders: Current Practices in Assigning Patients to Level of Care

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**Megumi Iyar, BA<sup>4</sup>**  
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There is little consensus or consistency in how patients with eating disorders (ED) are assigned to the most helpful and cost-effective level of care. The Short Treatment Allocation Tool for Eating Disorders (STATED) is a new evidence-based algorithm developed to ensure current empirical evidence is used in matching patients to treatment to promote best resource utilization in British Columbia. The STATED uses three patient dimensions: medical stability, symptom severity, and readiness in assigning patients to one of five levels of care. The objective of the present study was to determine the extent to which current practices are in alignment with STATED recommendations. Participants were 179 healthcare professionals belonging to international ED-specific organizations providing care for youth and/or adults with EDs. Over a period of three months, they were recruited online and invited to participate in a brief survey. Ratings were made on the extent to which each patient dimension (medical stability, symptom severity, and readiness) was considered suited to each of the five levels of care. Twenty-four McNemar tests were conducted testing a priori hypotheses based on STATED recommendations. For example, the STATED recommends inpatient hospitalization for high medical acuity, and recovery-focused treatment (as opposed to treatment focusing on engagement or quality of life) for those with higher readiness. Of the 24 analyses conducted, 22 were statistically significant (all  $p$ 's  $< .001$ ), in the direction of STATED recommendations. A coding scheme was developed to test the extent to which current practice ratings were inconsistent with the STATED. The mean proportion of inconsistent responses across levels of care for each dimension was as follows: medical stability (9%), symptom severity (40%) adult readiness (58%), and

family readiness (66%). This research serves as a first step in understanding the extent to which evidence based practice is used to assign patients to level of care.

*Learning Objectives:*

- ▶ Describe the Short Treatment Allocation Tool for Eating Disorders (STATED)
- ▶ Determine the extent to which current practices are in alignment with STATED recommendations
- ▶ Identify which STATED dimension is least consistently used in clinical practice

## P6.3 CHILDREN AND ADOLESCENTS

*Co-Chairs*

**Jennifer Couturier, MD, MSc, FAED and Debra K. Katzman, MD, FAED**

### P6.3.1 Clinical and Socio-demographic Features in Childhood vs Adolescent-onset Anorexia Nervosa in an Asian Population

**Cecilia Kwok, MD, MRCPsych**  
**Victor Kwok, MBBS, MMed (Psychiatry)**  
**Huei Yen Lee, MBBCh, MMed (Psychiatry)**  
**Shian Ming Tan, MBBS, MMed (Psychiatry)**  
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Onset of anorexia nervosa (AN) is generally in adolescence, but there are increasing rates in childhood. Childhood-onset AN maybe under-recognised and under-treated due to an atypical presentation. This study aims to 1) describe features of AN in patients  $\leq 18$  years, and 2) compare childhood-onset and adolescent-onset AN. Patients below 18 years of age, diagnosed with anorexia nervosa between Jan 2003 and Dec 2014, were included. Childhood-onset AN was defined as onset  $< 13$  years, while adolescent-onset AN was defined as onset between 13-18 years. The patients were predominantly female (95.4%) and Chinese (83%). Of the 435 patients, 8.3% had onset below 13 years, mean  $11.5 \pm 1.0$  years. The adolescent-onset group had mean age of onset of  $15.2 \pm 1.6$  years. Compared to the general population, a greater proportion of patients stayed in private housing, indicating higher socio-economic background. There was under-representation of Malays and Indians compared to the national ethnic distribution. The childhood and adolescent-onset groups were similar in socio-demographic variables, as well as

gender distribution, presenting body mass index, amount of weight loss, AN subtype, presence of psychiatric comorbidities and family history. The childhood-onset group had significantly longer duration of illness prior to presentation (4.75 vs 2.62 years), greater frequency of co-morbid OCD (19.4% vs 5.3%), were less likely to report bingeing symptoms (13.9% vs 26.6%) and were more likely to report teasing as a trigger for AN (58.3% vs 31.6%). The childhood-onset group also had significantly longer duration of inpatient stay (5.97 vs 3.22 weeks), as well as a greater number of total admissions (2.78 vs 1.37). Our results suggest that cultural and socio-economic factors may impact the development or identification of AN in an Asian context. There appears to be a delay in diagnosis of childhood-onset AN, with a corresponding more unfavorable clinical course.

*Learning Objectives:*

- ▶ Understand the clinical and socio-demographic presentation of anorexia nervosa presenting in children and adolescents in an Asian population.
- ▶ Compare the differences between childhood and adolescent-onset anorexia nervosa.
- ▶ Appreciate possible cultural contributions to development and identification of anorexia nervosa.

### P6.3.2 Investment in Thinness and Muscularity Mediates Relationships between Psychological Attributes, Body Esteem, and Dieting in 7-year-old Children

**Rachel Rodgers, PhD<sup>1</sup>**  
**Tania Nichols, PhD<sup>2</sup>**  
**Karen Gregg, BA (Honours in Psychology)<sup>2</sup>**  
**Eleanor Wertheim, PhD<sup>2</sup>**  
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Increasing evidence has suggested that body image and eating concerns may be present in children; however, data in this age group are still scarce. In particular, little is known regarding the psychological factors that may predispose to, or accompany, such concerns. The present study aimed to contribute to bridging this gap by examining the relationships among two psychological dimensions, perfectionism and self-esteem, and body image and eating concerns in 7-year-old children. Specifically, a model in which investment in muscularity and thinness mediated the relationship between these psychological dimensions and body esteem and dieting was tested. Participants were 7-year-old children ( $n = 261$ , 57% girls) who were part of the prospective Children's Body Image Study. Children were interviewed to obtain measures of self-esteem, investment in thinness and muscularity, body esteem, and dieting. As expected, higher perfectionism and lower self-esteem

were associated with greater body image and eating disturbance ( $|r|$  ranging from .18 to .30). The model proved a good fit to the data,  $\chi^2(3) = 6.50, p = .089, CFI = .98, GFI = .99, RMSEA = .067$ . Investment in thinness and muscularity mediated both the relationship between lower self-esteem and lower body esteem, and the relationship between higher perfectionism and higher dieting. Findings from a multi-group analysis revealed no differences in model fit between girls and boys. These results suggest that high perfectionism and low self-esteem may play a role in the development of body image and eating concerns even at this young age, although longitudinal researcher is needed to examine these relationships over time. In light of the development of these concerns during childhood, additional efforts should be made to develop and disseminate effective prevention interventions before adolescence.

*Learning Objectives:*

- ▶ To recognize the emergence of body image and eating concerns in children.
- ▶ To understand the relationship between perfectionism and self-esteem and body image and eating concerns in children.
- ▶ To understand the mediating role of investment in thinness and muscularity in these relationships.

### P6.3.3 Family Functioning and Relationship Quality for Adolescents in Family Based Treatment with Severe Anorexia Compared with Non-Clinical Adolescents

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**Jane Miskovic -Wheatley, DCP<sup>1</sup>**  
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**Paul Rhodes, PhD<sup>2</sup>**  
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Identifying changes in family functioning and parent-adolescent relationship quality over the course of recovery is an important area of investigation as healthy family functioning is more likely to help ameliorate the negative impact of illness, and provide a strong foundation for psychosocial wellbeing in the longer term. The current focus on family based treatment (FBT) for adolescent AN recognizes the important role families have in enabling recovery, but it is unclear how families undergoing this treatment may differ from unaffected families over time, and to what degree, and in what areas changes occur. Especially given a return to normal development, and

functioning is a specific treatment goal. This longitudinal study explored family functioning and relationship quality for adolescents with severe Anorexia Nervosa (AN). Fifty-four female adolescents, treated with FBT after inpatient admission, and 49 non-clinical age matched adolescents, were compared at assessment and 6-months after session 20. At baseline, AN group mothers and fathers reported poorer family function. AN adolescents were notably similar to controls, reporting poorer function in only one domain. There were no changes for adolescents, an improvement for mothers in the AN group, but an increase in perceived impairment for fathers in both groups, with AN fathers more affected. The similarity in adolescent reports, and the increase for fathers over time may indicate normal adolescent family processes occur even in the midst of serious illness. There is a need to provide intervention to ameliorate the impact of treatment on parents. Clinical implications will be discussed.

*Learning Objectives:*

- ▶ Describe the importance of assessing family functioning in treatment for adolescent anorexia nervosa.
- ▶ Describe the results of this study into family functioning and FBT.
- ▶ Assess the clinical implications of the study findings the context of delivering FBT.

### P6.3.4 Psychosocial Adjustment in Siblings of Youth with Anorexia Nervosa

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It is well-known that siblings of children with chronic conditions are at greater risk for psychosocial problems. However, siblings of youth diagnosed with anorexia nervosa (AN) are understudied. This study investigated mental health symptoms in siblings of youth with AN, as compared to matched controls. Participants included 39 youth (mean age=14.84, SD=2.13) with a sibling diagnosed with AN (ages 11-18; mean elapsed time since diagnosis=1.02 years, SD=0.88). Control participants (n=48) were matched in age (M=14.27, SD=1.77), ethnicity, SES, and parent marital status. All participants completed self-report questionnaires assessing anxiety, depression, and eating disorder (ED) symptoms. Siblings of AN youth also completed the Sibling Perceptions Questionnaire (SPQ) to assess the impact of having a sibling with AN on their lives. Compared to controls, AN siblings reported more symptoms of depression and anxiety (CDI:  $t=-2.018$ ,

$p=.047$ ; MASC:  $t=-2.562$ ,  $p=.012$ ); and greater eating concerns (EDE-Q Eating Concerns:  $t=-2.528$ ,  $p=.013$ ). Within the AN sibling group, the negative impact of having a sibling with AN was associated with less age difference between the well-sibling and youth with AN; more depression and anxiety symptoms; and higher EDE-Q Global and all EDE-Q subscale scores. Compared to male AN siblings (41%,  $n=16$ ), female AN siblings (59%,  $n=23$ ) perceived a greater negative impact of having a sibling with AN (SPQ Negative Impact scale:  $t=3.960$ ,  $p<.001$ ); more fears of acquiring AN (SPQ Fear scale:  $t=2.723$ ,  $p=.01$ ); and more interpersonal consequences within the family, secondary to AN (SPQ Interpersonal scale:  $t=3.508$ ,  $p=.001$ ). Findings from this study suggest that siblings of youth with AN experience more mental health difficulties than their peers and that perceived negative consequences of AN may be associated with more emotional problems and ED symptoms. Further, female AN siblings may be at heightened vulnerability to the negative consequences of having a sibling with AN, as compared to male AN siblings.

#### Learning Objectives:

- ▶ Describe specific vulnerabilities in siblings of youth with anorexia nervosa (AN), as compared to peers without a sibling with AN.
- ▶ Describe ways that female siblings of youth with anorexia nervosa may be more vulnerable to psychosocial adjustment than male siblings.
- ▶ In siblings of youth with anorexia nervosa (AN), discuss the relationship between mental health difficulties and perceived negative impact of having a sibling with AN.

### P6.3.5 Ecological Momentary Assessment of Maladaptive Eating in Children and Adolescents with Overweight or Obesity

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Loss of control (LOC) eating and overeating are prevalent in youth with obesity. Ecological momentary assessment (EMA) research is scant in youth with obesity and tends to focus on samples enriched for eating pathology. This is problematic not only in terms of generalizability, but also

because adults frequently report LOC eating behaviors via EMA that are denied during initial interviews. The current EMA study characterized antecedents and correlates of LOC and overeating in a heterogeneous sample of youth, aged 8-14y, with overweight/obesity. Those with ( $n=10$ ) and without LOC eating ( $n=30$ ) as reported via semi-structured interview did not differ on mean EMA LOC severity ratings [ $t(39)=0.30$ ;  $p=.76$ ]. Generalized estimating equations (GEEs) for LOC severity revealed between-subjects effects for craving ( $b=.25$ ,  $p<.001$ ) and interpersonal stress ( $b=.06$ ,  $p=.006$ ). There was a within-subjects effect for concurrent food hedonics ( $b=.01$ ,  $p=.002$ ), such that eating occasions with greater food liking were associated with greater momentary LOC severity. Eating with classmates ( $b=-.02$ ,  $p=.012$ ), while on the computer ( $b=-.03$ ,  $p=.010$ ), and while playing video games ( $b=-.06$ ,  $p=.026$ ) all were associated with lower LOC severity, while eating outside vs. at home was associated with greater LOC severity ( $p=.034$ ). GEEs for overeating severity revealed between-subjects effects for craving ( $b=.24$ ,  $p<.001$ ), eating because others are eating ( $b=.22$ ,  $p=.009$ ), interpersonal stress ( $b=.065$ ,  $p=.006$ ), and shape/weight concerns ( $b=.01$ ,  $p=.039$ ). Eating with classmates was associated with lower levels of overeating severity ( $b=-.08$ ,  $p=.003$ ). Taken together, both inter- and intrapersonal factors may be associated with maladaptive eating in youth with obesity. Although results require replication, momentary, adaptive eating-related interventions may benefit from focusing on reducing cravings, and addressing social influences, including protective effects of eating with others.

#### Learning Objectives:

- ▶ Evaluate the prevalence and correlates of loss of control and overeating as experienced in-the-moment, and in the natural environment, within a heterogeneous sample of youth with overweight/obesity.
- ▶ Describe inter- and intra-personal factors that may contribute to different types of maladaptive eating behaviors.
- ▶ Consider how interventions for eating- and weight-related problems could be improved by a better understanding of the characteristics of eating behaviors that may contribute to excess weight gain in youth.

### P6.3.6 The Impact of Loss of Control (LOC) Eating Remission on Metabolic Syndrome (MetS) Components in Adolescent Girls

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Pediatric LOC prospectively predicts the worsening of some components of MetS, independent of adiposity. However, it is unknown if remission (relative to LOC persistence) of LOC is associated with improvements in MetS components. We hypothesized that, in adolescent girls with LOC who underwent either a 12-week interpersonal psychotherapy or a standard-of-care health education program, those whose LOC remitted by the end-of-treatment would have greater improvements in MetS components at 6-month follow-up compared to youth with persistent LOC. One hundred three adolescent girls (age  $14.5 \pm 1.7$  y; BMI-z  $1.5 \pm 0.3$ ; 56.3% non-Hispanic White, 24.3% non-Hispanic Black) at risk for excess weight gain due to elevated weight (75th-97th BMI %ile) and reported LOC were assessed for MetS components at baseline and 6-months following participation in the intervention. LOC by EDE interview, fat mass by dual energy x-ray absorptiometry, height, waist circumference, fasting lipids (triglycerides, LDL-C, HDL-C) and plasma glucose were assessed. ANCOVAs examined the main effects of LOC status (remission vs. persistence at end-of-treatment) on MetS components (waist circumference, lipids, and glucose) at 6-month follow-up, adjusting for race, age, fat mass, height, change in height, change in fat mass, and the baseline value of each respective MetS component. There were no significant main effects or interactions with intervention group for any MetS component. However, youth whose LOC remitted by end-of-treatment had lower glucose ( $83.8 \pm 6.3$  vs.  $86.6 \pm 5.8$  mg/dL;  $p = .01$ ) and higher HDL-C ( $49.9 \pm 11.7$  vs.  $45.4 \pm 12.6$  mg/dL;  $p = .02$ ) compared to youth with persistent LOC, despite no baseline differences in glucose ( $87.2 \pm 6.3$  vs.  $86.6 \pm 7.2$  mg/dL) or HDL-C ( $48.8 \pm 10.3$  vs.  $46.6 \pm 9.8$  mg/dL). No other component significantly differed by LOC status ( $ps > .05$ ). These preliminary findings suggest that targeting LOC in adolescent girls may have a beneficial impact on some components of metabolic functioning.

*Learning Objectives:*

- 】 Describe the relationship between loss of control eating and metabolic health.
- 】 Evaluate the impact of loss of control eating remission on components of metabolic syndrome.
- 】 Discuss potential reasons for the relationship between loss of control eating and components of the metabolic syndrome.

## **P6.4**

### **BIOLOGY AND MEDICAL COMPLICATIONS**

*Co-Chairs*

**Melissa Munn-Chernoff, PhD and Sarah Racine, PhD**

#### **P6.4.1**

##### **Shared Genetic Association between Anorexia Nervosa and Temperament**

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Certain temperament characteristics are associated with anorexia nervosa (AN). Individuals with AN tend to score higher on measures of harm avoidance and lower on measures of self-directedness. Some studies suggest this profile persists after recovery. Further, significant single-nucleotide polymorphism (SNP)-based genetic correlations exist between neuroticism and AN. However, the genetic association between AN and other aspects of temperament in individuals with AN have not been investigated. To accomplish this, we first used linkage disequilibrium score regression (LDSC) to calculate SNP-based genetic correlations (rg) between AN and Temperament and Character Inventory (TCI) subscales. Second, we examined TCI scores by AN polygenic risk score (PRS) quintiles: the first quintile consisting of the lowest AN PRS and fifth consisting of the highest. Finally, we calculate TCI subscale PRS and calculate quintiles to apply to the AN sample. The AN sample was drawn from the Eating Disorders Working Group of the Psychiatric Genomics Consortium (n=3,495 cases and 10,982 controls). TCI GWAS summary statistics were obtained from a published meta-analysis (n~12,000). Although LDSC results were not significant, likely due to low power, findings trended towards significance between AN and TCI Persistence (rg = .27; p = .07) and Novelty Seeking (rg = -.20; p = .07). A trend was also observed such that individuals in the fifth quintile for AN PRS had higher Persistence ( $\beta = .14$ ) and Self-directedness ( $\beta =$

.17) and lower Cooperativeness ( $\beta = -.18$ ) and Reward Dependence ( $\beta = -.18$ ). With larger samples, patterns may become more robust. Calculating and applying TCI PRS is underway. Although phenotypic associations between AN and TCI tend to be strongest with higher harm avoidance and lower self-directedness, genetic associations appear most pronounced with persistence and novelty seeking. High persistence and low novelty seeking may play a significant role in the etiology of AN via genetic mechanisms.

*Learning Objectives:*

- ▶ Summarize the phenotypic association between anorexia nervosa and temperament and personality.
- ▶ Describe cross-disorder genomic methodologies.
- ▶ Describe the genetic association between temperament and anorexia nervosa.

#### P6.4.2

### Defining the Role of the Intestinal Microbiota in Anorexia Nervosa

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**Cynthia Bulik, PhD<sup>2</sup>**

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Compelling data implicate the intestinal microbiota in the regulation of adiposity, mood and behaviour, providing a strong rationale for exploring the role of the complex microbial community in the emergence and maintenance of, and recovery from, Anorexia Nervosa (AN). Previous research has demonstrated an intestinal dysbiosis in patients with AN, and an association between the intestinal microbiota and depression and anxiety in individuals with AN, providing evidence for the intestinal microbe-gut-brain axis communication in these individuals. This study represented a first step toward helping us to understand the precise mechanism(s) by which intestinal bacteria contribute to the dysregulation of adiposity, body mass index, anxiety, depression and stress in patients with AN. We collected and stored stool samples of 10 individuals with AN and 10 age- and sex-matched healthy controls. The samples were flash frozen and stored at the Marshall Centre for Infectious Diseases at the University of Western Australia. The composition and diversity of the intestinal microbiota were characterized via high-throughput sequencing of the bacterial 16S rRNA gene and the fungal 18S rRNA gene. We also used a new procedure known as whole genome-shotgun sequencing to profile all the microbes present. We then assessed associations with adiposity and psychopathology (assessed using the Eating Disorder Examination Interview and self-report

measures of depression, anxiety and stress). Our results provide critical information on the role of the intestinal microbiota in the presentation and course of AN and ultimately may inform direction on how best to develop and test adjunct interventions for AN with pre-, pro-, anti-, or syn-biotics to enhance current approaches to therapeutic weight restoration and improve treatment outcome.

*Learning Objectives:*

- ▶ Describe the relationship between intestinal microbiota and body mass, depression, anxiety and stress.
- ▶ Understand the methodology involved in examining the mechanism by which intestinal bacteria contribute to adiposity and mood.
- ▶ Understand the potential role of adjunct interventions for refeeding in Anorexia Nervosa with pre-, pro-, anti-, or syn-biotics.

#### P6.4.3

### Exploring Reward System Responsivity in the Nucleus Accumbens across Chronicity of Binge Eating in Female Rats

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Previous research has highlighted the potential importance of reward-based processes in binge eating (BE), but findings have shown both increased and decreased activation in reward related brain structures. One contributing factor to these differences might be chronicity of BE (i.e., early vs. chronic), where the reward system is initially hyper-responsive to BE, but over time, the system becomes hypo-responsive to BE. As a result, more frequent or more severe levels of BE might be needed to achieve the same level of initial responsivity. Despite chronicity of BE being a plausible mechanism to explain differences in reward-related responsivity, no studies have directly examined duration of BE as a potential factor contributing to differences in responsivity over time. The current study used an animal model of BE to directly examine differences in brain activation in response to PF in a key brain region of the reward system, the nucleus accumbens (NAc), across chronicity of BE. Sprague-Dawley female rats (N=120) identified as BE prone (BEP) or BE resistant (BER), were randomly assigned to the early stage (6 feeding tests) or chronic stage (24 feeding tests) group. C-Fos expression, a measure of neural activation, was quantified in the NAc and compared across BER/BEP groups and early/chronic stages of BE. Early stage BEP rats had higher levels of

c-Fos expression in the NAc, compared to early stage BER rats, pointing to an initial hyper-responsivity to PF in BEP rats at early stages of BE. Chronic stage BEP rats showed lower levels of c-Fos in the NAc compared to early stage BEP rats, suggesting a downregulation in responsivity to PF over time. Overall, results suggest that neurobiological contributions to BE may vary depending on early stage versus chronic use, and hyper-responsivity at the early stage of BE may be a key risk factor for initial engagement in BE, while hypo-responsivity at the chronic stage may serve as a maintaining factor for the behavior.

*Learning Objectives:*

- ▶ Describe the association between binge eating and reward system functioning.
- ▶ Discuss the differences in neural responsivity in the nucleus accumbens at early and chronic stages of binge eating.
- ▶ Consider the implications of differences in neural responsivity across duration of binge eating.

#### P6.4.4

### Anorexia Nervosa in Hospitalized Patients with and without a History of Bariatric Surgery: A Case-control Study.

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Bariatric surgery (e.g., Roux-en-Y gastric bypass surgery; RYGB), necessitates restricted eating post-surgery. Although rare, anorexia nervosa (AN) does occur post-surgery. However, it is unclear whether AN after RYGB is related to poorer outcomes than AN alone or whether RYGB history plus other psychiatric co-morbidity is related to poorer outcomes. We reviewed charts of patients admitted to an eating disorders inpatient unit from 2010-2014 with an RYGB history to identify those hospitalized for AN (ANBS) to provide initial descriptive data. Nine patients were identified. We used diagnosis, BMI, age, number of admissions for AN, and length of hospital stay to match ANBS patients to women admitted to the same unit for AN (ANnoBS) from 2010-2014. Patients with ANBS were more likely to require specialty medical consultation (n=7 in ANBS, n=1 in ANnoBS) and transfer to the medical hospital during admission for AN (n=3 in ANBS, n=0 in ANnoBS). Wernicke Encephalopathy (WE) occurred in four ANBS patients and no ANnoBS patients. Hemoglobin, hematocrit, and albumin levels were abnormally low in ANBS and normal in ANnoBS (ds > -1.1).

We are aware of three post-hospitalization deaths among ANBS patients compared with no deaths among those with ANnoBS. We also compared 13 women with a history of RYGB but no AN (BSnoAN), who were admitted to the same unit for treatment of other psychiatric disorders, with those with ANBS to evaluate whether the findings were specific to RYGB. ANBS had poorer hemoglobin, hematocrit, and albumin levels (ds > -1.4) and higher rates of transfer to medical hospital, WE, and death. Thus, in this initial effort to describe AN in patients with a RYGB history, we observed significant morbidity and mortality, with poorer medical and nutritional outcomes than in patients with AN or with a history of RYGB and other psychiatric conditions. Future studies are needed, including creation of a registry, to better characterize and support this vulnerable population.

*Learning Objectives:*

- ▶ Describe medical and nutritional complications in AN post-RYGB.
- ▶ Understand the need for better data in this population.
- ▶ Recognize complications seen in AN after RYGB that are not present in AN alone or RYGB with other psychiatric conditions.

#### P6.4.5

### Cardiac Risk in Eating Disorders

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Eating disorders have the highest mortality rate of any psychiatric diagnoses. The disorders are associated with serious medical complications and premature death from myriad causes; a high percent of these premature deaths are linked to adverse cardiac events. Identifying reliable biomarkers of cardiac risk in this population is essential to improve health outcomes. The present study examines differences in cardiac risk indicators among asymptomatic women compared to women with subclinical and clinical eating disorder symptoms. Specifically, differences in mean T wave amplitude, mean R wave amplitude, Tpeak to Tend interval, QT interval, and QRS interval were examined across the three groups. We predicted women in the subclinical and clinical groups would show decreased T wave amplitude, mean R wave amplitude, and increased QRS interval, QT interval, and TpeakTend interval compared to asymptomatic patients. We collected 5 minutes and 30 seconds of cardiac data via 3-lead electrocardiography (ECG) in a community sample of women with clinical and subclinical symptoms across a 4-year recruitment period as part of an ongoing study of cardiac function in women with eating disorders (N=141). Eating disorder symptoms, body mass index, and biomarkers of cardiac risk were examined. We predicted a statistically significant effect of condition

in the one-way MANOVA results. As predicted, results indicated a statistically significant effect of condition, Pillai's Trace = .59,  $F(12, 268) = 9.40$ ,  $p < .001$ . Mean R wave amplitude was significantly decreased among women with subclinical and clinical symptoms, indicating decreased force of ventricular contraction. Decreased mean T wave amplitude, QT interval prolongation, increased QRS interval duration, and prolonged Tpeak to Tend intervals indicated aberrant depolarization and repolarization processes in women with subclinical and clinical symptoms compared to asymptomatic women. Treatment implications are discussed.

*Learning Objectives:*

- ▶ Understand the specific aberrant cardiac markers associated with eating disorders.
- ▶ Explain how eating disorder behaviors contribute to cardiac risk.
- ▶ Examine the ways in which treatment may lead to enhanced cardiac function by altering pathological behaviors underlying cardiac risk.

#### P6.4.6

### Shared Genetic Risk between Eating Disorder and Substance-Related Phenotypes: Preliminary Evidence from Genome-Wide Association Studies

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Eating disorders and substance use disorders frequently co-occur. Twin studies reveal shared genetic risk between eating disorders and substance use, with the strongest

associations between bulimia symptoms and problem alcohol use (twin-based genetic correlation [ $r_g$ ] = .30). Analytic advances facilitate genetic correlations using summary statistics from existing case-control genome-wide association studies (GWAS). We investigated shared genetic risk between eating disorder and substance use and disorder phenotypes. Three eating disorder phenotypes (anorexia nervosa [AN] diagnosis, an Eating Disorder Examination [EDE] AN factor, and an EDE bulimia nervosa [BN] factor) and six substance-related phenotypes (alcohol consumption, alcohol dependence, ever smoker, former smoker, cigarettes per day, and cannabis initiation) from seven GWAS were included. Sample sizes ranged from ~2,400 to ~112,000. Linkage disequilibrium score regression (LDSC) was used to calculate single nucleotide polymorphism (SNP)-based genetic correlations ( $r_g$ ) between eating disorder and substance-related phenotypes. Although sample sizes for some phenotypes were small, leading to non-significant findings, intriguing patterns emerged. For alcohol dependence, a moderate correlation emerged with the BN factor ( $r_g = .66$ ), but not with AN diagnosis ( $r_g = .03$ ) or AN factor ( $r_g = -.10$ ). Conversely, former smoking was modestly correlated with AN diagnosis ( $r_g = .25$ ) and the AN factor ( $r_g = .40$ ), but not with the BN factor ( $r_g = .18$ ). This suggests that associations between different eating disorders and substance-related phenotypes may be etiologically distinct. The Eating Disorders and Substance Use Disorders Working Groups of the Psychiatric Genomics Consortium are rapidly growing sample sizes. We expect these patterns to become more robust and clear as sample sizes increase, shedding more light on genetic mechanisms underlying eating disorder and substance use disorder comorbidity.

*Learning Objectives:*

- ▶ Summarize research on overlapping genetic risk for eating disorders and substance-related behaviors and traits.
- ▶ Compare two different methods to estimate the genetic correlation between two traits.
- ▶ Discuss avenues of future research for investigating the co-occurrence of eating disorders and substance use disorders.

#### P6.5

### INNOVATIVE USES OF TECHNOLOGY

*Co-Chairs*

Eric F. van Furth, PhD, FAED and Ellen Fitzsimmons-Craft, PhD

## P6.5.1

Internet Searches for Pro-Eating Disorder Terms and Eating Disorder Help Seeking Terms Following the Release of Netflix film *To the Bone*

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The Netflix film *To the Bone* is the first major movie exploring eating disorders (EDs) and the treatment of EDs. The film is generated widespread discussions (>35,000 news reports), including debate from providers, advocates, and patients about the movie's ability to raise awareness of EDs without creating deleterious effects of increased interest in pro-ED behaviors. This study used data from Google Trends to examine ED internet searches the week prior to and following the film release. We obtained search trends emerging from the United States for the following: (1) general ED words; (2) help-seeking ED words; and (3) pro-ED terms. We then created two categories: ED awareness/help-seeking and pro ED. ED queries were divided by the total number of defined search terms for each day and then scaled to range from 0 to 100. For example, '50' indicated that 50% of the searches were about a defined ED topic, relative to the other a priori defined ED related topics. Prior to the film release, an upward trend of search terms related to ED awareness and help seeking ( $y=1.25+30.57$ ) and pro-ED deleterious behavior search terms ( $y=0.46+49.90$ ) was evident. This upward trend continued following the film release, for both positive ED search terms ( $y=0.22x+40.2$ ) and search terms related to pro-ED behaviors (e.g., proanorexia, thinspiration). Differences in the slopes suggest that prior to the film release, there were greater positive searches. However, following the film release, there was an increase in pro-ED deleterious behavior searches. Netflix's film *To the Bone* raised awareness of EDs both before and after film viewings. However, the search results suggest that after viewing the film, there were increases in pro-ED searches. Results from this study may help inform future recommendations, policies, and guidelines for the effects of ED portrayal in Hollywood films. More broadly, this study highlights the possible use of Google Trends data for ED research.

*Learning Objectives:*

- 1 Describe Google Trends data and its possible use in eating disorder research.
- 2 Assess changes in internet search terms for pro-eating disorder terms and eating disorder terms around the release of *To the Bone*.
- 3 Discuss recommendations, policies, and guidelines for the effects of ED portrayal in Hollywood films.

## P6.5.2

## Implementing an Internet-Based Platform for Eating Disorder Screening, Prevention, and Treatment on College Campuses: Preliminary Results from a State-Wide Initiative

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The Internet-based Healthy Body Image (HBI) Program platform uses online screening to identify individuals at risk for or with an eating disorder (ED) and then directs users to tailored, evidence-based online/mobile or in-person interventions to address individuals' risk/clinical status. We examined preliminary findings from the first state-wide deployment of HBI over three years in Missouri public universities. First, regarding reach of HBI, the screen was completed 2,454 times, with an average of 2.3% of undergraduate students on each campus taking the screen. Second, regarding screen results, 43.5% screened as low risk for an ED and were offered *Staying Fit*, an online universal ED prevention intervention; 38.9% screened as high risk for an ED and were offered *Student Bodies-Classic*, an online targeted ED prevention intervention; 15.4% screened positive for a clinical/subclinical ED (with the exception of anorexia nervosa [AN]) and were offered *Student Bodies-Eating Disorders (SB-ED)*, a mobile, guided self-help, cognitive-behavioral therapy-based intervention; and 3.7% screened positive for AN and were offered a referral to in-person care. Third, uptake for the Internet-based interventions ranged from 44-51%, with the only significant group difference being higher uptake in the high- vs. low-risk group ( $p=.003$ ). Fourth, restrictive eating and binge eating significantly decreased over the course of users' time in SB-ED ( $ps<.001$ ). Vomiting and diet pill/laxative use did not change ( $ps>.195$ ); however, any endorsement of these behaviors was low (12% and 15%, respectively). This is the first state-wide deployment of a comprehensive online platform for screening and delivering tailored interventions to a population of individuals with varying ED risk and symptom profiles. This effort demonstrates the feasibility

and preliminary efficacy of a state-wide intervention approach. Implications for future work and sustaining and broadening the reach of HBI will be discussed.

*Learning Objectives:*

- ▶ Demonstrate an understanding of the problem of eating disorders on college campuses and the Healthy Body Image Program.
- ▶ Consider challenges and strategies to overcome barriers to dissemination of online ED screening, preventive, and intervention services.
- ▶ Acquire an understanding of the implications of study findings for bridging the wide treatment gap for eating disorders and the development of future mobile apps.

### P6.5.3

#### Examining Coach Adherence and Competence in an Internet-delivered Guided Self-help Program for Women with Disordered Eating

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Internet-delivered, guided self-help (GSH) interventions have considerable potential for preventing and treating eating disorders (EDs), especially when enhanced by coaches who personalize the intervention. However, studies of these programs fail to report coach fidelity to the treatment protocol. This is the first study to develop and evaluate a measure of coach adherence and competence to the treatment protocol in a digital GSH program for EDs. Student Bodies – Eating Disorders (SB-ED) was provided to women from 28 U.S. colleges who screened positive for a clinical/subclinical ED (apart from anorexia nervosa). SB-ED incorporates the support of coaches who work with users individually via in-program

text messages. We developed a fidelity instrument based on existing coaching best practices and iteratively revised to incorporate expert feedback. Two coders used the resulting 17-item measure to rate coach adherence and competence in messages to users. Participants were 14 SB-ED coaches and 42 SB-ED users. For both adherence and competence, we report: 1) kappas and intraclass correlations estimating inter-rater reliability; and 2) descriptive statistics. While kappas for adherence items ranged from 0.22 to 0.69, percent agreement between coders was generally high (79.5% to 95.3%). Inter-rater reliability for competence items ranged from fair to good (0.43-0.65), except for one item (“Helps user understand her thoughts-feelings-behaviors cycle”) that had negative average covariance between raters. Overall coach competence was high, with a mean of 3.7 on a 1-5 Likert-type scale. Frequencies of coach strategy use ranged from 95.4% (“Demonstrates genuine interest and caring”) to 6.6% (“Enhances user motivation to change”). Coaches rarely engaged in behaviors violating treatment protocol (0% to 2.2%). This study illustrates the feasibility of reliably identifying some facilitator behaviors and assessing the competence of their delivery in digital GSH for EDs.

*Learning Objectives:*

- ▶ Understand how Internet-delivered guided self-help programs incorporate the support of a facilitator to reduce eating disorder symptoms.
- ▶ Assess the role of therapist adherence and competence in evaluating treatment efficacy.
- ▶ Recognize facilitator behaviors that adhere to or violate the treatment protocol.

### P6.5.4

#### Attentional Bias Modification for Unsuccessful Dieters: The Bouncing Image Training Task

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Both heightened attentional engagement with food and a difficulty to disengage from food has been argued to contribute to dieters’ failure to maintain their diet goal. We examined the efficacy of a novel 8-session computerized training (Bouncing Image Training Task; BITT) to reduce unsuccessful dieters’ attention for food. Furthermore,

we examined whether the anticipated reduction in attentional bias would be paralleled by a reduction in food craving and actual food intake. In contrast to previous ABM tasks, the BITT is designed to address both attentional engagement with food cues and difficulty to disengage from food cues. Participants were 113 female unsuccessful dieters (MBMI = 25.55, SDBMI = 3.72) selected from a prescreening. They were randomly assigned to the training or the waitlist control group. Both groups completed pre- and post-measures of attentional bias for food, and food craving. In addition, during the post-measure food intake was assessed with a 24-hour food recall interview. These measures were exactly one week apart, on the same time of day. The trainings group performed the first and last BITT training in the lab. The remainder of the training was done on a daily basis via the internet. Specifically in the trainings group, participants showed a decrease in attentional engagement with food cues, and a decrease in their difficulty to disengage from food cues. This effect was not restricted to the assessment version of the trainings task, but also showed transfer to other attentional bias measures. This robust reduction in attentional bias was not paralleled by a reduction in craving and food intake. Clinical implications for the current findings, and key issues for future research will be discussed.

*Learning Objectives:*

- 】 Understand why attentional bias modification might help unsuccessful dieters.
- 】 Understand what the added benefits of the Bouncing Image Training Task are.
- 】 Become up to date about recent developments on attentional bias modification.

**P6.5.5**  
**Personalized Networks of Symptoms Vary Across Individuals with Eating Disorders Supporting Need for Individualized Treatments**

**Cheri Levinson, PhD**  
**Cheri Levinson, PhD**  
**Lisa Michelson, BA**  
**Laura Fewell, BA4**

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Eating Disorders (EDs) are chronic and disabling; most individuals never meet full recovery even after intensive treatment. Relapse after treatment is high, with 50% of individuals readmitting for intensive treatment and many never reaching full recovery. This high relapse rate is due, partially to the fact that the factors which drive symptoms vary greatly across individuals. The field does not know what maintains or exacerbates individual symptoms and why disordered eating remains problematic for many individuals, making it difficult for clinicians to accurately target maintaining symptoms in treatment. In

the current study we used network analysis to identify core symptoms that maintain and promote the spread of ED psychopathology within individuals. Identification of core “trigger” symptoms pinpoint symptoms that can be targeted to disrupt the spread or “activation” of ED behaviors. Individuals with an eating disorder (N = 15; AN = 11; OSFED = 3; BN = 1) were assessed for 25 days (100 assessment points, 4 times a day) using a mobile smart-phone application. Participants were asked to report on their cognitions (e.g., fear of weight gain, fears of making mistakes), behaviors (e.g., binge eating, restriction, purging), and emotions (e.g., anxiety, shame). Network analysis showed that each individual had different patterns of maintaining symptoms and that core symptoms differed between individuals. For example, the core maintaining symptoms for one participant were fear of making mistakes, vomiting, and compulsive behaviors, whereas for another participant, the core maintaining symptoms were restraint, setting high standards, body checking, and worries about what others think about them. This study shows how network analysis can be utilized to identify personalized maintenance symptoms of ED psychopathology. These symptoms point directly to intervention areas that should be targeted in treatment for each individual. Future research is needed to develop algorithms and computer software to directly translate this methodology for use by clinical providers.

*Learning Objectives:*

- 】 Describe how network analysis can be used to develop individualized patterns of eating disorder symptoms.
- 】 Discuss how the development of personalized networks leads directly to individualized treatment targets.
- 】 Provide information on how to use a mobile-smart phone app to collect data on eating disorder cognitions, behaviors, and emotions.

**P6.5.6**  
**Treatment Attitudes and Barriers to Seeking Treatment among Individuals with Diagnosed and Undiagnosed Eating Disorders: A Quantitative Analysis**

**Scott Griffiths, PhD**

University of Melbourne

We examined treatment attitudes and barriers to seeking treatment in three groups: individuals with diagnosed eating disorders and in treatment (n = 178), individuals with diagnosed eating disorders and not in treatment (n = 100), and individuals with undiagnosed eating disorders and not in treatment (n = 127). Participants completed a survey assessing treatment attitudes and barriers in addition to eating disorder symptoms and quality of life. Across groups, participants were broadly more positive toward elements of dominant eating disorders treatment

models (e.g., one-on-one therapy delivered in-person by highly-trained specialists) than non-dominant treatment models (e.g., smartphone and Internet-delivered therapy). The strongest barriers to treatment-seeking were fear of change and fear of losing control, followed by treatment cost. Regarding treatment attitudes, the largest between-group differences were greater positivity among undiagnosed individuals toward Internet and smartphone-delivered treatments. Regarding barriers to treatment, undiagnosed individuals rated as stronger several barriers relating to eating disorders mental health literacy. Efforts to develop novel non-dominant forms of eating disorders treatment must be accompanied by research on individuals' attitudes towards these treatments. Eating disorders-related mental health literacy is an important target for efforts to promote rates of help seeking and diagnosis among individuals with undiagnosed eating disorders.

*Learning Objectives:*

- ▶ Assess what types of individuals are amenable to novel therapies (e.g., Internet-delivered CBT) versus traditional therapies.
- ▶ Describe the most salient barriers to treatment seeking among individuals with eating disorders
- ▶ Distinguish the treatment attitudes and treatment barriers of individuals with undiagnosed eating disorders versus diagnosed eating disorders

## **P6.6** **RISK FACTORS FOR EATING DISORDERS**

*Co-Chairs*

**Carolyn Becker, PhD, FAED and Phillipa Hay, DPhil, FAED**

### **P6.6.1** **Risk factors for Anorexia Nervosa versus Bulimia Nervosa and Binge Eating Disorder: Implications for Preventing Anorexia Nervosa**

**Eric Stice, PhD**

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Widely implemented eating disorder prevention programs seek to reduce pursuit of the thin ideal and body dissatisfaction, often targeting youth with body image concerns. However, the first study to examine risk factors that predict future onset of each type of eating disorder, which used a high-risk design to allow sufficient power to identify risk factors that predict onset of each eating disorder type, found that thin ideal internalization and body dissatisfaction predicted future onset of bulimia

nervosa and binge eating disorder, but not anorexia nervosa. Surprisingly, low body mass and low dieting predicted onset of anorexia nervosa. Indeed, being in the lowest quartile of body mass was associated with a 20-fold increase in future onset of anorexia nervosa, making this the most potent risk factor identified for this pernicious eating disorder. Results imply that widely implemented prevention programs may only prevent onset of bulimia nervosa and binge eating disorder, but not anorexia nervosa. This presentation will first describe novel findings from prospective high-risk etiologic studies, including results from cutting-edge machine learning and classification tree analyses, with a focus on identifying risk factors that are specific to each eating disorder. Further, a roadmap will be presented for future high-risk prospective studies that should advance knowledge regarding risk factors for each eating disorder, including biological risk factors. These new findings will permit two pathways for improving prevention efforts. The first pathway is to focus on risk factors that predict onset of all eating disorders, such as negative affect and psychosocial impairment. The second pathway is to recruit youth who are at high-risk for future onset of anorexia nervosa (e.g., low-weight adolescent girls) and evaluate prevention programs that promote the attainment of a healthy weight. The fact that low-weight girls do not endorse body image concerns implies that it may be necessary to focus on qualitatively different risk groups if we hope to prevent anorexia nervosa.

*Learning Objectives:*

- ▶ Following the presentation, participants will know risk factors that have been found to predict future onset of each eating disorder and those that have been found to predict onset of all eating disorders.
- ▶ Following the presentation, participants will know about high-risk designs that allow detection of risk factors for rare psychiatric problems like anorexia nervosa.
- ▶ Following the presentation, participants will also understand various approaches to developing and evaluating interventions that may be more effective in preventing anorexia nervosa.

### **P6.6.2** **Elucidating the Lasting Influence of Early Pubertal Timing on Eating Pathology: Evidence for Specific Effects on Binge Eating Symptoms**

**Megan Shope, BS  
Kristen Culbert, PhD**

University of Nevada, Las Vegas, NV, USA

Early pubertal timing is associated with increased risk for eating pathology in females. Physical changes of puberty (e.g., increases in adiposity) and related increases in psychosocial effects (e.g., pressures for thinness) have typically been presumed to account

for early pubertal timing effects on eating pathology in girls; however, biological influences could also be at play. Animal data indicate that gonadal hormones rise and exert organizational (i.e., long-lasting/permanent) effects on neural systems during puberty, which drive individual differences in behavior during adolescence and adulthood. Moreover, the brain is more sensitive to organizational effects of gonadal hormones at a younger age (earlier pubertal maturation). If pubertal gonadal hormones organize neural circuitry to alter risk for eating pathology, then early pubertal timing effects on eating pathology would be expected to persist into adulthood and to be present even after controlling for body mass index (BMI) and psychosocial factors. This study investigated this hypothesis in 209 female college students. Age at onset of menses was the indicator of pubertal timing. Well-validated measures were used to assess eating pathology and psychosocial factors: pressures for thinness, thin-ideal internalization, and history of weight-based teasing. Early pubertal timing predicted higher binge eating scores and related symptoms (e.g., loss of control over eating, food cravings), even after controlling for BMI and all psychosocial variables. Pubertal timing was also inversely associated with body dissatisfaction, but this effect was diminished once BMI and psychosocial variables were accounted for. Other forms of eating pathology (e.g., dietary restraint, excessive exercise) did not vary with pubertal timing. Thus, the long-term link between early pubertal timing and eating pathology is primarily relevant to binge eating symptoms, which may arise from biological rather than psychosocial mechanisms.

*Learning Objectives:*

- ▶ Describe the impact of individual differences in pubertal timing on risk for disordered eating.
- ▶ Understand proposed mechanisms underlying the relation between pubertal timing and disordered eating outcomes.
- ▶ Determine whether pubertal timing is associated with disordered eating in adulthood and which symptoms this long-term effect may be specific to.

**P6.6.3**  
**Do Anxiety Disorders Predict Fasting in Adolescence? A Cross-sectional and Prospective Investigation within a Large Population-based Cohort**

**Caitlin Lloyd, Psychology Bsc (hons), Mrs<sup>1</sup>**  
**Anne Haase, PhD<sup>1</sup>**  
**Stephanie Zerwas, PhD<sup>2</sup>**  
**Nadia Micali, MD PhD FAED<sup>3</sup>**

<sup>1</sup>University of Bristol, Bristol, UK

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<sup>3</sup>UCL Institute of Child Health, New York, NY, USA

The objective of the study was to determine whether anxiety disorders are cross-sectionally and prospectively associated with fasting behaviour in adolescence. Participants were 3,317 female children of the Avon Longitudinal Study of Parents and Children (ALSPAC). Generalised estimating equation (GEE) models assessed whether meeting diagnostic criteria for a DSM-5 anxiety disorder at age 13/14 (time 1), age 15/16 (time 2) and age 17/18 (time 3) was associated with fasting at the concurrent time-point, and prospectively. Models were adjusted for demographic variables, as well as for binge eating and purging. Longitudinal analyses were also adjusted for baseline fasting (at time-point 1). Anxiety was associated with fasting in cross-sectional models (adjOR = 1.58; 95% CIs [1.12 - 2.23];  $p < .05$ ), but not in longitudinal models. Post-hoc logistic regression analyses stratified by time-point confirmed cross-sectional associations at times 2 (adjOR = 3.00; 95% CIs [1.62 - 5.60];  $p < .01$ ) and 3 (adjOR = 2.72; 95% CIs [1.68 - 4.41];  $p < .001$ ). Logistic regression models stratified by time-point also assessed whether associations between anxiety and future fasting differed by time-point. A longitudinal influence of anxiety at time 2 on fasting at time 3 (adjOR = 6.50; 95% CIs [2.87 - 14.49];  $p < .001$ ) was observed. Our findings suggest that anxiety during mid-late adolescence predicts engagement in concurrent and future unhealthy restrictive eating. This has implications for a number of aetiological models of anorexia nervosa (AN) that hold anxiety central to the onset and continuation of the disorder.

*Learning Objectives:*

- ▶ Consider the role of anxiety in restrictive eating and development of anorexia nervosa, having been presented with evidence that addresses relevant research questions.
- ▶ Describe aetiological models that propose anxiety as a determinant of anorexia nervosa.
- ▶ Understand the mechanisms suggested to underlie the anxiety-anorexia nervosa relationship.

**P6.6.4**  
**Are Childhood Physical and Sexual Abuse Associated with Purging Disorder in Young Adult Women?**

**Molly Brown, BA**  
**Vera Men, BA**  
**Andrew Heath, DPhil**  
**Pamela Madden, PhD**  
**Kathleen Bucholz, PhD**  
**Alexis Duncan, PhD**

Washington University in St. Louis, St. Louis, MO, USA

Previous studies have established that child abuse – particularly childhood sexual abuse – is a risk factor for both bulimia nervosa and binge eating disorder, but it

is unknown whether child abuse is also associated with purging disorder. To examine the possible link between child abuse and purging disorder, we analyzed baseline and follow-up data from 3,787 young adult participants in the Missouri Female Twin Study. Logistic regression was used to estimate the odds of lifetime purging disorder as a function of self-reported childhood sexual and physical abuse, before and after adjusting for covariates. Purging disorder criteria were met by 3.5% women in the sample; 12.5% of women reported childhood sexual abuse and 20.3% reported childhood physical abuse. In the unadjusted model, childhood sexual abuse was associated with significantly greater odds of purging disorder (odds ratio [OR] = 2.51; 95% confidence interval [CI]: 1.67, 3.77). After adjusting for childhood physical abuse, demographic variables, and depression, the OR for childhood sexual abuse was somewhat diminished but remained statistically significant (OR=2.04; 95% CI: 1.33, 3.17). CPA was not significantly associated with PD in either model. Our results suggest that childhood sexual abuse may increase risk for both binge eating and purging behaviors.

#### *Learning Objectives:*

- ▶ Summarize existing evidence regarding associations of child abuse with eating disorders.
- ▶ Describe the association between childhood sexual abuse and purging disorder in a general population sample of young adult women.
- ▶ Describe the association between childhood physical abuse and purging disorder in a general population sample of young adult women.

### P6.6.5 Delay Discounting in Patients with Anorexia Nervosa: Examining Caloric Restriction as a Reward

**Colleen C. Schreyer, PhD<sup>1</sup>**  
**Meredith S. Berry, PhD<sup>1</sup>**  
**Jennifer L. Hansen, MHS<sup>1</sup>**  
**Graham W. Redgrave, MD<sup>1</sup>**  
**Matthew W. Johnson, PhD<sup>1</sup>**  
**Joanna E. Steinglass, MD<sup>2</sup>**  
**Angela S. Guarda, MD<sup>1</sup>**

<sup>1</sup>Johns Hopkins University School of Medicine, Baltimore, MD, USA

<sup>2</sup>New York State Psychiatric Institute, New York, NY, USA

Delay discounting (DD) studies show that patients with anorexia nervosa (AN) exhibit a preference for larger delayed monetary rewards as opposed to smaller sooner monetary rewards (Decker et al. 2014), suggesting a tendency to work towards a distant goal. In AN, this manifests as the ability to avoid the immediate reward of eating in pursuit of the long-term reward of thinness. The driven phenomenology of AN and its similarity to

addiction, however, suggest that eating restraint in AN is a highly salient reward that overrides the homeostatic hunger drive (Guarda et al. 2015). This study examined DD rates for caloric restriction, or preference for a smaller caloric restriction reward available sooner (SS) vs. a larger caloric restriction reward delivered at a delay (LL), in patients with AN. Participants (n = 20) were inpatients recruited from a behavioral specialty eating disorder treatment program and tested after reaching a target caloric intake of 3500 kcal/day. Mean age and BMI of the sample were 35.4 years and 17.0 kg/m<sup>2</sup>, respectively. Participants completed a novel measure of DD using caloric restriction as a reward, an individualized monetary DD task, the Food Choice Task (FCT; Steinglass et al. 2015), and the EDI-2. The caloric restriction DD task entails making a hypothetical series of choices between restricting a smaller amount of calories now vs. a larger amount of calories at a delay (1, 3, 7, and 10 days). For example, participants were offered the choice of skipping 500 calories today or 1000 calories tomorrow. Responses to the following statement: "Receiving \$\_\_\_\_\_ right now would be just as attractive as skipping 1000 calories" were used as the maximum monetary reward value in the individualized monetary DD task. Area under the curve was calculated for each participant. Participants showed greater preference for SS rewards in the caloric restriction task than in the monetary task (p < .05). Preference for LL caloric restriction reward was positively correlated with drive for thinness, body dissatisfaction, and a tendency to reject high-fat food choices on the FCT (ps < .05). Findings suggest that preference for LL caloric restriction rewards is associated with behavioral and psychological markers of AN and caloric restriction rewards lose value more rapidly than monetary rewards.

#### *Learning Objectives:*

- ▶ Describe the potential role of caloric restriction as a reward in the maintenance of disordered eating behavior.
- ▶ Describe a novel task for assessing preferences for immediate vs. delayed caloric restriction rewards in patients diagnosed with anorexia nervosa.
- ▶ Identify the relationship between delay discounting rates with monetary vs. caloric restriction rewards in patients with anorexia nervosa.

### P6.6.6 Characterizing the Presentation of Eating Disorders across Social Media Platforms - Lexical Variations and Behavioral Archetypes

**Jessica Pater, PhD Candidate**  
**Elizabeth Mynatt, PhD**

Georgia Institute of Technology, Atlanta, GA, USA

Within the computing community, little has been done to systematically analyze online eating disordered user

generated content. In this paper, we present the results of a cross-platform content analysis of posts associated with eating disordered behaviors. To understand how eating disordered content is communicated through these platforms, we conducted an interactive search for eating disordered content within Twitter, Tumblr, and Instagram. Using an initial set of terms outlined by Flemming-May, we conducted a search for content over one week. We used those posts to collect alternative terminology used within these communities. Using the updated set of search terms, we re-sampled these communities for a period of 10 days. Taking a 10% random set of our collected posts, we analyzed 575 posts. In total we found 1182 unique hashtags attached to the posts collected. In the presentation, we provide an analysis of these terms and a discussion of the lexical variations found within the dataset. We will also discuss the gendered differences found within the dataset and what that means for a holistic understanding of eating disordered behavior online. In addition to the lexical analysis of the posts, we also conducted an iterative, inductive content analysis of the entire post. The posts within the dataset represent six media archetypes. Through this characterization of these activities, we draw attention to the increasingly important role that these platforms play and how they are used and misappropriated for negative health purposes. Additionally, we will discuss the computing community's response to these types of online activities and how these responses are changing the way online content is communicated within the online communities. We also outline specific challenges associated with researching these types of networks online. **CAUTION:** This paper includes media that could potentially be a trigger to those sensitive to this type of content. Please use caution when reading, printing, or disseminating this paper.

*Learning Objectives:*

- ▶ Analyze the way eating disordered terminology is changing online.
- ▶ Assess the differences in gender presentation in online terminology and content.
- ▶ Discuss the media archetypes found within the data and how those match offline representations of eating disordered behaviors.

**SATURDAY, APRIL 21**

**11:15 AM - 12:45 PM**

**EDUCATIONAL SESSION VI**

**SIG Panels**

**SP6.1**

**Exercise and Neuropsychological Function in Eating Disorders**

**Presented by:**

Sports and Exercise, Neuropsychology

**Laura Moretti, MS, RD, CSSD, LDN<sup>1</sup>**

**Amy Harrison, PhD<sup>2</sup>**

**Lisa Smith-Kilpela, BA, MA, PhD<sup>3</sup>**

**Carrie J McAdams, MD, PhD<sup>4</sup>**

**Sharon Chirban, PhD<sup>1</sup>**

**Kathryn Ackerman, MD, MPH, FACSM<sup>1</sup>**

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<sup>3</sup> Department of Psychiatry UT Health San Antonio, San Antonio, TX, USA

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The central aim of this collaborative SIG panel is to address gaps in the literature regarding the neurocognitive, emotional, and behavioral consequences of exercise and over-exercise in the context of eating disorder (ED) pathology, treatment, and recovery. The scientific basis for changes in brain physiology and cognitive function during exercise will be presented through a series of case presentations. We focus on talking to patients in ways that reflect their real-world experiences while simultaneously providing data about known changes in neurocognitive function and behavior after exercise. Specifically, alterations in cognitive and emotional function in response to moderate and exhaustive levels of exercise will be presented. Real-world examples of techniques to manage and maintain appropriate exercise levels for patients in recovery from eating disorders, including both non-athletes and athletes, will be discussed. Differences associated with recovery in the context of the cognitive demands of different forms of athletic activity will be discussed, with an emphasis on differentiating between repetitive, low-cognitively demanding exercise and athletic behaviors that require substantial attention, cognition, and learning. This session will include a moderated panel designed to facilitate dialogue between panel attendees and the expert panelists regarding the role of exercise and neurocognitive correlates in ED pathology, treatment and recovery. For instance, we will address questions such as: What do we really know about healthy levels of exercise? What defines exercise excessive and exercise addiction? What

are the emotional and cognitive effects of exercise and over-exercise? How does one engage a patient to limit their exercise, and what are the neurocognitive effects of exercise reduction? Expertise from different disciplines as well as the perspective of a recovered patient-athlete, are included on the panel. Panelists will address a series of case presentations, which will be followed by discussion points facilitated by the moderator and fielding of audience questions, group and audience discussion.

*Learning Objectives:*

- ▮ Neurocognitive changes following moderate and excessive exercise in healthy people will be reviewed.

- ▮ Techniques to recognize excessive and eating-disordered levels of exercise in athletes, and treatment strategies specific to the athlete population from each discipline will be discussed.
- ▮ Facilitate discussion to address issues related to incorporating exercise into ED treatment from each end of the spectrum in athletes and non-athletes. RED-S and Triad return to play guidelines to evaluate a patient's readiness to engage in activity will be reviewed and discussed.



# POSTER SESSION II

**SATURDAY, APRIL 21**

12:45 PM - 2:15 PM

*Grand Ballroom, Seventh Floor*

## **S-001**

### **The Effect of Gender on the Interaction of Internalization of Sociocultural Attitudes and Disordered Eating**

**Valerie Douglas, MA<sup>1</sup>**  
**Kathryn Gordon, PhD<sup>1</sup>**  
**Allison Minnich, PhD<sup>2</sup>**  
**Mun Yee Kwan, PhD<sup>3</sup>**

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<sup>2</sup>Chicago Cognitive Behavioral Treatment Center, LLC, Chicago, IL, USA

<sup>3</sup>West Texas A&M University, Canyon, TX, USA

The current study investigated the effect of internalization of appearance ideals in men and women on disordered eating and drive for muscularity. 1929 participants (55.8% women) from a Midwestern university completed the Sociocultural Attitudes Towards Appearance Questionnaire-3 (SATAQ; Thompson et al., 2004), the Eating Disorder Examination Questionnaire (Fairburn & Beglin, 1994), and Drive for Muscularity Scale (McCreary, 2007). A series of five hierarchical multiple linear regressions were conducted to investigate the interaction of gender and SATAQ score on drive for muscularity, dietary restraint, eating concern, shape concern, and weight concern. All interactions were significant so simple slope analyses were conducted. It was hypothesized that internalization of sociocultural appearance ideals would be related to increased drive for muscularity in both men and women, but moderated by gender so that men would have higher drive for muscularity than women. This hypothesis was supported as men scored higher overall and in both men and women higher SATAQ scores predicted higher drive for muscularity. It was hypothesized that internalization of sociocultural appearance ideals would be related to increased dietary restraint and concerns about eating, body shape, and body weight in men and women, but moderated by gender so that women would have more disordered eating than men. This hypothesis was supported as for dietary restraint, eating concern, shape concern, and weight concern, women scored higher than men overall and in both men and women higher SATAQ scores predicted higher scores in each disordered eating variable. These findings are important as men are not traditionally investigated for their internalization of sociocultural appearance ideals and women are not traditionally investigated for their drive for muscularity.

*Learning Objectives:*

- Following the training, participants will be able to compare and contrast how internalized sociocultural attitudes affect disordered eating depending on gender.
- Following the training, participants will be able to consider how gender influences which disordered eating symptoms are most salient when considering internalization of sociocultural attitudes.
- Following the training, participants will be able to revise their opinions on how drive for muscularity affects women based on internalization of sociocultural attitudes.

## **S-002**

### **Gender Differences in the Association between Sensation Seeking and Alcohol-Related Compensatory Behaviors**

**Sarah Horvath, BS<sup>1</sup>**  
**Ryan Shorey, PhD Clinical Psychology<sup>1</sup>**  
**Sarah Racine, PhD Clinical Psychology<sup>2</sup>**

<sup>1</sup>Ohio University, Athens, OH, USA

<sup>2</sup>McGill University, Montreal, Canada

Alcohol-related compensatory behaviors (ARCB), or actions to counteract calories consumed from alcohol, such as food restriction, vomiting, and excessive exercise, are common among undergraduate students. Despite negative health consequences of ARCB, research on psychological correlates of, and gender differences in, these behaviors is limited. Sensation seeking is one psychological mechanism related to both compensatory eating behaviors and alcohol use. Given known gender differences in both disordered eating and sensation seeking, we hypothesized that: women would endorse greater ARCB than men; men would report greater sensation seeking than women; significant relationships would exist between sensation seeking and ARCB; and the relationship between sensation seeking and ARCB would be stronger in men than women. Participants were undergraduate students (205 men; 222 women) who completed the Compensatory Eating and Behaviors in Response to Alcohol Consumption Scale and the UPPS-P Impulsive Behavior Scale. Men endorsed significantly higher sensation seeking than women, but no gender differences were found for ARCB. Sensation seeking was positively related to overall ARCB and before drinking and diet/exercise subscales. Gender moderated the relationship between sensation seeking and ARCB alcohol effects and bulimia subscales. There was a significant positive relationship between sensation seeking and alcohol effects for women, but no significant relationship

for men. A significant negative relationship between sensation seeking and bulimia was found for men, but no significant relationship was found for women. Thus, as sensation seeking increases in women, they are more likely to engage in compensatory behaviors to enhance alcohol's effects, but as this trait increases in men, they become less likely to use bulimic behaviors to compensate for calories consumed from alcohol. Results suggest sensation seeking operates differently in men and women to influence ARCB.

*Learning Objectives:*

- ▶ Analyze gender differences regarding alcohol-related compensatory behaviors.
- ▶ Recognize the comorbidity of disordered eating and alcohol use.
- ▶ Discuss the relationship between sensation seeking and alcohol-related compensatory behaviors in men and women.

**S-003**  
**Perceptions of General and Post-Election Discrimination are associated with Loss of Control Eating among Racially/Ethnically Diverse Young Men**

Nichole R. Kelly, PhD  
 Tasia Smith, PhD  
 Gordon Hall, PhD  
 Claire Guidinger, MA  
 Gina Williamson, BA  
 Elizabeth Budd, PhD  
 Nicole Giuliani, PhD

University of Oregon, Eugene, OR, USA

The purpose of the current study was to examine the association between young men's perceived experiences with discrimination and their loss of control (LOC) eating frequency. Ethnic identity was evaluated as a potential moderator. The sample included 798 men (18-30y;  $M=24.0\pm 3.6$ ) who identified as African American ( $n=261$ ), Asian/Asian American ( $n=266$ ), or Hispanic/Latino ( $n=271$ ). Participants completed an online survey of items assessing demographic characteristics (including height and weight, used to calculate body mass index [BMI]); perceived discrimination (African American men completed the Everyday Discrimination Scale; Asian/Asian American men the Asian American Racism-Related Stress Inventory; and Hispanic/Latino men the Hispanic Stress Inventory-2); perceived experiences with race-related discrimination following the 2016 presidential election; ethnic identity (Multigroup Ethnic Identity Measure-Revised); and LOC eating frequency (Eating Disorder Examination Questionnaire). Negative binomial regression models adjusting for

income, education, US generation status and body mass index were conducted for each ethnic group separately. Perceived discrimination was positively associated with LOC eating frequency in African American and Hispanic/Latino men ( $ps<.01$ ). Ethnic identity was inversely associated with LOC eating frequency in Hispanic/Latino men ( $p<.001$ ). In Asian/Asian American men, perceived discrimination was only associated with more LOC eating among those with a low ethnic identity ( $p<.001$ ). Higher levels of perceived discrimination following the presidential election were uniquely associated with more frequent LOC eating ( $p<.01$ ) only among Asian/Asian American men who were not born in the U.S. or whose parents were not born in the U.S. LOC eating may partially explain known associations between discrimination and heightened risk for obesity and chronic diseases among African American and Hispanic/Latino men. Asian/Asian American men's LOC eating may be linked to post-presidential election and general experiences with racial discrimination, particularly if they report a low sense of belonging to their ethnic group.

*Learning Objectives:*

- ▶ Describe the association between perceived discrimination and loss of control (LOC) eating among racially/ethnically diverse young men.
- ▶ Describe the role of ethnic identity in buffering the link between perceived discrimination and LOC eating among a subgroup of men.
- ▶ Consider the role of LOC eating in exacerbating the effects of perceived discrimination on mental and physical well-being.

**S-004**  
**“What's Eating Katie?” The Musical: Utilizing Theater as a Means of Eating Disorder Education and Awareness**

Katherine Leddy, Public Health BS

University of Massachusetts Amherst, Amherst, MA, USA

Eating disorders are currently affecting millions in the United States alone and continue to be an epidemic on college campuses. They are often stigmatized and misunderstood in our current society, leading many people to believe that they are a choice rather than a disease, they only affect women, and they are a white person's problem. The musical “What's Eating Katie?” written by psychologist Dina Zeckhausen, in which a young woman named Katie meets the character ED, challenges these notions. This study focuses on the effectiveness as well as the obstacles of eating disorder education through theater performance during and after the production of the musical at the University of Massachusetts Amherst. Theater presents an opportunity to represent

marginalized communities in the eating disorder field. It allows members of the LGBTQIA, Hispanic, Black, Asian and other communities to step on stage and be a part of the conversation around eating disorders through their own pursuit of theater and activism. It creates a collaborative environment in which the cast, directors and producers can shape their experiences on stage and create characters that reflect our current society. That way, the audience is seeing the problem through the lens of their own peers. The audience and cast were given surveys after the production to further collect data on their thoughts and feelings surrounding this method of eating disorder education. The study found that 110 out of 130 audience participants in the survey learned something new during the show. 45% of audience members strongly agreed that the show's plot was relatable and/or familiar. The cast members expressed enthusiasm over the play being both a useful tool and an entertaining project to embark on. The show was a unique form of activism that created an intimate space to laugh, cry and talk together as spectators of both the performance and the world around us. It brought in individuals who may not otherwise have been exposed to such information about eating disorders but were interested in acting or musicals. It proved effective in teaching the cast something new about the issue and evoking change in some audience member's self-perceptions. Overall, this suggests that theater should be further pursued as a tool for eating disorder activism, healing and education.

*Learning Objectives:*

- ▶ Discuss the strengths and challenges of using theater for mental health advocacy unique to college campuses.
- ▶ Address limitations of using visual representations on stage for complex mental illness.
- ▶ Explain the role of post-performance discussions and cast relationships for maximizing positive effect.

**S-005**  
**Eating Disorder Screening in African American College Students: The Need for Improving Eating Disorder Detection**

Grace Monterubio, BS<sup>1</sup>  
 Ellen E. Fitzsimmons-Craft, PhD<sup>2</sup>  
 Katherine N. Balantekin, PhD, RD<sup>3</sup>  
 Marie-Laure Firebaugh, MSW<sup>2</sup>  
 Neha J. Goel, BA<sup>4</sup>  
 Rachael E. Flatt, BS<sup>5</sup>  
 Shiri Sadeh-Sharvit, PhD<sup>6</sup>  
 Mickey Trockel, MD, PhD<sup>6</sup>  
 C. Barr Taylor, MD, PhD<sup>5</sup>  
 Denise E. Wilfley, PhD<sup>2</sup>

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<sup>6</sup>Stanford University, Stanford, CA, USA

Eating disorders (EDs) impact individuals of all demographic backgrounds; however, discrepancies remain in identifying EDs in minority groups, particularly in African American (AA) individuals. The purpose of this study was to analyze ED screening results of AA students in the Healthy Body Image (HBI) Program and to determine if the proportion of AA students within each ED risk/clinical status group significantly differed. HBI used online screening to identify students at risk for or with an ED at 28 U.S. colleges and then matched them with tailored online interventions based on their ED risk/clinical ED status. Though the average enrollment of AA students at the campuses HBI recruited from was 11.7% (range 0.8-85.5%), only 6.6% of the entire sample (N=4,984 students) identified as AA, suggesting underrepresentation of this population. Overall, 7.1% of AA students met the criteria for the low-risk group, 7.6% for the high-risk group, 5.2% for subclinical/clinical EDs (other than anorexia nervosa [AN]), and 0% for AN. A chi-square analysis revealed that the proportion of AA students significantly differed across ED risk/clinical ED status groups ( $p < .001$ ). Follow-up pairwise comparisons revealed the percent of AA students who screened for subclinical/clinical EDs was significantly lower ( $p = .027$ ) than AA students who screened for the low-risk group. The proportion of AAs who screened positive for AN was significantly lower than the proportions within all other risk status groups ( $ps < .002$ ). However, there were no significant differences between the percentage of AAs who screened as high-risk compared to the subclinical/clinical ED or low risk groups ( $ps > .05$ ). The underrepresentation of AA students not only taking the HBI screen but also screening positive for EDs may signify lower rates of AA ED rates or could even suggest a current barrier to ED detection in this population. Future work should ensure that recruitment methods and assessments are culturally relevant for AA students in an effort to increase identification of EDs among this group.

*Learning Objectives:*

- ▶ Investigate eating disorder risk level among African American college students.
- ▶ Identify possible trends in the under-detection of EDs in African American college students.
- ▶ Highlight need to improve screening by incorporating cultural sensitivity in an effort to better detect eating disorders in African Americans.

**S-006****Gender Differences in the Awareness of Anorexia Nervosa and Weight Loss Behaviors among College Students**

Savannah Roberts, BS Psychology BA Spanish  
 Anna Ciao, PhD Clinical Psychology  
 Alexander Czopp, PhD Social Psychology

Western Washington University, Bellingham, WA, USA

The purpose of this study was to assess gender differences in college students' ability to recognize anorexia nervosa (AN) in their peers. Since AN is perceived to affect primarily women, judgments about the disorder may be heavily influenced by gender. College students ( $N = 438$ ; 75% female,  $M_{age} = 21$  years, 74% Caucasian) read an online vignette of a male or female target engaging in behaviors meeting DSM-5 criteria for AN. Afterwards, participants evaluated whether the target had AN and then determined the severity of specific weight loss symptoms that would warrant concern about AN. Across all conditions, participants reported that the target would need to lose an average of 5.01 pounds per week ( $SD = 6.55$ ), reduce their calorie intake by 57.61% per day ( $SD = 19\%$ ) and exercise 3.58 hours per day ( $SD = 3.69$ ) before believing the individual had AN. There was a significant effect of participant gender on belief in AN ( $p = .001$ ), such that female participants were more likely to correctly believe the target had AN relative to male participants. There was also a significant effect of vignette gender ( $p = .001$ ), where participants were more likely to believe the male target had AN relative to the female target. These results support previous research showing gender differences in the evaluation of AN. In this study, women with symptoms of AN were less likely to be identified as disordered by their peers, perhaps due to the normalization of extreme weight loss behaviors in female college students. This study also highlights how college students may face difficulties identifying unhealthy weight loss practices among their peers. Severe levels of weight loss behaviors were required to elicit concern for AN, and male students were less likely to correctly identify an AN diagnosis.

*Learning Objectives:*

- 1 Understand the effect of gender stereotypes on the identification of anorexia nervosa in college students.
- 2 Identify gender differences in the awareness of anorexia nervosa.
- 3 Classify unhealthy weight loss behaviors amongst college students.

**S-007****Social Comparison in Eating Disorder Recovery: Using PhotoVoice to Capture the Sociocultural Influences on Women's Recovery**

Jessica Saunders, MS1, Asia Eaton, PhD

Florida International University, Miami, FL, USA

Upward and downward body, food, and exercise-related social comparisons have been implicated in ED etiology and maintenance. However, there is little research exploring the role social comparisons play during ED recovery and remission. The current study sought to qualitatively examine this social-cognitive process among adult women in recovery from eating disorders using the PhotoVoice method, a participatory-action research method centered on participants' subjective experiences. Participants were instructed to take photos of the daily sociocultural influences on their recovery process and then discuss these photos during a semi-structured interview. Drawing from the SHOWeD technique, an established PhotoVoice interview framework, participants (S) described what was seen in the image, (H) talked about what was happening, (O) discussed how the image related to our lives and (W) why things are this way, and (D) offered ideas for what can be done about it. Participants ( $N = 16$ ) were women between the ages of 19-35 ( $M_{age} = 25.94$ ,  $SD = 4.19$ ), previously diagnosed with a clinical ED and in self-defined recovery ( $M_{months\ in\ recovery} = 23.7$ ,  $SD = 20.01$ ). Rather than following the typical patterning of upward and downward social comparisons, and their theorized motives and effects, thematic analysis yielded two distinct types of comparisons that occur during eating disorder recovery, recovery hindering comparisons and recovery promoting comparisons. These comparisons occurred along both body, food, and exercise-related domains, as well as domains central to ED recovery quality of life (relationships, achievements, and goals). Comparison to one's past self, used in a recovery promoting way, and comparison to sociocultural thin ideals, used in a recovery hindering way, were the two most frequent types of social comparison. These findings have important therapeutic implications, and will be used to develop a quantitative measure of social comparison in ED recovery.

*Learning Objectives:*

- 1 Identify the types of social comparisons women make during eating disorder recovery.
- 2 Understand how the Photovoice method was invoked to capture social comparisons engaged in during recovery.
- 3 Assess the implication of social comparisons in the recovery process, and ideas for targeting these comparisons in a therapeutic environment.

**S-008****It's Not Just Thin That's In: Perspective on Appearance Ideals In Racially and Ethnically Diverse Women**

Courtney Simpson, MS  
 Rachel Boutté, MS  
 C. Blair Burnette, MS  
 Melissa Kwitowski, MS  
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Eating disorder prevention efforts often target the Western thin ideal. Yet, women from racially and ethnically diverse backgrounds report less pursuit of this ideal. This study gathered qualitative information regarding the influence of race, ethnicity, and culture on appearance standards and eating and weight related behaviors. White (n=10), Black (n=14), and Latina (n=6) women participated in focus groups. White women reported idealizing thin bodies and experiencing pressure to achieve the thin ideal. In contrast, most Black and Latina women denied feeling pressure to achieve the thin ideal. Women in both of these groups noted differences in body types among racial and ethnic groups, and denied frequently comparing themselves to the bodies of racially and ethnically disparate women. Additionally, both Black and Latina women reported that being too thin is viewed negatively within their racial/ethnic group, and perceived that the pursuit of thinness is specific to White women. Nonetheless, Black and Latina participants reported fear of fat within their cultural groups and commented that women with larger bodies are also viewed negatively. Regarding beauty ideals, Black women noted idealizing a curvier body type, and expressed a desire to be "in the middle" regarding body shape; they also reported a desiring a flat stomach relative to curvaceous hips and bottoms. Latina women also reported idealizing a curvier body type, yet stated that looking "put together" was more important than body shape/size. Latina women also described a cultural emphasis on health (vs. appearance). Both Black and Latina women denied knowledge of culturally appropriate resources for individuals with eating concerns and offered strategies to increase the acceptability of current eating disorder prevention approaches for women in their racial/ethnic group. Results demonstrate the need for more culturally sensitive approaches to eating disorder prevention that target diverse beauty norms considering multiple aspects of appearance.

*Learning Objectives:*

- ▶ Outline the limitations of eating disorder prevention efforts targeting the thin ideal.
- ▶ Describe observed similarities and differences in appearance ideals among White, Black, and Latina women.
- ▶ Understand the need for considering diverse beauty ideals in approaches to eating disorder prevention.

**S-009****Food Addiction among Spanish-Speaking Latinos/as Residing in the United States**

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The purpose of this study was to examine the rate and associated clinical features of food addiction (FA), assessed by the Yale Food Addiction Scale (YFAS), among Spanish-speaking Latino/as. Participants were 134 Spanish-speaking Latino/as (n=77; 55% female) residing in the United States, recruited through MTurk. Mean age and body mass index (BMI) were 31.87 (SD=9.12) years and 28.34 (SD=7.14) kg/m<sup>2</sup>, respectively. In addition to the YFAS, participants completed a battery of self-report measures including the Eating Disorder Examination-Questionnaire (EDE-Q) to assess eating-disorder psychopathology, the Patient Health Questionnaire (PHQ-2) to assess depressive symptoms, and the Short Form Health Survey (SF-12) to assess mental and physical functioning. Participants also self-reported their current weight and height, which was used to calculate body mass index (BMI). The rate of FA, based on the YFAS diagnostic threshold, was met by 17.9% (n=25) of the sample. Participants with and without FA did not differ significantly in age, sex, or race. YFAS scores were significantly correlated with EDE-Q subscale factors (overvaluation and dissatisfaction, but not restraint), SF-12, the PHQ-2, and with BMI (all p-values < .01). Consistent with the dimensional findings, participants categorized with FA were significantly more likely to meet clinical levels of overvaluation of weight/shape, reported significantly greater frequency of binge-eating episodes, greater depressive symptoms, and poorer SF-12 mental health scores than those not meeting FA criteria (all p-values < .05). Our findings for this Spanish-speaking community sample are consistent with findings from a meta-analysis of English-speaking individuals, although the observed rate of FA was much higher than reported for a sample of Spanish-speaking individuals in Spain. Future studies should examine whether level of acculturation may contribute to differences in FA symptoms and associated psychopathology.

*Learning Objectives:*

- ▶ To examine the rate of food addiction in Spanish-Speaking Latino/as in the United States.
- ▶ To examine the associations between food addiction, weight, and psychosocial functioning among Spanish-Speaking Latino/as in the United States.
- ▶ To examine weight and psychosocial differences between those with and without a food addiction diagnosis in Spanish-Speaking Latino/as in the United States.

**S-010****Thinness, Amenorrhea and Medical Complications of Japanese Women.**

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Introduction: Thinness can cause anorexia nervosa, menstrual disorder, osteoporosis and other medical complications. While the prevalence of thinness is increasing among Japanese women, there were few study which investigated relationship among thinness, gynecological problem and medical complications in this population. Methods: We retrospectively examined cross-sectional data from 9,216 women aged 18 to 40 years old, who visited St. Luke's International Hospital Center of Preventive Medicine in Tokyo between 2012 and 2016 for medical checkup. Gynecological and medical status were assessed by doctors, self-reported questionnaires, electrocardiogram and laboratory tests. Ethical approval was obtained from the Research Ethics Committee of St. Luke's International Hospital. Results: Mean age and Body mass index(BMI) were 34.3(4.0) years old and 20.36(2.76 kg/m<sup>2</sup>), respectively. A total of 2186 (23.7%) were categorized as thinness (BMI<18.5), 554 (6%) as obesity (BMI>25), 6376 (70.3%) as normal. The prevalence of amenorrhea, hypoglycemia, abnormal electrocardiogram and lower bone density were significantly higher in thinness group. Logistic regression analysis showed that thinness was significantly associated with amenorrhea (odds ratio =1.622, 95% CI: 1.208-2.178), but not with thyroid hormones. At 3 years follow-up, 72.3% of thinness group members continued to be thin. Conclusion: About one in four Japanese women was thin, and their thinness tended to keep in a few years. Thinness was related with gynecological and physical problems.

*Learning Objectives:*

- ▶ State a high prevalence of thinness in Japanese women.
- ▶ Describe the gynecological and medical complications of thinness.
- ▶ Describe the course of thinness in this population.

**S-011****Examination of Social Media on Body Dissatisfaction using Ecological Momentary Assessment**

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Over the past decade, social media use has increased tenfold; 65% of adults in America use social media. There is limited research on the impact of social media use and research including body dissatisfaction may be particularly relevant due to the visual nature of social media. Existing research on media use and body dissatisfaction is limited by the flaws associated with the use retroactive self-report, especially when reporting media use. The current study aimed to assess the effects of social media consumption on body dissatisfaction using ecological momentary assessment, a method of assessment over time and in the participants' naturalistic environment. Thirty undergraduate female participants (Mage=18.52 years; SD=.87 years; MBMI=22.37, SD=3.25) were assessed at random timepoints five times per day for five days via text messages. Participants reported the number of social media sites they visited, how long they spent on each, and completed the Body Image States Scale. A mixed linear regression model using participants and time as nested variables was conducted. Results demonstrated that the number of social media sites visited was a significant predictor of body dissatisfaction,  $b=.50$ ,  $t(204.39)=2.40$ ,  $p=.02$ . Time spent using social media was not a significant predictor of body dissatisfaction,  $b=-.0003$ ,  $t(259.60)=-.07$ ,  $p=.95$ . These conflicting results suggests that the relationship between social media use and body dissatisfaction may not be dictated by time spent but by sites visited, suggesting a diminishing returns phenomenon. Future research should also determine whether individuals with body dissatisfaction deliberately seek out social media confirming their disparaging self-views, possibly resulting in a vicious circle. These results have potential implications for media literacy interventions; they support the need for further expansion of and research on media literacy.

*Learning Objectives:*

- ▶ Describe the relationship between social media and body dissatisfaction.
- ▶ Describe the potential uses of ecological momentary assessment.
- ▶ Describe the potential treatment implications of the relationship between social media use and body dissatisfaction.

**S-012****Clinicians' Understanding and Views of Brain Stimulation as a Treatment for Eating Disorders**

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We are witnessing a paradigm shift in the treatment of eating disorders (EDs), from mainly psychological and nutrition focused interventions to more targeted brain-directed treatments. In this context, brain stimulation techniques, such as repetitive transcranial magnetic stimulation (rTMS), transcranial direct current stimulation (tDCS) and deep brain stimulation (DBS), are emerging as promising treatment options. As yet, the views of ED clinicians regarding these interventions have not been reported. Clinicians (n=18) from a Specialist ED Service in the UK, first completed visual analogue scales to assess their thoughts on safety, ethics and promise of rTMS, tDCS and DBS. They were then interviewed to examine their knowledge of and their views on the use of brain stimulation for the treatment of EDs, prior to and after an educational presentation on brain stimulation techniques. The majority of clinicians had heard about rTMS; however, tDCS and DBS were less well known. Knowledge of these techniques was slightly higher among medically trained staff (e.g. psychiatrists, nurses) compared to clinical psychologists and psychological therapists. Both prior to and following the educational presentation, most safety and ethical (particularly capacity to consent) concerns among clinicians arose with regards to DBS, given its invasiveness. Clinicians considered brain stimulation to be a good adjunct to psychological therapy, particularly in those with extremely rigid thinking patterns, and the majority would consider these treatments most appropriate for patients with severe and enduring illness with several unsuccessful previous psychological treatments. Improving clinicians' knowledge and understanding of brain stimulation will be fundamental in bridging the gap between research and clinical work within this area, especially given the predominance of psychological approaches in the understanding and treatment of ED in current clinical practice.

*Learning Objectives:*

- 】 Recognise the importance of involving clinician's in research of brain-directed treatments in eating disorders.
- 】 Describe why it is important to educate clinician's in the use of brain-directed treatments in eating disorders.
- 】 Consider the different brain-directed treatments currently being researched as treatments for eating disorders.

## S-013

### Effects of Tasks on Food Cravings: Facebook vs Tetris

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Previous literature has found that Tetris, a visuospatial task, can significantly reduce food cravings. Facebook usage, which has been found to correlate highly with disordered eating symptoms and body image concerns, has never been studied in relation to food cravings. The current study aimed to compare how tasks that can be performed on a cellphone, playing Tetris and browsing Facebook, would affect craving experiences amongst college undergraduates. The experiment began with a chocolate craving induction protocol for 1 minute and then participants engaged in a 7 minute experimental condition, Facebook, Tetris, or a control condition. Participants who played Tetris or browsed Facebook experienced a significantly greater reduction in cravings compared to those in the control condition. There were no significant differences in craving reduction between participants in the Tetris and Facebook conditions. Moreover, when analyzing the participants who scored high for disordered eating/ binge eating symptoms, the control condition did not significantly affect their cravings. This study offers preliminary support for the use of mobile apps in reducing food cravings. Future research should explore how tasks such as Tetris and Facebook affect people experiencing disordered eating symptoms compared to people who do not experience these symptoms.

*Learning Objectives:*

- 】 Understand the role that food cravings play in eating disorders such as BED and bulimia.
- 】 Describe the ways in which visuospatial tasks are effective in reducing food cravings.
- 】 Evaluate whether mobile applications can be an effective intervention strategy amongst a disordered eating population.

## S-014

### Using Wearable Sensors to Detect and Intervene on Triggers for Disordered Eating Behaviors

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When patients with bulimia nervosa (BN) and binge eating disorder (BED) acquire and utilize the treatment skills targeted in CBT, substantial reductions in symptoms are observed. However, despite efforts in CBT to target skill acquisition and utilization, many patients fail to achieve sufficient rates of skill utilization or adequate skill acquisition by the end of treatment. One possible method for improving skill acquisition and utilization could be the addition of just-in-time adaptive interventions (JITIs), which use smartphone technology to deliver real-time interventions during moments of need. Current JITIs typically determine the delivery of interventions using data captured from ecological momentary assessments (EMA), an active form of self-report data collection that requires high rates of participant compliance. However, studies from our team and others have demonstrated that long-term use of EMA to power JITI systems has limited feasibility and acceptability in clinic settings. For example, in a recent study of a JITI system designed to reduce dietary lapses, average compliance with EMA during week one was 92.14% (SD = 7.13); but dropped to 76.08% (SD = 2.70) by week eight. These results suggest that the future of JITI systems relies on the development and use of passive data collection technologies that can provide on-going objective data to inform the timing and content of intervention delivery. We will review the current technologies available to passively detect when individuals with eating pathology could benefit from a real-time intervention and discuss two ongoing projects from our team that use wearable sensor technology (one using continuous glucose monitoring and the other using the Empatica E4 that detect physiological signals associated with affect) to detect when an individual is at risk for disordered behavior. We will also discuss how wearable devices could be integrated with existing JITI systems to enhance outcomes in CBT.

*Learning Objectives:*

- ▶ Understand the utility of JITIs to extend the reach of treatments for eating disorders.
- ▶ Describe the existing literature on wearable sensor technologies as a method for detecting and predicting eating disorder symptoms.
- ▶ Identify future directions in research for wearable sensors and JITIs in improving treatment outcomes for eating disorders.

**S-015**  
**Therapist Openness to and Acceptability of Online Training in the Treatment of Eating Disorders in College Counseling Centers across the U.S.**

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Empirically-supported treatments (ESTs) for eating disorders (EDs), such as interpersonal psychotherapy (IPT), exist but are not routinely delivered. A major barrier to the uptake of ESTs is lack of access to training. Standard training methods require substantial time and resources, making dissemination challenging. Therapist attitudes toward ESTs (e.g., openness, acceptability) may also affect uptake of ESTs. We developed a novel online IPT training platform and telephone-based simulation assessment of therapist fidelity to enhance disseminability of IPT training; testing is underway to determine whether the online training platform produces comparable IPT treatment fidelity as in-person training with expert follow-up consultation, and whether fidelity ratings of the simulation and of audio-recorded sessions of IPT delivery are strongly correlated. The purpose of the current study is to report on therapist openness to ESTs in general and IPT specifically, and openness to and acceptability of online training, prior to completing the training program. Therapists rated openness and acceptability using 5-point rating scales, with higher scores indicating greater agreement. Forty-six therapists (41 women and five men) ages 26 to 63 (M=40.22, SD=9.78) at 35 college counseling centers across the U.S. have been recruited to date. At baseline, therapists reported being generally open to new ESTs (M=3.85, SD=.63 on the Evidence-Based Practice Attitudes Scale openness subscale), as well as to IPT in particular, both personally (M=4.80, SD=.40) and in terms of their counseling center as a whole (M=4.61, SD=.61). Therapists reported being open to the concept of online training (M=4.57, SD=.50), perceived their respective counseling centers as being open to the concept of online training (M=4.17, SD=.80), and viewed online training as an acceptable way to learn new treatments (M=4.28, SD=.62). Findings from participants in this study suggest therapist and counseling center openness to IPT and ESTs in general, and openness

and acceptability to using technology for training in ESTs for EDs. Results have implications for dissemination and implementation and highlight the potential of online training for increasing access to ESTs for EDs.

*Learning Objectives:*

- ▶ Understand the challenges associated with dissemination and implementation of ESTs for EDs.
- ▶ Discuss how technology (e.g., online training) can potentially overcome barriers to increasing therapist access to training in ESTs for EDs.
- ▶ Describe college counseling center therapists' attitudes toward ESTs in general, IPT specifically, as well as online training as a method to learn a new treatment.

### S-016 Developing a Computerized Adaptive Test for Binge Eating

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The assessment of binge eating using self-report measures is efficient and associated with minimal burden for clinicians and patients. However, existing self-report measures yield high rates of false positive assessments compared to interviewer-administered measures. Computerized adaptive tests (CATs) are self-administered online tools that create personalized assessments at each administration by providing users different scale items—adaptively determined based on previous responses—that are targeted to users' impairment level. Thus, in contrast to traditional self-report measures, which use the same number of items and allow measurement precision to vary across users, CATs hold measurement precision constant and allow the items to vary, both in number and content. The net result is increased measurement precision, decreased respondent burden, fatigue, and response bias, and enhanced test-retest reliability compared to traditional fixed-length mental health instruments. The purpose of this study is to develop a CAT for binge eating using data from a diverse sample of college-age women (N = 549; 41% non-White) who completed the Eating Disorder Examination (EDE) and questionnaires to assess eating disorder and comorbid psychopathology. The CAT will be developed using multidimensional item

response theory. EDE-derived diagnoses and clinically-relevant thresholds [i.e., DSM-5 binge eating disorder (BED), subthreshold BED,  $\geq 1$  binge eating episode in the past three months] will serve as benchmarks by which self-report questions will be empirically selected to comprise the CAT item bank. The CAT will then be tested and validated against the EDE in a new sample, with the ultimate goal of more precisely differentiating individuals with versus without binge eating using self-report. Establishing a CAT for binge eating can improve standard self-report assessment and enhance detection of binge eating, from which we can more effectively direct individuals to appropriate care.

*Learning Objectives:*

- ▶ Describe the benefits of a computerized adaptive test (CAT) over traditional, fixed-length assessments and how CATs can be used to enhance eating disorder screening.
- ▶ Understand the subdomains identified by the bifactor model and the items that are retained in the calibrated item bank.
- ▶ Discuss ways to scale this low-cost screening strategy to diverse care delivery settings.

### S-017 Can we Improve Body Image in Adolescents with Eating Disorders with an Online Training on Basis of Evaluative Conditioning?

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The aim of the present study was to investigate whether a computer training on basis of evaluative conditioning can help to improve body image in adolescents with an eating disorder. Recent research already showed that this training lead to improvements of body satisfaction and general self-esteem in an unselected sample of female students and in women at risk for an eating disorder. The present study is the first testing evaluative conditioning in a clinical sample. Participants (N = 51) were randomly divided over an experimental group and a placebo-control group. In the training, participants had to click on pictures of their own and other people's bodies. Their own pictures were systematically followed by portraits of friendly smiling faces. That way, we wanted to teach participants to associate their body with positive social feedback. The training consisted of 6 sessions of approximately 5 minutes and was presented online. In the placebo-control group participants were shown the same stimuli, but here

the own body was not followed by smiling faces. Before, after, 3 weeks after and 11 weeks after the training self-report measures of body image and general self-esteem were administered. In addition, before and after the training automatic self-associations were measured with an Implicit Association Test (IAT). Outcomes show that - in contrast to our expectations - the training does not have positive effects on body image, general self-esteem and automatic self-associations. During the ICED conference both theoretical and methodological explanations for these findings will be discussed, as well as implications of these results for clinical practice.

*Learning Objectives:*

- ▶ Explain what evaluative conditioning is and how it might be applied in the context of body image.
- ▶ Describe the effectiveness of evaluative conditioning for a clinical sample of eating disorder patients.
- ▶ Discuss the theoretical and clinical implications of study results for the treatment of eating disorders.

### S-018 Neural Response to High Energy Food Images in Eating Disorders

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The purpose of this study was to compare the neural responses to images of high-energy foods in regional brain areas in patients with AN, EDs, and Healthy Controls (HCs). Women (age ≥14 yrs) with active AN or another Under-Weight ED (UWED: n=13, Not-UWED: n=21) and without an ED (n=16) were recruited. Functional Magnetic Resonance Imaging (fMRI) brain scans were acquired for all. Participants viewed food and non-food (neutral) images during scanning. Images were chosen to evoke responses of disgust, happiness, or fear. All participants completed self-report questionnaires including ED symptoms (the Eating Disorder Examination Questionnaire (EDE-Q)) and The Hospital Anxiety and Depression

Rating Scale (HADs). There were significant differences between HCs and ED groups. HCs had less responsivity to high-energy food images in the medial frontal gyrus, occipital lobe, and superior frontal gyrus compared to UWED group. The heightened responsivity in the medial frontal gyrus correlated significantly with anxiety (HADs) and EDE-Q scores (except for weight concern). These were correlated with eating disorder symptoms, BMI, and anxiety but only when observing disgust evoking images. Clinical implications will be discussed.

*Learning Objectives:*

- ▶ Be informed about neural responses to images of food in people with EDs.
- ▶ Be aware of the need to assess levels of negative emotions towards food in people with EDs.
- ▶ Be aware of variability in negative emotions towards food in people with diverse EDs.

### S-019 Differential Activation within Posterior and Anterior Insula During Acquisition and Extinction of Conditioned Disgust in a Low Weight Eating Disorder Sample

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Emerging neuroimaging shows activation within insula-amygdala-ventral striatum (IAVS) neurocircuitry to be linked to aversive and reward learning. This pattern of activation could be characteristic of clinical food avoidance seen in patients with low weight eating disorders (LW-ED). The present study aimed to assess the patterns of activation in adolescents with LW-ED during a food-cued reward and aversive conditioning task compared to healthy controls. The sample currently consists of eight adolescent (mean age = 16.8 years) females with a LW-ED and two age matched healthy controls, but recruitment is ongoing. All participants were scanned on a 3T head-dedicated MRI scanner which collected functional T2\*-weighted images. The task presented during functional magnetic resonance imaging (fMRI) paired colored square cues with images of palatable and rotten food during cue-acquisition; during extinction, the same stimulus cues were paired with scrambled food images. Comparison of the groups of adolescents revealed significantly greater activation in anterior insula cortex for rotten food-cued aversive conditioning and in posterior insula cortex for palatable

food-cued reward conditioning in those with LW-ED compared to healthy controls (both  $p < 0.05$ ,  $k = 25$  voxels). Further, adolescents with LW-ED showed reduced orbitofrontal cortex activation for the extinction of the aversive conditioned food-cue association but increased activation for the extinction of the conditioned association with palatable food compared to healthy foods (both  $p < 0.05$ ,  $k = 25$  voxels). These results point to functional anomalies in insula during the acquisition of conditioned disgust responses that may contribute to food avoidance, as well as to orbitofrontal abnormalities that may interfere with the extinction of these adverse conditioned disgust responses in adolescents with LW-ED. Future research is required in order to expand on the small sample presented here.

*Learning Objectives:*

- ▶ Describe key brain regions associated with disgust conditioning.
- ▶ Understand differences in disgust conditioning within low weight eating disorders.
- ▶ Understand differential patterns of activation seen in disgust conditioning.

### S-020 Differential Brain Activation during Reward Learning within Anorexia Nervosa

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The inability to reverse food-related learning may contribute to characteristic food avoidance behaviors relevant to anorexia nervosa (AN) which has been linked to differential neural activation within the insula and prefrontal cortex. The present study provided a reversal food-cue learning task during functional Magnetic Resonance Imaging (fMRI) in order to examine differences in activation of the neurocircuitry associated with acquisition and extinction of a conditioned response specific to food rewarded cues. The sample consisted of female adolescents (mean age = 17.7) with AN ( $n=15$ ) and age matched healthy controls ( $n=14$ ). All participants were scanned on either a 3T or MR6 head-dedicated MRI scanner through which functional T2\*-weighted images were obtained. Image preprocessing was conducted with the use of SPM12 software which was implemented on a MatLab platform. During acquisition, results show patients with AN showed greater activation within the orbito-prefrontal cortex compared to healthy controls ( $p < 0.01$  and  $k = 25$  voxels). Additionally, greater insula activation in healthy controls was seen during the extinction of the

food cue response compared to patients which was. These results suggest differential neural activation within patients with AN during reward learning specific to food images. The greater prefrontal activation suggests a greater top-down influence on food learning seen in the AN group. Although these results are preliminary, these differences could be an underlying neural factor within the maintenance of food avoidance within AN and should be considered for future research.

*Learning Objectives:*

- ▶ Understand key components of activation during acquisition and extinction within reward learning.
- ▶ Describe differences in activation within patients with AN and healthy controls.
- ▶ Assess the role of key brain regions within reward learning.

### S-021 Reduced Environmental Stimulation in Anorexia Nervosa

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Reduced environmental stimulation (aka floatation therapy) alters the balance of sensory input by systematically attenuating signals from the visual, auditory, thermal, tactile, vestibular, and proprioceptive systems. Previous research from our group has shown that this heightens interoceptive awareness and reduces state anxiety in clinically anxious populations. Anorexia nervosa (AN) is characterized by elevated anxiety, distorted body image, and disrupted interoception, raising the question of whether floatation therapy might positively impact these symptoms. There are presently no studies documenting the safety or tolerability of this procedure, and it is uncertain whether exposure to floating might worsen AN symptoms. We therefore conducted an open-label study to assess the safety and tolerability of floatation in AN, as well as to explore the impact of this procedure on affect, body image, and interoception. Twenty-one weight-restored outpatients with current or prior AN (mean age 27+/9 years, mean BMI 22+/2.7, mean EDE-Q: 2.3+/1.4) completed a study involving four sequential sessions of supine floating: reclining in a zero-gravity chair, floating in an open pool, followed on two occasions by floating in an enclosed pool. Sessions were 90 minutes, one week apart. We measured orthostatic blood pressure after each session (primary outcome measure), as well as

every 10 minutes during each session, using a wireless waterproof system. Participants rated their affective state, body image disturbance, and interoceptive sensations before and after each session (secondary measures). There was no evidence of orthostatic hypotension or adverse events. Furthermore, we observed statistically significant improvements in anxiety ( $p < 0.001$ , Cohen's  $d > 1$ ), negative affect ( $p < 0.01$ , Cohen's  $d > 0.5$ ), heightened interoceptive awareness for cardiorespiratory but not gastrointestinal sensations ( $p < 0.01$ , Cohen's  $d$  0.2-0.5), and reduced body dissatisfaction ( $p < 0.001$ , Cohen's  $d > 0.5$ ) following floating. The findings from this initial study suggest that individuals with AN can safely tolerate the physical effects of floating and experience improvements in symptoms of anxiety and mood, raising the possibility that this intervention might be investigated for clinical benefit in more acutely ill cases.

*Learning Objectives:*

- 】 Describe reduced environmental stimulation (aka floatation therapy).
- 】 Discuss potential relationships between reduced environmental stimulation and the symptoms of anorexia nervosa.
- 】 Identify how reduced environmental stimulation affects orthostatic blood pressure, as well as symptoms of anxiety, mood, and body image in anorexia nervosa.

## S-022

### Evaluating Neuropsychological Thinking Patterns in Patients with an Eating Disorder: Associations with Life Satisfaction, Anxiety and Depressive Symptoms, and Psychological Symptoms of the Eating Disorder

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Patterns in trait-based thinking including cognitive rigidity, difficulty shifting set, and an overly detail focused approach have been proposed as endophenotypes of the illness. However, continued work examining the relationships between these neurocognitive weaknesses among individuals with eating disorders and their experiences of satisfaction with life, anxiety and depressive symptoms, and psychological symptoms of the eating disorder is needed. We examined self-reported neurocognitive thinking patterns in a sample of Canadian adults engaged in a hospital-based outpatient adult eating disorders program and evaluated associations with life satisfaction, anxiety and depressive symptoms, and psychological symptoms of an eating disorder. Participants were 50 adults meeting DSM - 5 criteria for

an eating disorder and who consented to participate. Participants received ongoing medical monitoring and psychiatric follow-up. Demographic and physical symptoms information was collected. Participants completed the Detail and Flexibility Questionnaire (Dflex) Satisfaction with Life Scale, Beck Depression Inventory – 2nd edition, Beck Anxiety Inventory, and the Eating Disorders Examination questionnaire. Results showed difficulty with cognitive flexibility, set-shifting and weak central coherence across eating disorder diagnoses. Neurocognitive weaknesses were associated with lower self-reported life satisfaction, higher levels of anxiety and depressive symptoms and symptoms of the eating disorder. Thinking patterns may be important for clinicians to evaluate as part of routine care in outpatient treatment programs given the relationship with symptoms that may act to maintain cycles of the illness.

*Learning Objectives:*

- 】 Participants will learn about neurocognitive weaknesses at intake psychiatric assessment among Canadian adults struggling with an eating disorder.
- 】 We will discuss differences across diagnostic category in these trait-based thinking patterns.
- 】 Participants will learn about the importance of screening for neurocognitive deficits in the areas of rigid thinking and weak central coherence at intake psychiatric assessment as it may help to inform later treatment planning.

## S-023 - Poster Withdrawn

## S-024

### Neural Correlates of Food Distraction during different Homeostatic Satiety States in Anorexia Nervosa

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Individuals with anorexia nervosa (AN) employ different strategies to limit their food intake. Distraction from food may be one of these strategies to attenuate food cravings. However, the neural effects of homeostatic satiety that are

independent of orosensory stimulation (i.e. sight, smell, taste) on the distraction from visual food stimuli have not been examined yet. An event-related fMRI paradigm was used to investigate the effect of homeostatic satiety on the neural processing of food distraction in AN. Twenty-five healthy normal-weight women and patients with AN were scanned on two occasions and received glucose or water directly into their stomach using a nasogastric tube. Participants were presented with neutral and food images and were asked to distract themselves from these images by solving an arithmetic task. Preliminary results ( $n = 13$ ) indicate that there are no significant differences in brain activation between the water and glucose condition. However, comparing healthy controls with AN patients revealed significant differences during the distraction from food stimuli compared to viewing them in the water condition. Patients with AN compared to healthy controls showed significantly stronger activation in the ventral striatum (VS). The VS, as a key region of the reward circuit, has been found to be involved in the processing of food-related rewards. In patients with AN, a stronger activation of the VS has been observed when viewing pictures of underweight female bodies and it has been proposed that an increased reaction toward disease-specific reward stimuli is a crucial aspect in the development and maintenance of this disorder. Our preliminary findings support the notion of aberrant reward processing in AN and further indicate the importance of orosensory stimulation for the neural processing of food cues during different satiety states.

*Learning Objectives:*

- 】 Describe the aberrant reward processing in anorexia nervosa.
- 】 Discuss the role of the ventral striatum in the onset and maintenance of anorexia nervosa.
- 】 Explain the role of orosensory stimulation in the neural processing of visual food cues.

**S-025**

**Stories from Experience; An Interactive Resource to Support Successful Participation for Consumers and Carers.**

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Participation is a right of health service users and a key enabling strategy in improving health outcomes for the community. Participation is about being part of the process; actual involvement in the identification of issues and the authoring of solutions. Consumer and carer participation is an essential component in eating disorder treatment decisions, in service planning, development and evaluation and in research. However, people with a lived experience often find it difficult to share their

experiences and the details involved in eating disorders can often make the experience dangerous or fraught for both presenter and audience. To address this need the Australian National Eating Disorders Collaboration (coordinated by The Butterfly Foundation) developed a learning resource designed to help those with a lived experience understand their story, identify ways of sharing their story and practice developing their story for different contexts; from personal development, to input in to policy and advocacy. The project adopted a co-production approach to ensure active involvement of those with a lived experience story to share in all phases of the project, including authoring of content. An iterative method was used in the development of content. This resulted in a 12 module written resource with input from lived experience, eating disorder clinicians and experts in health and community development and literacy. The resource covers topics including; sharing with purpose, starting conversations, life in recovery, stories with words and pictures and representing others with your story. It focuses at each stage on safety, reflection, finding support and sharing recovery. The resource was trialed in a number of settings across 2015 and 2016. In response to feedback, in 2017 the resource has been translated in to an online, interactive learning space which individuals can securely access from anywhere in the world. This presentation will present an overview of the development of the resource, identify its usefulness in different personal, clinical and service settings, and summarise key findings from evaluative work done to date.

*Learning Objectives:*

- 】 Recognise the value of including experience in all aspects of treatment and care, and the challenges involved.
- 】 Understand the resource, its development and potential application in their area of expertise.
- 】 Identify where to access the resource and further information on its use.

**S-026**

**The Assessment of Eating Behavior and Body Image among People with Excessive and Normal Body Weight: Direct, Indirect And Buffer Effect and Model of Moderated Mediation**

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The main aim of the study was to evaluate the role of emotional eating in the relationship between desire to consume chocolate and avoidance of social situations related to food and body exposures. Further to this purpose, we have tested the direct, indirect and buffer

effect. In addition, we have used moderated mediation by introducing snacking into the model. The study included 123 individuals with excessive body weight and 123 individuals with normal weight. The mean BMI in the first group was 30.19 kg/m<sup>2</sup> (SD = 4.37), and in the second was 23.02 kg/m<sup>2</sup> (SD = 1.20). The Three-Factor Eating Questionnaire-R18, the Attitudes to Chocolate Questionnaire and the Body Image Avoidance Questionnaire have been used. The results shows that in all individuals the higher emotional eating is, the higher desire of chocolate consumption and avoidance of social situations related to food and body exposures are. Among individuals with excessive and normal body weight emotional eating is a significant mediator in the relationship between desire of chocolate consumption and avoidance of social situations related to food and body exposures. However, it does not moderate the relationship between these variables. Outcomes show that there is a significant model of moderated mediation of the link between social situations avoidance related to food and body exposure and the desire to consume chocolate through emotional eating, moderated by snacking among individuals with normal body weight. A similar effect has not been discovered in the group with excessive body weight. The most important conclusion is that among people with varied BMI categories snacking and emotional eating might be crucial for interventions related to changing eating behaviors.

*Learning Objectives:*

- ▶ To describe relationship between emotional eating, snacking, attitude toward chocolate and avoidance of social situations related to food and body exposures.
- ▶ To discuss the differences between participants with excessive body weight and normal body weight on eating attitude and behaviors.
- ▶ To discuss theoretical and empirical implications of the outcomes.

## S-027

### Young Chilean Women with Different Weights: Qualitative Study

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Obesity is a public health problem, being especially important among young women. The objective of this study is to compare body experience, healthy habits and emotional regulation among young Chilean women with

obesity and normal weight. The study has a qualitative approach, of exploratory scope and descriptive-analytical design. The sample consisted of 8 young women between 20 and 25 years old, 4 with obesity type III and 4 with normopeso, whose BMI fluctuated between 19.8 and 21.2. It was tried to homogenize the sample in other sociodemographic variables such as NSE, work, couple, children and medical history. The Multidimensional Body Self-Relationships Questionnaire (MSRQ) was used to measure body image, the Dutch Eating Behavior Questionnaire (DEBQ) to assess emotional ingestion and Derogatis Symptom Checklist (SCL-90) to measure psychological symptomatology. In-depth interviews were conducted, which were analyzed using open coding from the Grounded Theory. The results indicate that both groups present dissatisfaction with the shape and weight of their bodies. In participants with obesity, the perception of excess weight is only present when perceived limitations in the functionality of the body, not being able to perform daily activities. They notify their bodies only at particular moments in which they happen to observe their reflection or when they feel that space is small in relation to it. Women with obesity appear to have less emotional regulation strategies than normal weight women, they describe that they usually regulate their negative emotions through food. Normal weight participants are characterized by healthy habits, such as physical activity and balanced eating. In both groups they value body care and personal aesthetics, although only participants with normal weight present effective care behaviors. Aesthetic care and the possibility of having a physical illness is an issue in which both groups take action.

*Learning Objectives:*

- ▶ Compare healthy habit and emotional regulation of Young women with obesity tipe III and normal weight.
- ▶ Compare body experience of Young women with obesity tipe III and normal weight.
- ▶ Describe body experience, healthy habit and emotional regulation of Young Chilean women with and without obesity.

## S-028

### Do Individuals with Eating Disorders Dislike Exposure Therapy? Results from Adolescent and Adult Patients at a Partial Hospital Program for Eating Disorders

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Although exposure therapy holds promise as a treatment for eating disorders, therapists commonly express concern that patients will dislike exposure and consequently choose not to offer it. To our knowledge, however, no prior study has examined individuals with eating disorders' beliefs about exposure therapy or other treatments. In the present study, adolescent and adult patients completed a questionnaire asking about their perspectives of five treatments they received while in a partial hospital program for eating disorders: exposure therapy, cognitive therapy, interpersonal therapy, expressive art therapy, and psychiatric medication. After reading each treatment description, participants completed a modified version of the Personal Reactions to the Rationale (PRR), which assessed personal preferences about each treatment, and then ranked the five treatments from most to least preferred. Data collection is ongoing, with a current sample size of 45 participants. At the start of treatment, participants were significantly more likely to rank exposure therapy as their last choice treatment,  $X^2(1) = 5.00, p = .03$ . At the end of treatment, however, exposure therapy was no longer significantly likely to be ranked last,  $X^2(1) = 0.06, p = .81$ . Moreover, participants' ratings of exposure therapy improved from intake to discharge according to the PRR. In contrast, ratings of some other treatments, such as expressive art therapy, did not exhibit substantial changes over the course of treatment. Results from statistical analyses comparing ratings of the five treatments on the PRR will be presented from the larger sample. A substantial percentage of patients with eating disorders may enter therapy with a preference for treatments other than exposure. After receiving treatment that includes exposure, however, patients may develop more preferable views of exposure therapy.

*Learning Objectives:*

- ▶ Describe exposure therapy for eating disorders and some of the reasons for therapists' decision not to provide the treatment.
- ▶ Understand the views that patients with eating disorders have about exposure therapy and other treatments upon entry to a partial hospital program.
- ▶ Understand how these views change over the course of treatment that includes exposure therapy.

**S-029**

**Emotional and Behavioral Impacts of All-You-Can-Eat Dining on Female College Freshmen: The Moderating Role of Eating Disorder Symptoms**

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 Shannon Chaplo, PhD  
 Nandini Datta, MS  
 Bruny Kenou, Undergraduate RA  
 Peggy Liu, PhD  
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It is well documented that individuals are more likely to overeat in the context of an all-you-can-eat (AYCE) setting (Gonzales, Laurent, & Hohnson, 2017; Levitsky, Halbmaier, & Mrdjenovic, 2004; Levitsky & Youn, 2004), and many colleges require incoming freshmen to purchase an "all-inclusive" meal plan. Additionally, specific behavioral differences in an AYCE setting are associated with higher BMI (Wansink & Payne, 2008), yet how this setting impacts individuals with eating disorder symptoms remains largely uninvestigated. This study analyzed ecological momentary assessment (EMA) data from female college freshmen ( $N = 62$ ) who reported on their emotions and eating behavior following each meal for five consecutive days. We sought to determine the emotional and behavioral impact of eating at an AYCE dining hall and whether negative consequences are moderated by the presence of eating disorder symptoms. Findings demonstrate college freshmen report a significant increase in their amount consumed, feelings of fullness, loss of control, and guilt following meals in an AYCE dining hall, compared to a la carte. Further, women ( $n = 11$ ) reporting a score above a certain cutoff on the EDE-Q are especially vulnerable to these effects, in which they scored significantly higher on these constructs than women scoring below the cut-off ( $n = 50$ ). Findings may help to inform food policy at institutions of higher education, making it easier for individuals to opt out of mandatory meal plans when they are struggling with an eating disorder diagnosis.

*Learning Objectives:*

- ▶ Describe emotional and behavioral consequences impact of eating at an all-you-can-eat dining hall on college female freshmen.
- ▶ Summarize how eating disorder symptoms moderate these emotional and behavioral consequences, making those struggling with an eating disorder particularly vulnerable to these effects.
- ▶ Consider implications for food policy at institutions of higher education requiring mandatory meal plans.

**S-030**

**Emotional Eating in Normal Weight Adults: Insights from Qualitative Interviews**

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Emotional eating, or overeating in response to negative emotions, is a behavior endorsed by both normal weight and people with overweight/obesity. For some individuals, emotional eating contributes to weight gain and difficulties losing weight. However, there are also many who engage in emotional eating while maintaining a normal weight. Little is known about the mechanisms by which these

individuals are able to regulate their weight. The present study seeks to gain insight into the behaviors of normal weight emotional eaters through a series of one-on-one, 1-hour long, qualitative interviews. Participants were included who endorsed: (1) emotional eating as assessed by scoring greater than 3.25 on the Dutch Eating Behavior Questionnaire emotional eating subscale, (2) a BMI between 20-23, and (3) maintaining their weight within 5 pounds over the past 1-2 years. Interviews were semi-structured and guided by questions pertaining to participants' development of emotional eating, weight maintenance strategies, and concerns regarding their emotional eating. All interviews were transcribed and then objected to a thematic analysis of their content. Several themes emerged from the interviews, including historically endorsing a large appetite, compensating for emotional eating through exercise, and concerns that emotional eating may lead to weight gain in the longer term. These results provide preliminary evidence for the mechanisms normal weight emotional eaters use to maintain their weight and overall help to elucidate the presentation of emotional eating in this population.

*Learning Objectives:*

- ▶ Understand the presentation of emotional eating in normal weight individuals.
- ▶ Explore the ways in which normal weight emotional eaters maintain or regulate their weight.
- ▶ Explore normal weight emotional eaters history and concerns with their emotional eating.

**S-031**  
**The Role of Cognitive Flexibility in the Relationship between Perfectionism and Eating Disorders.**

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Perfectionism has been identified as being both a risk and a maintenance factor of eating disorders. According to Stoeber (2006), there are two types of perfectionism, adaptive (personally demanding standards) or maladaptive perfectionism (excessive concern over mistakes). Cognitive rigidity could be one of the characteristics that link perfectionism and eating disorders, especially maladaptive perfectionism and excessive concerns over perception of failure and desire for control. The objective of the study is to determine if cognitive flexibility plays a mediating role in the relationship between perfectionism and eating disorders symptoms. Sixty women from the general population aged between 19 and 58 years old (mean age: 26±8.7 years)

answered an online survey. Only women with a score of 20 or more at the Eating Attitude Test (EAT-26; (Leichner, 1994) were involved in this study (mean EAT score = 28±9.01). The "Questionnaire de perfectionnisme" (Langlois, 2010), the French version of the EAT-26 and the Cognitive Flexibility Inventory (Dennis, 2010) were used to measure perfectionism, eating disorders symptoms and cognitive flexibility respectively. Mediation analyses shows a significant indirect effect of maladaptive perfectionism on eating disorders symptoms through cognitive flexibility,  $ab = 0.06$ , BCa CI [0.01, 0.15]. The mediator could account for 30% of the global effect (PM = .31). No significant effect was found for adaptive perfectionism. Results confirm the implication of cognitive flexibility in the relationship between maladaptive perfectionism and eating disorders. People with eating disorders symptoms tend to apply their perfectionist criteria in the domain of control over eating, shape and weight, and data suggests that this could especially be the case when maladaptive perfectionism is colored with cognitive rigidity, thereby maintaining the pathological high standards and worries over loss of control.

*Learning Objectives:*

- ▶ Define de role of cognitive flexibility in eating disorders.
- ▶ Distinguish the two processes that define perfectionism (adaptive and maladaptive).
- ▶ Understand the role of cognitive flexibility in the relationship between eating disorders and perfectionism.

**S-032**  
**Exploring the Nature of Unexpected Food Choices Made by Individuals with AN Using the Food Choice Task Paradigm**

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Anorexia Nervosa (AN) is perpetuated by persistent, maladaptive food choices. Previous research using The Food Choice Task (Steinglass et al., 2015) suggests that, compared to healthy controls, AN individuals' food preferences are strongly correlated to perceived health of food and they are significantly less likely to choose high-fat foods. This study examined unexpected food choices in patients with AN, defined as the selection of a food rated as less healthy than the non-selected option. Participants were 19 inpatients with AN (7 AN-R, 12 AN-BP) admitted to a meal-based, rapid refeeding, specialty eating disorders program, with daily exposure to "risk foods". The Food Choice Task, administered once

participants were selecting their own meals, involves rating 76 food images on tastiness and healthiness and uses those ratings to identify a “neutral” food (reference item) for each individual. Participants then choose between each food image and their reference item. Three decision types were identified: a) expected decisions (EXPD), which align with the participant’s health ratings, b) unexpectedly neutral decisions (UND), which are when a patient declines to choose a food, despite previously rating one of the items as healthier, and unexpectedly contra-health decisions (UCD) where a food with a lower health rating is selected. Analysis of the UCD data revealed three findings. First, UCDs occurred in 14.3% of choices when the reference item was lo-fat, but 28.2% of choices involving a hi-fat reference item ( $p < 0.01$ ). Second, specific food items, such as fruits, consistently elicited EXPD responses. UCDs were concentrated amongst foods often consumed during binge/purge episodes, and accounted for 17.0% of UCDs. Finally, higher BMI and greater number of self-selected meals increased the likelihood of UCDs ( $p < 0.01$ ). Though preliminary, this may suggest that selecting meals with repetitive exposure to high-calorie foods contributes to a shift from EXPDs to UCDs.

*Learning Objectives:*

- ▶ Identify three types of decisions made by those with anorexia nervosa when choosing foods on the Food Choice Task, how they differ, and the meaning of such differences.
- ▶ Discuss the clinical correlates of food choices that are discordant from typical food choices in anorexia nervosa.
- ▶ Assess the potential impact that exposure to high-fat foods when self-selecting meals in inpatient settings has on food-based decision-making.

### S-033

#### Prescribing or Pathologizing Weight Loss?: Sizeist Perceptions of People with Eating Disorders as a Function of Target Weight Status

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Sizeism permeates how people understand, perceive, and behave toward others based on their weight status. The purpose of the present study was to investigate the impact of weight status on lay perceptions of an individual described as having an eating disorder. A mixed-gender, weight-diverse US community sample was recruited through Mechanical Turk ( $N = 139$ ; 49.6% female). Participants read a section of an ostensible college essay that included a personal disclosure from a student indicating body hatred, yo-yo dieting, binge eating, amenorrhea, and related markers of poor health. Before

reading the essay, participants were randomly assigned to one of two experimental conditions where the weight status of the student was manipulated to be ‘overweight’ or ‘underweight.’ Across a series of general and specific indicators of sizeism, several statistically significant patterns emerged. Consistent with our hypotheses, compared to the underweight student, the overweight student was attributed more body and public shame and less competence and capacity for human emotions (e.g., fear), but also viewed as more trustworthy and capable of reasoning than the underweight student. The overweight student was also less likely to be encouraged to seek medical, psychological, and/or social support (although some level of support was identified as needed for both targets) and more likely to be encouraged to continue dieting and lose weight. Even in the face of a potential eating disorder, only the underweight student garnered consistent empathy and the recommendation to stop pursuing weight loss. Overall, this research further illuminates the entrenchment of sizeism in lay perceptions of eating disorders, which has implications for early intervention and weight stigmatization.

*Learning Objectives:*

- ▶ Assess the impact of weight status on lay perceptions of people with eating disorders.
- ▶ Describe the sizeist attitudes held toward a higher weight person with an eating disorder.
- ▶ Consider the implications of sizeist attitudes for the prevention and treatment of eating disorders.

### S-034

#### The Eating Disorder Quality of Life Scale (EDQLS) in Residential Eating Disorder Treatment: An Exploratory Study

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Emerging literature recommends assessing outcomes of eating disorder treatment through a diagnosis-specific quality of life measure. This study aimed to examine quality of life (QL) in clients with eating disorders (ED) to explore the relationship between ED QL and diagnosis, age group, and length of treatment episode. Chart review data from approximately 1,000 adult and adolescent clients who received residential treatment (RT) and who completed the Eating Disorder Quality of Life Scale (EDQLS) at admission and discharge were used in this study. Results suggest ED RT significantly improves QL. Significant interactions between QL and ED diagnosis, age group, and length of treatment episode were found.

*Learning Objectives:*

- Describe the relationship between quality of life and eating disorder diagnosis.
- Describe the relationship between quality of life and age group.
- Describe the relationship between quality of life and length of treatment episode.

**S-035****Implementation and Clinical Outcomes of an Eating Disorders Day Program (including Multi-Family Therapy) in an Australian Private Hospital**

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**Vinay Garbharran, Doctor**  
**Suzi Brendon, Nurse**  
**Lauren Dasey, Dietitian**

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The Adolescent & Young Adult Eating Disorder Day Program (DP) is a new program that has been operating since May 2017, aimed at patients struggling to take charge of the eating disorder and achieve adequate weight gain and nutritional rehabilitation, despite support from their family and treating team. The program provides an alternative to an inpatient admission, and may be suitable when the patient and family require more intensive support than available in outpatient treatment, for a brief period of time. This study presents preliminary outcomes from the innovative 8-week DP and the Multi-family Therapy (MFT) groups. The content and structure of the programs, along with pre and post-treatment evaluations will be presented. It is predicted that patients completing the DP will make improvements in weight restoration, medical stabilisation, normalisation of eating, and improved psychological functioning. Further families participating in MFT will feel empowered through shared experiences.

*Learning Objectives:*

- An understanding of the Day Program structure, content and theoretical underpinnings.
- Gain an understanding of the implementation and delivery process involved in a novel Australian Day Program.
- Evaluate and assess preliminary outcome data.

**S-036****The Relation between Patient Characteristics and Their Carers' Use of a Directive vs. Collaborative Support Stance**

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Collaborative support provided by carers (family and friends) of individuals with eating disorders has been shown to be integral to patient motivation and clinical outcome. Little is known about factors that contribute to carers' use of collaborative, as opposed to, directive support. This research investigated associations between patient characteristics and their carers' support beliefs and behaviours. Eating disorder patients (n = 72) completed measures of readiness for change, eating disorder and psychiatric symptom severity, and interpersonal functioning. Their carers (n = 72) completed measures of collaborative and directive support beliefs and behaviours. Patient demographic variables (e.g., diagnosis, age, body mass index), readiness for change, eating disorder and psychiatric symptom severity were not associated with carer beliefs or behaviours. However, some patient interpersonal functioning scores were; higher domineering/controlling scores were associated with carers viewing directive support as more helpful, and with their use of more directive support behaviours. Higher vindictive/self-centered and intrusive/needy scores in patients were also associated with carers viewing directive support as more helpful. Although the majority of factors were not associated with carers' support stance, preliminary findings from this study suggest recovery is best supported by building positive experiences, reducing feelings of threat and cultivating feelings of safety, closeness and trust.

*Learning Objectives:*

- Describe collaborative vs. directive support provided by carers' of ED patients.
- Determine the association between ED patients' motivation for change and symptom severity and type of support provided by their carers.
- Determine the association between ED patients' interpersonal style and type of support provided by their carers.

### S-037 Attentional Engagement and Disengagement to Food Cues in Anorexia Nervosa

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We examined whether selective visual attention (i.e., attentional bias) for food cues is related to Anorexia Nervosa. Treatments for anorexia nervosa patients are limited in their effectiveness, and relapse after treatment is common. To strengthen currently available treatment options it is important to improve insight in what factors are critical in the maintenance of AN. One of the factors that has been proposed to be critically involved in the persistence of AN is a decreased attentional bias to food cues. Anorexia patients' attention might not be grabbed by food cues, or they might have little difficulty to look away after seeing the food cues. This might prevent the development of craving, which would make it easier to resist food even in a state of starvation. The attentional bias measures that have been used in previous research did not control for the location of initial attention, which rendered it impossible to adequately test both the difference in the tendency to look at food and the difference in participants' difficulty to redirect their attention away from food. This is the first study to examine attentional bias in anorexia nervosa patients with a measure that controls for the initial location of attention and which is therefore suggested to be optimally able to differentiate between enhanced engagement with food, and difficulty to disengage from food (the Attentional Response to Distal vs. Proximal Emotional Information – task). Participants were anorexia patients (N = 69) with an age between 12 and 23, and a comparison group (N = 69) without eating disorders that was matched on age and educational level. Results show that anorexia patients' attention is less grabbed by food cues, specifically when these food cues are shown for a short time. No difference was found between the groups on disengagement from food cues. Further results and implications will be discussed.

#### *Learning Objectives:*

- ▶ Understand how attentional bias is related to eating behavior
- ▶ Understand what the different aspects of attentional bias are, and how they are related to anorexia nervosa
- ▶ Be informed about recent developments in attentional bias research and paradigms that are designed to independently measure the critical components of attentional bias

### S-038 Exploring the Primary Care Experiences of Patients with Eating Disorders: A Thematic Analysis

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This study aims to gain an understanding of the experiences of patients with eating disorders in primary care. At the time of writing, 7 female patients with varied diagnosed eating disorders at family medicine clinics affiliated with two suburban teaching hospitals in Toronto, Canada were recruited to participate in our study. Participants completed in-depth, semi-structured interviews exploring 6 focal areas: family physician (FP)'s role in their screening; diagnosis and treatment of ED; ideal qualities and competencies of FPs addressing patients with ED; ED specialist access and referral; resources and treatment arranged in primary care; and training that would be beneficial for future FPs. An iterative qualitative analysis is underway, using a combination of open and selective coding. Preliminary thematic analysis has revealed themes including: FPs' role in treatment as a supporter and a referrer to specialized services; shortcomings in primary care, specifically the lack of screening and poor understanding of EDs or ED treatment and resources; barriers to accessing specialized care such as cost and wait times; as well as areas patients believe would be beneficial to address in their treatment, such as practical/life skills advice; and greater FP involvement in their treatment. As many ED patients first present with symptoms and are treated in primary care, this area is under-researched. To our knowledge, this is the first qualitative study to explore the experiences of patients with EDs in primary care, and, as such, will also serve as a guide for areas of future investigation. The results of this study will provide a qualitative complement to existing evidence suggesting that EDs are frequently overlooked in primary care and, if diagnosed, may be sub-optimally treated. Further, these results are expected to highlight areas that should be considered in the development of standardized guidelines for the treatment and management of EDs in primary care.

#### *Learning Objectives:*

- ▶ Explore the current state of ED diagnosis and treatment in primary care from patients' phenomenological perspectives.
- ▶ Identify target areas for improvement in primary care ED treatment, such as the development of standardized screening tools and treatment guidelines.
- ▶ Understand the current state of ED diagnosis and treatment in primary care based on the existing quantitative literature.

**S-039****Electronic Cigarette Use among Individuals Diagnosed with an Eating Disorder**

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Prior research suggests that some adult e-cigarette users vape to lose weight. The current study examined whether rates of vaping to lose weight are elevated among American adults diagnosed with an eating disorder (ED). Adult e-cigarette users with a current ED (n = 178; 72.5% women, 83.7% White, mean age 33.26 [SD = 8.35] years, 71.3% cigarette smokers) or no history of an ED (n = 433; 54.7% women, 83.4% White, 38.98 [SD = 11.71] years, 73.9% cigarette smokers) completed an anonymous survey. Participants with a current ED were more likely to endorse vaping to lose weight, vaping for appealing flavors, and vaping because it can be concealed from others than were participants with no ED history. Participants with a current ED also reported vaping more frequently overall and using higher nicotine concentrations than individuals with no ED history. Among individuals with a current ED, vaping frequency was associated with using nicotine e-liquid, mint or vanilla flavored e-liquid, positive reinforcement, and appetite/weight control. Among individuals with no ED history, vaping frequency was associated with nicotine content, menthol e-liquid, and negative reinforcement. This should be of great concern to treatment providers since nicotine is associated with deleterious effects on the heart, and individuals with EDs most often already experience serious cardiovascular complications due to their disorder. Thus, these findings suggest that treatment providers should screen for e-cigarette use in clients because conceptualizing vaping as a compensatory behavior may be a valuable addition to ED treatment. Identifying this at-risk population is of importance not only for the purpose of treatment, but for producing research literature regarding this subject. In order for the FDA to put in place proper regulations, including nicotine concentration and e-cigarette weight loss advertisements, greater investigation into this area is necessary and encouraged.

*Learning Objectives:*

- ▶ Understand the multifaceted use of electronic cigarettes and how they appeal to those diagnosed with an eating disorder.
- ▶ Explain the different predictors of using electronic cigarettes for weight loss.
- ▶ Assess the importance of further research into this subject in order to contribute to the need for better regulatory laws regarding electronic cigarettes.

**S-040 - Poster Withdrawn****S-041****Correlates of Food Anxiety during a Meal in Patients Diagnosed with an Eating Disorder**

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Margarita Sala, MA in Clinical Psychology<sup>2</sup>  
Thomas Rodebaugh, PhD in Clinical Psychology<sup>3</sup>  
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Eating disorders are characterized by high levels of anxiety, especially during mealtime. However, very little is known about anxiety experienced during mealtime and in the presence of food. In the current study (N = 42 participants diagnosed with an eating disorder [n = 36 participants with anorexia nervosa]), we examined the associations between personality (e.g., perfectionism and trust) and clinical factors (e.g., comorbid diagnoses, body mass index [BMI], and social anxiety) and anxiety before (pre-meal anxiety), during, and after a meal (post-meal anxiety). Perfectionism was the only significant correlate of anxiety experienced at all time points assessed (e.g., before [r = .37, p = .018], during [r = .44, p = .003], and after the meal [r = .45, p = .003]), and uniquely predicted anxiety during (b = .33, p = .023) and after the meal (b = .34, p = .019) over and above the other clinical and personality factors. Other significant correlates were fear of positive evaluation, social appearance anxiety, BMI, and trust (rs: -.31 to .44, ps = .003 to .046); however, only at certain points during the meal. These findings add to our understanding of the personality and clinical factors associated with mealtime anxiety (pre-meal anxiety, anxiety during a meal, and post-meal anxiety). We found that there were several significant correlates of mealtime anxiety, and that the type of correlate differed depending on when mealtime anxiety was experienced. Mealtime interventions may benefit from personalizations that address these factors.

*Learning Objectives:*

- ▶ Describe the personality and clinical correlates of food anxiety experienced during a meal by participants diagnosed with an eating disorder.
- ▶ Discuss how personality and clinical factors impact mealtime anxiety dependent on when the anxiety was experienced.
- ▶ Discuss how mealtime interventions can benefit from personalizations that address these personality and clinical factors.

**S-042****Reduced Automatic Approach Tendencies towards Food Pictures and the course of Anorexia Nervosa**

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 Klaske Glashouwer, Dr.<sup>1</sup>  
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The aim of this study was to test whether Anorexia Nervosa (AN) patients are characterized by reduced automatic approach tendencies (AAT) towards food. In addition, we investigated whether (AAT) towards food are related to AN treatment outcome in a longitudinal design. Two variants of an approach avoidance task were administered to a group of AN patients (N = 63) and a comparison group (N = 57) in which food was a task relevant feature (Stimulus Response Compatibility task), or a task irrelevant feature (Affective Simon Task). Relevant means that participants must categorize stimuli in terms of food/non-food, whereas irrelevant means that food is not relevant to be able to perform the task. The first computer task seems related to situations where a person actively is thinking of whether to avoid or approach food items (e.g., during lunch). The second task could mimic situations in which food is not relevant for people's current goals (e.g., when shopping) but in which people still may be seduced to approach food. Results showed that AN patients indeed show reduced AAT for high caloric food stimuli in both types of situations, compared to the comparison group. The deliberate intention to restrain from food might be facilitated by reduced AAT towards food. Reduced AAT for both types of situations might therefore contribute to the persistence of AN. A next question to test the relevance of AAT for food, is whether these are subject to change following successful treatment, or remain different from healthy controls and might then consequently be a risk factor for relapse. Therefore, the same group of AN patients was tested after one year follow up. We tested whether a reduction in eating disorder symptoms is associated with enhanced AAT toward food and whether AAT toward food at baseline are predictive for treatment outcome. Data collection is just finished and now being analyzed. During ICED, complete results of both studies will be presented and clinical implications will be discussed.

*Learning Objectives:*

- ▶ Describe what automatic/approach tendencies for food are and how these are relevant in Anorexia Nervosa.
- ▶ Describe how automatic approach/avoidance tendencies for task-relevant and irrelevant food stimuli in Anorexia Nervosa differ from a comparison group.
- ▶ Describe the role of automatic approach/avoidance tendencies for the course of Anorexia Nervosa and what this means for current treatment.

**S-043****Addressing Weight Bias among Eating Disorder Professionals Through an Online, Multi-component Intervention**

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Weight bias has been documented among many health professionals, including eating disorder (ED) practitioners. Less is known about what might work to reduce this stigma. This study thus aimed to: 1) explore the effects of an online multi-component weight-stigma reduction intervention on ED professionals' weight-biased attitudes and practices; and 2) examine participants' perceptions on the most useful elements of the course. Participants (N=25) completed pre- and post-course surveys and scripted reflections during the course. Explicit (Fat Phobia Scale) and implicit (Implicit Associations Test) weight bias was assessed pre- and post-course and self-reported changes in attitudes, knowledge, skills and practices at post. Participants exhibited positive changes on explicit anti-fat attitudes (Fat Phobia Scale pre M = 3.23, SD = 0.29 versus post M = 2.89, SD = 0.33,  $t(24) = 4.21$ ,  $p < .001$ , Cohen's,  $d = 0.84$ ). However, the change in implicit attitudes was small and non-significant (IAT pre M = 0.92, SD = 1.74 versus post M = 0.83, SD = 1.37,  $p = .81$ ). Although the course did not alter implicit anti-fat attitudes, baseline implicit bias was low in this sample compared with population averages and floor effects may have limited opportunities for improvement. Participants reported that exposure to other professionals' stories of change, patients' stories of weight bias in health care and information on how to apply health-centered principles in practice were particularly helpful. These results show that an online, multi-component intervention may have some effect in addressing explicit and behavioral manifestations of weight bias among ED professionals.

*Learning Objectives:*

- ▶ Describe weight bias and stigma.
- ▶ Articulate the prevalence and scope of weight bias in health care and what is known about this topic among eating disorder professionals.
- ▶ Describe the effects of an online course about weight stigma on eating disorder practitioners' anti-fat attitudes.

**S-044****Creating Hope-Engendering Environments for Eating Disorder Patients; Evaluating Current Nursing Interventions to Guide Implementation in the Future**

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Hope-engendering nursing interventions used in medical settings increase patients' levels of hope for the future, reduce suicidality, and improve coping self-efficacy (Herth, 2001; Meleis, 2010; Klonsky & May, 2015). Although nursing staff are integral treatment team members in residential eating disorder (ED) treatment, little is known about how nursing interventions should be implemented in such settings. The time allocated for nurse interventions in any setting is limited, thus, an evaluation of typical interventions with respect to patient outcomes can inform current protocols by identifying the most helpful interventions. Study participants included ED patients (n=97) and nurses (n=11) at a residential ED site, each completing the Herth Hope Index (HHI) and the Hope-Engendering Nurse Intervention – patient or nurse version (HENI-PT, HENI-N). Data from previously published papers using these measures were also utilized (Herth, 1991; Herth, 1995; Stavarski, 2015). Patients reported the most effective nursing interventions were: providing an open caring environment, providing patients with comfort/pain relief, and involving patients in their own care and progress. However, results from independent samples t-tests indicated that patients perceived nursing interventions were used significantly less often and with lower effectiveness than what the nurses' believed ( $t(68) = 2.99, p < .01$ ). Patients' perceived intervention averages were also significantly lower than reported averages from patients in medical settings ( $p < .05$ ) (Herth, 1995). Analysis comparing HHI ED patient scores to findings in published studies (Herth, 1991) revealed that ED patients discharging from treatment had similar levels of hope as patients in hospital settings ( $p = .48$ ). These findings on patient intervention preference and perceived gaps in care can be used to implement more effective nursing interventions and strengthen those that are currently used.

*Learning Objectives:*

- ▶ Evaluate eating disorder patients' level of hopefulness at time of discharge from residential treatment.
- ▶ Identify the unique needs eating disorder patients have for nursing staff in a residential care setting compared to patients in medical settings.
- ▶ Assess limitations in current care to allow more effective clinical strategies to be used in the future.

**S-045****The Moderating Effect of Impulsivity on Negative Affect and Body Checking**

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Joseph Wonderlich, MA<sup>2</sup>  
Daniel Le Grange, PhD, FAED<sup>3</sup>  
Scott Engel, PhD<sup>4</sup>  
Scott Crow, PhD<sup>5</sup>  
Carol Peterson, PhD<sup>5</sup>  
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This study examined the moderating effects of different aspects of trait impulsivity on trajectories of negative affect prior to and following body checking in the natural environment, in women with anorexia nervosa (AN). Body checking is a compulsive behavior that maintains the cycle of eating disordered behavior through negative reinforcement. Previous studies regarding the relationship of negative affect to body checking have been inconsistent, with some showing that negative affect increases prior to body checking and others not. We hypothesized that individual differences in trait impulsivity may influence body checking in response to negative affect. Negative urgency (NU) (the tendency to act rashly under distress) and (lack of) perseverance (the tendency to give up on goal directed behavior) may be unique facets of impulsivity that play a role in body checking, such that women who are more impulsive may be more likely to body check quickly after increases in negative affect. Women with AN (n = 82) completed a self-report measure on impulsivity and used ecological momentary assessment (EMA) to record negative affect and body checking six times per day for two weeks. We used generalized estimating equations to model trajectories of negative affect before and after body checking, with individual difference scores on trait impulsivity entered as moderators in the models. Results indicated that women with low (lack of) perseverance experienced a greater increase in negative affect than those with high (lack of) perseverance prior to body checking. In other words, women who more able to focus on goal directed behavior, despite distractions, were able to tolerate higher levels of negative affect prior to body checking. Overall, results indicate that individual differences in trait impulsivity influenced the relationship of negative affect to body checking in women with AN.

*Learning Objectives:*

- ▶ Explain theory and research on the relationship of negative affect to body checking.
- ▶ Identify and describe the functions of different facets of impulsivity.
- ▶ Discuss the relationship between impulsivity, compulsivity, negative affect, and body checking behavior.

**S-046**

### **A Brief Instrument to Measure Autonomous and Controlled Motivations for Change in the Eating Disorders: Further Assessment of Reliability and Validity**

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 Alexia Miller, BA<sup>3</sup>  
 Mimi Israël, MD, FRCPC<sup>4</sup>  
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We sought to validate the Autonomous and Controlled Motivations for Treatment Questionnaire (ACMTQ) in a sample of adults with an eating disorder. 478 women entering outpatient treatment for an eating disorder completed questionnaires at baseline. Test-retest reliability and predictive validity were measured in subsamples of 93 and 131 patients, respectively. As predicted, principal axis factoring yielded two domains: autonomous and controlled motivations, which corresponded exactly to the two subscales of the ACMTQ already described. Both subscales showed good internal consistency, with alphas above .8. Strong intraclass correlation coefficients on the test-retest reliability were found for the two domains (over .8). Assessments of convergent validity with Spearman's coefficient revealed that autonomous motivations as measured by the ACMTQ and the Eating Disorder-Readiness Ruler were correlated (.45), and so were controlled motivations (-.29). As expected, autonomous and controlled motivation domains of the ACMTQ were not correlated (-.02). Finally, significant regression analyses linking autonomous motivation to greater improvements in Eating Disorder Examination Questionnaire and Eating Attitudes Test-26 throughout time (both  $p < .05$ ) were indicative of good criterion validity. This study informs on the psychometric properties of the Autonomous and Controlled Motivations for Treatment Questionnaire, and confirms the acceptability of its use in the eating disorders.

*Learning Objectives:*

- ▶ Summarize the content of the Autonomous and Controlled Motivations for Treatment Questionnaire.
- ▶ Appraise the psychometric properties of the Autonomous and Controlled Motivations for Treatment Questionnaire.
- ▶ Use the Autonomous and Controlled Motivations for Treatment Questionnaire in the appropriate population.

**S-047**

### **Does Level of Motivation for Change Impact Post-treatment Outcomes in the Eating Disorders? A Systematic Review with Quantitative Analysis**

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The objective of this meta-analysis was to estimate the added impact of the level of motivation for change on treatment outcomes in eating disordered individuals. We included articles examining the impact of motivation at the beginning of an inpatient or outpatient therapy segment on treatment outcomes in children or adults with anorexia nervosa, bulimia nervosa, binge-eating disorder, and other specified feeding or eating disorder. Outcomes of interest comprised reductions in (1) general eating disorder symptomatology and (2) bingeing, and (3) purging frequencies from the beginning to the end of treatment. Since most studies applied multivariate statistical analyses using different predictors, a combined significance test analysis was done. Analyses were performed across two methods, first by combining available p-values alone, and second by adding z-scores of 0 for non-significant missing data. A total of 1784 relevant items were identified after double-record deletion, out of which 38 studies fully met inclusion criteria. A subgroup of 23 papers reported investigating the association between baseline motivation and general eating disorder symptomatology, whereas 11 and 10 studies examined motivation associated with bingeing and purging frequencies respectively. We were able to retrieve significance values from 14 articles for general symptomatology, and from 7 and 4 papers for bingeing and purging. Although our analyses are at a preliminary stage, we observe some initial indications to suggest that higher baseline motivation may be associated with lower end of treatment eating symptoms,

in general, and certain symptoms (like binge frequency), in particular. These initial results are consistent with the notion that individuals' motivation at the start of eating-disorder treatment has a bearing upon later clinical outcomes.

*Learning Objectives:*

- ▶ Summarize the state of knowledge on the association between pre-treatment motivation and clinical outcomes in the eating disorders.
- ▶ Describe the challenges encountered in conducting a meta-analysis on the association between pre-treatment motivation and clinical outcomes in the eating disorders, with multivariate relationships and incomplete data reporting.
- ▶ Recommend further steps to improve data reporting in studies investigating the predictive effect of motivation upon treatment outcomes in the eating disorders, and in studies investigating multivariate relationships in general.

## S-048

### Anorexia Nervosa as an Anxiety Disorder

**Murali Sekar, MBBS, DPM, MRCPsych**

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This presentation is about a new conceptualisation of anorexia nervosa as part of the anxiety spectrum for empirical testing, with the broader aim of generating new heuristics for research and practice in the field of Eating Disorders. The presentation would explore the hypothesis that Anorexia Nervosa sufferers do not consciously want to be thin but experience a strong urge to lose weight in order to avoid experiencing unacceptable levels of heightened anxiety and stress associated with not doing so. In this presentation, I will discuss various similarities and differences between anxiety disorders and Anorexia nervosa from the research evidence that have been published so far. I aim to include phenotypical similarities and differences, evidence from genetic studies and neurophysiology and brain circuitry. Most importantly, I would be presenting this new aetiological model and explain the clinical manifestations of Anorexia Nervosa based on this model. I would be discussing the role of classical and operant conditioning of symptom formation and maintenance of Anorexia Nervosa. Significant amount of this presentation would be about the clinical relevance of this model and the possible implications on treatment methods.

*Learning Objectives:*

- ▶ Learn the similarity and differences between Anorexia Nervosa and Anxiety Disorders and how Anorexia

Nervosa could be considered as a clinical condition that can fall in the Anxiety Spectrum of disorders.

- ▶ Consider a new plausible aetiological model for Anorexia Nervosa.
- ▶ Contemplate new heuristics for research and treatment of Anorexia Nervosa.

## S-049

### Anthropometric and Social Characteristics of a Sample of Brazilian Men with Eating Disorders

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**Ana Carolina Costa, Registered Dietitian<sup>1</sup>**  
**Paula Dayan, Registered Dietitian<sup>1</sup>**  
**Caroline Gallo, Registered Dietitian<sup>1</sup>**  
**Vania Hevia, Registered Dietitian<sup>1</sup>**  
**Mirella Guida, RD<sup>1</sup>**  
**Juliana Aragi, RD<sup>1</sup>**  
**Iamara Seara, RD<sup>1</sup>**  
**Alexandre Azevedo, MD MSc<sup>2</sup>**  
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This study describes some characteristics of a sample of male adult patients admitted to the Men With Eating Disorders Treatment Program (GAHTA-AMBULIM) at Hospital das Clínicas Institute of Psychiatry of the University of Sao Paulo School of Medicine. GAHTA was created in 2007 due to an emerging demand for treatment for the male population. In the last 10 years, GAHTA has seen 102 patients, but incomplete or conflicting data only allowed the inclusion of 55 subjects (54.9% of the total sample) in our analysis. Patients were diagnosed by clinical interview and self-report questionnaires. Weight and height were measured at admission. Mean age was  $29.55 \pm 8.44$  (min. 17, max. 50 years-old). Forty-two individuals (76.4%) informed their sexual orientation status (50% heterosexual, 45.24% homosexual, n=1 bisexual). Considering the general profile of Hospital das Clínicas clientele, this sample showed high levels of education, with the majority of individuals having some to complete college education (60%) and complete post-graduate work (7.27%). Bulimia nervosa (BN) was the most frequent diagnosis (49%), followed by Binge Eating Disorder (BED) (n=11, 20%) and anorexia nervosa (AN) (n=10, 18.2%). According to diagnostic category, mean BMI was 18 kg/m<sup>2</sup>  $\pm 2.12$  for AN, 26.5 kg/m<sup>2</sup>  $\pm 4.71$  for BN and 41.1 kg/m<sup>2</sup>  $\pm 5.44$  for BED patients. Men with eating disorders tend to seek less treatment due to stereotypes still very prevalent among healthcare professionals and the general population. This is especially damaging to BED patients, who suffer from the additional stigma of obesity. Little is known about the rates of treatment adherence or success in males. More studies are required to improve detection and treatment tailoring of ED in men.

*Learning Objectives:*

- ▶ Get acquainted with the male-only eating disorders treatment program in Brazil.
- ▶ Learn the profile of a sample of patients of the program.
- ▶ Discuss the limited studies about eating disorders in men.

**S-050**  
**Evaluation of Care and Services Given to Eating Disorder Patients Through a New Transdisciplinary Program (Pi-Loricorps)**

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**Marie-Josée St-Pierre, MS**  
**Johana Monthey-Blanc, PhD**

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 Trois-Rivieres, Canada

The purpose of this study was to examine the care trajectory of patients who were followed and treated by a transdisciplinary team. It also has an objective to compare the individuals who finished the program to those who decided to quit. A new program (Pi-Loricorps) was implemented in a EDspecialized treatment. This program has four phases : 1) evaluation, 2) understanding, 3) testing and 4)strengthening that last from four to six months at the rate of one session every week. Thirty-five individuals seeking treatment were involved in the present study. Participants completed self-reported questionnaires and professionals completed a file so it is possible to analyse every step that was followed by each individual. Results revealed that 22 individuals completed each steps of the program (63%), 9 decided to quit (26%) and 4 had to be referred to a psychiatrist because the ED problem has worsened (11%). Participants indicate that the strengths of the program are the uses of: intuitive eating, logbook, environment exposure and integrative card. Among things that can be improved are: the individual's participation in team meetings and explanation of each phase of the program so that the individual knows where is going. It is interesting to find out the reasons that made the people quit so it is possible to improveth Pi-Loricorps and be sure to give care and provide services that respond to individual's needs.

*Learning Objectives:*

- ▶ Learn how the evaluation of a care continuum can help professional to improve care that they give.
- ▶ Show program strengths and challenges still to be overcome.
- ▶ Compare the positive effects of the Pi-Loricorps on different type of ED patient.

**S-051**  
**I Can See Your (health) Halo: The Impact of Food Labeling on the Perceived Health Characteristics of Processed Food**

**McKenzee Sturm, Psychology BS; Sociology BA**  
**Marissa Hall, Psychology BS; Sociology BA**  
**Jacqueline O'Guin, Psychology, BS**  
**Renae Figueira, Psychology, BS**  
**Anna Ciao, Clinical Psychology, PhD**

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Research suggests that "health halos" occur when people attend to a specific attribute of a food product (e.g., that it is low fat) in a way that biases their perception of the product's other attributes (e.g., that it is also healthy). The current study explored the relative impact of different types of "healthy" food labels on the perceived health characteristics of tortilla chips. Participants (N = 138) each sampled four different types of tortilla chips (original, organic blue corn, organic yellow corn, multigrain), all of which had approximately equivalent nutritional properties. After tasting each tortilla chip, participants evaluated the chip's healthiness and rated the chip's potential impact on body weight if it were consumed regularly. Repeated measures analyses revealed the presence of a health halo with all "healthy" labels: both types of organic tortilla chips and the multigrain tortilla chip were rated as healthier and less likely to cause weight gain relative to the original yellow corn tortilla chip (ps < .001). Furthermore, there was some evidence of the combined effect of multiple "healthy" labels, where the organic blue corn chip was rated as healthier and less likely to cause weight gain relative to the organic yellow corn chip (p = .003). This study adds to the existing health halo research, finding that a variety of food attributes/labels, including blue corn, multigrain, and organic, elicit a health halo. Furthermore, this is the first study to suggest an additive effect of multiple "healthy" labels.

*Learning Objectives:*

- ▶ Understand the impact of food labeling on perceptions of food healthiness.
- ▶ Critically evaluate different sources of misinformation about food healthiness, including organic, multigrain, and other "healthy" labels.
- ▶ Consider the interactive impact of multiple food labels that "signal" healthiness.

**S-052**  
**A Content Analysis of Thinspiration Images and Text Posts on Tumblr**

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Thinspiration is content advocating extreme weight loss by means of both images and text posts. While past content analyses have examined thinspiration content present on various social media outlets and websites, no research exists examining thinspiration content on Tumblr. Over the course of a week, 222 images and text posts were collected after entering the keyword 'thinspiration' into the Tumblr search bar. These 222 items were rated on a variety of characteristics. The majority of thinspiration images included an underweight woman (97.7%) perpetuating the thin ideal (97%). Thin poses (25%) and sexual images (31.8%) were also common. The most common themes for thinspiration text posts included dieting/restraint (35.4%), weight loss (35.4%), food guilt (28.1%), and body guilt (25%). The thinspiration content on Tumblr appears to be consistent with that of other social media outlets and websites. While this study provides information on the different themes present under the thinspiration tag on Tumblr, future research should use experimental methods to examine the effects of consuming thinspiration content via Tumblr.

*Learning Objectives:*

- 】 Define 'thinspiration' and distinguish it from the term 'pro-eating disorder content.'
- 】 Describe the common themes found under the thinspiration tag on Tumblr.
- 】 Compare the findings of the present study to those found in other content analyses on thinspiration and related topics.

### S-053

#### To Eat or Not To Eat: An Investigation of Meal Skipping on Cognition

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Background. Inadequate nutrition has been shown to adversely impact brain development and cognitive functioning. Unhealthy eating practices are frequently formed in college; these individuals may be at greater risk of developing dangerous dieting behavior. Recent studies examining the acute impact of skipping meals on cognition have resulted in equivocal conclusions, necessitating the exploration of moderators to clarify

this relationship. The present study hopes to explore the deleterious effects of skipping lunch on cognitive ability in college-aged students by investigating the role of dietary restriction as a moderating factor. Methods. Sixty-six participants were blinded to condition and study purpose and were randomized to consume either a 'lunch' (610-calorie) or 'lunch omission' (65 calorie) shake, and complete baseline and post-shake questionnaires assessing affect, satiety and fatigue. After a controlled wait period of 2 hours, participants completed a neuropsychology battery, assessing working memory, attention, executive functioning, and task switching and online surveys assessing eating disorder symptomology, depression, and anxiety. The primary outcome measures of the study were cognitive functioning and changes in affect, satiety and fatigue. Results. Preliminary data analysis showed no significant differences between baseline and post-shake measures of satiety, fatigue, or happiness ( $p > .05$ ). A multiple linear regression will be conducted to assess if dietary restraint moderates the relationship between cognitive ability and meal skipping. Discussion. We hypothesize that the lunch condition participants will demonstrate greater performance on cognitive tasks than the lunch omission participants, for students' low on eating disorder symptomology. We expect the inverse relationship for students high on eating disorder symptomology, but lower performance in cognitive tasks overall. Findings from this study could have adaptive and beneficial effects on students' lifestyle choices and associated cognition; specifically, increases in students' healthy eating habits.

*Learning Objectives:*

- 】 Following the training, participants will be able to describe the relationship between meal skipping and cognitive functioning, as moderated by eating disorder symptoms.
- 】 Following the training, participants will be able to distinguish domain specific cognitive regions robust to chronic dietary restraint and/or meal skipping.
- 】 Following the training, participants will be able to better understand the basic relationship between meal skipping and sustained impact of cognition thereafter.

### S-054

#### Set-shifting Difficulties in Remitted Anorexia Nervosa: Evidence of Perseveration in Verbal Learning

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Eating disorders are complex psychiatric disorders, associated with alterations in neural and cognitive functioning. Research suggests deficits in cognitive flexibility in anorexia nervosa (AN), evidenced by perseverative errors on tasks like the Wisconsin Card Sort Test (WCST), but less is known about the persistence of deficits after recovery, or if altered cognitive function leads to difficulties with organizing and learning new information. Error analyses of serial list learning tasks can reveal executive control dysfunction specifically related to perseverative behaviors. Women aged 19-45 remitted from anorexia nervosa (RAN, N = 28), and controls (CW, N = 26) completed the California Verbal Learning Test (CVLT-2) and the WCST. It was hypothesized that RAN would demonstrate greater perseveration across both tasks than controls. Groups did not differ on overall CVLT-2 performance. Analysis of repetition errors on the CVLT-2 revealed RAN made significantly more errors than CW ( $p = 0.031$ ). Within the RAN group, CVLT-2 repetition errors were significantly correlated with WCST perseverative responses ( $r = 0.439$ ,  $p = 0.025$ ). Within-trial (WTP) and Trans-trial (TTP) perseveration errors on the CVLT were also calculated. RAN and CW did not differ significantly on TTPs and showed a trend-level difference on WTPs ( $p = 0.051$ ). Among RAN, WTPs were correlated to WCST Perseverative Repetitions ( $r = 0.406$ ,  $p = 0.040$ ); among CW neither WTPs nor TTPs were related to WCST errors. Findings indicate that difficulties with executive control remain even after symptom remission in patients with AN, resulting in inefficient learning of new information, despite similar performance. WTPs may reflect self-monitoring difficulties, and given the demonstrated relationship with WCST performance, may be related to aberrant executive functioning. Future research is necessary to determine if these alterations in cognitive flexibility reflect a biomarker that is evident prior to developing AN.

*Learning Objectives:*

- ▶ Describe the executive function differences seen in anorexia.
- ▶ Describe perseveration in learning tasks in remitted anorexia.
- ▶ Discuss how perseveration is related to broader executive function in anorexia.

**S-055**

**Validity and Reliability of the Difficulties in Emotion Regulation Scale Mexican Version among Patients with Eating Disorders**

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Background: The emotion dysregulation considered an important factor for eating disorders (ED). The Difficulties in Emotion Regulation Scale (DERS) measures this construct through 36 items, but there have been inconsistencies on the structure of the scale among different populations, some proposing a five-factor structure and elimination of items. The aim of this study was to explore the factor structure of DERS in young Mexican females with eating disorders and to examine its reliability and validity in this sample, with the purpose of contribute to find a solution on the inconsistencies on the scale. Methods: Patients with ED (N = 292) completed the DERS, the mean age was  $21.5 \pm 5.7$  years, the onset mean age for ED was  $14.9 \pm 3.3$  years. The MINI Plus International Neuropsychiatric Interview was used for the diagnosis of an ED and their comorbidity, and SCID II was used to identify Borderline Personality Disorder. Results: DERS total scores were correlated with BPD ( $r_{bis} = 0.155$ ) and ADHD ( $r_{bis} = 0.159$ ). The confirmatory factor analysis showed good fit estimates for the six factor model (CMIN/DF=2.8,  $gfi = 75.7\%$  and  $RMSEA = 0.08$ ). The high order factor analysis showed that the factor related with emotional awareness was weak; however, the Armor criteria indicated that the scale is formed by one dimension. The Cronbach's alpha for each factor were 0.694 to 0.886, for the total DERS 0.934, and for the interfactor 0.812. Conclusions: Total DERS presents relationship with BPD and ADHD diagnosis. Our findings suggest that the 36-items DERS with a six-factors structure is a strong measure with excellent internal consistency and good construct validity in Mexican females with ED.

*Learning Objectives:*

- ▶ The aim of this study was to explore the factor structure of DERS in young Mexican females with eating disorders and to examine its reliability and validity in this sample.
- ▶ Explore the construct Emotion regulation in ED.
- ▶ Explore the relation between ED and Emotion regulation.

**S-056**

**Association of Temperment and Character with Emotional Regulation in Anorexia and Bulimia Nervosa**

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Eating disorders occur with the frequency of the mayor in the young population. Common characteristics in eating disorders (ED) are found: concern for food, the weight and figure, with differences according to the clinical presentation depending on the diagnosis. The study aimed to describe the relationship of the temperament and the character to the emotional regulation in anorexia nervosa and bulimia nervosa. We included 111 patients of the National Institute of Psychiatry in Mexico City the scales were applied to comoborat the diagnosis, measure emotional regulation and personality trails. Patients were divided into two groups, 52.3% (N=58) were classified with low emotional regulation (high scores on the scale) and 47.7% (N=53) with high emotional regulation (low scores on the scale). Two models of emotional regulation were made in the dimensions of temperament and character. The anorexia mode of the two variables associated with low emotional regulation were age and dependece on reward and the model of bulimia nervosa were search for novelty and cooperativity and autotransference in all dimensions of emotional regulation and differend characteristics in the dimensions of the personality. The model of anorexia nervosa associates an age of early onset and higher scores of dependece to the reward with low emotional regulation and the one of bulimia nervosa associates a high search of the novelty, low cooperativity and autotransference.

*Learning Objectives:*

- 】 Describes the impact of emotion regulation in anorexia and bulimia nervosa.
- 】 Describes the impact of personality traits in anorexia and bulimia nervosa.
- 】 Describes the relation with personality traits and emotion regulation in anorexia and bulimia nervosa.

**S-057**  
**Comparative Study of Impulsivity and Aggressiveness in Patients with Bulimia Nervosa and Anorexia Nervosa.**

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Eating disorders prevalence is reported at 1% in patients diagnosed with anorexia nervosa (AN) and 4.2% in patients diagnosed with bulimia nervosa (BN). Their personality and psychological characteristics have been studied in different countries to identify behavioral predominance and risk factors in both spectra of eating

disorders. The inadequate control that exists in the eating patterns generates a marked social, labor and family's disability. One of the hypotheses of this disability is poor impulse control related to aggressive behaviors towards themselves and their environment. The aim was to compare the characteristics of aggression and impulsivity between patients with BN and AN. It is an observational, transverse and comparative study of cases. The sample consists of two groups: patients with AN and patients with BN. Patients were taken from the INPRFM eating disorders clinic that attended the consultation and met the inclusion criteria. A total of 75 patients were included. The mean score for the Explicit Aggression Scale was 7.5 points (SD = 4.1, range 1-23 points), where 51.4% (n = 36) of the patients were classified as aggressive according to the cut-off point of 7 Points on this scale. Patients with AN and BN showed similar percentages of aggressive behaviors. There was a tendency for a greater number of patients with BN to report aggressive self-directed behavior. Both groups were similar in both the severity of the aggression, the level of intervention used for the aggression and the dimensions of impulsivity. There was a tendency for greater impulsivity associated with the manifestation of physiological behaviors in patients with bulimia nervosa. The high presence of aggression and impulsivity can be a reflection of the continuous violence that is now observable and lived in our society. Their presence in addition to distressing the interpersonal relationships and affecting their development within a society, lead to greater repercussions in patients with eating disorders. The evaluation of aggression and impulsivity should be part of the daily clinical work of mental health professional in charge of the treatment of these patients, and their presence and severity should be included in the management and comprehensive treatment of patients.

*Learning Objectives:*

- 】 Compare the characteristics of aggression between patients with BN and AN.
- 】 Compare the characteristics of impulsivity between patients with BN and AN.
- 】 Compare the relation between of aggression and impulsivity in patients with eating disorders.

**S-058 - Poster Withdrawn**

**S-059**  
**Association of Empirically Determined Personality Classifications with Clinical Features and Outcome in People with Eating Disorders**

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Previous efforts to classify individuals with eating disorders (EDs) on the basis of personality traits have consistently yielded three-group solutions that identify people as being either overcontrolled, undercontrolled, or low on comorbid personality pathology. We classified adults receiving treatment for an ED into personality-trait based clusters using scores on the Big Five Inventory (BFI), and then examined the extent to which resulting clusters were relevant to clinical features and treatment response. Our sample consisted of 211 women undergoing outpatient treatment for an ED (AN, BN, or OSFED). At treatment intake and discharge, participants completed the BFI as well as questionnaires measuring ED symptomatology (EDE-Q) and general psychopathology (BASIS-32). A latent-class analysis isolated three distinct groups within the sample: One characterised by high levels of neuroticism, openness and extraversion (labelled “undercontrolled/dysregulated”); another characterised by low levels on extraversion, agreeableness, openness, conscientiousness and intermediate levels of neuroticism (labelled “overcontrolled”); and a third characterised by low neuroticism and high levels of extraversion, conscientiousness and agreeableness (labelled “resilient”). Results of repeated measures ANOVAs indicated that ED symptoms and general psychopathology decreased over the course of treatment for each group. There were no significant differences as to ED symptomatology between groups; however they differed on general psychopathology (anxiety, depression and impairments in daily living). Our findings replicate (using the BFI) the personality clustering found previously in eating-disordered individuals using other personality assessments. As has previous research, results suggest that personality variations influence response on general psychopathological symptoms, but not on indices of eating disturbances.

*Learning Objectives:*

- 1 Describe the three distinct personality patterns found within the Eating Disorder population.
- 2 Distinguish among the clinical features associated with each personality subgroup.
- 3 Learn about the relationship between personality traits and outcome.

**S-060**  
**How I Feel When I see Appetizing Food? A Comparison among Eating Disorders, Obesity Patients and Healthy Controls in their Emotional Reactions - Poster Withdrawn**

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The aim of the study was to compare the emotional reactions to pictures of palatable food in ED and obesity patients. Participants were 162 women. Sixty-six fulfilled diagnostic criteria for an ED and divided according their symptomatology (DSM-IV-TR): the “Restrictive group” (RG) included 38 patients (AN-R & EDNOS.AN), whereas the “Bingeing/purging group” (BPG) included 28 patients (AN-P, BN & EDNOS.BN); 52 patients were suffering from obesity (BMI>30) (OB-G); and 44 women (HG, healthy group). Stimuli consisted of 16 pictures selected from Affective Picture System. Two set of images were random shown in a computer: 6 pictures of palatable food, and 10 images of neutral content and valence. After each picture was offset, participants were instructed to rate that picture along the affective dimensions. There was a significant interaction effect in the valence dimension [ $F(3,158)=9.442, p<.0001$ ]. RG and BPG rated the food images as less pleasure than HG group. In dominance dimension, there was a significant interaction effect [ $F(3,158)=19.075, p<.0001$ ]. HG and OB-G rated the food pictures with more dominance than both ED groups. Is noteworthy that OB-G show no significant differences in either valence or dominance of both types of images. Regarding arousal, there was a significant interaction effect [ $F(3,158)=9.344, p<.0001$ ]; both ED groups reported more arousal in food pictures than HG&OB-G. All the clinical groups reported significantly more arousal in palatable than neutral images. Results showed that ED patients felt less pleasure and dominance, but more arousal, than obesity and healthy participants while processing palatable food pictures. However, obese patients seem to process the pictures of palatable food in a “plane” way regarding pleasure or dominance. These results, added to the increased arousal reported in food stimuli in all the clinical groups, underline the importance of working the emotional processing of food in the treatment of these disorders.

*Learning Objectives:*

- 1 Appraise emotional processing in eating disorders and obesity patients.

- Measure and contrast the emotional processing of palatable food stimuli in patients with disordered eating and weight.
- Integrate different emotional dimension in the therapeutic process.

### S-061 Executive Functioning and Psychological Symptoms in Food Addiction: The Central Role of Error Monitoring in the Assessment of Severity and Overall Impairments

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Food addiction (FA) has recently been an emerging field in the study of obesity. Previous studies have contributed to identify psychological correlates of FA. However, few researchers have examined the neurocognitive profile related to this condition; up until now, neural similarities to substance dependence, attentional biases related to food cues and a poorer performance monitoring have been observed. The present study aimed to examine the psychological profile and executive functioning related to FA in individuals with severe obesity and awaiting bariatric surgery. Participants (N=86) were split into two groups, according to their level of FA symptoms (low FA vs high FA). Groups were compared on questionnaires measuring binge eating, depression and anxiety symptoms, and impulsivity as well as on tasks reflecting executive functioning (D-KEFS and BRIEF-A). The relationship between FA groups and patterns of errors during the D-KEFS' Color-Word Interference Test was further analyzed. Individuals within the high FA group reported significantly more binge eating, depressive and anxiety symptoms, and more metacognitive difficulties. They also tended to show a typical pattern of errors, characterized by an increased number of errors as the tasks' difficulty rises as opposed to a decreased number of errors, which characterizes an atypical pattern of errors. Among the high FA group, those with a typical pattern of errors reported more psychological symptoms and executive functions

difficulties. The present results show that the inability to learn from errors or past experiences is related to FA's severity and overall impairments.

*Learning Objectives:*

- Compare individuals with a high and a low level of FA symptoms on psychological and cognitive variables.
- Describe the performance of both groups on neuropsychological tasks.
- Compare individual within the high FA group on psychological and self-reported cognitive variables, according to their error processing profile.

### S-062 Perceived Conflict and Support among Participants with Bulimia Nervosa Compared to Psychiatric and Healthy Controls

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The current study examined differences in perceived social conflict and support between participants with bulimia nervosa, a psychiatric comparison group of participants with depression, and healthy controls. Female participants were recruited for three groups, bulimia nervosa group (n = 27), depression group (n = 26), and healthy controls (n = 27), matched on several demographic characteristics. Participants first completed the Social Support Questionnaire (SSQSR; Sarason, Sarason, Shearin, & Pierce, 1987) and the Quality of Relationships Inventory (QRI; Pierce, Sarason, & Sarason, 1991) and then listened to 18 vignettes depicting social interactions with varying levels of conflict and support. Participants rated each vignette on level of perceived conflict and support. Trait level self-reported differences on the SSQSR and QRI were tested using independent t-tests. The bulimia group reported smaller social networks ( $t(45.95) = -2.53, p = .014$ ) and less satisfaction ( $t(52) = -2.15, p = .036$ ) relative to controls. Additionally, the bulimia group reported higher average conflict ( $t(41) = 5.41, p < .001$ ) and lower average support in social relationships relative to controls ( $t(48) = -3.37, p = .001$ ). There were no differences between the bulimia and depression group except that the depression was significantly less satisfied with their social network ( $t(51) = 2.16, p = .036$ ). Multilevel modeling was then used to analyze differences for conflict and support ratings for the scenes nested within individual. Results indicated that the bulimia group perceived less support ( $p = .004$ ) and greater conflict ( $p = .01$ ) relative to controls. There also was a significant diagnosis by high support interaction for both conflict ( $p = .01$ ) and support ( $p = .03$ ) ratings. There were no differences between the bulimia group and depression group on the vignette ratings.

Overall, these results suggest that women with bulimia perceive social interactions differently compared to healthy controls but not necessarily compared to other psychiatric groups. Incorporating a supportive social network and helping eating disorder patients with perception and utilization of this social network may be an important intervention target.

*Learning Objectives:*

- ▶ Summarize existing literature on eating disorders and social functioning.
- ▶ Describe differences in perceived social support and conflict between participants with eating disorders and psychiatric and healthy control groups, respectively.
- ▶ Apply findings regarding perceived conflict and support in social interactions to potential intervention targets for eating disorders.

### S-063

#### Investigating the Relationship between Gifted Sensibilities and Eating Disorders

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The purpose of this study is to begin to explore a potential relationship between giftedness and eating disorder symptomology in a pediatric hospital eating disorder treatment program. Previous studies have focused solely on the relationship between IQ and eating disorders and have not shown significant differences in above average or gifted intelligence in adult eating disorder populations. Gifted sensibilities however, extend well beyond the notion of IQ for determining giftedness and may have relevant implications in improving effective interventions for children and adolescents with eating disorders. Measures of giftedness, including Characteristics of Giftedness scale and the Over-excitabilities scale, were given to pediatric patients as a part of the standard admissions battery to a hospital based treatment program at a children's hospital used for quality improvement. This study will analyze and provide results from 50 child/adolescent patients receiving treatment for an eating disorder as part of a family based hospital program on measures of giftedness, over-excitabilities and eating disorder symptoms. It is hypothesized that the majority of patients will have significant positive indicators on the characteristics of giftedness as well as above average scores on various over-excitabilities. These data could provide meaningful feedback about how to understand how gifted sensibilities, and their emotional consequences, may shape the lives of patients we treat with eating disorders and how to use this knowledge to improve the quality of care we provide.

*Learning Objectives:*

- ▶ Summarize the theoretical frameworks that connect dimensions of giftedness and eating disorders and explore limitations/challenges associated with typical measurement of giftedness especially in previous research.
- ▶ Discuss how characteristics of giftedness and overexcitabilities may impact treatment and treatment outcomes.
- ▶ Illustrate various dimensions of giftedness and correlations between eating disorders and giftedness to broaden awareness and understanding how to best engage patients/clients with eating disorders and gifted sensibilities.

### S-064

#### Set-Shifting, Dietary Restraint, and Systemizing

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Though set-shifting has continued to be a construct of interest in research related to eating disorders, much remains unclear about the nature of set-shifting in general and its association with eating pathology. The purpose of the current study was to understand how set-shifting relates to other variables relevant to eating concerns, including dietary restraint and systemizing, in both a normative college-student sample and in a subset of participants with elevated eating and weight concerns. The current study examined 193 college students' set-shifting abilities using self-report questionnaires and neuropsychological tasks. Dietary restraint was measured using the Rigid vs. Flexible Dieting Scale (Westenhoefer, Stunkard, & Pudel, 1999), and systemizing was captured using the Systemizing Quotient (Baron-Cohen et al., 2003). Individuals with scores greater than 19 (n=27) on the Eating Attitudes Test Version 26 (Garner, Olmsted, Bohr, & Garfinkel, 1982) were also examined separately as a group with elevated eating and weight concerns. Results indicated that as rigid dietary restraint increased, set-shifting ability worsened (Wisconsin Card Sorting Task [WCST] perseverative errors:  $r = .17$ ,  $p < .05$ ; WCST categories completed:  $r = -.16$ ,  $p < .05$ ). Systemizing was positively associated with self-reported cognitive flexibility (Cognitive Flexibility Inventory:  $r = .40$ ,  $p < .001$ ). For the subset of participants with higher eating and weight concerns, more efficient set-shifting was associated with increased use of flexible dieting strategies (Trail Making Test B:  $r = -.60$ ,  $p < .001$ ). Increased use of rigid dietary strategies, however, is also associated with faster set-shifting (Trail Making Test B:  $r = -.35$ ). Thus, findings related to dietary strategy and set-shifting were mixed, while systemizing was related only to self-reported

cognitive flexibility. Multiple associations between set-shifting and dietary restriction were in the hypothesized directions, suggesting that the two may support each other, but those that were contrary to hypotheses may indicate that they relate uniquely in the presence of particular contexts. The inconsistent nature of the results indicates that the constructs are more complex than previously considered and marks them for additional research.

*Learning Objectives:*

- ▶ Describe the complex associations between set-shifting and dietary restraint.
- ▶ Appraise differences in set-shifting presentations for individuals with higher eating and weight concerns when compared to a representative sample.
- ▶ Consider the limitations of tools associated with measuring set-shifting.

### S-065 Verbal Learning and Memory Performances in Patients with Anorexia Nervosa or Bulimia Nervosa

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In the latter years, there has been a strong interest in cognitive performance in patients with anorexia nervosa (AN) and bulimia nervosa (BN). However, few studies have investigated aspects of verbal learning and memory. This is surprising given the frequent concerns of learning and memory difficulties in these patient groups. The aim of the present study was thus to assess verbal learning and memory performance in patients with AN and BN compared to healthy controls (HCs). The study group comprised 40 patients with AN and 39 patients with BN from the Specialised Eating Disorder Unit at Levanger Hospital, Norway. All patients were assessed with tests of verbal learning and memory as part of a broader study on neuropsychological functioning in patients with eating disorders, and were compared to a group of 40 HCs. The following tests and variables were used: Wechsler Memory Scale- Revised (WMS-R) Logical Memory I and Logical Memory II; California Verbal Learning Test, 2nd Edition (CVLT-II) total recall 1–5, short-delay free recall and long-delay free recall. Analyses revealed that there were significant differences between the groups on all subtest measures. Furthermore, post-hoc tests showed that the AN group performed significantly below the HCs on all measures. The BN group, however, performed below the HCs only on the WMS-R Logical Memory I ( $p = .02$ ).

In addition, the difference between the BN group and the control group was also approaching significance on the WMS-R Logical memory II ( $p = .05$ ). There were no differences between the AN group and the BN group on any measures. The findings indicate that the patients with AN had difficulties in learning and recalling abstract and logical verbal material, while BN patients performed below HCs on recall of logical verbal material. These cognitive difficulties are important to keep in mind during treatment.

*Learning Objectives:*

- ▶ Describe verbal learning performance in patients with anorexia nervosa and bulimia nervosa.
- ▶ Describe verbal memory performance in patients with anorexia nervosa.
- ▶ Describe verbal memory performance in patients with bulimia nervosa.

### S-066 Does a Presenter's Self-Disclosure of a Past Eating Disorder Impact The Effectiveness of Prevention Messages?

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This study investigated whether presenter self-disclosure of a past ED influences message and presenter ratings in a school-based universal prevention program. In collaboration with the National Eating Disorder Information Centre of Canada, a total of 158 male and female high school students completed questionnaires following an established eating disorder prevention presentation that was delivered by a female presenter who had a lived eating disorder experience. The messages delivered to students included media literacy, dieting, fat talk, and health at every size. In the disclosure condition, the presenter also discussed her past history with Anorexia Nervosa. She did not mention her personal ED history in the control condition. After hearing the presentation, the audience rated their opinions of the messages, themselves, and the presenter. Students in the disclosure condition reported that they were less likely to diet and were generally happier with their bodies after hearing the presentation than did those in the control condition. But there was little evidence that one condition was significantly more effective than the other. A significant gender effect was found on the majority of message evaluation items, indicating that female students benefitted more from the eating disorder prevention messages than did males, despite the fact that efforts were made to make the presentation gender neutral. These results suggest no

strong advantage of a prevention program presenter either disclosing or not disclosing a past ED. Future research focusing on prevention efforts targeting young men is mandated.

*Learning Objectives:*

- ▶ Following the training, participants will have a better understanding of the role of self-disclosure in eating disorder prevention settings.
- ▶ Following the training, participants will be able to identify the need for research representing male audiences in universal prevention efforts. Males are largely underrepresented in both eating disorder prevention research and prevention efforts.
- ▶ Following the training, participants will be able to make suggestions for universal prevention programs by using the results from this study and previous research.

**S-067**  
**Psychological Factors that Differentiate the Onset of an Eating Disorder: Case-Control “ANOBAS” Study**

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Adolescence is a vulnerable stage for the onset of eating disorders (ED) and affective disorders in women. Comorbidity between eating disorders and affective disorders has been extensively studied. However, it is difficult to find comparative studies between them, and neither with a psychosomatic medical condition as asthma (some similarities with ED on family functioning). The aim was to analyze the different marked psychological factors associated at the onset of the eating disorders. For this, we used a case-control design of 40 female adolescent with ED at onset matched by age and their parents' socioeconomic status with 40 patients with an affective disorder (AfC), 40 patients with asthma (AC) and 40 without a pathology (Healthy Controls). Participants aged between 12 and 17 years. Diagnoses were completed with K-SADS interviews and an evaluation that included the Body Shape Questionnaire, the Children Depression Scale, the State and Trait Anxiety Inventory, the Perfectionism Scale and de Leyton Obsessional Inventory. Because each control subject was 'matched' to a specific ED case, the four groups (ED, AfC, AC and

HC) were compared using repeated measures analyses of variance (ANOVAs) for each risk factor scale. Results showed that adolescents with ED differed with affective disorders in the level of depression, socially prescribed perfectionism and anxiety; however, patients with affective disorders scored significantly higher than ED. In contrast, there were no differences between these two groups in body dissatisfaction, obsessional symptoms, self-oriented perfectionism and anxiety state. Regarding asthma and healthy groups, these groups scored less in body dissatisfaction, self-oriented perfectionism and anxiety than patients with ED. Overall, the level of depression appeared as a factor that could explain the onset of an affective disorder, while high perfectionism, expected as specific factor at the onset of ED, was not found. Examining the factors at onset associated to each pathology allows to improve the clinical diagnosis.

*Learning Objectives:*

- ▶ Following the paper, participants will be able to analyze psychological factors associated at the onset of ED.
- ▶ Following the paper, participants will be able to think about possible changes in the clinical diagnoses.
- ▶ Following the paper, participants will be able to discriminate risk factors associated to the ED and affective disorders at the onset of the illness.

**S-068**  
**“6 Healthy Steps” – Proposal of a Program of Shared Prevention of Eating Disorders and Obesity in Early Adolescents**

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Obesity, eating disorders and the whole spectrum of weight and eating-related problems among adolescents have many risk factors in common, and are a great issue of public health concern due to their high prevalence and seriousness of complications. The goal of this proposal program is to prevent obesity and eating disorders in an early adolescent population. It is a school-based prevention program, consisting in 6 educational sessions of 90 minutes of duration each, once a week. Sessions will be highly interactive, coordinated by a Nutritional Educator, in groups of around 20 to 25 students; early adolescents, male and female, aged 12 to 13 years old. The theoretical framework adopted is the Social Cognitive Theory (SCT). Sessions will approach, topics such as body image, weight and body teasing, consumption of snacks, soda, sources of protein, starchy foods, fruits and vegetables, the risks of dieting, mindless and mindful eating, emotional eating, screen time and physical activity. As a supporting activity, parents, teachers and school staff will receive newsletters on the same topics. Assessments

will be made one week prior to the beginning of the program and 3 days and 3 months after its conclusion. Assessment include BMI assessment and classification, intake of specific foods by a food frequency questionnaire and questionnaires approaching body dissatisfaction and concern; media internalization; peer teasing; perceived pressure to be thin (from family, friends, and the media); emotional eating; symptoms, signals and risk behaviors for eating disorders and disordered eating.

*Learning Objectives:*

- ▶ Recognize the importance of shared prevention of obesity and eating disorders.
- ▶ Apply educational activities to prevent both eating disorders and obesity in early adolescents.
- ▶ Select appropriate tools to assess shared risk factors for both eating disorders and obesity at the end of the educational program.

### S-069

#### Exploring the Possible Benefits of Using 3D Technology in Body Appreciation Interventions

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The purpose of this study was twofold: 1) to determine if 3D body scanning was related to an increase in state self-objectification and 2) to determine if the 3D body scanning intervention, 3-Dimensional (3D) Body Appreciation Mapping (3D-BAM) resulted in an increase in body appreciation immediately following the intervention and 3-months post-intervention. Body scanning technology captures a 3D model of the surface shape of the body. The scans result in realistic views of the body in three dimensions from all possible angles. The intervention involved digitally “painting” one’s 3D scan based on seven prompts from the researcher (e.g., “using green, please ‘paint’ the parts of your body you appreciate for their utility”). Participants used a different color for each prompt, all of which were related to body appreciation. The sample included 18-25-year-old women who were mostly White (89%) and heterosexually-identified (94%). Data were collected at 4 time points: 1) online survey to collect baseline data, 2) post-3D body scan, 3) post-intervention, and 4) 3-months post-intervention. The sample included 158 women at Time 1, 105 at Time 2, 99 at Time 3, and 89 at Time 4. We found no significant change in state self-objectification between Time 1 and Time 2 ( $p = .244$ ), suggesting that 3D body scanning in the current study did not influence self-objectification. The mean Body Appreciation Scale-2 score at Time 1 was 3.52 ( $SD = 0.62$ ), at Time 3 was 3.74 ( $SD = 0.62$ ), and at Time

4 was 3.78 ( $SD = 0.60$ ). Body appreciation scores were significantly higher at Time 3 than Time 1 ( $t = -594$ ,  $p < .001$ ) and significantly higher at Time 4 than Time 1 ( $t = -5.6$ ;  $p < .001$ ). Results suggest that 3D body scanning may be advantageous to include in interventions aiming to improve body appreciation among emerging adult women.

*Learning Objectives:*

- ▶ Assess the possible benefits of utilizing 3D body scanning in interventions to improve body appreciation.
- ▶ Summarize the 3D-BAM intervention.
- ▶ Propose ways to incorporate 3D technology into their prevention work.

### S-070

#### Does the Impact of a Prevention Program Differ Between Female Adolescents With and Without Disturbed Eating Attitudes and Behaviors?

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The aim of this study was to compare the impact of a three session eating disorders prevention program in female adolescents with and without disturbed eating attitudes and behaviors (DEAB). The program was based on the principles of the cognitive dissonance theory and on the media literacy approach. This intervention was implemented in a group format. The sample included 88 female adolescents aged between 12 and 17 years ( $M = 14.49$ ,  $SD = 1.25$ ) from Buenos Aires, Argentina: 28 with and 60 without DEAB. Participants completed a Sociodemographic Questionnaire and were interviewed by the Eating Disorder Examination (EDE) before the intervention, to identify whether they presented DEAB or not. In order to assess the impact of the program, participants completed the following self-administered instruments before, immediately after and six months after the intervention: Cuestionario de Influencia del Modelo Estético Corporal (Questionnaire of influence of

the Aesthetic Corporal Model-26, CIMEC-26) and risk subscales of the Eating Disorder Inventory-3 (EDI-3). A multilevel model was fitted with two levels using the R Project 3.3.1 version. Model tested whether the program produced similar effects across subgroups (with and without DEAB) with a time x DEAB interaction. There was significant time x DEAB interaction for three CIMEC-26 subscales (Influence of advertising (t [161] = -3.73, p < .001), Influence of social models (t [170] = -2.62, p = .010) and Influence of social contexts (t [172] = -3.02, p = .003), and for global CIMEC-26 score (Thin-ideal internalization (t [161] = -3.08, p = .002). There was no significant interaction for Drive for thinness, Bulimia, Body dissatisfaction (EDI-3), Concern for body image and Influence of verbal messages (CIMEC-26), suggesting similar effects across subgroups. The implemented program seems to have different impact when it is administered to adolescents with DEAB or without DEAB. Future research should be aimed at investigating the factors which might explain these findings, and the implications for the design of new preventive programs.

*Learning Objectives:*

- ▶ Recognize the importance of effective prevention programs.
- ▶ Evaluate if the impact of an eating disorders prevention program in female adolescents differs according to the presence/absence of disturbed eating attitudes and behaviors.
- ▶ Discuss the importance of designing and implementing universal or selective preventive programs.

### S-071

#### Dissonance-based Eating Disorder Prevention Program. Changes in Disordered Eating, Aesthetic Thin Ideal Internalization, Self-esteem, Body Dissatisfaction and BMI After a Year Follow-up in Mexican University Students

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The objective was to measure changes in disordered eating behaviors (DEBs), internalization of the aesthetic thin ideal, self-esteem, body dissatisfaction and body mass index, after a year follow-up a universal dissonance-based eating disorder prevention intervention (Body Project). A quasi-experimental pretest-posttest study with a control group (without intervention) and one year

follow-up study was carried out with a sample of 111 students 21.6±3.3 years of age in average, of which 75 (76.5%) females and 19 (23.4%) males participated in the intervention and 10 (58.8%) females and 7 males (41.2%) participated as controls. All students were included without carrying out a selection by level of risk of DEBs or sex. Data were collected between 2013 and 2016 at a public university in Mexico City and all students signed a written consent form. Validated in Mexican population measurements were used to assess DEBs, internalization of the aesthetic thin ideal, self-esteem and, body dissatisfaction, BMI was calculated with self-reported weight and height. We used a fixed-effects model in order to analyse the impact of variables that vary over time. The models were carried out for the experimental and control groups separately. Among students that were intervened with the Body Project, model 1 indicated that DEBs decline 0.83 when age increases in one year, 0.3 when self-esteem increases in one unit; having a desire for a slimmer body and desiring a bigger body increase 0.97 and 0.6 the DEBs risk respectively in comparison with those satisfied with their figure. Among controls, there were no significant differences. Model 2 indicated that internalization of the aesthetic thin ideal declined 1.2 when increasing one year in age, 0.8 when self-esteem increased one unit, increased 6 units for those students with moderated DEBs risk, and 8.9 for those with high DEBs risk as compared with their peers without risk. Among controls the internalization of the aesthetic thin ideal declined 1.1 when self-esteem increased in one unit. The results showed that positive effects were achieved at one-year follow-up in the reduction of DEBs, internalization of the aesthetic thin ideal and self-esteem, confirming previously reported results in the literature and the importance of delivering universal dissonance-based prevention interventions.

*Learning Objectives:*

- ▶ Describe the use of the Body Project among Mexican university students.
- ▶ Assess changes in disordered eating, the internalization of the aesthetic thin ideal, self-esteem body dissatisfaction and BMI, after a year follow-up of an eating disorders prevention intervention compared to only assessment controls.
- ▶ To point out the use of a universal dissonance-based prevention program in young adults.

### S-072

#### Validity and Reliability of the Sport-Specific Thin-Ideal Measure

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Research indicates that female athletes' body image is more complex than that of non-athletic women because they maintain two different body images – one sport-related and one in their everyday lives. Research also suggests that many athletes face pressure to obtain a certain sport-specific body type that is believed to enhance performance. This sport-specific ideal body differs from sport to sport as well as from the traditional thin-ideal body type. Because athletes strive to achieve a body ideal different from the rest of the general population, we examined the validity and reliability of the 19-item Internalization of Sport-Specific Thin-Ideal Measure (ISTI). Data collected as part of the Female Athlete Body (FAB) Project (NIMH 1 R01 MH094448-01), a larger, multi-site, randomized controlled trial, was used to conduct an exploratory factor analysis (EFA) establishing five factor groupings, three of which had good internal consistency ( $\alpha > 0.7$ ) both overall and at each time point. The three factors established were termed the Sport-Specific Thin-Ideal Factor (4 items), the Body Fat and Performance Factor (4 items), and the Appearance in Sport/Uniform Factor (3 items). These factors show strong convergent validity with the Eating Disorder Examination Questionnaire (EDEQ) on multiple subscales. Specifically, EDEQ subscale relationships were strongly correlated with the Sport-Specific Thin-Ideal Factor, ranging from  $r = .33$  to  $r = .51$ . The other two factors showed weaker relationships, but were still statistically significant. Repeatability was tested using baseline and the three weeks' time point for the control group only, and similar estimates were produced. The strong relationship between the Sport-Specific Thin-Ideal factors and the EDEQ subscales may support the use of the ISTI measure as a tool to screen for the risk of disordered eating behaviors in female athletes in the future.

#### *Learning Objectives:*

- ▶ Examine the convergent validity of the Internalization of the Sport-Specific Thin-Ideal Measure with the Eating Disorder Examination Questionnaire.
- ▶ Assess the test-retest reliability of the Sport-Specific Thin-Ideal Measure.
- ▶ Investigate the relationship between the sport specific thin ideal and disordered eating behaviors.

### **S-073**

#### **Difficulties in Emotion Regulation and Attachment Style in Adolescents with Anorexia Nervosa**

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Nowadays it is assumed that, eating disorders are emotional disorders. In fact, several authors define eating disorder as a dysfunctional attempt to regulate or avoid negative affective states. Emotional regulation, according to Gross' definition, refers to processes by which people exert an influence on the emotions they have, when they have them, and how they experience and express them. A contemporary perspective situates the attachment style as one of the factors which influences the development of the emotional regulation. The ability to control the expression of emotion, especially negative emotions, is developed in the first years of life and is of great importance for an appropriate adaptive social behaviour. It is thought that the caregiver's sensitivity to child's communications is critical in how the child learns to regulate emotional experiences. These findings provide support for the hypothesis that a problematic attachment might be a maintaining factor for an eating disorder. Subject sample: Female patients (ages 16-19) with a diagnosis of anorexia nervosa and female patients (ages 16-19) without a diagnosis of anorexia nervosa. It is a cross-sectional descriptive study. As independent variable it will be used the Difficulties in Emotion Regulation Scale, "Cartes, Modèles Individuels de Relation" (Ca-MIR) and Eating Disorders Inventory-2. The preliminary result is the presence of a significant difference between difficulties in emotion regulation and attachment; particularly relevant is the association between emotional regulation variable (lack of control) and the variable of child trauma (CaMir-R). A dysfunctional attachment, in any of its variations, prepares for difficulties in emotional regulation in these patients. It is important to take into account these variables for planning an individualized treatment, emphasizing emotional aspects.

#### *Learning Objectives:*

- ▶ Following the training, participants will be able to have a more holistic point of view of the emotional aspects of eating disorders, specially those related to emotion regulation and attachment.
- ▶ Following the training, participants will be able to understand the implications of a dysfunctional attachment style on the development of emotion regulation.
- ▶ Following the training, participants will be able to appraise patient's difficulties in emotion regulation, and discuss attachment style as a contributor factor for further psychological symptoms.

**S-074****Does What you Think you Feel, Impact What you Actually Eat? An Examination of Alexithymia, Interoceptive Processes, and Binge Eating in Young Women.**

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Affect regulation models of binge eating (BE) posit that eating modulates aversive mood states; however, findings for eating and mood associations are often mixed. Prior work has often tested links between food intake and negative affect without accounting for individual difference factors linked with affect regulation. The current study evaluated associations between food intake and change in affect during a test meal in young women with and without BE, while accounting for alexithymia and interoception – constructs closely linked with emotion regulation. Sixty-four women with BE and 64 healthy controls (HC) completed a bogus taste test meal following a negative or neutral mood induction. Drawing from results linking alexithymia and interoceptive deficits with poor emotion regulation, alexithymia and poor interoception were expected to predict greater food intake after negative mood induction and modulate positive and negative affect in women with BE. Group comparisons partially supported affect regulation theories of BE. MLM analyses revealed a significant Mood Condition\*Group\*Time effect for positive affect such that women with BE reported increases in positive affect that remained elevated post-meal, whereas HCs positive affect decreased past pre-meal positive affect in the negative mood induction,  $b = -.71$ ,  $se(b) = .30$ ,  $p = .02$ . This was not true for negative affect. Compared with HCs, women with BE endorsed significantly higher levels of alexithymia ( $p < .01$ ). However, alexithymia did not relate to food intake or demonstrate a moderation effect on pre- to post-meal affect. In sum, results do not support strong links between alexithymia, interoception, and BE. However, findings do suggest affect regulation models of BE may be further improved with increased consideration of positive affect in BE. Future research should examine the role of positive affect, as it may be that positive reinforcement or reward, rather than decreased negative affect, underlies BE pathology.

*Learning Objectives:*

- 】 Describe the roles of negative and positive affect in young women who meet DSM-5 criteria for BED, as compared to age, ethnicity, and BMI-matched healthy controls.
- 】 Discuss associations between alexithymia, interoceptive awareness, interoceptive sensitivity; their respective relations with emotion regulation; and theoretical links to binge eating pathology.

- 】 Evaluate current strengths and limitations associated with in-laboratory test meal and mood induction paradigms used to evaluate affect regulation models of binge eating.

**S-075****Ecological Momentary Assessment of Weight Stigmatizing Cognitions and Behaviors**

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Weight stigma is pervasive and salient in our culture, and is associated with both disordered eating and obesity. Both cognitions and emotions are important determinants for eating behavior in cognitive behavioral models of obesity and disordered eating. This investigation explored the affective and contextual factors of weight stigmatizing cognitions and weight comparisons using momentary, real-time diary assessments among college students. 40 participants completed ecological momentary assessment (EMA) data through their smartphone. Participants endorsed when they had negative thoughts around someone else's weight or engaged in a weight stigmatizing behavior, positive and negative affect, and eating behaviors. Weight stigmatizing cognitions and reported behaviors were reported daily. The most common weight stigma behaviors included staring, grimacing, or avoiding other individuals due to their weight. The most common weight stigmatizing cognitions included judging others or seeing others as less attractive due to their weight. Preliminary analyses found that weight stigmatizing behaviors occurred prior to and following food restriction or overeating. Individuals did not report a change in their mood prior to or following weight stigma cognitions or behaviors. Weight stigmatizing cognitions and behaviors occur multiple times throughout the day. In addition, weight stigmatizing cognitions and behaviors occur both before and after overeating and restriction, adding additional support for the role of weight stigma in disordered eating.

*Learning Objectives:*

- 】 Describe weight stigma cognitions and behaviors.
- 】 Describe ecological momentary assessment.
- 】 Assess the role of weight stigma cognitions in behaviors in disordered eating behaviors.

**S-076****Guilt, Shame, and Fear of Weight Gain are Bridge Symptoms Between Negative Affect and Eating Disorder Symptoms**

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Negative affect is a maintenance factor of eating disorder (ED) symptoms. Although negative affect has been implicated in EDs, it is less clear how specific aspects of negative affect drive ED symptoms. Network analysis is a method that elucidates how specific symptoms relate to one another to maintain mental illness. In the current study, we used network analysis to test how negative affect maintains ED symptoms in individuals (N=108) with an ED, primarily anorexia nervosa (71.4%). Participants completed measures of ED symptoms and negative affect at two time points (T1 and T2), one month apart. We tested a network of ED symptoms (binge eating, vomiting, laxative use, excessive exercise, fasting, feelings of fatness, fear of weight gain, and weight and shape concerns) and aspects of negative affect (shame, guilt, scared, afraid, nervous, jittery, upset, distressed, irritable, and hostile) to investigate the most central (i.e., symptoms that are most related to all other symptoms in the network and are theorized to maintain psychopathology) and bridge symptoms (i.e., symptoms that maintain the connection between negative affect and EDs). We then tested if central symptoms at T1 predicted ED behaviors at T2. We found that the most central symptoms were feeling nervous (Strength [S] = 1.40), shame (S = 1.37), and fear of weight gain (S = 1.26). The bridge symptoms were shame, guilt, and fear of weight gain. Central symptoms predicted ED outcomes over time ( $ps < .038$ ). Our findings show that shame and guilt maintain the connection between negative affect and ED symptoms through fear of weight gain. Targeting fear of weight gain, shame, and guilt may help to disrupt the association between negative affect and ED symptoms, which may then decrease eating disorder behaviors.

*Learning Objectives:*

- 1 Identify central and bridge symptoms of eating disorders and negative affect.
- 2 Describe how specific types of negative affect maintain eating disorders.
- 3 Explain how intervening on specific aspects of negative affect may reduce eating disorder behaviors.

**S-077****Appearance Versus Functional Motives for Weight Loss: Associations with Eating Attitudes and Behaviors**

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Greater weight suppression, the difference between one's highest and current adult weights, is associated with greater eating pathology, poorer treatment prognosis, and symptom maintenance. However, studies with non-clinical samples have not assessed motivations for weight loss. Research demonstrates that appearance-based motives for exercise are linked to greater body dissatisfaction, elevated depressive symptoms, and lower self-esteem. Functional-based motives (e.g., for health and enjoyment), however, are linked to greater body satisfaction, self-esteem, and overall well-being. The current study assessed associations of weight-loss motivations in a sample of undergraduates with a history of intentional weight loss ( $n = 111$ ,  $M = 20.29$  years, 75% female). Participants completed surveys assessing demographics, weight history, and eating behaviors and attitudes. Participants qualitatively reported their motivation for weight loss and responses were independently coded by two coders ( $k = .91$ ) as functional ( $n = 59$ ) or appearance-based ( $n = 52$ ). Degree of weight loss did not differ significantly between groups. Those who reported appearance-based motives had greater thin-ideal internalization ( $p = .008$ ) and global eating disorder symptomatology ( $p = .02$ ) than those who reported functional-based motives. These results provide preliminary evidence that appearance-based motives for weight loss, similar to exercise, might be associated with negative eating attitudes and behaviors. As well, they suggest that intentionality of and motivations for weight loss are important factors to examine within non-clinical samples. Those motivated to lose weight for appearance might be at increased risk for disordered eating. Future research should examine associations between motivation for weight loss and self-esteem and depressive symptoms.

*Learning Objectives:*

- 1 Understand the relevance of weight suppression to eating pathology.
- 2 Delineate the difference between functional and appearance-based motives for exercise and weight loss.
- 3 Assess the value in measuring motivation for weight loss in non-clinical samples.

**S-078****Could Pressure from Medical Professionals to Maintain a “healthy weight” Increase Eating Disorder Symptoms?**

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With the increased prevalence of obesity, the pressure on individuals to maintain a “healthy” weight has increased. Medical professionals can have a strong influence on their patients by encouraging them to maintain a “healthy” weight. Such pressure to maintain a “healthy” weight is often accompanied by weight-stigma directed towards overweight individuals. The purpose of this study was to examine how perceived pressure from medical professionals was related to both attitudes towards overweight individuals and disordered eating. Preliminary data were analyzed from 875 college students (75% female; Mage = 20.53, SD = 3.45) at a large Southeastern university. Participants completed a subscale from the newly developed the Sociocultural Influences Towards Healthy Weight Scale, used to evaluate discourse and perceived pressure from medical professionals to maintain a healthy weight. They also completed the Attitudes Towards Obese People Scale and the Eating Disorder Diagnostic Scale for DSM 5. Data revealed that pressure to maintain a “healthy” weight from medical professionals significantly predicted attitudes towards overweight people ( $\beta = -.17, p < .001$ ) and eating disorder symptoms ( $\beta = .38, p < .001$ ), such that greater perceived pressure from medical providers was associated with more negative attitudes towards overweight individuals. Furthermore, attitudes toward overweight individuals were found to moderate the relationship between perceived pressure from medical professionals to maintain a “healthy” weight and eating disorder symptoms, such that the relationship was stronger for individuals with more negative attitudes toward overweight individuals compared to those with more positive attitudes. Findings suggest that medical professionals should focus on encouraging patients to engage in health-promoting behaviors and overall wellness rather than focusing on weight control.

*Learning Objectives:*

- ▶ Understand the relationship between perceived pressure from medical professionals to maintain a “healthy” weight, attitudes towards overweight individuals, and eating disorder symptoms.
- ▶ Review preliminary support for these relationships.
- ▶ Examine how attitudes towards obese people affect the relationship between pressure to maintain a “healthy” weight and eating disorder symptoms.

**S-079****Body Image’s Dimensions: Factors of Risk and Protectors**

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Eating Disorders (ED), such as anorexia and bulimia, are chronic disorders, which generate high costs of professional services, and whose incidence and prevalence has been fluctuating, sustained and with a tendency to increase in recent years. The objective of this study is to determine potential risk and protective factors related to body image (BI), that could be associated with the development of an ED in adolescent and young Chilean population. This cross-sectional, correlational study, evaluated 1449 subjects between 15 and 25 years old (43.41% male and 56.59% female) from different regions of Chile. Body image was measured with the Multidimensional Body-Self Relations Questionnaire (MBRSQ), and risk for ED with the Eating Disorder Inventory (EDI 3). Logistic regressions stratified by sex were used, adjusting the results by age, body mass index (BMI), socioeconomic level, family composition and paternal overweight. It was observed that risk factors for developing an ED, behaved differently according to sex. In women, “fitness orientation” was found to be a risk factor (OR = 1.724, 95% BI [1.256 - 2.366]), and in men, “physical fitness assessment” (OR = 1.425, 95% [1.006 - 2.017]). Regarding the protective factors, in both sexes it was observed that three of the dimensions that measure BI are protectors of being at risk of developing an ED. First, “health assessment” (OR = 0.510, 95% BI [0.346 - 0.752]) for men and (OR = 0.628, 95% BI [0.477 - 0.827]) for women, as well as “health orientation” (OR = 0.571, 95% BI [0.358 - 0.910]) for men and (OR = 0.466, 95% CI [0.305 - 0.654]) for women, and finally “physical fitness assessment” (OR = 0.716, 95% BI [0.534 - 0.943]). Food problems are becoming more frequent and it is necessary to understand them better, to develop strategies that allow early detection of subjects at risk of developing them. The present study provides information that contributes to the above, which is highly relevant considering the severity that these pathologies can reach, especially in young population and high socioeconomic level, which in Chile constitute groups at risk for this type of disorders.

*Learning Objectives:*

- ▶ Determine body image risk factors for a sample of Chilean youth.
- ▶ Determine body image protective factors for a sample of Chilean youth.
- ▶ Compare risk and protective factors of body image among men and women of a sample of Chilean youth.

**S-080****Body Dissatisfaction, Internalization of the Thin Ideal, and Subclinical Anorexic Symptomatology in Undergraduate Appalachian Women**

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Research identifies numerous sociocultural factors predicting body image concerns and eating pathology; one of these is thin ideal internalization (TII), the degree to which an individual internalizes what is deemed the socially desirable ideal body. TII has been found to relate to and predict body dissatisfaction (BD). According to a sociocultural theory of bulimic symptomatology, TII predicts bulimic symptoms, and this relationship is mediated by BD. It is thought that this is a pathway to the development of bulimic symptoms in women. However, this model has not been applied to anorexic symptoms. The current study sought to extend the findings of the aforementioned study from bulimic symptoms to anorexic symptoms in women at an Appalachian university. One hundred fourteen undergraduate students from a rural, southeastern university completed an online survey containing questionnaires about TII, BD, anorexic symptoms, and perfectionism. Of the sample, 108 (94.7%) were Caucasian, 5 (4.4%) were African American, and 1 (0.9%) was Hispanic or Latino. The average age of the women was 18.8 years (SD = 1.3), and the average BMI was 24.9 (SD = 5.6). We hypothesized that TII, as measured by the Sociocultural Attitudes towards Appearance Questionnaire – 4, would predict anorexic symptoms, as measured by the Eating Attitudes Test-26. It was also hypothesized that BD, as measured by the Body Shape Questionnaire – 34 and Body Image Avoidance Questionnaire, will be a mediator of this relationship. PROCESS, an SPSS macro capable of performing hierarchical linear regression and determining the size of total, direct, and indirect effects, will be used to determine mediation. Results showed partial support for the study hypotheses. TII did predict anorexic symptoms; however, BD partially mediated the relationship, rather than fully mediating the relationship. These findings can help guide future prevention strategies.

*Learning Objectives:*

- ▶ Evaluate the process of subclinical anorexic symptom development in an Appalachian sample.
- ▶ Determine possible prevention strategies for preventing anorexic symptoms.
- ▶ Comprehend the significance of sociocultural factors in predicting anorexic symptoms.

**S-081****Disordered Eating Behaviors and their Association with Psychological Variables and BMI among University Males from Mexico City**

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The purpose of this study was to identify the features associated with disordered eating behaviors (DEB) in college males. A survey was conducted on students enrolled at the Metropolitan Autonomous University, in Mexico City. The authors obtained informed consent from respondents and notified data confidentiality. The sample comprised 570 men (average age of  $21.2 \pm 3.3$  years) who responded to a battery of self-report questionnaires. Multinomial logistic regression was employed and two models were set up: Model 1, group without DEB vs. group with moderate frequency of DEB (MF-DEB), and Model 2, group without DEB vs. group with high frequency of DEB (HF-DEB). The prevalence of MF-DEB was 22.3% and 6.7% for HF-DEB. Model 1 suggests that the highest risk of DEB is observed in the condition of having been teased (OR=4.4;p=0.000;CI=2.37-8.37), higher body mass index (OR=2.1;p=0.000;CI=1.60-2.87) and thin-ideal internalization (OR=1.9;p=0.036;CI=1.04-3.47). In Model 2, an increased risk of DEB is seen in the variables of having been teased (OR=10.3;p=0.000;CI=4.32-24.73), higher body mass index (OR=3.5;p=0.000;CI=2.09-5.85) and drive for muscularity (OR=3.4;p=0.009;CI=1.35-8.54). Among men with MF-DEB, the thin-ideal internalization increased the risk of DEB, whereas drive for muscularity did not show a significant association with the risk of DEB. An analysis of the second model of men with HF-DEB showed that drive for muscularity was significantly associated with DEB. This finding may be related to the presence of men with different aesthetic ideals: men who want to be thin and those who wish to be muscular. In this study, men who wish to be muscular have a higher probability of DEB. The results of this research contribute with evidence that can be used in the inclusion of specific preventive features to each sex.

*Learning Objectives:*

- ▶ Find out associations of eating disorders behaviors with psychological variables among college males from Mexico City.
- ▶ Describe most relevant associations among eating disorders behaviors and psychological variables in college males from Mexico City.
- ▶ Estimate the prevalence of eating disorders behaviors in college males from Mexico City.

**S-082****The Relationship Between “Feeling Fat” and Weight-Gain Feedback in a non-Eating Disordered Female Sample: Clinical Perfectionism as a Related Variable****Jenna DiLossi, PsyD**Philadelphia College of Osteopathic Medicine,  
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Although previous research has focused on the vital role of Feeling Fat (FF) in eating disorder (ED) populations, research about this construct in non-ED populations is scarce. This current study examined FF regarding feedback type (i.e., weight reading or clothing size) and social context (i.e., alone or with peers present) through use of vignettes in a non-ED female sample. Additionally, clinical perfectionism was examined as a related variable within this relationship. Participants consisted of females (N = 111) ranging from 18 to 45 years of age, all of whom denied current and past ED diagnosis and treatment. FF was measured by Likert-type questions created by the researcher and another doctoral student (Killian, 2013), and clinical perfectionism was measured by the Clinical Perfectionism Questionnaire (CPQ; Fairburn et al., 2003). Participants accessed an online survey that randomly assigned them into two separate conditions, resulting in a one-way independent repeated-measures design. Results indicated a significant main effect for social context on FF scores ( $F = 20.47, p < .01, w_2 = .87$ ) and an insignificant interaction effect for feedback type ( $F = .50, p > .05, w_2 = .87$ ). Additionally, results indicated positive correlations between perfectionism and FF for weight readings ( $r = .61, p < .01$ ) and clothing size ( $r = .29, p < .05$ ). These findings suggest that social context is more impactful than feedback type in producing feelings of fatness. Furthermore, females are likely to experience more intense feelings of fatness when they receive weight-gain feedback in the presence of their peers than when alone. Findings also suggest a relationship between the intensity of FF and clinical perfectionism. Although limitations are present, this study was the first to examine FF based on feedback type and social context. Its findings offer suggestions for future research and implications for clinical practice.

*Learning Objectives:*

- ▶ Explain feeling fat as it relates to body image.
- ▶ Describe the relationship between feeling fat and weight feedback.
- ▶ Explain how clinical perfectionism might increase one's degree of feeling fat.

**S-083****Calorie Fear and Eating Disorder Pathology: Does Weight Suppression Matter?****Sasha Gorrell, MA<sup>1</sup>****Lisa M. Anderson, PhD<sup>2</sup>****Erin E. Reilly, PhD<sup>3</sup>****Lauren Ehrlich, MA<sup>1</sup>****Drew A. Anderson, PhD<sup>1</sup>**<sup>1</sup>University at Albany, State University of New York, Albany, NY, USA<sup>2</sup>University of Minnesota, Minneapolis, MN, USA<sup>3</sup>University of California, San Diego, CA, USA

For individuals with elevated eating pathology, knowledge of calorie content may lead to increases in negative affect and urges to engage in eating disorder (ED) behavior to mitigate distress. Negative response to caloric content may be exacerbated in individuals with increased history of dieting and elevated weight suppression (WS; calculated difference between an individual's highest weight since reaching adulthood and current weight) but to date, no work has investigated the specific role of WS in the link between negative affect related to high-calorie food consumption and ED pathology. The current study also included a strategy (mindfulness) that may aid in managing negative affect. In this investigation, 96 college undergraduates (50% female) consumed chocolate beverages described as either “High-Calorie” or “Low-Calorie,” based on random assignment. Each student then completed a mindfulness meditation task, after which participants completed assessment of disordered eating behavior and attitudes, and weight history. It was anticipated that individuals told their beverage was high-calorie would report greater overall ED pathology particularly among those with elevated WS. Regression analyses included WS as a moderator of relations between calorie condition (Low vs. High) and ED pathology (Eating Disorders Examination Questionnaire). The full model was significant,  $F(4,91) = 4.59, p > .001$ , with a main effect of sex,  $\beta = .75, t = 3.23, se = .23, p = .002$  and an interaction, Calorie condition X WS, with the effect of high calorie condition on ED pathology significant for those with either low or high WS,  $\beta = -.06, t = -2.60, se = .02, p = .01$ . Post-hoc analyses conducted within sex did not indicate significant effects for women. In contrast, a significant interaction emerged for men,  $\beta = -.12, t = -2.62, se = .04, p = .01$ ; the effect of high calorie condition on ED pathology was significant among men with elevated WS (> 48th %ile). Study findings identify specific vulnerability for males and ED pathology, and suggest a need for further investigation of the role of WS in contributing to ED behavior and attitudes across sex.

*Learning Objectives:*

- ▶ Describe associations between negative affect related to calorie consumption, weight suppression, and eating disorder pathology.

- Discuss the role of weight suppression as a potential risk factor for eating pathology in males.
- Consider specific factors unique to gender that may contribute to vulnerability for eating disorder pathology.

### S-084

#### An Investigation of the Intersection between Perfectionism and Sociocultural Idealization of Thinness on Disordered Eating Symptoms

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The idealization of thinness is ubiquitous in Westernized cultures; however, only some females internalize the thin-ideal and even fewer develop disordered eating. Perfectionism is a key personality trait that may intersect with sociocultural effects (e.g., pressures for thinness; thin-ideal internalization) to heighten vulnerability to disordered eating. Moreover, perfectionism and sociocultural factors could interact to influence individual differences in disordered eating (i.e., moderation) and/or sociocultural factors may serve as intervening variables that help explain the relationship between perfectionism and disordered eating (i.e., mediation). The current study aimed to test these two theoretically plausible hypotheses to better understand how perfectionism may influence the development of disordered eating within a context of sociocultural idealization of thinness. Participants were 204 female college students. The Eating Disorder Examination Questionnaire was used to assess overall disordered eating symptoms. Perfectionism was assessed with the Multidimensional Perfectionism Scale. Pressures for thinness and thin-ideal internalization were assessed with the Sociocultural Attitudes Towards Appearance Questionnaire. Three facets of perfectionism (personal standards, concern over mistakes, and doubts about action) were significantly correlated with disordered eating and each sociocultural variable, and thus, were used in subsequent analyses. Results revealed minimal evidence to support interaction effects between facets of perfectionism and sociocultural variables on disordered eating. Instead, sociocultural variables fully mediated the effects of each facet of perfectionism on disordered eating. Taken together, findings highlight that disorder-specific risk factors (i.e., sociocultural constructs) likely serve as key mechanisms by which non-specific transdiagnostic risk factors (i.e., perfectionism facets) influence disordered eating symptoms in women.

#### Learning Objectives:

- Describe relationships between perfectionism, sociocultural factors, and disordered eating symptoms.
- Recognize that perfectionism is a non-specific transdiagnostic factor that may intersect with disorder-

specific factors (e.g., pressures for thinness, thin-ideal internalization) to predict disordered eating symptoms.

- Understand that findings point to sociocultural factors serving as mediators in the relationship between perfectionism and disordered eating.

### S-085

#### Cross-sectional and Longitudinal Associations between Overweight/Obesity and Eating Disorder Risk among Collegiate Athletes

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The purpose of this study was to examine cross-sectional and longitudinal associations between overweight/obesity and eating disorder risk among collegiate athletes. This study used data from male (52%) and female (48%) athletes across fourteen sports at a Midwestern university. Eating disorder risk was assessed in 2013 and 2014 fall semesters via a screening tool comprised of 23 items modified from the Female Athlete Screening Tool and the Female Athlete Triad Screening Questionnaire. An eating disorder risk score was calculated, with possible scores ranging from 23 to 82 and higher scores indicating higher eating disorder risk. Body mass index (BMI) was calculated via measured height and weight obtained in 2013, and athletes with a BMI  $\geq 25$  kg/m<sup>2</sup> were classified as having overweight/obesity. In cross-sectional analyses (N = 362), linear regression models were adjusted for sex and participation in weight- or body-focused sports (i.e., endurance, weight class, or aesthetic sports). In longitudinal analyses (N = 156), models were additionally adjusted for baseline eating disorder risk score. At baseline, 32.3% of athletes were classified as having overweight/obesity and the mean eating disorder risk score was 31.83 (standard deviation = 6.88), with scores ranging from 23 to 56. Overweight/obesity was cross-sectionally ( $\beta = 4.78, p < .001$ ) and longitudinally ( $\beta = 2.18, p = .01$ ) associated with higher eating disorder risk score. The findings from this study highlight the importance of eating disorder risk screening for athletes of all BMI categories and identify higher-weight athletes as a population at elevated risk.

#### Learning Objectives:

- Describe the role of overweight/obesity in eating disorder risk among collegiate athletes.
- Recognize the importance of studying male athletes in addition to female athletes.
- Consider the implications of overweight/obesity classification in an athlete population.

**S-086****Perceived Impact of Negative Appearance Comments and Eating Pathology in Ethnically Diverse Women: The Mediating Role of Thin Ideal Internalization**

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The harmful effects of weight-based teasing during childhood/adolescence on body image and eating pathology are well documented. Limited research has focused on the perceived impact of negative appearance comments (e.g, being upset/bothered by these criticisms) experienced in young adulthood and mechanisms contributing to poor outcomes, especially among ethnic minorities. The current study examined thin ideal internalization as a mediator of the relationship between the perceived impact of negative weight/shape commentary and eating pathology in ethnically diverse young adult women. The sample consisted of 262 women (60.7% ethnic minority) aged 18 to 26 ( $M = 19.35$ ,  $SD = 1.49$ ) with a mean body mass index of 24.38 ( $SD = 4.81$ ) in the Midwestern and Southeastern U.S. regions. Participants completed the Negative Weight/Shape Commentary subscale of the Verbal Commentary on Physical Appearance Scale, the Internalization - Thin/Low Body Fat subscale of the Sociocultural Attitudes Towards Appearance Questionnaire-4, and the Eating Disorder Examination-Questionnaire. SPSS PROCESS macro with bootstrapping was used to test the mediation effect of thin ideal internalization on the relationship between negative weight/shape commentary and eating pathology. The perceived impact of negative weight/shape commentary indirectly influenced eating pathology via the effect on thin ideal internalization,  $F(2,259) = 77.25$ ,  $p < .001$ ,  $R^2 = .374$ . As the negative perceived impact of negative weight/shape comments increased by one point, eating pathology increased by 3.79 points through the effect of thin ideal internalization ( $ab = 3.79$ ,  $p < .001$ , 95%CI [2.52,5.25]). A greater negative perceived impact of negative appearance commentary also directly predicted more eating pathology ( $c' = 6.25$ ,  $p < .001$ ). Results suggest that levels of thin ideal internalization may increase in ethnically diverse young women after experiencing weight/shape commentary that they perceive as highly negative, and this increase in thin ideal internalization predicts eating pathology. Research should further examine the role of thin ideal internalization in this context as such research may help inform intervention efforts for reducing the impact of negative appearance commentary on eating pathology.

*Learning Objectives:*

- ▶ Describe perceived impact of negative weight/shape commentary.
- ▶ Explain the role of thin ideal internalization in the association between perceived impact of negative weight/shape comments and eating pathology in ethnically diverse women.
- ▶ Explain the relationship between perceived impact of negative weight/shape commentary and eating pathology in ethnically diverse women.

**S-087****Compulsive Exercise as a Predictor of Longitudinal Eating Disorder Characteristics in an Adolescent Population Sample**

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Compulsive exercise (CE) is a common feature prevalent in eating disorders (EDs), known to be associated with ED onset, development and maintenance. As EDs have a peak onset in adolescence, we examined CE as a longitudinal predictor of ED behaviors and cognitions in an adolescent community sample. Adolescents ( $n = 4,054$ ) enrolled in the Avon Longitudinal Study of Parents (ALSPAC) responded to self-report questionnaires at ages 14 and 16 on CE, ED behaviors (fasting, purging, binge eating), and cognitions (body dissatisfaction, thin idealization, pressure to lose weight, and pressure to increase muscle). The longitudinal association between CE and EDs at age 16 was measured using multivariate logistic regression techniques. CE at age 14 significantly predicted ED behaviors at age 16, including fasting in both girls (OR: 1.84; 95% CI: 2.01; 4.9) and boys (OR: 4.84; 95% CI: 1.58; 14.87) and purging in girls (OR: 2.94; 95% CI: 1.69; 5.14). In whole group analyses, CE also significantly predicted self-reported binge eating (OR: 2.34; 95% CI: 1.57; 3.50) (all  $p < 0.001$ ). These results remained significant when controlling for both current BMI and the presence of ED behaviors at 14 years. This study found CE to be strongly predictive of later ED behaviors in a large adolescent community sample. Our findings underscore the importance of identifying and assessing CE not only in clinical samples but also in population-based samples.

*Learning Objectives:*

- ▶ Identify the role of compulsive exercise in relation to eating disorder behaviors and cognitions.

- Understand compulsive exercise as a significant predictor of eating disorder symptoms.
- Understand the need of studying compulsive exercise in adolescents across the population.

**S-088****Dieting Behavior and Anger Suppression in Sample of Russian Women with Eating Disorders**

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Gender inequality creates an environment where anger suppression is the desired behavior in women. In Russian culture anger is traditionally regarded as a non-feminine emotion and females have more difficulty adaptively expressing anger. Research data demonstrate that anger is a particularly difficult emotion for people with eating disorders (ED): they have higher levels of anger but are less likely to express it. We assume that dieting is one of the forms of emotional regulation helping to control and regulate anger and other emotions. The aim of our research was to investigate the correlation of anger, dieting behavior and disordered eating in Russian women. We examined 313 female patients with binge eating disorder, bulimia nervosa, and OSFED. Methods used for assessment of our sample included NVM (Dutch personality inventory, a variation of MMPI), DEBQ (Dutch Eating Behaviour Questionnaire), EAT-26 (The Eating Attitudes Test), IES-2 (The Intuitive Eating Scale-2). Statistical analysis (Kruskal-Wallis criterion) shows that women with the highest level of anger have the highest points on scales “dieting” ( $\chi^2 = 17,036$ ;  $p = 0,002$ ), “bulimia and food preoccupation” ( $\chi^2 = 27,333$ ;  $p = 0,000$ ), as well as bigger general load of symptoms of eating disorders ( $\chi^2 = 21,350$ ;  $p = 0,000$ ) combined with emotional eating ( $\chi^2 = 20,560$ ;  $p = 0,000$ ), eating in the absence of physical hunger ( $\chi^2 = 19,265$ ;  $p = 0,001$ ), lack of trust to inner signals of hunger/fullness (on the level of tendency -  $\chi^2 = 8,767$ ;  $p = 0,067$ ) and low congruence of food choice ( $\chi^2 = 9,911$ ;  $p = 0,042$ ). These findings demonstrate that women with higher level of anger use dieting behavior to control and regulate socially unaccepted emotion of anger more often. In short term perspective, they receive double social reinforcement. First, they are approved for anger suppression, second - for an attempt to lose weight, cause dieting behavior is assumed in Russian culture an inherent component of femininity. In the long run dieting behavior and suppressed emotions lead to the development of disordered eating patterns (especially bulimic episodes and episodes of emotional overeating) and also distorts the ability to recognize signals of hunger and fullness which finally leads to inability to eat intuitively.

*Learning Objectives:*

- Describe the correlation between higher anger levels and dieting behavior.
- Describe the role of dieting behavior as a emotion regulation instrument for cultural inappropriate emotions (anger in women).
- Describe the relationship between distorted eating behavior and anger suppression.

**S-089****Objectification Theory in a Multi-ethnic Sample: An Evaluation of Body Shame Operationalization as a Mediator of Self-objectification and Eating Disorder Pathology**

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Research supports the mediational role of body shame in the association between self-objectification and eating disorder (ED) pathology in cross-sectional models, but largely in Caucasian samples. Additionally, researchers have raised concerns regarding the operationalization of body shame. The present study aimed to: 1) evaluate this model in a large, multi-ethnic sample, and 2) investigate two measures of body shame that tap different dimensions of this construct. Participants were 321 women recruited via online snowball sampling, ranging in age from 18-70 years, who completed measures of self-objectification and body shame (based on the Objectified Body Consciousness Scale; OBCS), a phenomenological measure of body shame (PBSS), and ED pathology (Eating Disorders Examination-Questionnaire; EDEQ) at baseline, and 3- and 6-month follow-up. We conducted cross-sectional moderated mediation models with the OBCS body shame subscale and the PBSS as mediators of the relation between body surveillance and EDEQ at each time point. Results indicated ethnic status was not a moderator in any model (all  $p$ 's > .05). At baseline, the indirect effect between body surveillance and the EDEQ was significant for the PBSS (95% CI [.27, .43], 43.2% mediated) and OBCS body shame (95% CI [.20, .37],

35.6% mediated), and this model predicted 73.7% of the variance in the EDEQ. Results held at 3-months for the PBSS (95% CI [.28, .45], 46.7% mediated) and OBCS body shame (95% CI [.15, .32], 29.8% mediated), and at 6-months (PBSS: 95% CI [.28, .48], 47.9% mediated; OBCS body shame: 95% CI [.13, .31], 27.3% mediated). Models predicted 68.0% and 73.5% of the variability in the EDEQ at 3- and 6-months, respectively. In sum, mediation models were similar across ethnic status, and models were a robust predictor of ED pathology. The PBSS was a stronger mediator of this relation, which may tap a dimension of body shame that better reflects the construct described in objectification theory.

*Learning Objectives:*

- 1 Identify and describe the concerns regarding the operationalization of body shame in objectification theory.
- 1 Understand the application of objectification theory in a multi-ethnic sample.
- 1 Evaluate the utilization of various measures of body shame in the context of objectification theory.

**S-090 - Poster Withdrawn**

**S-091  
Self-compassion as a Mediator of Experiential Avoidance and Disordered Eating**

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Individuals diagnosed with eating disorders (ED) frequently avoid aversive stimuli (i.e., experiential avoidance), which has been noted to predict disordered eating, body avoidance, and dissatisfaction and argued to enable maintenance of EDs. It is important for researchers to better understand the relationship between experiential avoidance and eating disorders, particularly factors that might explain this relationship more clearly. One factor may be self-compassion since research indicates that greater self-compassion for oneself is associated with less avoidance behaviors as well as less disordered eating and body dissatisfaction. This study investigates whether self-compassion might explain (i.e. mediate) the relationship between experiential avoidance and disordered eating. One-hundred forty-two female participants were recruited from a Midwestern university and completed the Self-Compassion Scale, Acceptance and Action Questionnaire-II (AAQ-II, a measure of experiential avoidance), and the Eating Disorder Evaluation-Questionnaire (EDE-Q; a measure of disordered eating). A mediation analysis was

completed using a bootstrapping procedure in AMOS with 5000 iterations. Results indicated that AAQ-II scores significantly predicted disordered eating,  $\beta = 0.41$ , 90% CI = 0.29 - 0.52,  $p < 0.001$ . There was a significant indirect effect between the AAQ-II and EDE-Q with self-compassion as a mediator ( $\beta = 0.26$ , 90% CI = 0.15 - 0.37,  $p < 0.001$ ). There was not a significant direct effect when self-compassion was added to the model ( $\beta = 0.15$ , 90% CI = -0.01 - 0.31,  $p = 0.13$ ) suggesting full mediation. The overall model explains 30% of the variance in EDE-Q scores and revealed that although experiential avoidance predicts disordered eating, self-compassion helps to explain this relationship more efficiently. These results have clinical implications and suggest that it may be beneficial to assess changes and encourage a growth in self-compassion throughout treatment.

*Learning Objectives:*

- 1 Understand the relationship between experiential avoidance and eating disorder symptoms.
- 1 Evaluate protective factors against disordered eating.
- 1 Consider how self-compassion may explain the relationship between experiential avoidance and eating disorder symptoms.

**S-092  
Responses to Interoceptive and Nociceptive Homeostatic Perturbations in Eating Disorders**

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Individuals with eating disorders (ED) often report heightened discomfort with interoceptive sensations. However, few studies have systematically investigated interoceptive sensory processing beyond the gastrointestinal system, particularly in response to physiological perturbations. Findings on nociceptive sensation are mixed, with observations of greater tolerance for cold pain but also a lower pain threshold on the cold pressor test. No studies have examined respiratory sensation during the inspiratory breath holding test. The present study therefore examined whether individuals with a current or prior ED show differences in the responses to acute modulation of nociceptive or dyspnea sensations. ED subjects were identified by structured clinical interview (MINI 6.0 or 7.0). The ED sample included 24 participants (23 female, mean age = 26 +/- 7 years, mean BMI = 21.3 +/- 2.8) who

were individually matched on age, sex, and BMI to a healthy comparison (HC) sample of 24 individuals (23 female, mean age = 25 +/- 7 years, mean BMI = 22.9 +/- 3.2). Nociceptive perturbation consisted of a cold-pressor test (2-minute maximum duration). Dyspnea perturbation consisted an inspiratory breath-holding test (2-minute maximum duration). Stress, unpleasantness, and sensation intensity ratings were collected during each test. We predicted that ED individuals would report higher ratings in all three measures, indicative of greater discomfort with body sensations. Using one-sided t-tests, we found that the ED group rated their stress to be significantly greater than HCs during the breath hold task ( $t(45) = 1.84, p=0.036$ .) and greater in the cold pressor task ( $t(44) = 1.54, p = 0.06$ ). However, there were no significant differences in the ratings of intensity ( $t(89) = 0.52, p=0.52$ ) or unpleasantness ( $t(91) = 0.59, p = 0.28$ ) across both tasks combined, or individually (all  $p$ 's >0.05). These results suggest that exaggerated interoceptive discomfort in ED may extend to nociceptive and dyspnea signals, but in a manner independent of stimulus magnitude. While this study is the first to examine nociceptive and dyspnea processing in individuals with eating disorders, further studies are required to determine whether the observed stress responses are due to homeostatic (reactive) vs. allostatic (prospective) dysregulation.

*Learning Objectives:*

- 】 Describe differences in processing of homeostatic threat between eating disorders subjects and healthy subjects.
- 】 Understand methods of inducing interoceptive and nociceptive homeostatic challenge in healthy and eating disorders participants.
- 】 Assess the differences between stress, discomfort, and intensity ratings in response to homeostatic perturbations.

### S-093

#### The Relationship of Disordered Eating Behaviors with Alcohol Consumption, Substance Abuse, Depression and Body Mass Index among College Students

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The purpose of this study was to analyze the association of disordered eating behaviors (DEB) with alcohol consumption, substance abuse, depression symptoms and body mass index (BMI) among fist-year college

students. A cross-sectional study was carried out on 2797 freshman students, 1173 (42.8%) men and 1565 /57.2%) women (average age  $20 \pm 2.5$ ), at the Autonomous Metropolitan University in Mexico City. Participants answered an online questionnaire (Risk Eating Behavior Questionnaire; CES-D Depression Scale; and questions regarding substance abuse); weight and height were measured to calculate BMI. The prevalence of moderate risk (score 7-10 points) of DEB was 15.1% and of high risk (score > 10 points) of DEB was 5.9%; in men 13.5% and 3.3%; in women 16.3% and 8%, respectively. Multinomial logistic regression was used to assess the association of DEB (both in moderate risk and high risk individuals) with study variables. In women, substance abuse (OR=1.73,  $p=0.01$ ), prior psychological treatment (OR=1.53,  $p=0.026$ ) depression symptoms (OR=1.87,  $p=0.0004$ ), and BMI  $\geq 25$  kg/m<sup>2</sup> (OR=2.72,  $p<0.0001$ ) were associated with moderate risk of DEB, whereas in men the associations were observed with depression symptoms (OR=1.69,  $p=0.03$ ) and BMI (OR=3.09,  $p<0.0001$ ). Regarding high risk of DEB, in women, the associations were observed with substance abuse (OR=2.61,  $p=0.0009$ ), depression symptoms (OR=1.85,  $p=0.01$ ), and BMI (OR=3.05,  $p<0.0001$ ); in men, the associations were observed with depression (OR=4.59,  $p=0.004$ ) and BMI (OR=7.36,  $p<0.0001$ ). Particularly in women, an association was observed between disordered eating behavior and alcohol consumption ( $\geq 5$  drinks/occasion),  $p=0.0007$ . Students with disordered eating behaviors had greater possibility of substance abuse, developing depressive symptoms and higher BMI. This findings suggest that comorbid problems should be included in prevention programs aimed to development of healthy eating.

*Learning Objectives:*

- 】 To understand the high prevalence of disordered eating behaviors among non-clinical young population.
- 】 To recognize the association between disordered eating behaviors and relevant comorbidities.
- 】 To acknowledge differences and similarities of these behaviors among men and women.

### S-094

#### Disordered Eating Behavior, Depression and Food Choice in College Students

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The purpose of this study was to analyze the association of disordered eating behaviors (emotional and loss-

of-control eating) with depression symptoms and the preference for certain foods among first-year college students. A cross-sectional study was carried out on 1,047 freshman students, 40.5% men and 59.5% women (average age  $19.6 \pm 2.4$  years), at the Autonomous Metropolitan University in Mexico City. Participants answered an online questionnaire (EADES -The Eating and Appraisal Due to Emotions and Stress Questionnaire; CES-D Depression scale and Food Frequency Questionnaire). The prevalence of emotional eating was 38.3%, in men 22.9% and in women 48.8%. About a quarter of participants had a positive response to the questions: "I feel out of control when I eat" (22.4%); "It is hard for me to stop eating even though I feel full" (25.5%); "I don't have control over how much I eat" (27.2%). Emotional eating was associated with higher depression score in both men (OR=2.25,  $p=0.005$ ) and women (OR=1.94,  $p=0.001$ ). In women, emotional eating was also associated with higher consumption of high-sugar foods (OR=1.83,  $p=0.0024$ ), sweetened drinks OR=1.61,  $p=0.01$ ), fast food (such as hamburgers, fried chicken, pizza or sausages), OR=2.19,  $p=0.0001$ , and fried food (such as potato chips, corn chips and tortilla chips; French fries, fried pork rinds, fried bananas), OR= 1.81,  $p=0.001$ . Loss-of-control- eating (I don't have control over how much I eat) was associated with depression symptoms in both men (OR=2.35,  $p=0.0008$ ) and women (2.43,  $p<0.0001$ ); and body mass index (BMI  $\geq 25$ ) in men (OR=1.87,  $p=0.0037$ ) and in women (OR=2.11,  $p=0.0002$ ). In addition, in women loss-of-control- eating (I don't have control over how much I eat) was associated with greater consumption of high-sugar food, OR=1.97,  $p=0.0004$ . Disordered eating behaviors were associated with higher depression score in college students. Particularly in women, emotional and loss-of-control eating were associated with higher consumption of foods high in fat and sugar.

*Learning Objectives:*

- ▶ To identify disordered eating behaviors (emotional and loss-of-control eating), depression symptoms and frequency of unhealthy food consumption in first-year college students.
- ▶ To recognize the association of disordered eating behaviors with depression and unhealthy food consumption.
- ▶ To understand differences on eating behaviors and associated variables by sex.

**S-095**  
**The Longitudinal Influence of Anxiety on Anorexia Nervosa Onset and Maintenance: A Systematic Review- Poster Withdrawn**

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Several accounts of anorexia nervosa (AN) hold anxiety as a factor central to the aetiology of the AN, which has implications on recommendations for how the disorder should be treated. The current systematic review aims to aggregate findings of longitudinal investigations into the effect of anxiety on both the development and maintenance of AN. Thirteen articles were identified as eligible for the review, following searches of three databases (Medline, PsychInfo and Embase). Four studies were concerned with whether anxiety pathology ( $n = 2$ ) or anxiety disorder diagnosis ( $n = 2$ ) predicted the onset of AN. The nine other studies assessed the ability of trait anxiety ( $n = 5$ ), anxiety pathology ( $n = 3$ ) or anxiety disorder diagnosis ( $n = 1$ ) to predict recovery from AN or AN severity. Collectively the findings support anxiety increasing the risk of AN onset, and predicting the severity of illness. Whether anxiety is a negative prognostic factor for recovery from AN is less clear however, and reasons for possible discrepancies in study outcomes will be discussed. How findings align with current theories of AN will also be considered, as will how the conclusions of the current review might be applied to prevention and treatment interventions.

*Learning Objectives:*

- ▶ Describe and critically evaluate the evidence for the role of anxiety in AN onset and maintenance.
- ▶ Understand the possible mechanisms and pathways by which anxiety operates to promote AN pathology.
- ▶ Consider the utility of adapting existing, or developing novel, prevention and treatment interventions for AN so that these may address anxiety, with an awareness of how such might be achieved.

**S-096**  
**The Role of Body Shame in the Relationship Between Depressive Symptoms and Eating Pathology In Young Women**

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This study examined the role of body shame in the relationship between depressive symptomology and two disordered eating (DE) outcomes: binge eating and dietary restraint among young women. 95 female undergraduates completed questionnaires evaluating depression, body shame, dietary restraint and binge eating. Non-parametric correlations and hierarchical regression analyses were conducted. Among the entire

sample, depression correlated with eating pathology (all  $p$ s  $< 0.01$ ). When divided by a median split, the relation between depression and dietary restraint was only significant among high-depression participants. The relation between depressive symptomology and binge eating was significant among low-depression participants only. Hierarchical regression analyses revealed significant models for both binge eating and dietary restraint (all  $p$ s  $< .0001$ ). Body shame was the only significant predictor of both DE outcomes, with depressive symptomology falling below significance (all  $p$ s  $> 0.1$ ). Further analyses revealed a stronger correlation between binge eating and shame among low-depression participants than among high-depression participants. Our hypotheses were partially supported: depressive symptomology more strongly correlated with dietary restraint among those reporting greater depression, and body shame appears to play a significant explanatory role in the relationship between depressive symptomology and DE. These results prompted further analyses suggesting that among low-depression participants, body shame is more strongly associated with binge eating than depression. Thus, among young women with less depression, body shame may be an indirect target to reducing eating pathology, while those with greater depression may need to address both depressive symptoms and body shame. These findings expand on previous research identifying depressive symptoms and negative body-related experiences as predictors of binge eating and dietary restraint.

*Learning Objectives:*

- 1 Understand the association between depression, body shame/other negative body-related experiences and disordered eating in non-clinical samples based on the current literature.
- 1 Explain the mechanistic role of body shame in the relationship between depressive symptomology and binge eating and dietary restraint.
- 1 Explain how the role of body shame differs between young women with higher depressive symptomology and those with lower depressive symptomology.

**S-097**

**Over-evaluation of Body Shape and Eating Disturbances: Testing the Meditational Role of Thin-ideal Internalization in Adult Female from Buenos Aires (Argentina)**

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Recent theoretical approaches to the etiology of eating disorders and body image disturbances have begun to focus on multifactorial models. The purpose of this study was to examine the meditational role of thin-ideal internalization between over-evaluation of body shape and risk attitudes for eating disorders (body dissatisfaction, drive for thinness and bulimic behaviors). The sample included 237 female university students from Buenos Aires (Argentina) aged between 18 and 34 ( $M = 23.35$ ,  $SD = 3.90$ ). Participants completed the following self-administered instruments: Sociodemographic Questionnaire, Beliefs About Appearance Scale, Sociocultural Attitudes Towards Appearance Questionnaire-3 and risk subscales of the Eating Disorder Inventory-3 (Drive for Thinness, Bulimia and Body Dissatisfaction). This model proposes that over-evaluation of body shape contribute to the development of risk attitudes for eating disorders. Additionally, the model suggests that thin-ideal internalization mediate this relationship. Pathways Analysis was used to test the model. Its fit was found to be adequate:  $\chi^2(1) = 0.20$ ,  $p = .656$ ,  $RMSEA < 0.001$ ,  $AGFI = 1$ . Structural equation modeling indicated that thin-ideal internalization mediated the effects of over-evaluation of body shape on risk attitudes. In addition, over-evaluation of body shape had also a direct influence on risk attitudes. This finding of significant paths was in line with previous research. The results indicated that increased over-evaluation of body shape was associated with increased thin-ideal internalization and both were associated with increased risk attitudes for eating disorders (body dissatisfaction, drive for thinness and bulimic behaviors). These results support the continued inclusion of media literacy training in both prevention and treatment programs.

*Learning Objectives:*

- 1 Examine the meditational role of thin-ideal internalization between over-evaluation of body shape and risk attitudes for eating disorders in female university students from Buenos Aires.
- 1 Demonstrate the importance of analyze multifactorial models.
- 1 Find out risk factors for eating disorders.

**S-098**

**“The Pressure to be Beautiful”: Preliminary Data on the Development of an Asian Beauty Ideal Measure and Correlates with Perceived Pressure**

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Since globalization in the East began, the Asian female body has been associated with postcolonial ideas of market economy, globalization, and national identity formation, which has influenced cultural expectations for beauty and have dictated formation of new behavioral patterns for Asian women to strive to meet (Luo, 2012). Research has shown that sociocultural pressures to be thin are associated with disordered eating and negative psychological well-being (Johnson et al., 2015, Rodgers et al., 2015). In addition to thinness, aspirations to attain beauty ideals, specifically valued in Asian cultures (e.g., youthfulness, facial characteristics, skin color) may have similar negative implications. The current ongoing study aims to pilot an Asian beauty ideal measure and to explore any correlations with perceived cultural and societal pressure to achieve those ideals. Five undergraduate female participants (Mage = 25.2, 80% Asian) were recruited from a large university in Hawai'i. The Aspects of Appearance Measure (AAM) was developed and administered to capture an individual's preference for particular Asian beauty ideals, and the Perceived Asian and Western Media Appearance Pressure Scales (PAWMAPS; Jackson, Jiang, & Chen, 2016) was utilized to assess perceived cultural and societal pressure from Asian and Western media. Current results indicate strong correlations between the new AAM and the Asian subscale of the PAWMAPS ( $r = .601$ ,  $R^2 = .36$ ) and between the AAM and the Western subscale of the PAWMAPS ( $r = .791$ ,  $R^2 = .62$ ). Similar to research on facial beauty in Asian media (Frith et al., 2005), these results suggest that there is a sociocultural pressure to achieve beauty ideals that go beyond just thinness. These results suggest that further research is needed to examine subscription to particular beauty ideals are related to body dissatisfaction and psychological well-being. Data collection is ongoing with an anticipated sample of 50 participants.

*Learning Objectives:*

- ▶ Describe additional risk factors for eating disorders.
- ▶ Consider other beauty ideals to negatively impact psychological well-being.
- ▶ Learn about a developed measure that captures Asian beauty ideals.

### S-099

#### Nutrition Status, Body Dissatisfaction and Risky Eating Behaviors in Nutrition Students

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Sociocultural pressure on college Nutrition students results in a high prevalence of body dissatisfaction that encourages the practice of risky eating behaviors (REB), regardless of their nutritional status. The main purpose of this study was to describe the relationship between body dissatisfaction, nutritional status and REB in Nutrition students. Cross-sectional, descriptive, prospective study in a sample of 370 nutrition students at a private university with a mean age of  $19.5 \pm 2.5$  years, 93.5% women and 6.5% men. Nutritional status, REB and body dissatisfaction were assessed. 81% of students had normal weight and 72.3% were dissatisfied with their body figure. Those who were obese, overweight and normal weight had a moderate risk of REB ( $p < 0.05$ ). The students who were satisfied had no risk of developing REB ( $p < 0.05$ ). Those who wanted thinner figures were at higher risk ( $OR = 2.97$ ,  $p < 0.05$ ), compared to those who wanted bigger figures ( $p = 0.76$ ). A higher BMI increased frequency of exercise, restrictive diets, binge eating and loss of control ( $p < 0.05$ ). It is necessary to develop interventions for improving body satisfaction in order to prevent risky eating behaviors in college students, with greater attention in careers such as Nutrition.

*Learning Objectives:*

- ▶ Assess body dissatisfaction in college students with regards to the nutritional status.
- ▶ Analyze the relationship of body dissatisfaction with risky eating behaviors (REB).
- ▶ Appraise the higher risk of eating disorders due to high prevalence of REB in Nutrition students.

### S-100

#### Restraint as a Moderator of Negative Affect and Food Consumption Rate

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Restraint is the intention to restrict food intake to control body weight or shape. Individuals with higher restraint are more susceptible to binge eating (BE), and consuming food more rapidly than normal is a common feature of BE episodes. Momentary increases in negative affect (NA) often precede BE episodes and precipitate overeating in those high on restraint. This study examined restraint as a moderator of the relationship between NA and consumption rate. We hypothesized that consumption rate would be faster among individuals who had undergone a NA induction and who were high in restraint compared

to those high on restraint in a control condition and those low in restraint. After a 12-hour overnight fast, participants ( $N = 75$ ; 72% women) recruited for the presence (37%) or absence (63%) of BE completed the Three-Factor Eating Questionnaire. Half of participants underwent a NA induction. All participants were then instructed to drink as much as they desired from a large cup containing 32oz (960 Kcals) of Boost meal replacement shake. Their consumption rate was quantified using the weight of the shake measured twice every second with a hidden scale. A generalized linear mixed model indicated a two-way interaction (restraint X time;  $\beta = .015$ ,  $t = 2.336$ ,  $p = .020$ ) while controlling for sex, BE status, and BMI. Individuals high on restraint consumed at a slower rate, but this was qualified by a three-way interaction (condition X restraint X time;  $\beta = -.021$ ,  $t = -2.551$ ,  $p = .011$ ), which indicated that individuals high on restraint receiving the NA induction consumed the shake faster. Consuming food more slowly may be a way that individuals try to limit their caloric intake; however, this is compromised in the presence of NA when they ironically consume faster. This study demonstrated that consumption rate might be one way that restraint can operate and fail. Future research on affect and restraint should measure consumption rate in addition to overall amount consumed.

*Learning Objectives:*

- 】 Define restraint and momentary negative affect and understand their relationship to binge eating.
- 】 Demonstrate how restraint and negative affect affect rate of food consumption.
- 】 Understand the importance of measuring complex relationships and associated features of binge eating in future studies examining eating rate.

### S-101 The Central Role of Disgust Versus Anxiety in Disorders of Food Avoidance

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Anxiety figures prominently in theoretical models of food avoidance; however, the role of disgust in food avoidance disorders has been somewhat understudied. Although individuals with clinical levels of severity of food avoidance

often experience comorbid anxiety, there is little evidence to suggest that repeated exposures to unfamiliar foods increases approach behavior. In this study, we consider the unique contributions of disgust and anxiety in predicting picky eating and avoidant restrictive food intake disorder (ARFID) in a sample of 2,002 adult volunteers (26% male) who filled out an online survey. Structural equation modeling was used to test a measurement model of latent disgust and anxiety factors as measured by self-reported frequency of disgust and anxiety reactions to new and disliked foods. Paths were added to examine the unique influences of disgust versus anxiety on picky eating and ARFID diagnosis. Results showed that the latent disgust factor was approximately five times more strongly related to picky eating and ARFID ( $B \approx 0.5$ ) than the latent anxiety factor ( $B \approx 0.1$ ). Furthermore, disgust was found to be a strong mediator of the association between anxiety and picky eating and ARFID diagnosis as well (indirect effect  $B \approx 0.4$ ), suggesting that anxiety may be associated with food avoidance at least in part due to increased feelings of disgust. Overall, these results suggest that disgust may play a prominent role in the etiology of food avoidance disorders. This research guides future treatment development and suggests that targeting disgust in addition to anxiety may be important.

*Learning Objectives:*

- 】 Understand the unique roles of disgust versus anxiety in food avoidance disorders.
- 】 Describe etiology of avoidant restrictive food intake disorder.
- 】 Consider role of disgust in treatment for food avoidance disorder.

### S-102 A Longitudinal Study on the Association Between Facets of Mindfulness and Disinhibited Eating

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Disinhibited eating (i.e., emotional and external eating), as well as associated features such as binge eating, bulimia, and eating concern are inversely associated with the mindfulness facets of acting with awareness, observing, and non-reactivity. However, it is unclear whether higher mindfulness is a precursor to lower disinhibited eating behaviors and symptoms or whether lower disinhibited eating behaviors and symptoms are a precursor to higher mindfulness (or both). In this study, we examined if the mindfulness facets of acting with awareness, non-reactivity, and observing prospectively predicted several disinhibited eating features (emotional eating, external

eating, bulimic symptoms, binge eating, and eating concern) and vice-versa across six-months. Young adult women (N = 300) completed measures of mindfulness and disinhibited eating at baseline and six months later. Non-reactivity inversely predicted binge eating ( $p = 0.002$ ) and bulimic symptoms ( $p = 0.005$ ) across six-months. Higher observing predicted higher external ( $p = 0.01$ ) and emotional eating ( $p = 0.02$ ) across six-months. In the opposite direction, disinhibited eating did not predict observing, non-reactivity, or acting with awareness. Interventions focusing on increasing non-reactivity could be effective in preventing and treating binge eating and bulimic symptoms.

*Learning Objectives:*

- ▶ Participants will learn about the different features of disinhibited eating (e.g., external eating, emotional eating, binge eating, bulimia, eating concern) and about the different facets of mindfulness.
- ▶ Following the presentation, participants will have a greater understanding of the relationship between mindfulness and disinhibited eating across time.
- ▶ Participants will learn how targeting specific facets of mindfulness could reduce disinhibited eating symptoms.

### S-103 Does Nutrition Knowledge Moderate the Association between Perfectionism and Shape/Weight Concerns?

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Perfectionism is commonly linked to the development of disordered eating. While some studies support perfectionism as a predictor of eating disorder symptoms, other studies fail to find a statistically significant association, suggesting a need to explore other factors that could be impacting this association. Research has found that individuals with eating disorders have more knowledge of sources of nutrients compared to controls, but that this knowledge tends to be selective and skewed towards maintaining the eating disorder. Thus, individuals with more nutrition knowledge may be more likely to respond to perfectionist tendencies by developing disordered eating. The current study examined nutrition knowledge as a moderator of the association between perfectionism and disordered eating attitudes. College women (N=122) completed questionnaires related to disordered eating, nutrition knowledge, and perfectionism. Perfectionism was associated with disordered eating ( $p < .01$ ), while nutrition knowledge was not found to be directly associated with disordered eating ( $ps > .05$ ). Results indicated that nutrition knowledge moderated

the association between global perfectionism and shape/weight concerns at a trend level ( $p = .065$ ). When analyzing the perfectionism subscales separately, nutrition knowledge significantly moderated the association between concern over mistakes and shape/weight concerns ( $p = .020$ ), such that women with more nutrition knowledge reported a stronger association between concern over mistakes and shape/weight concerns. Results are consistent with previous research suggesting that concern over mistakes may be more closely tied to disordered eating than other facets of perfectionism. Findings suggest that those with greater nutrition knowledge and greater concern over making mistakes may be more likely to develop disordered eating.

*Learning Objectives:*

- ▶ Evaluate the current literature on the association between perfectionism and eating disorders.
- ▶ Describe the role of nutrition knowledge in relation to disordered eating.
- ▶ Delineate risk factors for developing disordered eating through seemingly positive characteristics (perfectionism and greater nutrition knowledge).

### S-104 Biological, Psychological, Environmental and Familial Biomarkers Related to the Onset in Eating Disorders: Design and Baseline Results of a Control-case Study (ANOBAS).

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The low prevalence and the complexity in the development of and ED pose methodological challenges in the studies about the risk factors in this pathology. Pike et al. (2008) proposes to use a case-control design for this type of study. The choice of suitable control groups for these designs is important. The eating disorders' risk factor study (ANOBAS) is a case-control study with three control groups aiming to evaluate several variables related to the onset of this pathology. The aim was to illustrate the framework and the methodology behind the research questions, as well as describing general features of the

sample. We used a case-control design of 50 female adolescent with ED at onset matched by age and their parents' socioeconomic status with 40 patients with an affective disorder, 40 patients with asthma and 50 healthy controls (without pathology). Participants aged between 12 and 17 years. Diagnoses were completed with K-SADS interviews and an evaluation of biological, immunological, psychological, environmental and family markers. The results at baseline showed that adolescents with affective disorders differed adolescents with ED in the level of depression, socially prescribed perfectionism and anxiety. Regarding asthma and healthy group, these groups scored less in body dissatisfaction, self-oriented perfectionism and anxiety than patients with ED. The evaluation of the family variables showed a higher index of depression in the mothers of the affective disorder group while the emotion expressed is greater in ED. We did not found significant results in the other groups. The neurohormones (cortisol, T3,T4, leptin, soluble leptin receptor, adiponectin, peptide YY) results will be analyzed. In conclusion examining the factors at onset associated to each pathology allows improving the clinical diagnosis. In addition, it could reduce the prevalence of complete cases and allow offering adequate treatment at an early stage.

#### *Learning Objectives:*

- ▶ Following the paper, participants will be able to learn how to conduct empirical studies to identify risk factors in different domains at the beginning of the pathology (i.e., biological, family, psychosocial, cultural, etc.).
- ▶ Following the paper, participants will be able to understand the complex etiology of ED at the onset, thus, to identify proximal factors to improve diagnosis early.
- ▶ Following the paper, participants will be able to discriminate risk factors to improve the efficacy of prevention programs.

### **S-105** **Insecure Attachment and Binge Eating: The Mediating Role of Perfectionism**

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The purpose of this study was twofold: 1) to examine the relationships between attachment style, perfectionism, and binge eating, and 2) to explore the mediating mechanisms underlying these relationships. Whilst the association between insecure attachment and disordered eating behaviours is relatively well established, the examination of potential mediators has received minimal previous attention. A cross-sectional study of 313 young people

(85% female) aged 16-25 years old was conducted. An online questionnaire was used to collect self-report measures of insecure attachment to mother and father, perfectionism, and frequency of binge eating. Participants who reported at least one binge eating episode in the past 28 days were more likely to have higher self-oriented ( $t(314) = -3.42, p < 0.008$ ) and socially prescribed ( $t(314) = -3.59, p < 0.008$ ) perfectionism and to report greater levels of anxious attachment to father ( $t(245) = -2.83, p < 0.008$ ) than those who reported no binge eating. Mediation modelling revealed that socially prescribed perfectionism fully mediated ( $b = 0.10, 95\% \text{ CI } [0.02, 0.20]$ ), and self-orientated perfectionism partially mediated ( $b = 0.07, 95\% \text{ CI } [0.02, 0.16]$ ), the relationship between anxious father attachment and binge eating. The three other orientations of insecure parental attachment (avoidant father, avoidant mother, and anxious mother) were not significantly associated with the presence of binge eating. The results suggest that perfectionism and anxious attachment towards father may play a role in the aetiology of disordered eating, and may also be helpful targets for clinical intervention.

#### *Learning Objectives:*

- ▶ Explore what is known about attachment and binge eating.
- ▶ Investigate whether perfectionism mediates between attachment and binge eating in a young adult sample.
- ▶ Consider the implications of this for intervention approaches.

### **S-106** **Food Insecurity is Associated with Greater Eating Pathology and Objective Overeating**

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Food insecurity, the uncertain or limited availability of nutritionally adequate foods, has been associated with poorer mental health but its direct association with energy intake and eating behaviors is not well established. Two-hundred-ninety-seven volunteers (150m;  $38 \pm 12$ y) were admitted to our clinical research unit and completed the Food Security Short Form, Three-Factor Eating Questionnaire (TFEQ), Gormally Binge Eating Scale (BES), Figure Rating Scale (FRS), Perceived Stress Scale (PSS) and Inventory for Depressive Symptomatology (IDS-SR). A subgroup ( $n=82$ ) self-selected their food ad libitum for 3-days from a vending machine paradigm to measure

daily energy intake (kcal). We quantified objective overeating as the percentage of an individual's weight maintaining energy needs (%WMEN). Compared to those classified as food secure (FS;  $n=147$ ; 49%), those with food insecurity (FI;  $n=150$ ; 50%) had higher disinhibition ( $p<.0001$ ), hunger ( $p<.0001$ ) and BES scores ( $p<.0001$ ) but not cognitive restraint ( $p=.22$ ). They also reported a thinner ideal body image ( $p=.04$ ) and greater body dissatisfaction ( $p=.008$ ), perceived stress ( $p<.0001$ ) and depressive symptomatology ( $p=.0002$ ). Those with FI ate significantly more kcal ( $p=.01$ ) and had greater objective overeating (%WMEN,  $p=.0008$ ) compared to FS individuals. We observed, for the first time, that food insecurity is associated with overeating using an objective measure of food intake in a controlled inpatient setting, as well as with greater eating pathology and poorer mental health. These behaviors, combined with the chronic cycle between food availability and food scarcity may amplify susceptibility to overeating during times of unlimited access to food.

*Learning Objectives:*

- ▶ Assess eating pathology between food insecure and food secure individuals.
- ▶ Assess objective overeating in food insecure individuals during an ad libitum vending machine paradigm.
- ▶ Assess differences in depressive symptomatology and perceived stress in individuals with food insecurity.

### S-107

#### The Presence of Negative Emotional Eating and Lack of Emotional Clarity Relate to Positive Emotional Eating

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The precise mechanisms behind eating in response to positive and negative emotions are still somewhat unclear, especially regarding positive emotions. The aim of the current study was to investigate how positive and negative emotional eating relate to eating disorder related symptoms and emotion regulation difficulties. 548 women aged 15 – 61 ( $M = 9.68$ ,  $SD = 29.73$ ) filled out the Positive-Negative Emotional Eating Scale (PNEES), comprising two subscales – Positive emotional eating (PNEES-P) and Negative emotional eating (PNEES-N), Eating Disorders Assessment Scale (EDAS), and Difficulties in Emotion Regulation Scale (DERS). Preoccupation with body image and body weight, non-acceptance of emotional responses, and binge eating predicted PNEES-N, with the latter being the strongest predictor ( $\beta = .74$ ,  $SE = .03$ ,  $t = 24.03$ ,  $p < .001$ ). The presence of negative emotional eating ( $\beta = .27$ ,  $SE = .04$ ,  $t = 6.18$ ,  $p < .001$ ) and lack of emotional clarity ( $\beta = .16$ ,  $SE = .04$ ,  $t = 3.76$ ,  $p < .001$ ) predicted positive emotional

eating best ( $R^2 = 12.7$ ,  $F(2,547) = 39.76$ ,  $p < .001$ ). Our results indicate that positive emotional eating might share some overlapping features with negative emotional eating through emotion regulation difficulties. Specifically, poor interoceptive awareness of one's emotions could lead to eating when experiencing positive emotions. Further, the presence of positive emotional eating could enhance the tendency of negative emotional eating, which, in turn, is associated with eating disorder related features. Therefore, positive emotional eating as well as the regulation of positive emotional experience should receive further attention in designing prevention and intervention methods targeting emotional eating and binge eating.

*Learning Objectives:*

- ▶ Understand the association between positive emotional eating and emotion regulation difficulties.
- ▶ Understand the similarities between positive and negative emotional eating.
- ▶ Understand the differences between positive and negative emotional eating.

### S-108

#### Diversity of Profiles of Families with Anorexic Adolescents and its Association with the Severity of the Problem

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The goal of this study is to have a better understanding of the diversity of clinical profiles in families with anorexic adolescents and study the relationship between the severity of the clinical profiles of families and those of anorexic adolescents. Participants were 181 adolescents recruited in specialized care programs for eating disorders. Self-reported questionnaires were filled by adolescents two or three weeks after their admission to program. Data were collected to measure psychological and familial variables associated with anorexia nervosa. Latent class analysis (LCA) was used to identify family subgroups based on the severity of the problems in the family. Once the subgroups were identified, relationship with the severity of the clinical profiles of adolescent was studied. LCA analysis reveals that 4 subgroups of clinical profiles of families are identified based on the severity of the problems in the family. It appears that about 75% of the families of anorexic adolescents do not

present important difficulties. However, analysis shows that adolescents present a more severe psychological profile when the family have also a more severe clinical profile. On the other hand, there is no link with the adolescents' BMI. Relationship between family dysfunction and level of psychological dysfunction of the anorexic adolescents could not be ignored but it is not possible to determine whether it is the family problems that hinder the development of adolescents or rather the severity of the adolescents' eating disorder that affects the functioning of the family. Further longitudinal studies are needed to answer that question.

*Learning Objectives:*

- 】 Identify the diversity of familial profile of anorexia nervosa.
- 】 Understand the role of family on treatment of anorexia nervosa.
- 】 Associate the difficulties of family and familial profile.

### S-109 Obsessions, Compulsions, and Dietary Fat: Prognostic Implications in Anorexia Nervosa

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Identification of the factors that perpetuate illness and contribute to relapse is important in elucidating disease mechanisms in Anorexia Nervosa (AN). The goals of this study were to examine whether obsessionality, a commonly observed psychological feature of AN, is related to avoidance of dietary fat, a core behavioral symptom, and if these two measures are related to prognosis. We hypothesized that 1) obsessionality in AN will be associated with preference for low-fat foods, and 2) obsessionality and low-fat food preference will be associated with greater weight loss after hospital discharge. Participants were hospitalized females with AN (n=26), ages 16-25 years, and age-matched healthy volunteers (n=21). Participants completed the Obsessive Compulsive Inventory, revised (OCI-R) twice (for AN, upon admission and after weight normalization). AN also completed the Geiselman Food Preference Questionnaire (FPQ). Among AN, weight was assessed over 4 weeks after hospital discharge and weight slope was calculated. Post-treatment OCI-R was negatively correlated with fat preference score on the FPQ ( $r = -0.57$ ,  $p = 0.007$ ), such that higher obsessionality was associated with greater preference for low-fat foods. Both obsessionality and greater preference for low-fat foods were also associated with higher rates of weight loss

post discharge (FPQ:  $r = 0.568$ ,  $p = 0.011$ ; OCI-R:  $r = -0.51$ ,  $p = 0.014$ ). Obsessionality was related both to dietary fat preference and to weight-loss. These findings contribute to the data indicating that obsessive-compulsive features are an important dimension of AN, and may be important to understanding neural mechanisms and developing treatment targets.

*Learning Objectives:*

- 】 Understand the interaction between obsessive-compulsive features and anorexia nervosa.
- 】 Identify the impact of obsessionality on eating behavior, including dietary fat preference.
- 】 Appreciate the relationship between obsessive-compulsive features, eating behavior, and prognosis, and the impact this knowledge has on elucidating neural mechanisms and improving treatment targets.

### S-110 Body Checking and Body Avoidance in Individuals with High Fit-Ideal Internalization

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Sociocultural values and expectations about body shape and size have recently shifted towards incorporating muscle definition into the ideal body, now referred to as the fit-ideal. Research on the psychological impact of incorporating this fit-ideal has been mixed. Some studies have found associations between the fit-ideal and certain eating disorder risk factors, such as dieting behavior and compulsive exercise, while others have failed to show relationships between the fit-ideal and body dissatisfaction (Bell, Donovan, & Ramme, 2015; Harrison, 2000; Wasilenko, Kulik, & Wanic, 2007). The current research examined whether there is an association between internalization of the fit-ideal and body checking and body avoidance behaviors in 101 undergraduate women. The Sociocultural Attitudes Towards Appearance Questionnaire – 4 (SATAQ-4; Schaefer et al., 2015) was utilized to capture the internalization of the fit and thin ideals. The Body Checking Questionnaire (BCQ; Reas et al., 2002) was used to measure body checking, while the Body Image Avoidance Questionnaire (BIAQ; Lydecker, 2015) was used for body avoidance. Overall, the association between fit-ideal internalization and body checking was not significant ( $r = .05$ ,  $p = .66$ ), nor was the correlation between the fit-ideal and body avoidance ( $r = .01$ ,  $p = .96$ ). Twenty-eight participants (27.7%) had responses that were considered high internalization of the fit-ideal (scores in the upper quartile,  $> 18$ ). Four (11% of

the 28) of those participants with high internalization of the fit-ideal had scores in the bottom three quartiles for internalization of the thin-ideal, and one (<1%) had high internalization of the fit-ideal and scores in the bottom quartile for internalization of the thin-ideal, underscoring the typical positive association between the two ideals. Overall, the overlap between the two ideals underscores the need for future research to focus the impact of the two co-occurring. Additionally, future research should focus on whether manifestations of body checking behaviors in individuals with high fit-ideal internalization mirror those traditionally found among individuals who value thinness, or whether new checking behaviors emerge alongside this new ideal and thus warrant a new measure.

*Learning Objectives:*

- ▶ Discuss the overlap between fit- and thin-ideal internalization.
- ▶ Interpret the relevance of body checking and body avoidance to the fit-ideal.
- ▶ Appraise the appropriateness of current body checking measures for those who value muscularity.

**S-111**  
**Perceived Peer Dieting as a Predictor of Drive for Thinness at 10-Year Follow-Up**

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Previous research suggests perceived peer dieting, regardless of peer gender, is associated with increased drive for thinness in men, while women's drive for thinness is most strongly associated with perceived female peer dieting. However, it is unknown whether perceived peer dieting differentially predicts future drive for thinness between men and women. We ran a series of hierarchical regressions to determine the influence of perceived peer dieting on drive for thinness ten years later in men (n=592) and women (n=1,468) from three cohorts: late adolescent (mean age 20.0 years) to early adult (mean age 30.5 years), early adult (mean age 30.0 years) to middle adult (mean age 40.4 years), and middle adult (mean age 40.1 years) to late adult (mean age 50.5 years). After controlling for age, cohort, race/ethnicity, baseline drive for thinness, and BMI, only perceived male dieting at baseline was found to be a predictor of drive for thinness in men at ten-year follow-up (p=.04). Results suggest that the relevance of peer dieting diminishes over time for both men and women; however, for men, the percentage of male friends dieting predicts higher drive for thinness at follow-up.

*Learning Objectives:*

- ▶ Summarize the effects of perceived peer dieting on drive for thinness at ten-year follow-up, and how these effects differ between men and women.
- ▶ Identify drive for thinness at baseline and BMI as predictors for drive for thinness at a later date, regardless of gender.
- ▶ Summarize how the findings of the present study relate to previous cross-sectional research on perceived peer dieting and drive for thinness.

**S-112**  
**A Two-Week Family Intensive Program: Results from a New FBT Adjunct**

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Research suggests that family-based treatment (FBT) is the most effective treatment currently available for adolescents with anorexia nervosa, however a significant minority of adolescents do not respond to standard care. The Eating Disorder Team at The Children's Hospital at Westmead has designed a Two-Week Family Intensive Program; an outpatient treatment aimed to strongly enhance standard FBT and work intensely to help families progress in treatment. Families attend the program daily for 2 weeks, receiving two or more therapeutic sessions throughout the day as well as meal support from a multidisciplinary team. Treatment goals are targeted to the family and focus on supporting weight gain, improving family functioning, and transitioning back to weekly outpatient care. More than thirty families have completed the program to date, with more than a third from rural and regional areas. Data indicate that the program assists families to help their child gain weight, improve family functioning, manage distress more effectively, increase hope and efficacy at meal times and help young people return to peer relationships. Feedback from families indicates that the treatment is highly acceptable. While research is in the early stages, data is promising and indicates that this unique program allows for tailored short-term interventions resulting in families returning to, and receiving benefit from, standard outpatient FBT. The treatment has also been found to be particularly applicable to rural families as a means of accessing specialist eating disorder care. This FBT adjunct adds to the growing body of research exploring new treatment approaches and indicates the importance of increasing treatment intensity for some families who have not responded to standard outpatient care.

*Learning Objectives:*

- ▶ Evaluate the role of adjunct treatments in FBT.
- ▶ Assess the role of increasing treatment intensity to support families to progress in standard outpatient FBT.
- ▶ Develop ways of practically increasing treatment intensity in their own practice to support families to progress in standard outpatient FBT.

**S-113****Family Interventions in Adolescent Bulimia Nervosa: A Systematic Review**

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Family interventions are well established in the management of anorexia nervosa. Evidence regarding the use of family interventions for bulimia nervosa in adolescents is becoming more prevalent. However, to date, the main evidence base for the management of bulimia nervosa focuses on cognitive behavioural therapy. A systematic review was conducted on the use of family interventions for adolescent bulimia nervosa. Family interventions encompasses a variety of formats, and this review included family-based therapy or treatment, emotion-focused family therapy, modified or combined approaches including dialectical behavior therapy and multi-family therapy programmes. Systematic searches of CINAHL-Plus, ClinicalTrials.gov, Embase, PsycINFO, PubMed, Web of Science GreyLit.au were conducted on 9th July 2017. Following pre-determined inclusion criteria, 15 studies were identified for review, including 4 randomised controlled trials. The methodology of the existing evidence-base included limitations however, such as small sample sizes, large participant diversity and lack of controlled conditions. Preliminary research suggests that family therapy can be significant in reducing bulimic symptomatology, over other forms of established treatment. This was particularly true of research investigating the use of multi-family therapy, whose programmes were mostly still in the pilot study stage. The ability to draw conclusions about the use of family interventions in the treatment of bulimia nervosa in adolescents therefore appeared limited and highlighted a need for further research within this area. Potential mediators and moderators for family interventions is another future area of research as this will help in the understanding of the families for who family therapy would be most effective.

*Learning Objectives:*

- ▶ Describe the current status of the literature regarding family interventions for treatment of adolescent bulimia nervosa.
- ▶ Assess the efficacy of family intervention based on existing literature.
- ▶ Explain where further research is needed.

**S-114****A New Direction? Exploring the Effectiveness of Exposure and Response Prevention in the Treatment of Eating Disorders in Youth**

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Exposure and response prevention (ERP) is an effective treatment for obsessive-compulsive disorder (OCD) has been increasingly studied as a viable treatment for adults with eating disorders (EDs); however, there has been little investigation of this treatment among youth. The objective of the present research was to assess the effectiveness of an intensive ERP treatment program for youth with EDs. Patients (N = 118; M age = 15.8 years, SD = 1.9; M body mass index = 19.0, SD = 1.7; 85.6% female; 90.3% Caucasian) with a primary ED diagnosis were treated between September 2014 and July 2017 in a partial hospitalization program emphasizing ERP. Patients worked with a clinician to create an exposure hierarchy targeting common fear-evoking stimuli in the context of EDs, including feared eating scenarios (e.g., school cafeteria), body image triggers (e.g., wearing swimsuit), and foods associated with weight gain (e.g., pizza). Response prevention plans were also developed to efficiently decrease patients' engagement in safety behaviors (e.g., compulsive exercising). Patients were guided in completing three hours of ERP activities daily (Monday through Friday) under the guidance of program clinicians. The program also included a significant component of conjoint parent-child exposure activities, such as family meals out at unfamiliar restaurants or trying on new clothing at a department store. At pre and posttreatment, patients completed several measures assessing a variety of cognitive and behavioral ED features, including dietary restraint, concerns about weight and shape, preoccupation with eating-related thoughts, ritualistic eating behaviors, and body image distress. Repeated measures analyses demonstrated that on average, youth patients experienced significant reductions across all ED features assessed from pre to posttreatment (all p's < .05). Effect sizes were the largest for reductions in dietary restraint (d = .89), ritualistic ED behaviors (d = .77), and compulsive body checking (d = .73) and avoidance (d = .56). Global ED severity at pretreatment did not predict response on any of the outcome variables. Overall, ERP appears to be a promising intervention for

EDs in youth. Patients receiving an ERP-focused treatment experienced robust improvements across a diverse array of ED symptom domains.

*Learning Objectives:*

- ▶ Identify the need to develop and test novel treatment interventions for youth with eating disorders.
- ▶ Describe the implementation of exposure and response prevention for eating disorders in youth and the effectiveness of this approach.
- ▶ Apply exposure and response prevention treatment strategies to their youth patients with eating disorders.

**S-115**  
**In-Hospital Cognitive Remediation Therapy for Adolescents with Anorexia Nervosa: Preliminary Results from a Pilot Randomized Controlled Trial Protocol**

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Cognitive Remediation Therapy was developed as an adjunctive treatment to target a more inflexible and detailed oriented cognitive style often observed in individuals with anorexia nervosa. In this pilot and feasibility randomized controlled trial, we adapted an adolescent version of CRT for daily delivery while in hospital. Participants were randomized into one of three groups: standard care (Treatment as Usual), CRT + Contact Control, and CRT + Teach the Parent. The latter group includes a parent component wherein adolescents conduct mini-CRT sessions with parents. Preliminary feasibility results demonstrate an improvement in recruitment, adherence rates, and parental and participant feedback over the past year. To date, 153 eligible participants were identified; 30 consented and were enrolled. Reasons for not participating included difficulty accepting diagnosis, too much time commitment, and a sense of being overwhelmed. Adolescent participants were primarily female (86.2%). Mean age at baseline was 14.83 years (SD=2.38) with a range of 10-19 years, and an average BMI z-score of -1.35 (SD=1.21) at admission. To date, adolescents have been randomized as follows: TAU: (10), CRT+FFT: (8), and CRT+TTP: (12). Number of

CRT sessions completed ranges from 1-7. Adolescents who enrolled had a mean score of 3.09 (SD =1.86) on the EDE-Q Global. They also were more likely to be in the "contemplation" stage of readiness for change (33.3% of our sample). Retention analysis indicates 18 in active follow-up, 4 treatment completers, 4 drop-outs, and 4 lost to follow-up. Data collection will continue until the end of 2017. We will report feasibility data for the sample and present pilot outcome data. This study adds to the gap in quantitative studies of CRT in adolescents with eating disorders, specifically those with AN. Given the limited research in this population, this feasibility study enables us to ascertain how to better use the principles of CRT to improve patient outcomes.

*Learning Objectives:*

- ▶ Describe feasibility results including recruitment and adherence rates as well as parent and participant feedback over the past year.
- ▶ Summarize differences between groups during follow-up.
- ▶ Discuss the viability for CRT with parental involvement as a pre-treatment intervention.

**S-116**  
**Cognitive Reappraisal as a Moderator of Food Attentional Bias**

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Cognitive reappraisal (CR) is a cognitive regulation strategy aimed at changing how people think about certain stimuli in order to change their emotional impact. CR strategies have been used in research to try to change eating behaviors and other food-related responses. Instead of utilizing self-reported measures, recent studies have adopted more objective methods, such as neuro-imaging, to examine changes in brain responses to food following CR. This study is the first to use a behavioral measurement to examine the effect of CR on food attentional bias (FAB) in people with elevated FAB. It was hypothesized that CR would reduce FAB. Ninety-five participants were randomly assigned to one of three groups: CR, upregulation (UP) or controls (CN). All participants performed a computerized Visual Dot Probe (VDP) task using food stimuli to measure their FAB before and after the manipulation. The CR group recited five sentences aimed at curtailing the reward of high caloric food (e.g., "this is not good for me", "I will be satisfied now but in the long run I will regret eating this"). Participants in the UP group recited five sentences aimed at strengthening the reward of high caloric food (e.g., "This looks delicious", "I really want to eat this").

The CN group recited five mundane sentences about their day. Participants also self-reported on body image, disturbed eating, emotional regulation and BMI. People with elevated FAB had more disordered eating and lower emotional regulation than people low on FAB. A significant interaction was observed between group and time (pre/post-test), with the lowest FAB levels in the CR group following the manipulation, and the highest FAB levels in the UP group. People with FAB tend to have disordered eating and low emotional regulation. CR, a self-administered, easy-to-learn strategy, can be effective in reducing FAB. CR may therefore be an effective strategy for developing resistance to tempting food stimuli and curbing high caloric food intake. Being highly attentive to food cues may contribute to obesity. The attentional bias paradigm can be used to detect early signs of FAB, and evaluate FAB-related obesity interventions.

*Learning Objectives:*

- ▶ Following the training, participants will be able to explain what Food Attentional bias is and how it effects obesity.
- ▶ Following the training, participants will be able to explain what the Visual Dot Probe is and how it can help understand Food Attentional bias.
- ▶ Following the training, participants will be able to explain what Cognitive reappraisal is and how using this strategy might help lessen obesity.

### S-117 Multi-family Group Day Program for Adolescent Eating Disorders in an Australian Private Hospital: Clinical Outcomes and Musings.

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Multi-Family Therapy (MFT) involves working intensively with a collection of families with shared experiences in a group setting. The Adolescent & Young Adult Eating Disorder Day Program (DP) recently began offering a four day intensive program for patients (14 – 19 years) and their parents, followed by three monthly follow up days (or as required). MFT focuses on family strengths and resilience to enable parents to take a central role in tackling eating problems. It addresses problematic family interactions that have developed around the eating problems and focuses on normalisation of eating and return of healthy weight. MFT can be utilised as a standalone intervention to compliment current treatment in community. Clinical outcomes and remission rates from consecutive referrals and our service musings will be presented.

*Learning Objectives:*

- ▶ Understand the theoretical concepts underpinning Multi-family therapy.
- ▶ Gain an understanding of the implementation & delivery process of MFT.
- ▶ Evaluate and assess the outcomes of MFT in a day program context.

### S-118 Collaborative Synergy Improves Treatment in an Adolescent Eating Disorder Residential Program

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Chronic, complex eating disorders (EDs) are life-threatening psychiatric disorders that necessitate an interdisciplinary collaborative synergy. Traditionally, members of the medical team act as individual consultants, each providing separate recommendations to the care plan. In complex cases, this interferes with the provision of personalized treatment as essential clinical details are lost between conflicting consultants. This paper describes the collaborative approach of the medical sub-group of a larger interdisciplinary team in a residential program for adolescents with severe EDs. A pharmacist, nurse-practitioner (NP) and psychiatrist meet weekly, as a group and then at rounds with the patient and the whole interdisciplinary team, to review the adolescents' physiologic, pharmacologic and psychiatric needs. This enables a whole-person understanding of the mind-body-drug interactions of various interventions to better predict treatment success. For example, delayed gastric emptying may result in psychological and physical distress, but it may also reduce the absorption and subsequent effectiveness of psychopharmacological treatments prescribed to mitigate distress. Without collaborative synergy, each team member focuses on their area of expertise when assessing the clinical situation. The NP may initially address delayed gastric emptying with reassurance, allowing the resumption of normal eating to gradually improve gastric emptying over time, the psychiatrist may treat the psychological distress with an anxiolytic, and the pharmacist may focus on evaluating the appropriateness of various psychopharmacologic agents prescribed. These isolated strategies risk the erroneous conclusion that the medication was ineffective, when it was simply mal-absorbed. Rather than altering the psychotropic drug, the patient would be better served by treating the gastric emptying delay more actively. Thus, when treatment decisions are a product of thorough team

discussion, collaborative synergy is achieved, radically improving the problem-solving ability needed for optimal clinical outcome. This collaborative synergistic approach has produced both expected and unexpected positive outcomes. Overall, it has enhanced personalized care and potentiated treatment outcomes for these adolescents.

*Learning Objectives:*

- ▶ Describe what does collaborative synergy look like when applied to ED treatment.
- ▶ Explore the intersection between the mind, body and drug, and how collaborative synergy optimizes personalized care.
- ▶ Provide clinical examples to illustrate the expected and unexpected benefits of this form of collaboration.

### S-119 Exploring Provider Views on Involuntary Treatment for Eating Disorders

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This international study explored opinions of healthcare professionals on the role of involuntary treatment (IT) in eating disorders (EDs) using an online survey. The questionnaire asked general questions pertaining to the role, if any, of IT for ED management. Participants were health professionals who provided care for patients with EDs. The primary recruitment method was internet-based and the survey was open for 3 months. One hundred and seventy participants completed the survey (57% of those who initiated) and were retained for analysis. The majority were female (86%) and most were from Canada (65%) or the USA (29%). Participants from 12 countries responded. The majority of respondents were allied health professionals (68%), followed by physicians (22%). Regarding views on the role of IT, 54% of the sample felt that multiple reasons for IT have a place in ED care, whereas 43% felt IT should only be considered when the patient is medically unstable and the intent is to hospitalize and treat to medical stability. Two percent of participants felt IT should never be considered. Participants' patient population (youth vs adult vs all-ages) appeared to significantly influence IT answers ( $p=0.008$ ). Those treating youth were less likely than those treating adults (OR: 0.28 (CI 95%: 0.12-0.70)) or all-ages (OR: 0.36 (CI 95%: 0.17-0.77)) to respond that only medical stabilization,

rather than multiple reasons, should be considered for IT. Respondents treating adults were more likely to endorse IT based on acute medical risk while those treating youth were more likely to consider both psychological and medical risk ( $p=0.016$ ). Although this study sheds light on how ED clinicians view the role of IT in ED care, further research is required to better understand the complexity involved with this decision making. Examination of outcomes in patients with EDs who have been certified for treatment may help guide decision-making regarding IT across the developmental spectrum.

*Learning Objectives:*

- ▶ Gain a better understanding of providers' current views regarding the use involuntary treatment in patients with eating disorders.
- ▶ Recognize how patients' age can influence a provider's decision regarding involuntary treatment.
- ▶ Identify the need for further research to help inform the creation of eating disorders treatment guidelines including recommendations for involuntary treatment.

### S-120 Emotion-Focused Family Therapy as an Adjunct to Family-Based Treatment

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This presentation will outline the methodology for an international study aiming to identify an emotion-focused adjunct to outpatient family-based treatment (FBT). FBT currently has the most empirical support for its use with adolescents with anorexia nervosa (AN) in outpatient settings. However, FBT leads to rates of full remission in approximately 40% of patients. Thus, there is a need for effective forms of treatment for FBT non-responders. Families may struggle with a number of aspects of FBT, including the re-nourishment process in the home environment. While FBT provides a solid framework around physical recovery, there is less focus on managing the difficult emotions that often arise during refeeding. There is a need for a family-based approach that targets both the physical and the psychological aspects of recovery. To empower parents to take on their child's psychological recovery, Emotion-Focused Family Therapy (EFFT) has been developed. The purpose of the current study is to describe an adaptation to FBT that will include adding four sessions of EFFT after session four of FBT. These sessions will augment FBT by 1) introducing advanced caregiving skills to parents to manage the

often very distressing emotions that arise in their child during refeeding, and 2) supporting parents to manage their own emotions that fuel common recovery-interfering behaviors. After conducting qualitative interviews with certified FBT therapists to inform the implementation of the EFFT sessions, the study will recruit 25 adolescent patients with AN and their parents into treatment to assess the appropriateness, acceptability, and feasibility of the treatment. Initial effect sizes for changes in weight and eating disorder psychopathology will be assessed, as will parental accommodation and enabling behaviors, parental self-efficacy, carer fear and self-blame, and expressed emotion. This study will lay the groundwork for a larger study offering EFFT sessions to FBT non-responders.

*Learning Objectives:*

- 】 Describe the emotional aspects of FBT that families often struggle with.
- 】 Identify the ways in which EFFT can help parents manage these struggles.
- 】 Outline the methodology of a study proposing to add EFFT sessions as an adjunct to manualized FBT.

### S-121 Development of a Treatment Program Targeting Avoidant Restrictive Food Intake Disorder at a Pediatric Tertiary Care Center

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ARFID was found in 5-14% of children treated in inpatient ED programs. One recent longitudinal study in a pediatric hospital found that children diagnosed with ARFID were presenting younger, with longer hospital stays and increased use of enteral feeding methods, compared with peers diagnosed with AN. Our project aimed to develop a treatment protocol for ARFID in the pediatric psychiatric hospital setting to improve efficacy of multidisciplinary, family-centered interventions. Needs assessment was completed using an existing clinical database of 29 sequential pediatric ARFID patients between 5 and 17 years old (Mean age, 11.3 years, 58.6% male) presenting for assessment of suspected ARFID. Exploratory analysis was completed to examine correlations between factors affecting length of stay and treatment outcomes, and this data was used to develop a specific treatment track targeting pediatric ARFID. Pediatric ARFID pilot program will be implemented from September 2017

through February 2018. Pilot ARFID program efficacy is assessed using Behavioral Pediatric Feeding Assessment administered at the start, midpoint and completion of the 4-week program. The ARFID program is currently in pilot stages, including an ARFID specific history and diagnostic intake process, multidisciplinary interventions, and various therapy modalities targeting reduction in patient anxiety, increase in parenting skills and improved parental distress tolerance. Program evaluation data is currently being collected and results of 6-month pilot will be presented. Creating an ARFID specific treatment track for patients has improved the intake process, has decreased length of stay and enhanced treatment outcomes. Next steps include longitudinal data analysis of ARFID track program and expanding on this proposed treatment track for ARFID to include cultural considerations.

*Learning Objectives:*

- 】 Understand clinical symptoms of Avoidant Restrictive Food Intake Disorder (ARFID) and how these children present in the pediatric hospital setting.
- 】 Identify ARFID-specific treatment targets that improve clinical outcomes in pediatric the population.
- 】 Consider unique treatment challenges in delivering effective treatment to children suffering from ARFID.

### S-122 Correlation between Expressed Emotion and Parent Empowerment

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Previous research has indicated that parents who engage in high expressed emotion tend to have low levels of parental empowerment. In fact, high expressed emotion has been shown to be a negative indicator for Family-Based Treatment. However, data from approximately 500 patients participating in a higher level of care hospital family based treatment program produced the opposite outcome, that high-expressed emotion is positively correlated with parental empowerment. This paper will highlight these findings and discuss possible indicators for differentiation between parent empowerment and parent efficacy in eating disorder treatment, and propose that future clinical directions focus on parental efficacy rather than parental empowerment.

*Learning Objectives:*

- 】 Present findings on relationship between expressed emotion and parent empowerment.

- Discuss potential reasons for the positive correlation found between parental high-expressed emotion and parent empowerment.
- Suggest future directions for how to better use parental expressed emotion and parental/care taker dynamics to predict treatment outcomes.

### S-123

#### Changes in Meal-Related Anxiety Predict Treatment Outcomes in an Intensive Family-Based Treatment Program

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Meal-related anxiety in individuals with eating disorders is associated with reduced caloric intake and persisting eating-disordered behaviors, which may reduce the likelihood of attaining or sustaining remission. The current study is the first to examine changes in meal-related anxiety as a predictor of outcomes in the context of family-based treatment (FBT). A sample of 142 patients (primary diagnosis = anorexia nervosa [67%]), aged 8-24 ( $M=16.01$ ), who were enrolled in an FBT-based partial hospitalization program, rated anxiety before and after all treatment meals using the Subjective Units of Distress Scale (SUDS). Average SUDS ratings during the first ten days of treatment were used to estimate baseline meal-related anxiety, while averages for the last ten days of treatment were used to estimate end-of-treatment meal-related anxiety. Outcomes were measured using percent expected body weight (EBW), Eating Disorder Examination (EDE), and Eating Disorder Examination Questionnaire (EDE-Q) global scores at baseline and follow-up. Regression analyses suggested that, controlling for baseline EDE and EDE-Q scores, EBW, SUDS, and days in treatment, participants experiencing a greater reduction in pre-and post-meal anxiety endorsed fewer eating disordered symptoms on the EDE (pre-meal:  $t(4) = -3.31$ ,  $\beta = -0.35$ , 95% CI: -0.05, -0.01,  $p < 0.01$ ; post meal:  $t(4) = -3.97$ ,  $\beta = -0.39$ , 95% CI: -0.05, -0.02,  $p < 0.01$ ) and the EDE-Q at the end of treatment (pre-meal:  $t(4) = -5.82$ ,  $\beta = -0.62$ , 95% CI: -0.07, -0.03,  $p < 0.01$ ; post-meal:  $t(4) = -5.70$ ,  $\beta = -0.60$ , 95% CI: -0.06, -0.03,  $p < 0.01$ ). Reductions in pre-or post-meal anxiety did not predict EBW at end of treatment, which could be because FBT supports adequate food intake regardless of meal anxiety (i.e., parents ensure food intake). Findings suggest that reductions in meal-related anxiety may be an important predictor of outcomes in FBT, and future research is needed to examine if directly targeting meal anxiety may enhance outcomes.

#### Learning Objectives:

- Describe the effects of meal anxiety on treatment outcomes in FBT.
- Identify which outcome measures are most associated with changes in meal anxiety.
- Summarize current research on meal anxiety in the context of eating disorder treatment.

### S-124

#### SSRI Use in Adolescent Eating Disorders: A Retrospective Chart Review

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There is a lack of research to support the use of psychotropic medications in adolescent eating disorders (EDs), yet these medications are widely used. This study is a descriptive review of the psychopharmacological medications prescribed to youth with EDs, with detailed focus on the use of SSRIs in this population. A retrospective chart review of 60 consecutive referrals to a tertiary care pediatric ED program in Ottawa, Canada was conducted. Included patients were assessed between January 1 – December 31, 2014 and received an ED diagnosis at time of assessment. Patient outcomes were tracked for an 18 month period post-assessment. The average age of patients at assessment was 14.0 years old. 70% of patients were diagnosed with AN at assessment, 14% were diagnosed with EDNOS, 10% with ARFID and 3% with BN. Average percentage of treatment goal weight (TGW) at assessment was 82.4%. Psychotropic medications were prescribed to 72% of patients during the course of treatment, of which, 79% were prescribed SSRIs. The initial SSRI was prescribed on average 20.0 weeks after assessment; the average percentage of TGW at the time of initiation of an SSRI was 94.6%. Reasons for starting an SSRI were: Anxiety disorder 41%, Mood disorder 9%, both Mood and Anxiety disorder 41%, Other reasons 9%. Of those treated with SSRIs, 61.8% were treated with one SSRI, 29.4% switched to a second SSRI, and 8.8% switched to a third. The most common SSRI prescribed was fluoxetine (82%) (at a mean maximum dose of 41.0 mg); the other most common SSRIs prescribed were sertraline (29.4%) and escitalopram (29.4%). These results show that SSRIs are widely used by specialists to treat co-morbidities in weight-restored youth with EDs.

*Learning Objectives:*

- 】 Describe the clinical characteristics of youth with EDs who were referred to a specialized pediatric ED team in a tertiary care hospital over a one year period.
- 】 Examine the use of SSRIs by clinicians treating this population, including reasons for starting an SSRI, when the SSRI was initiated and at what doses, the most common SSRIs prescribed, and the percentage of patients who were switched to a second or third SSRI.
- 】 To point out the need for further psychopharmacological research to guide clinicians who treat youth with EDs in Canada.

### **S-125** **Implementation and Piloting of a Parent-Inclusive Cognitive Remediation Therapy Protocol: Examining Feasibility for Adolescents with Anorexia Nervosa during Medical Hospitalization**

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Cognitive Remediation Therapy (CRT) for anorexia nervosa (AN) was developed to target observed difficulties in executive function and has been successfully used as an adjunctive treatment. CRT is generally well received by adolescents with AN and can result in increased motivation to engage in treatment. Parents report feeling that the rationale for CRT helps them understand their child's behavioral difficulties. Despite preliminary positive findings, research on CRT in adolescents is still limited. The dearth of research in this area is a significant gap in our knowledge regarding how best to employ CRT in this population. We posit that providing CRT during hospitalization for medical stabilization may provide a non-threatening introduction to a therapeutic relationship and will subsequently increase the adolescent's willingness to engage in treatment once discharged. In this way, CRT can be used as a pre-treatment intervention. We will describe the adaptation of CRT for use on a medical floor with adolescents with AN. As family is important in the treatment of AN, we have included a parent component in which adolescents conduct modified versions of CRT sessions with their parents. By having adolescents teach their parents CRT, we are drawing on the principles of "train the trainer" models and are strengthening adolescents' abilities to shift gears and think globally.

We hypothesize that this interaction will increase parents' understanding of their child's thinking style and result in a reduction of parental symptom accommodation. We will describe the protocol for an ongoing pilot and feasibility study of a randomized clinical trial comparing CRT with a parent component to CRT with contact control or treatment as usual. We will discuss challenges for implementation on a medical unit and review modifications that increased feasibility.

*Learning Objectives:*

- 】 Explain the rationale for CRT during hospitalization.
- 】 Describe the inclusion of parents using a train the trainer model.
- 】 Discuss challenges to implementation and methods to address these challenges.

### **S-126** **The Effectiveness of the Interpersonal Forum in the Treatment of Eating Disorders**

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The interpersonal forum (IPF) is a novel group intervention based on the interpersonal therapy (IPT) we formulated in order to help adolescents in dealing with their interpersonal issues. In comparison to the interpersonal therapy, the interpersonal forum does not recognize the personal problem area and assumes that each participant, at different times, have different problem area. In the forum, interpersonal events are being investigated, clear up and ways of understanding and coping emerge. However, there is no striving towards a solution. The main goal is learning to observe the interpersonal situation, while expanding the participant's perspective, and creating a personal reservoir of interpretations, expectations, and interpersonal skills. A nonjudgmental approach enables the group to contain different and sometimes conflicting interpretations, and allows the participant to find his way in the dialectical space revealed during the discussion. We implanted the IPT in our day care unit for adolescent eating disorders, as a part of the therapeutic array (which include individual psychotherapy, interpersonal forum, DBT group, group dynamic and creative expression, nutritional care and supervised meals, school, medication, etc.). Then, we compared this treatment group to control group that had the same therapeutic array without IPF. The comparison was made before and after the intervention, using Clinical measures, tools to evaluate eating disorders, tools to assess interpersonal relationships and a subjective questionnaire. Our initial results are encouraging and the forum participants report an intensifying subjective

experience. The IPF is a promising novel group therapy that can alleviate interpersonal difficulties and strengthen resilience dealing with eating disorders.

*Learning Objectives:*

- ▶ Describe the interpersonal forum.
- ▶ Evaluate the clinical trial.
- ▶ Identify the novel aspects of the interpersonal forum, it's Advantages and weaknesses.

**S-127**  
**Implementing Dialectical Behavior Therapy on a Pediatric Eating Disorders Unit**

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This study describes the themes arising from the implementation of Dialectical Behavior Therapy (DBT) in a combined Pediatric Eating Disorders day hospital and inpatient unit. Front line staff perceptions of the utility of DBT with adolescent patients with eating disorders and their own adjustment needs from medical to mental health providers discussed. Audio-recorded and transcribed semi-structured interviews from eleven Registered Nurses, one Child Life Specialist, and one Child and Youth Worker (N=13) were coded and analyzed using thematic content analysis to expose central themes. Twenty percent of the transcripts were double-coded to ensure consistency. Fundamental qualitative description guided sampling and data collection. Frontline staff positively endorsed the use of DBT as a viable and effective treatment model for adolescents with eating disorders. Five major themes emerged through analysis: DBT as a valuable treatment model; improvement of team cohesion; role confusion among frontline staff transitioning from a medical role to a mental health role; frontline staff feel more effective in their role; and a need for continual education. Frontline staff positively endorse DBT as a treatment model, but express challenge committing to DBT among their competing roles and priorities. The challenges and advantages inherent in utilizing DBT on a blended unit; namely degree of commitment to wellness are highlighted. Implementation themes align with previous research examining the adoption of DBT and provide further insight into clinical programs seeking to implement DBT for eating disorders in an intensive hospital setting. Future research will focus on how to apply a competency based learning program to address the special needs of front-line staff utilizing DBT skills with eating disorders youth.

*Learning Objectives:*

- ▶ Consider the major challenges associated with implementing DBT –those associated both with the adolescent patient population and the staff implementing the treatment- as well as possible solutions to these challenges.
- ▶ Consider the unique challenges associated with implementing DBT on a blended pediatric eating disorders unit among both staff and patients.
- ▶ Recognize the impact that implementing DBT has had on team cohesion, patient care, and service delivery from the perspective of frontline staff on a pediatric eating disorders unit.

**S-128**  
**Bright Light Therapy for the Treatment of Binge Eating Disorder: Proceed with Caution**

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This pilot study evaluated a novel circadian-based treatment for binge eating disorder (BED): bright light therapy (BLT). Many individuals who struggle with binge eating experience the highest frequency of binge eating on days characterized by a circadian pattern of worsening affect throughout the day (Berg et al., 2014). Because light exposure is a central circadian synchronizer, BLT is used as a non-invasive biological intervention to treat disorders with circadian rhythm disruption, and is an evidence-based intervention for the treatment of mood disorders with prominent circadian features. Our review found some support for the use of BLT in the treatment of bulimia nervosa and night eating syndrome (Beauchamp & Lundgren, 2016). Little is known about the potential for BLT in the treatment in BED. In this well-controlled pilot study, we employed a single case series (N = 3 female participants; Mage = 41.3) using an AB1AB2 design, where the "A" phases were 2 weeks of daily mood and eating behavior assessments and the "B" phases were 2 weeks of 10,000-lux BLT or a 200-lux dim red light placebo for 60 minutes/morning, counter-balanced in their order of administration. No clear pattern of symptom improvement was observed for binge eating. Compared to the placebo light condition, when participants were exposed to the active light, the average number of daily binge eating episodes ranged from a 250% worsening to a 50% improvement, the average morning mood rating ranged from a 4% to a 62% improvement, and the average evening mood rating ranged from a 14% to a 49% improvement. While results do not appear promising, it is possible that adjunctive BLT, vs. BLT administered as a stand-alone intervention, might demonstrate favorable outcomes, particularly for individuals with co-morbid mood or circadian disruption. Until additional controlled

research is conducted, clinicians should proceed with extreme caution when considering the use of BLT as an intervention for BED.

*Learning Objectives:*

- ▶ Assess the use of bright light therapy for individuals with Binge Eating Disorder.
- ▶ Review the use of bright light therapy in the treatment of other eating disorders.
- ▶ Discuss the future of bright light therapy as a treatment for Binge Eating Disorder.

### S-129

#### Women's Experiences with Integrative Medicine-Based Eating Disorder Treatment: A Mixed Methods Study

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The goal of this study was to investigate the experiences of women who have received integrative medicine-based eating disorder treatment. The Eating Disorders Examination-Questionnaire (EDE-Q) 6.0, Short Form Patient Satisfaction Questionnaire (PSQ-18), and six open-response questions pertaining to treatment experience were administered electronically to a national cohort of 16 adult women who have received integrative medicine-based eating disorder treatment. All women were white, with a mean age of 29 years. The most common form of integrative medicine-based care received was mind-body medicine, although all women reported having had received at least two forms of such care. The women's mean score on the PSQ-18 were not significantly different from the published norms for the measure. Thematic analysis of the open-response data identified three themes that characterized participants' experiences with this type of care: (1) integrative medicine as a unique form of eating disorder treatment; (2) engagement as a result of personal empowerment; and (3) engagement in care influenced by health care delivery. Findings from the quantitative and qualitative data suggest that while integrative medicine may be a patient-centered treatment model for individuals with eating disorders, it is not inherently so. The individualized recovery tools, strong therapeutic relationships, and sense of autonomy provided to patients by integrative medicine may be especially beneficial in the treatment of eating disorders, although issues of provider specialization and barriers to access should be considered. Further research is needed to fully understand the relationship between treatment experience and subsequent outcomes.

*Learning Objectives:*

- ▶ Describe integrative medicine-based eating disorder treatment.
- ▶ Discuss the treatment experiences of women who have received integrative medicine-based care for an eating disorder.
- ▶ Compare the proposed model of integrative medicine-based eating disorder treatment experience with existing models of treatment experience.

### S-130

#### What Can We Learn from the Treatment History of Eating Disorder Patients Seeking Specialized Treatment in the Netherlands?

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Eating disorders (ED's) are serious mental disorders and effective treatments remain limited. To better understand ED treatments and how these treatments are perceived by patients, we examined the treatment history of patients with an ED, who were seeking treatment in a specialized ED center in the Netherlands. Patients (N = 655) of this specialized ED center in the Netherlands filled in questionnaires as part of an intake procedure. Seventy-five percent (N = 492) of these patients had followed a mental healthcare treatment before. This group was analyzed regarding their characteristics, pathology severity and treatment history. Results show that there were almost no statistical significant differences in characteristics (length of the ED, number of earlier followed treatments, ED length and pathology severity) between patients who followed their last treatment in a primary care setting, or a specialized care setting. Fifty-two percent had followed 3 or more treatments in their journey to recovery. Qualitative analysis showed that stagnation of the treatment and a 'successful' treatment outcome were the two most reported reasons for ending a treatment. There were several aspects that patients felt were absent/unsatisfactory in treatment as well as aspects that they had learned in treatment. This study shows that Dutch ED patients need multiple treatments in their recovery process. A substantial part of patients had a 'successful' treatment outcome and then relapsed. ED patients in this study were not distributed across the 'steps' of care, based on the severity of the disorder (i.e. number of earlier treatments, ED length, severity). This raises questions about the utility of a 'stepped care' approach for ED patients as currently used in The Netherlands. The ED patients reported several aspects that were

absent/unsatisfactory and aspects they had learned in these treatments. These qualitative knowledge from patients about learned and absent/unsatisfactory aspects should be assimilated into evidence-based care and treatment guidelines. The manuscript is currently in review for submission into the journal BMC Health Services Research.

*Learning Objectives:*

- ▶ Tell about the differences in pathology severity between patients who followed primary care or specialized care.
- ▶ Name the most stated reasons for ending their last treatment.
- ▶ Name what aspects patients have learned during their last treatment and what aspects patients found that was absent/unsatisfactory during their last treatment.

### S-131

#### An Examination of Factors Associated with Dropout from Partial-Hospitalization Eating Disorders Treatment

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Previous research indicates that approximately 20-70% of eating disorders (ED) patients drop out of treatment in both inpatient and outpatient settings. These data are concerning, as studies suggest that dropout from ED treatment is associated with poorer treatment outcomes and higher risk of relapse. To date, we do not have an adequate understanding of how reasons and risk factors for ED treatment dropout impact remission across the ED spectrum. To build on extant research, the aim of the current study was to examine treatment dropout in a partial-hospitalization ED treatment program for adults. More specifically, we examined how reason for discharge from treatment predicted likelihood of ED remission at follow-up. We also examined whether the traits of novelty seeking and harm avoidance were significant predictors of dropout from treatment above and beyond age, gender, BMI, ED severity, illness duration, ED diagnosis, comorbid diagnosis (mood, anxiety, alcohol use disorder), and length of stay in treatment. 296 women and men presenting to a university-based, partial-hospitalization ED treatment program (ages 18-60 years old) completed self-report measures at treatment admission. Of these participants, 124 completed self-report measures at follow-up (M = 9.5 months, range: 2.9-27.9 months). Chi-square analyses comparing remission rate by reason for discharge indicated that patients who completed treatment (n=89) were more likely to meet criteria for full

remission at follow-up (42.7%) than patients who dropped out (n=29) against medical advice (17.2%), and patients who dropped out (n=6) due to end of insurance coverage (0%),  $\chi^2(2, N = 124) = 9.60, p = < .01$ . Results from a logistic regression analysis examining predictors of treatment dropout were not significant. These findings highlight the impact dropout from treatment can have on ED outcomes, and the importance of identifying patients at risk for dropout.

*Learning Objectives:*

- ▶ Identify risk factors for treatment dropout across the ED spectrum at various levels of care.
- ▶ Understand reasons for discharge from ED partial-hospitalization treatment.
- ▶ Describe how reason for discharge may impact treatment outcomes.

### S-132

#### Graduated Food Exposure Therapy Reduces Eating-Related Fear and Avoidance among Adult Inpatients with Severe Eating Disorders

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To contribute to the growing body of evidence that brief cognitive-behavioral interventions are effective in addressing transdiagnostic eating disorder (ED) features in inpatient settings, the purpose of the present study was to assess the effectiveness of exposure therapy targeting eating-related fears and avoidance in adults receiving inpatient care for severe EDs. Participants included 97 adults (M age = 28.7 years, SD = 7.9; M length of stay = 18.3 days, SD = 11.6; M body mass index = 18.2, SD = 1.8; 83.5% female; 86.6% Caucasian) receiving inpatient treatment for EDs at a large behavioral health hospital. Principal ED diagnoses included: anorexia nervosa (n = 49; 50.5%), bulimia nervosa (n = 23; 23.7%), avoidant/restrictive food intake disorder (n = 8; 8.2%), binge eating disorder (n = 6; 6.2%), and other specified/unspecified feeding or eating disorder (n = 11; 11.3%). Patients were guided in developing a food exposure hierarchy in which feared foods were systematically introduced into their diets throughout the course of treatment. At admission and discharge, patients completed measures of global ED symptom severity (Eating Disorder Examination-Questionnaire 6.0) as well as fear and avoidance of eating (Fear of Food Measure). From admission to discharge, patients showed significant reductions in anxiety about eating,  $t(96) = 3.93, d = .69$ , food avoidance behaviors,  $t(96) = 5.52, d = 1.23$ , and feared concerns related to eating  $t(96) = 2.95, d = .52$  (all  $p$ 's < .01). Additionally, patients experienced significant reduction in global ED severity from admission to discharge,  $t(96) = 3.17, p < .01, d = .62$ . There was also a marginally significant

increase in patients' body mass index  $t(96) = 1.88, p = .09, d = .24$ . Reductions in fear of eating and food avoidance was not associated with ED diagnosis or global ED severity. The present findings add to a growing body of evidence for the effectiveness of exposure-based therapy for eating disorders. In a clinical sample with significant ED severity, an exposure-based intervention targeting eating-related fear and avoidance yielded significant symptom relief in a relatively short period of time.

*Learning Objectives:*

- ▶ Recognize a significant shortage of evidence-based psychosocial interventions that can be implemented in an inpatient setting.
- ▶ Develop and implement a brief, exposure-based treatment addressing eating-related fear and avoidance.
- ▶ Describe the effectiveness of this exposure-based intervention in reducing eating-related fear and avoidance as well as global eating disorder symptoms.

### S-133 Intuitive Eating in a Treatment-seeking Eating Disordered Sample

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The purpose of this study was to examine the associations between intuitive eating (IE), symptoms and eating behaviors among an eating disorder (ED) treatment-seeking sample, and to investigate differences according to ED types (restrictive or disinhibited). IE is defined as an adaptive approach, which promotes the identification and reliance on internal body cues (hunger and satiety) to regulate food intake, without any restriction on the type of food eaten. Being a positive approach, IE bears considerable potential for the treatment of ED. Previous studies, mostly led in community samples, showed that IE is inversely related to ED symptoms as well as to emotional and uncontrolled eating. Thirty-five individuals seeking treatment in a specialized ED clinic were involved in the present study. Participants completed self-reported questionnaires measuring IE, symptoms and eating behaviors. Results revealed that IE was strongly and negatively correlated with eating ( $r = -0.61, p < 0.001$ ), weight ( $r = -0.58, p < 0.01$ ), and shape concerns ( $r = -0.53, p < 0.01$ ), as well as with emotional ( $r = -0.69, p < 0.001$ ) and uncontrolled eating ( $r = 0.66, p < 0.05$ ). Unconditional Permission to Eat was inversely associated

with restriction ( $r = -0.45, p < 0.05$ ). Eating for Physical Reasons (EPR) and Reliance on Hunger and Satiety Cues (RHSC) were inversely associated with bulimic symptoms ( $r = -0.37$  to  $-0.74, p < 0.05$ ). The restrictive ED group had a higher IE total score (mean =  $2.86 \pm 0.32$ ), EPR subscale score (mean =  $3.41 \pm 0.96$ ) and RHSC subscale score (mean =  $2.32 \pm 0.62$ ) than the disinhibited group (mean =  $2.18 \pm 0.43$ ; mean =  $1.98 \pm 0.88$  mean =  $1.40 \pm 0.54$  respectively). These results suggest that individuals with restrictive ED may confuse IE with restraint, which possibly reflects a problematic confusion on what internal body cues are and how to respond to them appropriately. Considering these differences, when addressing IE in the treatment of ED, key objectives should differ according to the type of ED to address the more problematic components of IE.

*Learning Objectives:*

- ▶ Describe the associations between intuitive eating (IE) and eating behaviors among eating-disordered individuals.
- ▶ Compare intuitive eating, ED symptoms and eating behaviors between ED types (restrictive or disinhibited).
- ▶ Explain possible future directions in eating disorders treatment (ED) based on intuitive eating (IE) approach.

### S-134 A Culturally Adapted Optimization Intervention for Collegiate Student-Athletes: A Case of Bulimia Nervosa in a Lean Sport Athlete

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The present study delineates a controlled implementation of The Optimum Performance Program in Sports (TOPPS) in a lean sport athlete with Bulimia Nervosa. Developed with support from the National Institutes of Health, this holistic intervention integrated sport-specific factors into intervention planning to enhance participation in an athlete with a history of rejecting psychotherapeutic services. The participant completed an initial pre-treatment assessment, 16 weekly intervention meetings, and a post-treatment and four-month follow-up assessment. All assessments were conducted by a trained assessor. Assessments comprised the Structured Clinical Interview for DSM-IV, Timeline Follow Back (TLFB) Interview for substance use and risky sexual behaviors, Beck Depression Inventory-II, SCL-90-R, Sport Interference Checklist (SIC), and Student Athlete Relationship Instrument (SARI). At baseline, the participant met full DSM-IV criteria for Bulimia Nervosa and experienced elevated mental health symptoms (via SCL-90-R) including recurrent unpleasant thoughts, overeating, and difficulty making decisions. Interventions

were implemented with prescribed protocol checklists, and the performance coach demonstrated strong protocol adherence (88%) and interrater reliability with an independent rater (86.4%). At post and follow-up timepoints, the participant evidenced full remission of BN DSM-IV diagnosis, improvements in unprotected sex and binge drinking as per the TLFB, and significant reductions in cognitive and behavioral factors that interfered with her sport performance (via SIC). The BDI-II total score remained in the minimal range with an improvement of 55% from baseline assessment to follow-up. The participant's psychiatric functioning in SCL-90-R subscales obsessive-compulsive, interpersonal sensitivity, depression, anxiety, and the global severity index improved by two standard deviations from baseline assessment to follow-up. Issues specific to intervention implementation and methods of engagement will be discussed in light of the findings.

*Learning Objectives:*

- 】 Describe sport-specific and performance-related factors that may contribute to the development of Bulimia Nervosa in college athletes.
- 】 Learn to rapidly engage collegiate athletes into therapeutic services using consumer-driven interventions and sport-specific cultural adaptations.
- 】 Learn intervention components of an evidence-supported family-based intervention for adults with Bulimia Nervosa.

### S-135 Motivational Profile of Perfectionism in Eating Disorders

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Perfectionism has been identified as being both a risk and a maintenance factor for eating disorders. Cossette and Langlois (2016) suggested that addressing the motivational profile of perfectionism would be a clinical target for treating eating disorder. Specifically, identifying the reasons underlying perfectionism and transforming them into more self-determined motivations could diminish the negative consequences associated with perfectionism (fear of failure, concerns over mistakes, etc.). The objective of the study is to identify the different motivations underlying perfectionism which contributes to

eating disorders symptoms among individuals with high and low eating disorders symptoms. We hypothesized that participants with high eating disorders symptoms would have a less self-determined motivation for perfectionism than participants with low eating disorders symptoms. One-hundred-and-seventeen participants aged between 14 and 65 year old (mean age:  $29 \pm 10,85$ ) recruited from two community organizations working with individuals with eating disorders (ANEB and Maison l'Éclaircie) answered the "Questionnaire des motivations sous-jacentes au perfectionnisme" and the French version of Eating disorder examination questionnaire. Regression analyses were conducted to determine the motivational profile underlying perfectionism for each group (high and low symptoms). Results suggest that, within the low symptoms group, social motivation to perfectionism is the only one predictor of the model and explain 10.9% of eating disorders variance ( $F(4,51) = 2.687$ ;  $p=0.041$ ) while intrinsic motivation for perfectionism is also the only one predictor with 15.9% ( $F(4,52) = 3.649$ ;  $p=0.011$ ) of the variance within the high symptoms group. It is known that individuals with eating disorder tend to experience feelings of triumph and pride while achieving their goals in terms of food restriction, which could explain the association of intrinsic motivation to perfectionism and eating symptoms. This interpretation suggest that intrinsic motivation could be perverted in some ways for individuals with eating disorders, whereas the notion of pleasure in reaching high perfectionist standard would be confused with the gratification of feeling in control.

*Learning Objectives:*

- 】 Demonstrate the impact of perfectionism in eating disorders symptoms.
- 】 Explain how motivational profile of perfectionism is a clinical target in eating disorders.
- 】 Describe the motivational profile of perfectionism in eating disorders.

### S-136 Model Proposal for Eating Disorder Treatment for a private Institution in Mexico City

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INTRODUCTION: Eating disorders in Mexico and around the world are becoming a serious public health problem, cases are presented in a more severe and complex way, tending to be chronic, needing a specialized and interdisciplinary treatment model that involves the international treatment guidelines to achieve the appropriate symptom remission. Nowadays the treatments turn out to be too long, complex and expensive since they require more capable specialists to carry

them out and to avoid reaching chronicity. **OBJECTIVE:** This research proposes to create a team in which the psychiatrist is trained in High Specialization in Eating Disorders management to coordinate the intervention of the other specialists to achieve an interdisciplinary treatment in a progressive way that reduces the time and costs of the procedure obtaining results in a shorter term. **PROCEDURE:** In Medica Sur's Eating Disorders and Obesity Clinic the following therapeutic model was implemented a year ago and is currently being carried out, presenting excellent results: The patient's first contact is with the specialized psychiatrist who performs the diagnostic evaluation and analyzes the clinical studies recommended to observe the medical and nutritional conditions in which the patient is. The psychiatrist along with the internist will participate in the medical consequences or findings that have been observed in the previous studies. The medical team will medically stabilize the patient and provide the pertinent psychoeducation to both the patient and his parents. The third treatment contact is with the nutritionist, who is in charge of providing an adequate eating plan for each patient adopting the roll of a nutritional educator. As the patient physically and nutritionally stabilizes, the psychiatrist intervention will be fading away to evolve to the fifth phase, psychological treatment, which is expected to last for a year approximately, and will be complemented by the family therapist interventions, who will keep the progress made throughout the treatment.

*Learning Objectives:*

- ▶ Treatment procedure.
- ▶ Treatment in progressive way.
- ▶ Lower cost.

### **S-137** **Preliminary Evidence for the Off-Label Treatment of Bulimia Nervosa with Psychostimulants: Six Case Reports**

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Psychostimulants have been assessed in bulimia nervosa (BN) patients with comorbid attention deficit/hyperactivity disorder (ADHD) but few studies have examined the impact of psychostimulants on BN patients without comorbid ADHD. The aim of this study is to examine psychostimulants as a potential treatment for BN and to assess the concern of weight loss, given the medication's appetite suppressing effects. This retrospective study describes six case reports of outpatients who were prescribed a psychostimulant specifically for their BN. The number of binge/purge days per months and body mass index (BMI) were assessed. All patients demonstrated

reductions in the number of binge/purge days per month and one patient experienced total remission of bulimic symptoms. Minor fluctuations in weight were observed but no clinically significant reductions in weight were noted. These findings support the need for clinical trials to examine the efficacy and safety of this potential treatment.

*Learning Objectives:*

- ▶ Understand the literature on off-label treatment of bulimia with stimulant medications. This is discussed in the context of recent research and FDA approval of treating BED with lisdexamfetamine.
- ▶ Describe potential risks and benefits of off-label treatment of bulimia patients with stimulants.
- ▶ Learn about the authors recently published case series on the treatment of bulimia patients (without ADHD) with stimulants.

### **S-138** **Cognitive Behavior Therapy For Binge Eating Disorder: Which Component Has The Most Significant Impact On Frequency Of Binge Eating?**

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Although empirical studies support the efficacy of different therapies for disordered eating, there is little information on how or when the therapy might work or what components might be most effective. Most therapies include multiple components or modules that may contribute to their success. The current study examined which treatment modules are most influential in producing changes in binge eating behaviour in treatment-seeking individuals with binge eating disorder (BED). Data was retrospectively reviewed for 53 patients with BED from 2014-2016. Treatment consisted of a 25-week Cognitive Behavioural Therapy based program targeting factors contributing to the maintenance of disordered eating. This treatment protocol includes 4 distinct modules: 1) psychoeducation about body weight regulation and lifestyle choices, 2) nutrition planning, goal-setting and self-monitoring, 3) self-monitoring and addressing emotional triggers and 4) self-monitoring and addressing interpersonal triggers. A weekly checklist administered each week assessed changes in binge eating frequency over the course of treatment. A mixed-model analysis examined changes in binge eating frequency over the 4 treatment phases and showed a significant reduction in binge eating across the treatment weeks. Specifically, the largest reduction in binge eating occurred after the 2nd treatment module on nutrition planning, goal-setting and self-monitoring. During this module, individuals learn to

plan regular and nutritionally-balanced meals, set goals to improve their eating, and begin to self-monitor food intake and triggers for binge eating. Binge eating continued to decrease over the last two treatment modules, but the change was not statistically significant. These results suggest that stabilizing food intake may have the greatest impact on binge eating. Altogether these findings suggest a significant role for nutrition and meal planning in BED treatment. These findings have implications for developing a more targeted approach in the timing and content of specific therapeutic components.

*Learning Objectives:*

- 1 Describe a CBT approach to treating binge eating disorder that includes 4 phases of treatment, addressing biological and emotional vulnerabilities to binge eating.
- 2 Assess the impact of these different treatment phases on the frequency of binge eating in patients being treated for binge eating disorder.
- 3 Describe the nutrition planning, goal-setting and self-monitoring that resulted in a significant change in binge eating.

**S-139**  
**Perfectionism Group Treatment for Eating Disorders in an Inpatient, Partial Hospitalization, and Outpatient Setting: Preliminary Support for Reducing High Standards but not Concern Over Mistakes**

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Perfectionism is elevated in individuals with eating disorders and is posited to be a risk factor, maintaining factor, and treatment barrier. Recently, a cognitive behavioral therapy (CBT) for perfectionism group was shown to be effective for reducing symptoms of anxiety, depression, and disordered eating. However, there has been little literature testing the feasibility and effectiveness of perfectionism interventions in individuals specifically with eating disorders. In the current study, we piloted and tested the feasibility of (a) a short CBT for perfectionism intervention delivered in an inpatient, partial hospitalization, and outpatient for eating disorders setting (combined N = 28), as well as (b) a training for disseminating the treatment to eating disorder clinicians and dietitians (N = 9). We also tested if specific aspects

of perfectionism (high standards and concern over mistakes) were reduced during the intervention. Overall, we found that it was feasible to implement a perfectionism group in each treatment setting, with both an open and closed group format. We found that high standards, but not concern over mistakes, was significantly lower from pre- to post-intervention. This research adds additional support for the implementation of perfectionism group treatment for eating disorders and provides information on the feasibility of implementing such interventions across multiple settings. However, additional research is needed to develop treatments that specifically target and reduce concern over mistakes.

*Learning Objectives:*

- 1 Describe a perfectionism treatment implemented in a inpatient, partial hospitalization, and outpatient setting.
- 2 Discuss the feasibility and effectiveness of a perfectionism group treatment for eating disorders.
- 3 Provide information on how to implement a perfectionism group in multiple settings.

**S-140**  
**The Effect of Manipulating the Theoretical Framing of Exposure Therapy for Eating Disorders on Clinicians' Treatment Preferences**

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Evidence supporting the efficacy of exposure therapy for eating disorders (EDs) is growing (Steinglass et al., 2014). However, many clinicians are concerned about the safety and tolerability of exposure therapy, despite its strong empirical support, making exposure therapy underutilized in clinical practice (Farrell et al., 2016). It is possible that part of this underutilization is due to the way in which exposure therapy is framed. In the current study we (a) examined attitudes toward exposure therapy in ED clinicians and (b) tested if the framing of exposure therapy impacted the likelihood of providing exposure therapy to ED clients. Clinicians (N=58) answered questions about exposure therapy and viewed 3 theoretical perspectives/ treatment descriptions of the same treatment framed from different orientations in a counterbalanced fashion: (a) behavioral experiments, (b) mindfulness, and (c) exposure therapy. Clinicians rated how likely they would be to use each treatment with a client. Clinicians reported a somewhat positive view towards exposure therapy in general (M=5.43, SD=0.78). They also reported viewing exposure therapy for EDs as an acceptable (M=6.83, SD=2.07), suitable (M=7.05, SD=1.85), beneficial (M=7.10, SD=1.65), and efficacious (M=6.88, SD=1.77) treatment. Finally, we found that clinicians' ratings did not vary across conditions;  $F(2)=0.59, p=.56$ . This finding

suggests that the theoretical perspective from which exposure therapy is framed does not influence clinicians' treatment preferences. In other words, clinicians are as likely to treat a client with an ED regardless of if the treatment is framed in terms of mindfulness, behavioral experiments, or exposure to face eating-related anxiety. Our results indicate that the negative beliefs endorsed by clinicians toward exposure therapy as reported in the anxiety disorder literature may not hold for ED clinicians, and has promising implications for the dissemination of exposure therapy for EDs.

*Learning Objectives:*

- 】 Describe eating disorder clinicians' baseline views toward exposure therapy for eating disorders.
- 】 Explain how changing the framework of treatment impacts treatment decisions.
- 】 Consider how framing therapy interventions impacts the dissemination of exposure therapy for eating disorders.

### S-141 Promoting Behavior Change in Cognitive-Behavior Therapy for Eating Disorders: Understanding Clinician Attitudes and Perceived Difficulties

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Rapid response is well-established as a strong predictor of treatment outcome in cognitive behavior therapy (CBT) for eating disorders. This study examined clinician attitudes toward facilitating behavior change in CBT, and clinician characteristics associated with these attitudes. 117 clinicians who self-identified as currently providing outpatient CBT for adults with eating disorders completed an online survey, including: An author-constructed questionnaire about clinician attitudes toward promoting behavior change in CBT; an author-constructed questionnaire about current practices and use of interventions when providing CBT; and questionnaires about cognitive inflexibility, intolerance of uncertainty, and demographic and professional information. The majority of clinicians (~90%) reported that it is important for clients to normalize eating and interrupt binge eating/purging as quickly as possible. However, 26.9% and 19.1% of clinicians, respectively, disagreed that regular eating and binge/purge interruption are non-negotiable components of CBT for eating disorders. A factor analysis of the clinician attitudes to CBT questionnaire revealed three subscales, which we termed: 1) Directive, rapid change focused; 2) Stage of readiness focused; and 3) Difficulties promoting behaviour change. Identifying CBT or DBT as their primary clinical orientation was the only predictor of a rapid change-focused approach ( $p < .001$ ), whereas no measured characteristics predicted

a readiness-focused approach. Self-reported difficulties promoting behavior change in CBT were predicted by a primary clinical orientation other than CBT ( $p = .002$ ), a lower percentage of one's caseload consisting of adults with eating disorders ( $p = .02$ ), and greater trait intolerance of uncertainty ( $p < .001$ ). These findings indicate that both personal and professional clinician characteristics may be related to clinicians experiencing difficulties promoting behavior change in CBT.

*Learning Objectives:*

- 】 Describe clinician practices when delivering CBT for eating disorders.
- 】 Describe predictors of different clinician attitudes towards promoting behavior change in CBT for eating disorders.
- 】 Describe clinician-reported difficulties related to promoting change, as well as clinician characteristics that predict such difficulties.

### S-142 #Canadian Medscape: The Types of Psychiatric Medications Patients Have Been Prescribed Prior to Receiving Specialized Assessment for an Eating Disorder

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The types of psychiatric medications patients are prescribed prior to attending specialized assessment and treatment for an eating disorder are not well understood. We examined data collected on over a five year period (2008 through 2013) at a tertiary level hospital based adult eating disorders outpatient program. We evaluated whether participants were on a psychiatric medication at intake assessment, the types of medications they had been prescribed by their primary care physician, and whether this was associated with their age, sex, diagnosis, or whether they had a comorbid presenting concern. Participants were 224 adults who met diagnostic criteria for an eating disorder and who consented to participate the clinics program evaluation research. Demographic and physical symptoms information was collected. Participants reported whether they were on a medication at intake assessment and the type of medication or combination that they had been prescribed. Our results showed that the majority of participants endorsed that they were on a psychiatric medication at time of intake assessment. The most commonly prescribed medications included Escitalopram (23%), Fluoxetine (16.3%), Zoloft (10.4%), and Celexa (9.6%). Associations between medications prescribed and participants age and diagnosis are discussed. Clinicians may want to consider the types

of psychiatric medications most often prescribed by primary care physicians to patients with eating disorders and their role (if any) in providing information back to referring physicians on the limited evidence-base for these medications for eating disorders.

*Learning Objectives:*

- ▶ Participants will learn about the types of psychiatric medications adult Canadian patients with an eating disorder are most commonly prescribed by their primary care physician prior to receiving specialized psychiatric assessment for an eating disorder.
- ▶ We will discuss the relationship between psychiatric medication type and participants age, sex, eating disorder diagnosis and comorbid diagnosis.
- ▶ Implications and recommendations for primary care physicians will be discussed.

### S-143

#### **Beyond Treatment Outcomes: Predictors of Patient Satisfaction with Intensive Treatment for Eating Disorders**

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Over the last decade, an increasing proportion of eating disorder patients have sought treatment at free standing facilities, leading to a great deal of interest in these facilities' treatment outcomes, and in the extent to which patients are satisfied with their treatment experience. Moreover, the relationship between outcomes and patient satisfaction is poorly understood. It is not yet known, for example, whether patient satisfaction levels result from treatment gains, personality, or other factors. In the current study, 78 patients in residential, partial hospital, or intensive outpatient treatment for eating disorders completed baseline and discharge measures of personality, depression, anxiety, eating disorder symptoms, DBT skills use, and patient satisfaction (discharge only). Patient satisfaction was assessed in terms of satisfaction with treatment, satisfaction with the treatment environment, and perceived readiness for discharge. Patients showed significant improvement on all symptom related measures, and in DBT skills use. Regression analyses showed that only increased DBT skills use over the course of treatment and baseline Conscientiousness predicted patient satisfaction. In contrast, symptom improvements were unrelated to patient satisfaction. Results highlight the importance of utilizing skills to reverse the course of illness, and suggest that increased self-efficacy due to enacting a more adaptive set of behaviors leads patients to be more satisfied with their treatment.

*Learning Objectives:*

- ▶ Understand the concept of patient satisfaction.
- ▶ Understand the relationship between patient satisfaction and treatment gains.
- ▶ Understand the relationship between skills acquisition and personality on one hand, and patient satisfaction on the other.

### S-144

#### **Indications for Hospital Admission for Patients with Eating Disorders: A Review of International Treatment Guidelines**

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Currently, multiple position papers and guidelines exist for the treatment of eating disorders. They provide guidance around criteria of when to consider hospitalization for a patient with an eating disorder. The purpose of this project is to analyze the hospital admission criteria among these publications and determine the most commonly used criteria. We examined six sets of guidelines from the USA, United Kingdom, Finland, Australia, and New Zealand published between 2003 and 2017. These guidelines were created by professional organizations. Only three factors, bradycardia, electrolyte imbalances, and decreased weight, were common to all six sets of guidelines. However, these criteria were defined differently among the guidelines. In some cases, no specifiers or numeric values were suggested. Regarding decreased weight, two of the guidelines examined used a BMI cutoff, two used percent of expected weight, and two did not specify. Similarly, while all guidelines suggested electrolyte imbalances as a criterion, only two sets of guidelines provided threshold levels. While the majority (5 of the 6) of the guidelines addressed psychiatric emergency as an indication for hospital admission, only one guideline clearly delineated criteria for a psychiatric versus medical hospital admission. Also notable was the presence of more subjective criteria such as failure of outpatient treatment and family dysfunction. These findings highlight the variability present among hospital admission guidelines for patients with eating disorders. This may lead to confusion when inpatient hospitalization is indicated. Ultimately, we propose that a standardized set of admission criteria with clearly defined variables is warranted to guide treatment decisions for these patients. A single set might help general practitioners and other providers without specialized training or familiarity in the treatment of eating disorders.

*Learning Objectives:*

- ▶ Understand the literature for professional guidelines for hospital admission criteria for patients with eating disorders.
- ▶ Identify the most common criteria currently used to guide medical decision making among these patients.
- ▶ Highlight the need for the development of a universal set of admission guidelines with clearly defined parameters.

**S-145**

### Disparities in Psychological Well-Being Based on Women's Subjective and Objective Eating Disorder Recovery Statuses

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The current study evaluates whether six comprehensive dimensions of psychological well-being (PWB)—Autonomy, Environmental Mastery, Personal Growth, Positive Relations with Others, Purpose in Life, and Self-Acceptance—differentially relate to women who have been diagnosed with eating disorders' (ED) subjectively and objectively defined recovery statuses. Participants ( $n = 123$ ;  $\mu$ age = 29.95;  $\mu$ BMI = 23.80 kg/m<sup>2</sup>) completed an online battery of measures targeting ED diagnoses and symptomology, PWB, and recovery. Primary study questions were answered using one-way MANOVAs. Significant differences were found across multiple dimensions of PWB when participants were grouped based on objective and subjective recovery statuses. Follow-up Tukey-Kramer post-hoc tests indicated that women who met the Bardone-Cone et al. (2010) criteria for objective partial recovery, foremost, and those in objective full recovery, successively, scored significantly higher on the Environmental Mastery and Self-Acceptance PWB subscales than participants with objective active EDs. Moreover, irrespective of objective classifications of participants' recovery statuses, those who believed that they were fully recovered (e.g., subjective full recovery) scored higher on the Environmental Mastery, Personal Growth, Positive Relations with Others, Purpose in Life, and Self-Acceptance PWB dimensions than those who believed that they were partially recovered, and participants who felt that they were fully recovered similarly scored higher on these PWB dimensions than those who believed that they continued to struggle with their EDs. These findings indicate that PWB upholds unique relationships with ED recovery. Meeting objectively defined physiological, psychological, and behavioral aspects of recovery alone does not inherently translate to positive functioning or wellness. PWB ought to be incorporated within definitions of recovery from the full spectrum of EDs.

*Learning Objectives:*

- ▶ Identify the relationships between psychological well-being and objectively- and subjectively-defined eating disorder recovery.
- ▶ Discuss the necessity of accounting for measures of positive functioning, namely psychological well-being, in the creation of a uniform definition of eating disorder recovery.
- ▶ Determine which aspects of psychological well-being warrant particular consideration in advancing both felt and assessed eating disorder recovery in clinical practice.

**S-146**

### Inpatient Anorexia Nervosa Treatment in a Specialized Eating Disorders Ward in the Instituto de Psiquiatria do Hospital das Clinicas da Faculdade de Medicina de São Paulo (AMBULIM-IPQHCMUSP), Brazil

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The purpose of this prospective study is to evaluate the efficacy of the anorexia nervosa inpatient program from the Instituto de Psiquiatria do HCFMUSP (AMBULIM-IPqHCFMUSP). The treatment includes a multi professional team: psychiatrists, nurses, nutritionists, psychologists, occupational therapist, physiotherapist, physical education teacher and social worker. From January 2016 until July 2017, 23 patients completed the program (20 female patients and 3 male patients). At the beginning and at the discharge of the treatment, patients completed the Eating Attitudes Test (EAT-26) and the Bulimic Investigatory Test of Edinburgh (BITE) and nutritionists measured the weight, calculating the Body Mass Index (BMI). All patients improved the BMI and scales score, indicating the efficacy of the inpatient anorexia nervosa treatment from AMBULIM-IPqHCFMUSP.

*Learning Objectives:*

- ▶ Describe an inpatient anorexia nervosa treatment program.
- ▶ Recognize the importance of a multiprofessional team in the treatment of anorexia nervosa.
- ▶ Evaluate the efficacy of an inpatient anorexia nervosa treatment program.

### S-147 Characterization of Residential Treatment Centers for Eating Disorders in the United States: Analysis of Program Web Sites

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An increase in eating disorders has necessitated additional options for treatment. One type of treatment setting gaining popularity is the residential treatment center (RTC). Despite a growing demand for RTCs, there are little data on how RTCs operate or the treatment methods used. This study analyzed the variety of therapeutic methods offered and eligibility of patients treated. RTCs were selected from treatment centers classified as residential by EDReferral.com and National Eating Disorders Association (NEDA) webpages. Therapeutic methods were organized a priori and catalogued based on clinical guidelines for eating disorder treatment. Descriptive statistics were developed after webpage analysis. Seventy-five RTCs were identified and 63 RTCs stated patient demographics: all treated females, 49% treated males and females, 37% exclusively treated females, none exclusively treated males, 70% treated children and adolescents, and 73% treated adults. RTCs resided in 27 states and were most common in populated and coastal states such as California (19% of total) and Florida (11%) with Washington, Massachusetts, Illinois, and Ohio following (5.3%). Few RTCs were in the Midwest and southern U.S. 93% of RTCs accepted health insurance. The most commonly used therapies were family involved treatment (88%), cognitive behavioral therapy (68%), and dialectical behavior therapy (65%). Other therapeutic methods lacking empirical support such as yoga (63%) and equine related therapy (23%) were used more than empirically based therapies such as family based (13%), interpersonal (9.0%), and psychodynamic therapy (7.0%). The therapeutic methods used by RTCs warrant further research on their efficacy for patients.

#### *Learning Objectives:*

- 】 To gain a deeper understanding of the present numbers and current geographic distribution of residential treatment centers in the United States.
- 】 To analyze and compare therapeutic methods offered based on clinically recommended guidelines and empirical support.
- 】 To recognize the characteristics of admitted patient populations and health insurance acceptance for patients in residential treatment centers.

### S-148 Help-seeking for Eating Disorders: The Roles of Gender, Self-identification and Other Covariates in a General Population Sample

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Eating disorders (EDs) are widely perceived to be a 'female' problem, which may be a barrier to help-seeking among males with ED. The present study aimed to examine the roles of gender, self-identification of an ED, and other potential covariates, namely, age, BMI, education, overvaluation of weight or shape and impairment in role functioning, in help-seeking behavior. Data were collected from a general population survey of 3047 Australian adults and older adolescents conducted in 2005. Participants were presented with one of three vignettes: a woman with binge eating disorder (BED), a man with atypical anorexia nervosa (AAN) and a woman with AN. Among participants who received the BED vignette, men were less likely than women to seek help for an ED problem. In multivariate analysis, however, self-identification of an ED, higher BMI, greater weight/shape overvaluation, and greater functional impairment – but not gender – predicted help-seeking for an ED. Similarly, among participants who received the AN and AAN vignettes, self-identification of an ED, higher BMI, and greater weight/shape overvaluation predicted help-seeking for an ED whereas gender was not independently associated with help-seeking. The findings suggest that self-identification, BMI and weight/shape overvaluation may be better predictors of help-seeking for an ED than gender. Implications for health promotion and early intervention programs are discussed.

#### *Learning Objectives:*

- 】 Assessed gender differences in treatment seeing in general population.
- 】 Examined role of gender, self-identification of an ED and other putative determinants in help-seeking behaviour.
- 】 Effect of overvaluation of weight/shape, BMI and impairment in role functioning in treatment seeking for an ED also assessed.

**S-149****The Self Mirroring Therapy: A New Tool to Help Patients in Recognizing their Own Emotions**

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 Maurizio Sociale, PsyD<sup>2</sup>  
 Paolo Vinai, MD Student<sup>3</sup>  
 Luisa Vinai, MD<sup>3</sup>  
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The abilities in recognizing our own emotions and the emotions of others are related to different neural networks: respectively the Limbic lobe and the Mirror Neurons System (MNS). Frequently, patients affected by eating disorders, even if able to recognize others' emotions, have difficulties recognizing their own emotions. This because they cannot use their MNS in recognizing them. Today, new audiovisual recording techniques can provide patients with a "mirror", where they can view their own emotions. So we developed a new psychotherapeutic method, the Self Mirroring Therapy (SMT) based on the videotape of a patient's face during the session and on the subsequent analysis of emotional sequences that we can see on his face. In brief we record patients while they are recalling an emotionally significant episode of their life (for example the antecedents of a binge episode) and immediately after we show them the recording of their faces looking at their own image on the screen, besides we record again them when they are looking to this video and subsequently while they are telling the episode. In this way they can use their automatic and intuitive abilities related to the Mirror Neurons system normally used to understand the thoughts and emotions of others to recognize their own emotions instead of their self-reflective abilities, related to the limbic system, that are frequently impaired. In this paper, we describe the theoretical basis and the clinical implications of this method in a case of Binge Eating Disorder. The SMT is not a new form of psychotherapy, but only a tool that can be easily integrated in many models of psychotherapy.

*Learning Objectives:*

- 】 Following the training, participants will be able to: recognize the role of mirror neurons system in recognizing the emotions.
- 】 "Following the training, participants will be able to: use a new tool to help patients affected by alexithymia in recognizing and managing their own emotions.
- 】 "Following the training, participants will be able to: use the Self Mirroring Therapy in a case of Binge Eating Disorder.

**S-150****Self-compassionate Letter Writing Decreases Shame and Increases Autonomous Motivation for Treatment in Non-patient Women with Anorexia Nervosa**

Sydney Waring, BA (Hons)  
 Allison Kelly, PhD, CPsych.  
 Kiruthiha Vimalakanthan, MA  
 Elizabeth Stephen, BA

University of Waterloo, Waterloo, Canada

Individuals with anorexia nervosa (AN) are known for both their resistance to seeking treatment and their low rates of long-term recovery. Feelings of shame have been identified as a barrier to treatment seeking and have also been linked to lower autonomous motivation for eating disorder treatment. There is evidence in other clinical populations that compassion-based interventions can successfully alleviate shameful feelings. The current study was the first to our knowledge to investigate such an approach in AN. Our specific aim was to examine the effectiveness of a self-compassion self-help strategy in counteracting feelings of shame and increasing autonomous motivation for treatment in individuals with AN. Forty-one adult females who met criteria for AN, and who were not currently attending or seeking treatment for an eating disorder, were randomly assigned to complete a daily self-compassionate letter-writing task or to remain on a waitlist over a two-week period. Participants in the self-compassion condition were given access to an audio guide for their letter-writing task. They were asked to think of someone who they had felt compassion for in the past and to write a compassionate letter to that person. Subsequently they were told to bring to mind a personal source of inadequacy or distress and to write themselves a similar compassionate letter. Multilevel modeling revealed a significant Condition x Time effect in predicting each of the dependent variables ( $p$ 's < .05). Only the self-compassion condition led to significant decreases in participants' feelings of shame ( $B = -.21$ ,  $SE = .05$ ,  $p < .001$ ) and significant increases in both their ability to be self-compassionate ( $B = .21$ ,  $SE = .06$ ,  $p < .001$ ) and their autonomous motivation for treatment ( $B = .23$ ,  $SE = .10$ ,  $p = .02$ ). Results suggest that self-compassion training may be a simple and cost-effective way to increase AN sufferers' readiness to engage in treatment.

*Learning Objectives:*

- 】 Discuss how shame and autonomous motivation impact eating disorder treatment outcomes.
- 】 Assess whether learning and practicing certain skills may help to increase AN sufferers' motivation to seek treatment.
- 】 Evaluate the role of a self-help self-compassion strategy in preparing and motivating individuals with AN for treatment.

**S-151****More Than Words: Weight-Based Stigma According to Italian People Suffering from Obesity: A multicentric Italian study**

Daniele di Pauli, PsyD<sup>1</sup>  
 Federica Luisi, Dietitian<sup>2</sup>  
 Gianluigi Luxardi, Clinical Psychologist<sup>3</sup>  
 Lorenzo Maria Donini, MD<sup>2</sup>  
 Fulvio Arnone, Psychiatrist, Neurologist<sup>4</sup>  
 Eleonora Roncarati, Dietitian<sup>5</sup>  
 Emilia Manzato, Psychiatrist<sup>5</sup>

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Obese people are often considered guilty and responsible for their condition by our society. Due to their weight, they may face real discrimination in the most important life domains. Aim of our study is to investigate the weight based stigma from the perspective of overweight/obese individuals. Our study, the first multicentric Italian research on weight-based stigma, recruited about 130 obese individuals, partly under treatment and partly from a Facebook bariatric group. A questionnaire (inspired by Rebecca Puhl et al., 2008) investigating their worst stigma experience related to weight stigmatization (how the most common stereotypes on obese people are perceived and the most effective strategies, in their opinion, to reduce weight stigma) and a form recording demographic and weight history data were administered. Preliminary data show that often some answers were omitted and the term "weight-based stigma" was misunderstood by a high percentage of participants, thus highlighting the great difficulty in understanding the issues related to the "stigma" by obese people themselves. Verbal stigma (e.g. mockery, insults and nicknames) is the most frequent, peers are the main source of stigma, occurring most frequently at school, and "eating too much" is the most common stereotype. Moreover, most participants believe that information on the psychological distress related to being overweight and education about obesity should be fostered to reduce weight bias. Our study highlights that lack of thorough knowledge of weight-based stigma can lead obese individuals to unconsciously share the stigma, thus preventing them from understanding its potential negative impact on their quality of life. The aim of the study is to investigate the weight based stigma from the perspective of overweight/obese individuals in Italy. The study focused the characteristics of weight based stigma highlighting the experiences of people with weight problems. The purpose is to better understand the negative effects of stigma on patients with obesity in Italy.

**S-152****Body Perception, Body Dissatisfaction and BMI in Young Males: A Multicentre Italian Study**

Emilia Manzato, Psychiatrist<sup>1</sup>  
 Giovanni Gravina, Endocrinologist<sup>2</sup>  
 Gianna di Loreto, Psychologist<sup>3</sup>  
 Valentina Guist, Dietitian<sup>4</sup>  
 Eleonora Roncarati, Dietitian<sup>1</sup>  
 Giada Gregoratti, Dietitian<sup>1</sup>  
 Carla Piccione, Dietitian<sup>5</sup>  
 Massimo Cuzzolaro, Psychiatrist<sup>6</sup>

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Recent studies have shown a meaningful presence of body misperception in underweight males, while data about it in young males with overweight and obesity are controversial. In males with a normal BMI, a distorted self-perception of their body shape and concerns about their weight can be risk factors for developing disordered eating behaviours. The multicenter study was conducted in a sample of 121 males, from 4 Italian regions, aged 15 to 30 yrs. They were administered the BUT and EAT-26 tests, the Stunkard figure rating scale and a photo test designed by two SISDCA centres in Ferrara and Pisa, displaying silhouettes with an increasing BMI. A comparison between actual weight and height (actual BMI) and self-perceived weight and height (self-perceived BMI) was made for each subject. Each subject was asked to choose the Figure and the Silhouette he identified with, as well as the photo representing his ideal body shape. The sample included 66,7% subjects with normal-weight, 5% with underweight, 22,5% with overweight and 5,8% with obesity. 14% of the subjects showed high scores, possibly pathological, at BUT. 35,5% people would like to be thinner and 38,8% would like to have a greater weight. 28,1% attribute to themselves a lower BMI than the actual one and 5% attribute to themselves a higher BMI than the actual one. There is substantial discrepancy between self-perceived weight and height and visual perception (BMI of the silhouette chosen as representing their body shape in the Photo-test). The aim of study is to highlight the characteristics of body perception in a sample of young student males, to highlight the characteristics of body image and shape perception in young male general population the study focused on risk factors (body image and eating behavior) for eating disorders in young males.

**S-153****Features of Body Image and Eating Habits in a Samples of Competitive and Not Competitive Body Builders.**

**Emilia Manzato, Psychiatrist**  
**Eleonora Roncarati, Dietitian**  
**Giada Gregoratti**  
**Marilena Digitalino, Psychologist**

University of Ferrara, Ferrara, Italy

Body builders are often focused on their body shape and muscularity and they might be willing to practice dangerous eating behaviour for their health. The aim of our study is to compare the features of a sample of competitive body builders (10 subjects) with a sample of not competitive body builders (52 subjects). A semistructured interview and two psychometric tests (Body Usiness Test and Eating Attitude Test) have been administrated. The study shows many similarities between the two samples, such as an important focus on the body shape, excessive attention for the body image and the extreme research of the muscle definition. Both samples (particularly the competitive body builders) reveal an excessive use of the scale and they spend a lot of time in structured spaces for training. Competitive body builders focus their concern particularly on the calves, instead the sample of the not competitive body builders is focused on the stomach/belly. With reference to the sample of competitive body builders, we can assure they use a strictly controlled meal plan and they abuse of food supplements. However, both groups usually follow an unbalanced diet in terms of nutritional value, according to the guide lines. Body disperception and dissatisfaction are present only in a minority of the sample, especially in the group of the not competitive body builders. Our study highlights the presence of some risk factors for the development of disorders, such as muscle dysmorphia (body dysmorphia) and eating disorders in competitive as well as in not competitive body builders. The aim of study is to focus on body image and the altered eating behaviour as risk factors for eating disorders or dysmorphia in a sample of body builders. Furthermore, to highlight the possible differences between agonist body builders and not agonist. The study is focused on body image in body builders as risk factor for dysmorphia corporea. The aim is to focus on epidemiological study of risk factors for eating disorders in agonist and not agonist body builders.

**S-154****Self Perception of Risk Factors for Eating Disorders: Survey on a Large Sample of Adolescents in Sicily (South Italy)**

**Marina Morelli, Psychiatrist<sup>1</sup>**  
**Oriana Risso, Psychologist<sup>1</sup>**  
**Lorenzo Maria Donini<sup>2</sup>**  
**Eleonora Roncarati, Dietitian<sup>3</sup>**  
**Emilia Manzato, Psychiatrist<sup>3</sup>**

<sup>1</sup>Eating Disorder Centre, Public Health Service, Siracusa, Italy

<sup>2</sup>University of Rome, Rome, Italy

<sup>3</sup>University of Ferrara, Ferrara, Italy

The characteristics of eating behavior and body image have been far more studied in the general population of Northern Italy in comparison with Southern Italy and Islands communities. Aim of the present research was to explore, in a general population of southern adolescents, the self perception regarding the following topics: weight, body image, weight concerns, eating behavior, food selection, binge eating, food restriction. Familiar attitudes towards weight and body shape were also taken into account. The survey was organized in 22 upper secondary schools by the Public Eating Disorder Unit of Siracusa (Sicily) in March 2017. 600 students, 15-17 years old, were recruited: the sample represented the 10% of all students attending the involved schools. A questionnaire with open answers was administrated. Preliminary data indicate that most students considered themselves to be normal weight, but a not negligible percentage of students, particularly females, thought to be underweight; only a small number reported to be overweight or obese. Body dissatisfaction resulted more present in females. Most students did not report emotional eating or eating behavior disorders. Finally most students of both genders did not perceive any concern of the family about their weight or body shape. Our study is the first large survey carried out in a student adolescent population of Sicily. The preliminary data require more detailed investigations to better understand the real attitudes of this adolescent population towards Body Image and Eating Behaviour in this area as well as the possible influence of specific characteristics due to the territory. The aim is to study the self perception regarding body image and eating behaviour in a sample of adolescents of Sicily (southern Italy). The study highlights the need to study the risk factors for eating disorders in young population. The study aim to better understand the real attitudes of this adolescent population towards Body Image and Eating Behaviour in the young populations in south Italy as well as the possible influence of specific characteristics due to the territory.

# RESEARCH PRACTICE

**SATURDAY**, APRIL 21

4:15 PM - 6:00 PM

Research Practice **Global Think Tank**

Clark Meeting Room, Fourth Floor

*Simultaneously translated to Spanish*

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## THE CLINICAL PERSPECTIVE ON EATING DISORDERS RESEARCH: A SYMBIOTIC RELATIONSHIP

*Session Co-Chairs/Moderators:*

**Kristin von Ranson, PhD, FAED (Canada)**

**Kelly Bhatnagar, PhD (USA)**

*Research-Practice Committee Co-Chairs*

As the final event of the International Conference on Eating Disorders, the Research-Practice Think Tank provides an opportunity for reflection and discussion of issues that are critical to conference attendees. The Think Tank aims to promote research-practice integration (RPI) in our field. Rather than the usual focus on how to integrate research-informed evidence into clinical work, the 2018 Think Tank will focus on how to integrate a clinical perspective into research. This year's session will include 3 discussants (a recovered patient/advocate discussant, a full-time clinician, and a clinician-investigator). After the co-chairs introduce the topic, each panelist will speak briefly on how they use clinical knowledge to inform research; practicalities and limitations of integrating clinical expertise into research; or personal experiences with clinical research protocols; as well as any comments they have on research-practice integration at ICED. Attendees will have the opportunity to ask questions and exchange views regarding research-practice integration.

*Recovered Patient/Advocate:*

**Kristina Saffran, BA**

Recovered Patient and Project HEAL

Co-Founder, USA

Currently involved in a collaborative research project



# ICED 2018

*Clinician-Investigator:*

**Carol Peterson, PhD, FAED**

University of Minnesota, The Emily Program,  
and Private Practice

*Full-Time Clinician:*

**Andrew Wallis, BSW, MFamTher**

The Children's Hospital at Westmead

*Learning Objectives:*

By the end of the session, attendees will be able to:

- 1 Define research-practice integration.
- 2 Explain why clinically-informed research is desirable in eating disorders treatment.
- 3 Discuss two barriers to conducting clinician-informed research in eating disorders.
- 4 Critically appraise the degree to which the 2018 ICED program modeled research-practice integration.

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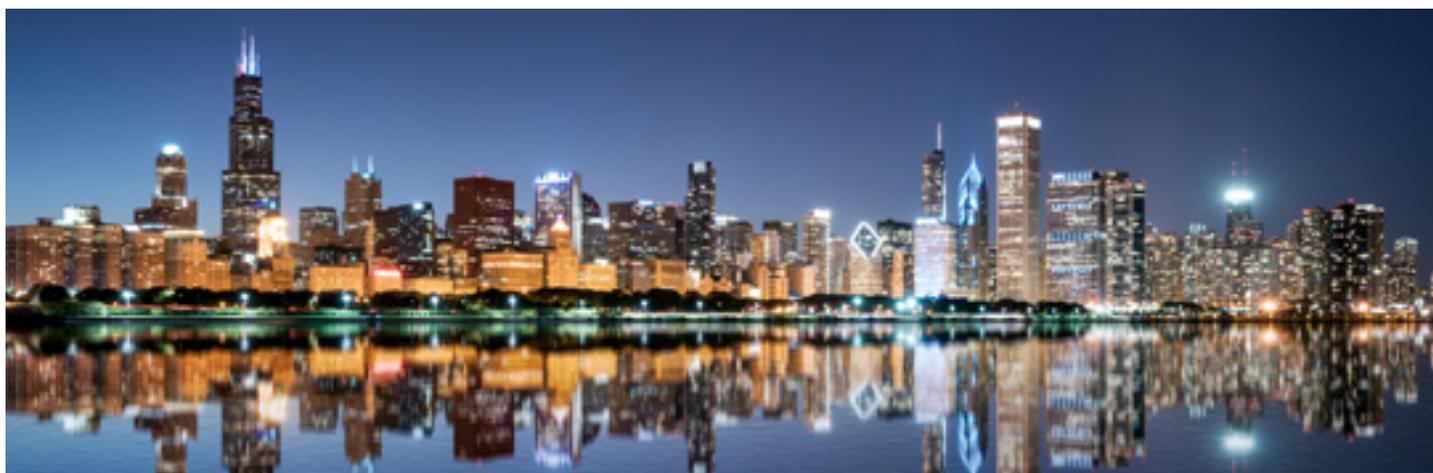
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<b>Dr. B. Timothy Walsh</b>	McGraw Hill Guilford Press UpToDate	Authorship Authorship Authorship	Honorarium Honorarium Honorarium
<b>Dr. Beth McGilley</b>	Monte Nido and Affiliates	Advisory committee	Ownership Interest
<b>Dr. Carolyn Becker</b>	Body Project Body Project Collaborative	Speaking and training Management/co-owner	Training and consulting fees Annual partner payment
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<b>Dr. Daniel Le Grange</b>	Training Institute for Child and Adolescent Eating Disorders Guilford Press	Co-director, teaching Author	Co-ownership interest Royalty
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<b>Dr. Howard Steiger</b>	Portevoix Inc	Speaking/teaching	Honoraria and Royalty
<b>Dr. James Mitchell</b>	Shire	Consulting	Consulting Fee
<b>Dr. Jennifer Thomas</b>	Department of Defense Cambridge University Press Hazelden/Havard University Press National Institute of Mental Health	Serving on review panel Author Author Serving on review panel	Honorarium Royalties Royalties Honorarium
<b>Dr. Kamryn T Eddy</b>	Cambridge University Press	Author	Future Royalties
<b>Dr. Katharine L Loeb</b>	Training Institute for Child and Adolescent Eating Disorders Routledge	Consultant/Faculty Author	Consulting Fees Book Royalties



	Commercial Interest	For what role	What was received
<b>Dr. Lee Kaplan</b>	Sanofi	Scientific advisor	Honoraria
	Ethicon	Scientific advisor	Honoraria
	AMAG Pharmaceuticals	Scientific advisor	Honoraria
	Novartis	Scientific advisor	Honoraria
	Gelesis	Scientific advisor	Honoraria
	Novo Nordisk	Scientific advisor	Honoraria
	GI Dynamics	Scientific advisor	Honoraria
	Medtronic	Scientific advisor	Honoraria
	Rhythm	Scientific advisor	Honoraria
Zaluvia	Scientific advisor	Honoraria	
<b>Dr. Marcia Herrin</b>	Taylor & Francis	Author	Royalties
<b>Dr. Margo Maine</b>	Taylor & Francis	Journal-senior editor (EDJTP)	Fees
	Elsevier	Author	Book royalties
	Renfrew Foundation	Clinical advisory board	honorarium, consult fee
	Gurze Books	Author	Book royalties
	Walden Behavioral Health	Clinical advisory board	Clinical consulting
<b>Dr. Melissa Kimber</b>	Public Health Agency of Canada	Curriculum Development	Consulting Fee
<b>Dr. Michael Lowe</b>	Renfrew Center for Eating	Consultant, Board Member	Consulting Fees
<b>Dr. Phillipa Hay</b>	Shire Pharmaceuticals	Comissioned report	Consulting Fee
<b>Dr. Renee Rienecke</b>	Training Institute for Child and Adolescent Eating Disorders	Consulting	Consulting Fees
<b>Dr. Ross Crosby</b>	Health Outcomes Solutions	Statistic consultation	Consulting Fees
<b>Dr. Timothy Brewerton</b>	Monte Nido and Affiliates	Consulting	Consulting Fees
	Center for Hope in the Sierras	Speaking/teaching	Honoraria
	Monte Nido and Affiliates	Stock holdings (wife)	Stock holdings (wife)
	Center for Change	Speaking/teaching	Honoraria
<b>Mr. Aaron Flores</b>	Center for Discovery	PT employee	Salary
<b>Ms. Hallie Espel-Huynh</b>	The Renfrew Center, Inc.	Consulting	Consulting Fees
<b>Ms. Phillipa Diedricks</b>	Dove Self Esteem Project	Consulting	Consulting Fees

# ICED 2018 SPONSORS

## GOLD SPONSOR

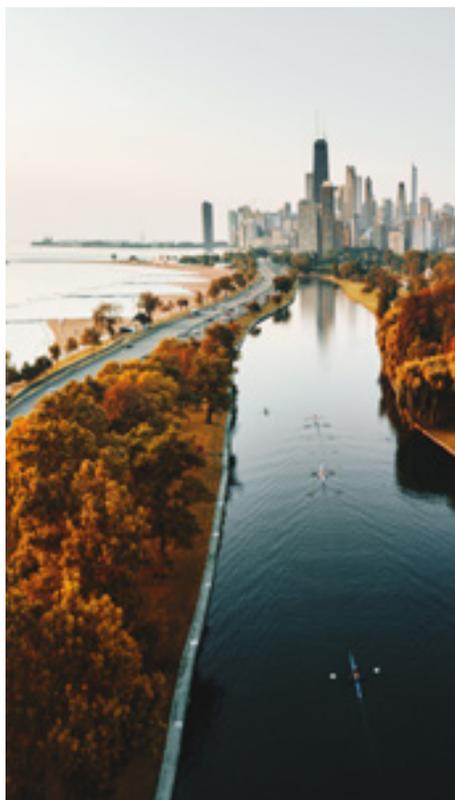
**Wiley**

[www.onlinelibrary.wiley.com](http://www.onlinelibrary.wiley.com)

# WILEY

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## SILVER SPONSORS

**The Center for Eating Disorders at Sheppard Pratt**

Towson, Maryland, USA  
[eatingdisorderinfo@sheppardpratt.org](mailto:eatingdisorderinfo@sheppardpratt.org)  
410.938.5252  
[www.eatingdisorder.org](http://www.eatingdisorder.org)  
**Booth #302**



The Center for Eating Disorders  
AT SHEPPARD PRATT

The Center for Eating Disorders at Sheppard Pratt has been a national leader in the provision of evidenced-based eating disorder treatment for three decades. Our highly-trained, multidisciplinary staff provide specialized care for children, adolescents and adults healing from eating disorders. The Center's full continuum-of-care includes age-specific Inpatient Programs, Partial Hospital Program (PHP), Intensive Outpatient Program (IOP), comprehensive outpatient services and free support groups. Research and compassion combine to guide treatment options which include individual, group and family-based therapies, as well as nutritional counseling, art therapy, occupational therapy and specialized programming for individuals with dual diagnoses. Most insurance plans accepted.

**McCallum Place Eating Disorder Centers**

St. Louis, Missouri and Kansas City, Kansas  
[www.mccallumplace.com](http://www.mccallumplace.com)  
**Booth #301**



**McCallum Place**  
Eating Disorder Centers

McCallum Place is a nationally acclaimed eating disorder treatment center for pre-teens, adolescents, adults and athletes. With locations in St. Louis and Kansas City, McCallum Place offers on-site medical and psychiatric care combined with intensive individualized psychotherapy and personalized nutritional support in a home-like setting. Residential, partial

hospitalization, intensive outpatient and transitional living provide a full continuum of treatment options for every stage of recovery. Four separate programs are designed to meet the specific needs of each patient: pre-adolescent/adolescent, adult, trauma-sensitive program for adult females only, and Victory Program for elite athletes

**Montecatini Eating Disorder Treatment Program**

Carlsbad, California, USA  
Emily Pellegrine, [Emily.pellegrine@montecatinedtc.com](mailto:Emily.pellegrine@montecatinedtc.com)  
[www.montecatinieatingdisorder.com](http://www.montecatinieatingdisorder.com)  
**Booth #402**



*montecatini*

Montecatini specializes in the comprehensive care of females, aged 16 and older, who are struggling with eating disorders and other co-occurring diagnoses. Since 1991, we have successfully treated hundreds of adolescent girls and women with eating disorders and have become nationally recognized for providing services at the residential, partial hospitalization, and intensive outpatient levels of care. We are dedicated to helping our clients achieve long-term recovery and return to a healthy, meaningful life.

**Sanford Eating Disorders & Weight Management Center**

Fargo, North Dakota, USA  
 Colleen Hughes, [Colleen.Hughes@SanfordHealth.org](mailto:Colleen.Hughes@SanfordHealth.org)  
[SanfordHealth.org](http://SanfordHealth.org)  
 Sanfordhealth.org, Keyword: Eating Disorders  
**Booth #101**



Sanford's Eating Disorders & Weight Management Center, located in Fargo, ND is a national leader specializing in diagnosing and treating eating disorders in adolescents and adults. Evidence based treatment options include outpatient, partial hospital or full inpatient services. People throughout the US choose Sanford because of our unique and comprehensive program, also available via telehealth; bringing together leading experts to evaluate, treat and conduct research with the hope of successfully treating eating disorders and obesity. Treatment is specialized, yet our goal is the same: To help people regain control of their lives and overcome the potentially life-threatening consequences of eating disorders.

**Timberline Knolls**

Lemont, Illinois, USA  
 Megan Olson, [megan.olson@timberlineknolls.com](mailto:megan.olson@timberlineknolls.com)  
[timberlineknolls.com](http://timberlineknolls.com)  
 630.248.4204 or 877.257.9611  
**Booth #202**

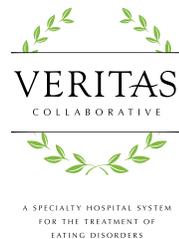


Timberline Knolls Residential Treatment Center is located on 43 beautiful acres just outside Chicago, offering a nurturing environment of recovery for women and girls ages 12 and older struggling to overcome eating disorders, substance abuse, mood disorders, trauma and co-occurring disorders. Our multi-disciplinary

integrated program provides individualized, intensive treatment utilizing clinical approaches that include the Recovery Principles, Dialectical Behavior Therapy (DBT), expressive therapies, spirituality and family systems. We also have an award-winning on-campus school, TK Academy, for adolescent residents to attend classes with a curriculum consistent with that of their home school. Women and girls seeking Christian treatment can opt for our specialized Christian-based programming. An adult partial hospitalization program is available on campus for step down as well as in Orland Park, Ill., for women to direct admit. By serving with uncompromising care, relentless compassion and an unconditional joyful spirit, we help our residents and clients help themselves in their recovery.

**Veritas Collaborative, LLC**

Durham, North Carolina, USA  
 info@veritascollaborative.com  
[www.veritascollaborative.com](http://www.veritascollaborative.com)  
**Booth #102**



Veritas Collaborative is a specialty healthcare system for the treatment of eating disorders. With locations in Durham, NC, Atlanta, GA and Richmond, VA, Veritas provides a range of services for individuals ages 8 and older, including inpatient, acute residential, partial hospitalization, intensive outpatient, and outpatient levels of care. Accredited by The Joint Commission, Veritas Collaborative delivers individualized, evidence-based care in a gender-diverse and inclusive environment. At every turn, Veritas Collaborative's focus is on ensuring that each patient's plan of care is cohesive, attainable, sustainable, and geared toward long-term recovery.

**BRONZE SPONSOR**

**Eating Recovery Center  
 Insight Behavioral Centers**

[info@eatingrecoverycenter.com](mailto:info@eatingrecoverycenter.com)  
<https://www.eatingrecoverycenter.com/>  
<http://www.insightbhc.com/>  
**Booths #201 and #203**



Eating Recovery Center (ERC) is the only national, vertically integrated, health care system dedicated to the treatment of serious eating and related disorders at any stage of the illness. ERC offers best-in-class treatment programs for all patients, no matter their age or gender, struggling from: anorexia, bulimia, binge eating disorder, eating and weight disorder, unspecified eating disorders, as well as comorbid, co-occurring and dual diagnoses. Led by the world's leading experts in eating disorder treatment, ERC provides a full spectrum of eating disorder recovery services through an unmatched network of multiple locations across seven states. Partnering with ERC, Insight Behavioral Health Centers offers best-in-class mood and anxiety recovery programs in the Chicago area, Seattle, and in the Woodlands and Round Rock, Texas.



# ICED 2018 EXHIBITORS

## ACUTE Center for Eating Disorders

Denver, Colorado, USA  
acuteinfo@dhha.org  
1-877-ACUTE 4U  
www.ACUTEcenterforEatingDisorders.org  
**Booth #109**



The ACUTE Center for Eating Disorders at Denver Health is the country's only specialized medical stabilization program for adults with severe eating disorders. Led by Drs. Philip S. Mehler and Margherita Mascolo, ACUTE is uniquely tailored to help all genders (ages 17+) who cannot seek care in a traditional inpatient or residential treatment setting due to the severity of their weight loss and/or other medical complications (<70% of their ideal body weight, severe malnutrition, electrolyte/fluid problems, organ failure, cardiac irregularities, gastrointestinal complications, severe laxative/diuretic abuse, etc.) Patients receive specialized medical care from the industry's leading experts, a highly individualized treatment plan, daily dietary and therapeutic support and thorough discharge planning to help them on their path to recovery. ACUTE is contracted with most major insurance companies and uses the patient's medical insurance benefit for stabilization.

## AMITA Alexian Brothers Behavioral Medicine Institute Center for Eating Disorders

Hoffman Estates, Illinois  
Renee Bach, Clinical Liaison, 847.755.3244  
800.432.5005  
www.Amitahealth.org/eatingdisorders  
**Booth #406**



Alexian Brothers provides specialized treatment for those suffering from eating related issues. We also treat co-occurring conditions, including self-injury and substance abuse. We provide a comprehensive program that includes

individual and family therapy, nutrition intervention, experiential treatments like body image work, medication management, and skills-based groups. Our levels of care include inpatient, PHP and IOP.

## Aloria Health

Milwaukee, Wisconsin, USA  
admissions@aloriahealth.com  
844.801.9529  
aloriahealth.com  
**Booth #107**



Using an approach that includes more than treatment, Aloria Health gives people the tools to become their best selves. Aloria provides care for individuals with food and body related issues as well as all eating disorder diagnoses including anorexia, binge eating disorder, body dysmorphia, bulimia, compulsive overeating, orthorexia, and co-occurring issues. Aloria Health is now accepting admissions for residential, partial hospitalization, and intensive outpatient care.

## Avalon Hills

Logan, Utah  
info@avalonhills.org  
800.330.0490  
www.avalonhills.org  
**Booth #314**



Avalon Hills Eating Disorder Specialists offers residential treatment for adolescent females and adult women in overcoming the full range of eating disorders. Treat to Outcome is at the core of our philosophy and refers to our commitment to long-term recovery. We help our clients develop new ways of thriving in their lives through a combination of traditional psychotherapies, applied neuroscience based on the stages of neuroplastic healing, experientially-based interventions, and graded re-integration when stepping down.

## BEDA Binge Eating Disorder Association

www.bedaonline.com  
**Booth located in the Registration Area on the 5th floor**



The Binge Eating Disorder Association (BEDA) is the national organization focused on providing leadership in the recognition, prevention, and treatment of Binge Eating Disorder (BED). BEDA is committed to helping those affected by BED through exploration and support of best practices in treatment and recovery that honor the individual's needs and circumstances.

## Bright Heart Health

Walnut Creek, California, USA  
admissions@brighthearthealth.com  
www.BrightHeartHealth.com  
**Booth #112**



Bright Heart Health

Bright Heart Health provides Intensive Outpatient services to individuals across the United States via telemedicine. Our licensed psychiatrists, psychologists, therapists, clinicians, and dietitians provide comprehensive treatment to patients in the privacy of their home. Each individual is assigned a multi-disciplinary treatment team who creates an individualized treatment plan. Bright Heart Health is Joint Commission accredited. Bright Heart Health accepts commercial insurance.

## Cambridge Eating Disorder Center (CEDC)

617-547-2255  
info@cedcmail.com  
www.eatingdisordercenter.org  
**Booth #209**



At the Cambridge Eating Disorder Center (CEDC), we have developed a comprehensive system of care for adolescents and adults battling eating disorders. CEDC offers a complete spectrum of recovery services to support the continuity of care and help clients achieve lasting recovery: Residential Program, Adolescent and Adult Partial Hospital Program (Day), Adult Intensive Outpatient Program (Day and Evening programs available), Adolescent Intensive Outpatient Program (Day and Evening programs available), Transitional Living, and Outpatient Programs. To learn more visit [www.eatingdisordercenter.org](http://www.eatingdisordercenter.org).

**Castlewood Treatment Centers**

St. Louis, Missouri, Birmingham, Alabama, Monterey, California, USA  
 Alexandra.Konefall@castlewoodtc.com  
 1.888.822.8938  
[www.castlewoodtc.com](http://www.castlewoodtc.com)  
**Booth #210**



Castlewood Treatment Centers offer compassionate and empowering treatment for eating disorders and co-occurring conditions. With locations in St. Louis, MO, Birmingham, AL and Monterey, CA, Castlewood works with gender diverse clients age 16 and older at multiple levels of care (residential, partial hospitalization and intensive outpatient). Delivering more than just symptom stabilization, Castlewood provides adaptive and transformative care for the whole person. While most eating disorder programs are designed to address psychological, nutritional, and medical needs, Castlewood offers a more comprehensive model that includes these areas, as well as addressing a person's need for physical movement and relationship with self and others.

**The Center for Balanced Living**

Columbus, Ohio, USA  
 Lori Johnson, [lori.johnson@thecenterforbalancedliving.org](mailto:lori.johnson@thecenterforbalancedliving.org)  
[www.TheCenterForBalancedLiving.org](http://www.TheCenterForBalancedLiving.org)  
**Booth #207**



Established as a freestanding, non-profit 18 years ago in Columbus, OH, The Center for Balanced Living provides compassionate, evidence-based eating disorder treatment for ages 16+. Our team of experts provides premier care in a healing environment. Services include a 5-Day program, Partial Hospital program, Intensive Outpatient Programs, outpatient counseling, nutrition services, medication management and psychotherapy groups for specific populations. Our mission also focuses on providing quality educational programs and collaborating on cutting-edge research projects. The Center recently launched #BalancedLifeMovement, a campaign to fund the final stage of development of BalancedLife™, a robust, recovery-focused nutrition app. Learn more: [www.youcaring.com/BalancedLifeMovement](http://www.youcaring.com/BalancedLifeMovement).

**Center for Change**

Orem, Utah, USA  
 1.888.224.8250  
[www.centerforchange.com](http://www.centerforchange.com)  
**Booth #303**



Center for Change is a place of hope and healing that is committed to helping women and adolescent girls break free and fully recover from their eating disorders. The Center offers intensive treatment for eating disorders and co-occurring issues, including a specialty program for co-occurring diabetes (ED-DMT1), and provides a full continuum of care: inpatient, residential, day & evening programs, and outpatient services. Accredited by The Joint Commission, AdvancED, and TRICARE® certified.

**Center for Discovery**

[info@centerfordiscovery.com](mailto:info@centerfordiscovery.com)  
 1.866.480.3475  
[www.CenterForDiscovery.com](http://www.CenterForDiscovery.com)  
**Booth #404**



Center for Discovery offers Joint Commission accredited residential, partial hospitalization, and intensive outpatient eating disorder, mental health, and substance abuse treatment with separate programming for adults and adolescents. Discovery programs treat a limited number of clients at a time because individualized attention is critical when it comes to providing effective and efficient treatment.

**The Center for Eating Disorders at Sheppard Pratt**

Towson, Maryland, USA  
[eatingdisorderinfo@sheppardpratt.org](mailto:eatingdisorderinfo@sheppardpratt.org)  
 410.938.5252  
[www.eatingdisorder.org](http://www.eatingdisorder.org)  
**Booth #302**



The Center for Eating Disorders at Sheppard Pratt has been a national leader in the provision of evidenced-based eating disorder treatment for three decades. Our highly-trained, multidisciplinary staff provide specialized care for children, adolescents and adults healing from eating disorders. The Center's full continuum-of-care includes age-specific Inpatient Programs, Partial Hospital Program (PHP), Intensive Outpatient Program (IOP), comprehensive outpatient services and free support groups. Research and compassion combine to guide treatment options which include individual, group and family-based therapies, as well as nutritional counseling, art therapy, occupational therapy and specialized programming for individuals with dual diagnoses. Most insurance plans accepted.

**Children’s Hospital Colorado Eating Disorders Program**

Aurora, Colorado, USA  
 Vicki Sullivan, Intake Coordinator, vicki.sullivan@childrenscolorado.org  
 720.777.6452  
 www.childrenscolorado.org  
**Booth #307**



The Eating Disorders Program at Children’s Hospital Colorado has provided a comprehensive, multidisciplinary team approach for the treatment of eating disorders in children, adolescents and young adults since 1988. Our family centered approach is an integral part of every level of care, which includes outpatient services, partial hospitalization, an inpatient eating disorders unit and specialized inpatient medical care. The program includes multifamily groups, parent education, art, music, movement and yoga therapy, psychiatric evaluation, medical management and monitoring.

**Eating Disorders Coalition for Research, Policy & Action (EDC)**

manager@eatingdisorderscoalition.org  
 202-543-9670  
 www.eatingdisorderscoalition.org  
**Booth is located in the Registration area on the 5th floor**



The Eating Disorders Coalition for Research, Policy & Action (EDC) is a Washington, D.C.-based federal advocacy organization comprised of treatment providers, advocacy organizations, academics, parents of children with eating disorders and people experiencing eating disorders nationwide. The EDC advances the recognition of eating disorders as a public health priority throughout the United States by educating and building relationships with Congress, federal agencies and organizations dedicated to health issues.

**Education, Inc.**

Plymouth, Massachusetts, USA  
 info@educationinc.us  
 1.508.732.9101  
 www.educationinc.us  
**Booth #310**



Up to 100-word description of your company/organization to be included in the official ICED Conference Program and mobile app: Education, Inc. helps hospitals and treatment centers to reduce operating costs while providing high-quality educational programs for K-12 student-patients. Working closely with your team and the school district, we customize each student’s studies to keep him/her on track academically. We help normalize the experience, making integration of the educational component as seamless as possible. Since 1995, we have delivered over a quarter-million teaching hours in over 70 US healthcare facilities. Moreover, our programs are typically low or no cost to your healthcare organization.

**Edward-Elmhurst Healthcare**

Sonja Sreckov, sonja.sreckov@eehealth.org  
 Edward Hospital - Main Campus  
 801 S. Washington Street, Naperville, Illinois 60540  
 630-527-3000  
 www.eehealth.org  
**Booth #110**



**The Ellen West Foundation**

Ciudad de Mexico, Mexico  
 Araceliazpuru@prodify.net.mx  
 www.ellenwest.org  
**Booth #205**

The Foundation and Treatment Centre are named after Ellen West, an Austrian poet who suffered from Bulimia Nervosa in the late 1930s. She died from it before the disease was even diagnosed. “Hunger and fear of fat torture me...” Such single and plain line written by this poet still remains

in the memory and heart of many women. Our Mission: a) Create awareness in Mexico about eating disorders b) Provide the best holistic and multidisciplinary treatment to people who have eating disorders, regardless of their financial means.

**The Emily Program**

Minnesota, Ohio, Pennsylvania, Washington  
 info@emilyprogram.com  
 http://emilyprogram.com  
**Booth #304**



The Emily Program is nationally recognized for its compassionate, personalized approach to eating disorder treatment and lifetime recovery. The Emily Program’s team of experts combine evidence-based therapies with personalized integrative interventions. If you or someone you love is struggling with food, call 1-888-EMILY-77 (1-888-364-5977) today.

**F.E.A.S.T. (Families Empowered and Supporting Treatment of Eating Disorders)**

Milwaukee, Wisconsin, USA  
 info@feast-ed.org  
 +1-855-50-FEAST  
 www.feast-ed.org  
**Booth #212**



F.E.A.S.T. is an international organization that supports caregivers of eating disorder patients. F.E.A.S.T. provides resources on the biology of eating disorders and evidence-based treatment options. F.E.A.S.T.’s goal is to educate parents to make the best treatment decisions for their children, and to provide peer support to help parents engage effectively as participants in their child’s treatment plan. F.E.A.S.T. also advocates for better research and education to reduce the suffering associated with eating disorders.

**International Association of Eating Disorders Professionals (iaedp)**

*Pekin, Illinois, USA*  
 1.800.800.8126  
 www.iaedp.com  
**Booth #214**



Established in 1985, iaedp is well recognized for its excellence in providing first-quality education and high level training standards to an international multidisciplinary group of various healthcare treatment providers and helping professions, who treat the full spectrum of eating disorder problems. iaedp offers a highly respected certification process for those professionals who wish to receive specialized credentials in their work with eating disorders.

**The Gaudiani Clinic**

*Denver, Colorado, USA*  
 meghan@gaudianiclinic.com  
 720.515.2140  
 www.Gaudianiclinic.com  
**Booth #204**



The Gaudiani Clinic offers expert outpatient medical care to people of all ages, sizes, and genders with eating disorders or disordered eating. The Gaudiani Clinic also offers thoughtful care to those who are recovered from an eating disorder. Through a collaborative multi-disciplinary approach, the Clinic cares for the whole person, in the context of their values. The Gaudiani Clinic is located in Denver, Colorado and offers telemedicine treatment throughout the United States.

**The Johns Hopkins Eating Disorders Program**

*Baltimore, Maryland, USA*  
 www.PsychiatryAdmissions@jhmi.edu  
 410.955.3863  
**Booth #106**

The Johns Hopkins Eating Disorders Program is a nationally recognized treatment center for eating disorders. Psychiatrist led, multidisciplinary team care for patients ages 14 and up, males and females. Consultations from various specialties, are available, as needed. Medical and nutritional interventions are integrated with physical and psychological therapies to develop a comprehensive individualized treatment plan for each patient. Our primary goals are to restore the functional capacity, to normalize the eating patterns, and to improve the quality of life of our patients.

**The Joint Commission**

*Oakbrook Terrace, Illinois, USA*  
 Darrell Anderson, LAnderson@jointcommission.org  
 www.jointcommission.org/bhcs  
**Booth #410**



The Joint Commission Accreditation provides an external validation of the quality and safety your organization provides. The Joint Commission Gold Seal of Approval is widely recognized and respected across health care, and can uniquely position your eating disorder treatment program as a quality-oriented partner with payers, referral sources, patients and families.

**Laureate Eating Disorders Program**

*Tulsa, Oklahoma, USA*  
 800.322.5173  
 www.laureate.com/eatingdisorders  
**Booth #311**



Laureate is a small, not-for-profit treatment program in Tulsa, Oklahoma for women and girls with eating disorders and their co-occurring psychiatric and medical conditions that is fully accredited by The Joint Commission. We are highly individualized & designed for a personalized experience. We offer separate tracks for adolescents and adults, and 40 hours of therapist-led group, individual and family therapy weekly. Laureate has expertise in treatment of co-occurring psychiatric and medical conditions.

**Living Hope Eating Disorder Treatment Center**

*Norman, Oklahoma, USA*  
 Alexa Deghand, Outreach Director,  
 adeghand@livinghopeok.com  
 1.833.206.6921  
 www.livinghopeok.com  
**Booth #111**



Living Hope Eating Disorder Treatment Center is located in Norman, Oklahoma and offers services for men and women which incorporate counseling, nutrition education, medical stabilization and group therapy. Depending on level of care, programs are available for adolescents and adults. Living Hope offers residential, partial hospitalization, intensive outpatient and outpatient services treating Anorexia Nervosa, Bulimia Nervosa, OSFED, Binge Eating Disorder, Compulsive Overeating and Disordered Eating.

**McLean Klarman Eating Disorder Center**

*Belmont, Massachusetts, USA*  
 mcleanklarman@partners.org  
 www.mcleanhospital.org  
**Booth #103**



The Klarman Eating Disorders Center at McLean Hospital provides effective

treatment for young women ages 16-26 living with anorexia, bulimia and binge eating disorders. Our Harvard Medical School-affiliated clinicians use evidence-based treatment methods and are experts in treating eating disorders and the conditions that commonly accompany them such as depression, anxiety, and substance use. Our intensive residential program has a typical length of stay of 30 days and includes a step-down partial hospital component for those requiring additional care. McLean Hospital is ranked #1 in Psychiatry by US News & World Report. For more information or to make a referral, please call 617.855.3410 or email [mcleanklarman@partners.org](mailto:mcleanklarman@partners.org).

**McCallum Place Eating Disorder Centers**

St. Louis, Missouri and Kansas City, Kansas  
[www.mccallumplace.com](http://www.mccallumplace.com)  
**Booth #301**



McCallum Place is a nationally acclaimed eating disorder treatment center for pre-teens, adolescents, adults and athletes. With locations in St. Louis and Kansas City, McCallum Place offers on-site medical and psychiatric care combined with intensive individualized psychotherapy and personalized nutritional support in a home-like setting. Residential, partial hospitalization, intensive outpatient and transitional living provide a full continuum of treatment options for every stage of recovery. Four separate programs are designed to meet the specific needs of each patient: pre-adolescent/adolescent, adult, trauma-sensitive program for adult females only, and Victory Program for elite athletes

**The Meadows Ranch**

Wickenburg, Arizona, USA  
[info@themeadows.com](mailto:info@themeadows.com)  
 866.390.5100  
[www.Meadowsranch.com](http://www.Meadowsranch.com)  
**Booth #411**



The Meadows Ranch offers individualized treatment specifically designed for women and girls with eating disorders and dual diagnosis. Treatment includes critical care/inpatient, residential, transitional living, and chemical dependency (detox) services. We integrate trauma theory into the programming and provide medical and psychiatric stabilization and nutritional rehabilitation for a holistic approach to recovery. Our clients develop the tools they need to sustain recovery by focusing on education, resiliency, and self-regulation.

**Melrose Center**

Minneapolis, Minnesota, USA  
[Melrose@parknicollet.com](mailto:Melrose@parknicollet.com)  
[www.melroseheals.com](http://www.melroseheals.com)  
**Booth #206**



For more than 30 years, Melrose Center has helped treat and heal patients and families struggling with all types of eating disorders, including anorexia, bulimia, and the most common, binge-eating disorder. We treat all genders, all ages, eating disorders and diabetes, eating disorders and substance use disorder and athletes with eating disorders. Our personalized and innovative treatment uses a multidisciplinary approach that includes medical, nutritional, psychological and behavioral care through outpatient and residential programs.

**Monte Nido/Oliver-Pyatt Centers/ Clementine Programs**

[montenidoadmissions@montenido.com](mailto:montenidoadmissions@montenido.com)  
[www.montenido.com](http://www.montenido.com)  
**Booth #403**

**MONTE NIDO & affiliates**

What binds Monte Nido & Affiliates together is shared histories, overlap in mission, language, models and approaches, treating those who present with eating disorders as people first, dedication to best-in-class treatment, and a belief in being fully recovered. Monte Nido & Affiliates includes three distinct eating disorder treatment programs: Monte Nido, Oliver-Pyatt Centers and Clementine. Our Mission is to save lives while providing opportunity for people to realize their healthy selves. Monte Nido and Oliver-Pyatt Centers provide residential treatment for women (day treatment programs for women and men) and Clementine provides treatment for adolescent girls.

**Montecatini Eating Disorder Treatment Program**

Carlsbad, California, USA  
 Emily Pellegrine, [Emily.pellegrine@montecatiniedt.com](mailto:Emily.pellegrine@montecatiniedt.com)  
[www.montecatinieatingdisorder.com](http://www.montecatinieatingdisorder.com)  
**Booth #402**



*montecatini*

Montecatini specializes in the comprehensive care of females, aged 16 and older, who are struggling with eating disorders and other co-occurring diagnoses. Since 1991, we have successfully treated hundreds of adolescent girls and women with eating disorders and have become nationally recognized for providing services at the residential, partial hospitalization, and intensive outpatient levels of care. We are dedicated to helping our clients achieve long-term recovery and return to a healthy, meaningful life.

**National Eating Disorders Association (NEDA)**

212.575.6200  
[www.NationalEatingDisorders.org](http://www.NationalEatingDisorders.org)  
**Booth: #701**



National Eating Disorders Association

NEDA supports individuals and families affected by eating disorders, and serves as a catalyst for prevention, cures and access to quality care. NEDA's Feeding Hope Fund for Clinical Research and Training raises money to advance the field of eating disorders and awards grants towards research and training.

**The Pediatric Eating Disorders Center at Atlantic Health System**

Summit, New Jersey, USA  
[www.EatingDisorders@atlantichealth.org](mailto:www.EatingDisorders@atlantichealth.org)  
 Meghan Feehan, PsyD, Clinical Coordinator  
**Booth #208**



The Pediatric Eating Disorders Center at Atlantic Health System is the only program in New Jersey that exclusively treats children and adolescents ages 8 to 21 with eating disorders. Our multidisciplinary team of health care professionals are specially trained in providing comprehensive assessments and treatments for eating disorders and related problems, specifically Family-Based Treatment. The program provides outpatient, intensive outpatient, and partial hospitalization levels of care so that patients can remain close to home and their families can fully participate in the recovery process. Treatment includes medical monitoring, nutritional counseling, psychiatric and psychosocial consultations and therapy, and Family-Based Treatment.

**Penn Medicine Princeton Center for Eating Disorders**

Plainsboro, New Jersey, USA  
[cshamy@princetonhcs.org](mailto:cshamy@princetonhcs.org)  
[www.princetonhcs.org/eatingdisorders](http://www.princetonhcs.org/eatingdisorders)  
**Booth #104**



Nationally known, Penn Medicine Princeton Center for Eating Disorders provides inpatient and partial hospital treatment for adults, adolescents, and children as young as eight years old who are suffering from eating disorders. We provide the foundation for recovery by combining psychosocial treatment, nutritional support, family involvement and the latest advances in clinical care – together with an atmosphere of understanding, safety, respect and support. Patients and families benefit from our ability to address eating disorders in those with additional medical complications, and to treat individuals who have extremely low body weight. Princeton Center for Eating Disorders welcomes patients of all genders.

**Reasons Eating Disorder Center**

Los Angeles, California, USA  
[Reasonsedc@uhsinc.com](mailto:Reasonsedc@uhsinc.com)  
 844.573.2766  
[www.reasonsedc.com](http://www.reasonsedc.com)  
**Booth #408**



Reasons Eating Disorder Center provides comprehensive, individualized and integrative, gender-inclusive treatment for ages 12 and older. We offer inpatient, residential, partial hospitalization and intensive outpatient programs with a highly specialized multidisciplinary treatment team. All of our programs are structured and intensive to promote emotional regulation, behavioral stability, nutritional restoration, as well as to provide a deeper level of understanding and most importantly, acceptance of self.

**REDC – The Residential Eating Disorders Consortium**

[info@residentialeatingdisorders.org](mailto:info@residentialeatingdisorders.org)  
 646.553.1340  
[www.residentialeatingdisorders.org](http://www.residentialeatingdisorders.org)  
**Booth #414**



Residential Eating Disorders Consortium

The Residential Eating Disorders Consortium (REDC)'s mission is to collaboratively address issues impacting residential eating disorder treatment programs in an effort to elevate the quality and scope of care available to individuals and families struggling with eating disorders. REDC members believe it is imperative to work collaboratively with each other and with the broader community of those concerned about eating disorders to provide quality service to the public. We believe that we must have a unified voice in regards to Policy; to uphold and expand Quality Standards; and to conduct outcomes Research to demonstrate quality care.

**The Renfrew Center**

Philadelphia, Pennsylvania, USA  
[info@renfrewcenter.com](mailto:info@renfrewcenter.com)  
[www.renfrewcenter.com](http://www.renfrewcenter.com)  
**Booth #405**



The Renfrew Center has been the pioneer in the treatment of eating disorders since 1985. As the nation's first residential eating disorder facility, now with 19 locations throughout the country, Renfrew has helped more than 75,000 adolescent girls and women with anorexia nervosa, bulimia nervosa, binge eating disorder, and related mental health problems move towards recovery. The Renfrew Center's extensive range of services includes residential, day treatment, intensive outpatient, and outpatient programs. Each treatment level utilizes The Renfrew Center Unified Treatment Model for Eating Disorders®.

Renfrew accepts most major insurances and is a preferred provider for all levels of treatment.

**River Oaks Hospital**

New Orleans, Louisiana, USA  
 www.riveroakshospital.com  
**Booth #407**



At the Eating Disorders Treatment Center at River Oaks Hospital, patients receive compassionate care tailored to their unique and complex needs. The clinical team provides evidence-based treatment that includes Cognitive Behavioral Therapy, insight-oriented psychotherapy and an integrated mix of proven approaches to treat eating disorders. Patients utilize all the facets of their personalized treatment plan to understand the underlying causes of their disorders and develop skills to motivate change toward positive transformation.

**Rogers Behavioral Health**

Jean Corrao, jcorrao@rogersbh.org  
 1.800.767.4411  
 www.rogersbh.org  
**Booth #108**



For more than a century, Rogers Behavioral Health has been a leading nonprofit provider of mental health services including comprehensive eating disorder treatment for children, adolescents, and adults nationwide. Offering each person a specialized treatment plan, our inpatient, residential, and outpatient programs address anorexia nervosa, bulimia, binge eating disorders, as well as co-occurring conditions that often contribute to a patient's struggles. To support the effectiveness of treatment, we routinely assess each patient to monitor progress and program outcomes.

**Rosewood Centers for Eating Disorders**

Wickenburg, Arizona, USA  
 info@rosewoodranch.com  
 www.rosewoodranch.com  
**Booth #409**



**ROSEWOOD**  
 CENTERS FOR EATING DISORDERS

Our well-established model of care, experienced multidisciplinary staff, and intimate warm setting make Rosewood uniquely qualified to effectively treat your eating disorder. Rosewood is one of the nation's leading eating disorder treatment programs for men, women and adolescents offering comprehensive Levels of Care for all stages of recovery, from 24-hour inpatient monitoring to a variety of residential, transitional and outpatient programs. If you're considering treatment for an eating disorder—for yourself, a family member or friend—Rosewood is both an innovator and a respected leader in comprehensive, fully individualized treatment programs that are proven to work. Rosewood is accredited by the Joint Commission and is a member of many respected organizations within the industry. Using a holistic and multidisciplinary approach, we treat patients with anorexia nervosa, bulimia nervosa, and binge eating disorders, as well as co-occurring addictions and disorders.

**Selah House**

Anderson, Indiana, USA  
 Ashley Hemrich, ashleyh@selahhouse.com  
 1.765.253.4087  
 www.selahhouse.com  
**Booth #412**



**Selah House**  
 Reclaim Freedom

Selah House offers Inpatient, Residential, and PHP Eating Disorder treatment for women and adolescent girls ages 15 and older. We are a Christ-centered, clinically excellent program located in Central Indiana.

**Erin Riederer Foundation/Sockit to ED Global**

Elm Grove, Wisconsin, USA  
 riederer\_j@sbcglobal.net  
 www.facebook.com/Sockit  
**Booth is located in the Registration area on the 5th floor**



Sockit to ED originated when a group of international eating disorder advocates gathered at the AED conference in Salzburg, Austria. News that a young woman from the United States, Erin Riederer, had passed away reached those at the conference. Kitty Westin was to speak at a session during ICED and was weeping, no tissue to wipe her tears was to be found. Instead, June Alexander pulled an old gym sock from her bag, the sock had hitched a ride from Melbourne to Salzburg. Kitty wiped her tears and asked if she could clutch the sock while she gave her now emotionally driven presentation. Kitty took the sock home to the USA..That sock led to the Sockit to ED campaign, to raise awareness and financial support for eating disorder charities around the world.

**Silver Hill Hospital**

New Canaan, Connecticut, USA  
 Rachel Freeman Hudson, LCSW,  
 Clinical Outreach Director, rhudson@silverhillhospital.org  
 www.silverhillhospital.org  
**Booth #105**



Established in 1931 in New Canaan, CT, Silver Hill Hospital is one of the nation's preeminent psychiatric hospitals. With more than 14 full-time board certified psychiatrists, it is widely recognized for its

psychiatric and addiction services as well as its eating disorder recovery program. Open to all genders, the Eating Disorder Center uses evidenced-based therapies to address the complex emotional and behavioral issues that underlie a patient's unhealthy relationship with food. Through the program's holistic approach, patients develop the strategies and skills necessary for long-term recovery.

**Structure House**

Durham, North Carolina, USA  
 Debra.Norris@structurehouse.com  
 www.StructureHouse.com  
**Booth #309**



Structure House is a Healthy Weight Loss & Wellness Center located in beautiful North Carolina for over 40 years. Holistic, Sustainable and Effective, this program blends Behavioral therapy, Skills training, Nutrition Guidance and body movement to create long term sustainable change. Our programs are customized to each individual and specialty offerings are available for BED (Binge Eating Disorder), Diabetes, Compulsive and Emotional Overeating and Pre/Post Behavioral Bariatric Support. The 14 acre campus for adult men and women includes luxury apartments, fitness center, two pools, education building plus more. Structure House is rooted in evidence based principles of support in areas of Nutrition, Movement/Fitness and Behavioral Therapy.

**Torrance Memorial Medical Stabilization Program for Patients with Eating Disorders**

Torrance, California, USA  
 Jill@drscheck.com  
 www.torrancememorial.org/EatingDisorders  
**Booth #211**



Torrance Memorial has more than 20 years of experience in treating adolescents and younger adults with eating disorders, our Eating Disorders Program offers hope for these high risk patients. Because the cause and effect of these conditions is emotional and behavioral as well as physical, our expert interdisciplinary team of professionals includes specially trained physicians, nurses, nutritionists, psychologists, family therapists and other support staff.

**The University of Iowa Hospitals & Clinics Eating Disorder Program**

Iowa City, Iowa, USA  
 www.uihc.org/eating-disorder-program  
**Booth #308**



The University of Iowa Hospitals and Clinics has been treating eating disorders for over four decades through evidence-based practices. Our multidisciplinary team includes: dietitians, educational consultants, nurses, occupational therapists, psychiatrists, psychologists, recreational therapists, pharmacists, music therapists, and social workers who work together to help individuals learn strategies to better cope with distress related to food, size, weight, and shape. Levels of care include: inpatient, partial hospitalization, and outpatient. Insurance accepted: private, Medicaid, Medicare, and Tricare.

**UC San Diego Eating Disorders Center**

San Diego, California, USA  
 www.eatingdisorders.ucsd.edu  
**Booth #401**



UC San Diego Eating Disorders Center is a non-profit, Center of Excellence that serves as an international leader in research, treatment, and teaching. Our mission is to improve the lives of sufferers and their families through the creation, dissemination, and practice of cost-effective, evidence-based treatment. Our research examines the neurobiological underpinnings of eating disorders. We translate our findings into data-driven innovative treatments that ensure patient satisfaction. Our treatment programs include three separate clinics: Pediatric, Adolescent, and Adult. We offer 10- and 6-hour Day Treatment and Intensive Outpatient programs that have a foundation in Family Based Therapy and Dialectical Behavior Therapy. We are here to effectively treat your loved one with individualized evidence-based treatments and to share new and effective evidence-based protocols to help all those affected by eating disorders now and in the future.

**Veritas Collaborative, LLC**

Durham, North Carolina, USA  
 info@veritascollaborative.com  
 www.veritascollaborative.com  
**Booth #102**



Veritas Collaborative is a specialty healthcare system for the treatment of eating disorders. With locations in Durham, NC, Atlanta, GA and Richmond, VA, Veritas provides a range of services for individuals ages 8 and older, including inpatient, acute residential, partial hospitalization, intensive outpatient, and outpatient levels of care. Accredited by The Joint Commission, Veritas Collaborative delivers individualized, evidence-based care in a gender-diverse and inclusive environment. At every turn, Veritas Collaborative's focus is on ensuring

that each patient's plan of care is cohesive, attainable, sustainable, and geared toward long-term recovery.

**Walden Behavioral Care**

*Massachusetts, Connecticut, & Georgia*  
 Jessica Morrison Walther, Director of Marketing and Community Relations  
 JWalther@WaldenBehavioralCare.com  
 www.WaldenEatingDisorders.com  
**Booth #305**



Walden Behavioral Care offers a full system of specialized care for individuals and families impacted by all types of eating disorder diagnoses. Our commitment is to provide personalized care as close to home as possible. Using evidence-based interventions proven to support lasting

recovery, Walden offers easily accessible care for those living across New England and Georgia. Walden's programming spans all levels of care - inpatient, residential, partial hospitalization, intensive outpatient and outpatient care – for those with anorexia, bulimia, binge eating disorder, other specified feeding or eating disorders (OSFED) and avoidant restrictive food intake disorder (ARFID). Locations in Massachusetts, Connecticut, and Georgia. Additional information is available at www.waldeneatingdisorders.com.

**Yellowbrick**

*Evanston, Illinois, USA*  
 847.869.1500, Ext. 221  
 www.Yellowbrickprogram.com  
**Booth #312**



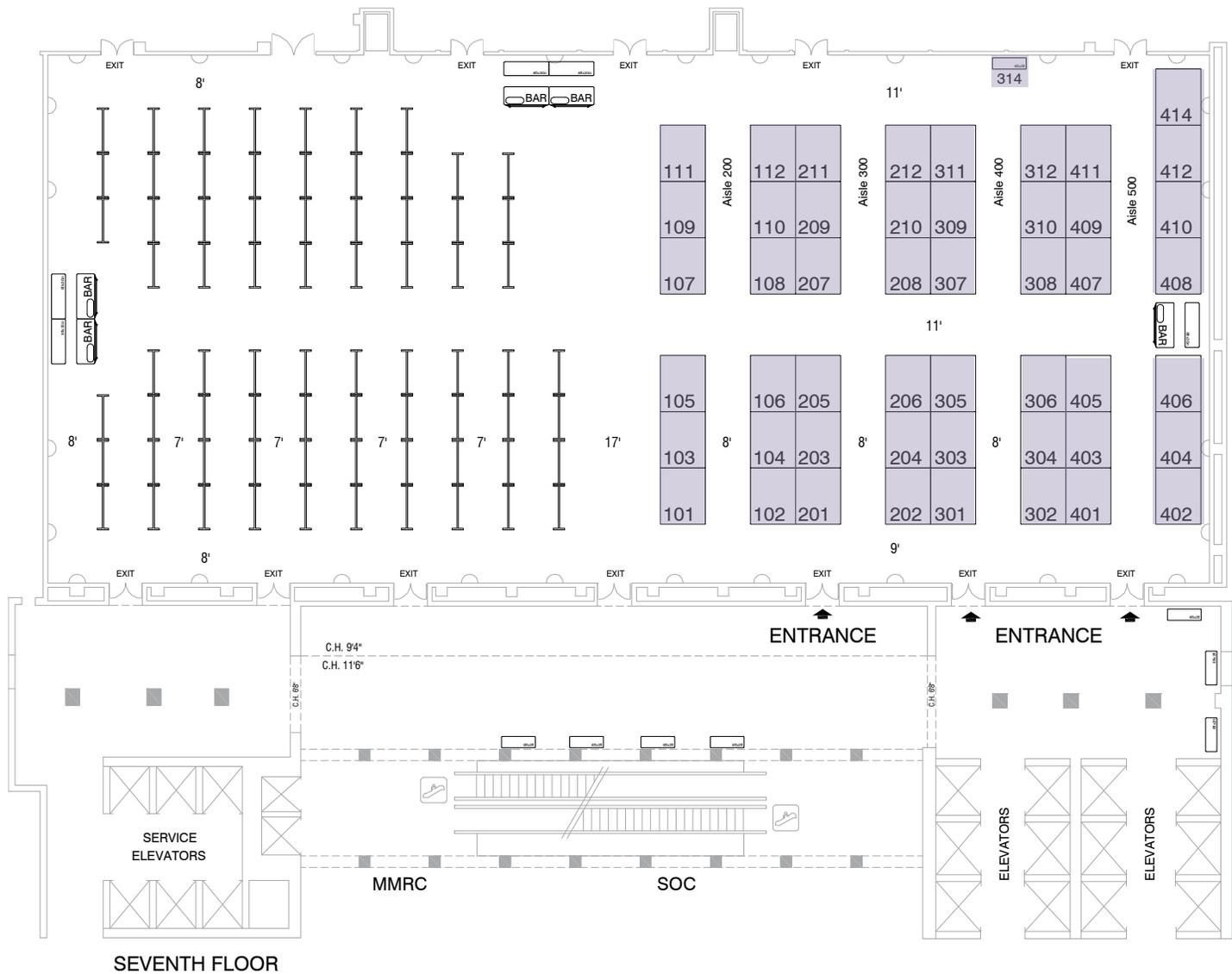
Yellowbrick has created a developmentally specialized, research-based clinical model that integrates current contributions of neuroscience, innovative psychotherapies, strength-based life-skills acquisition and wellness medicine. Across a spectrum of diagnosis and syndrome patterns of dysfunction, all of the young people coming to Yellowbrick from across the United States share the common difficulties in negotiating the universal challenges of transitioning into adulthood. Common diagnosis include mood and anxiety disorders, PTSD, OCD, trauma related and dissociative disorders, co-occurring psychotic disorders, substance abuse, eating disorders, borderline and avoidant personality disorders, and "failure to launch."



**ICED 2018** INNOVATION EXPANDING OUR COMMUNITY & PERSPECTIVES

[aedweb.org/aed-events/iced](http://aedweb.org/aed-events/iced)

# ICED 2018 EXHIBIT HALL



SEVENTH FLOOR

- 101** Sanford Eating Disorders & Weight Management Center
- 102** Veritas Collaborative, LLC
- 103** McLean Klarman Eating Disorder Center
- 104** Penn Medicine Princeton Center for Eating Disorders
- 105** Silver Hill Hospital
- 106** The Johns Hopkins Eating Disorders Program
- 107** Aloria Health
- 108** Rogers Behavioral Health
- 109** ACUTE Center for Eating Disorders
- 110** Edward-Elmhurst Healthcare
- 111** Living Hope Eating Disorder Treatment Center
- 112** Bright Heart Health
- 201** Eating Recovery Center
- 202** Timberline Knolls
- 203** Insight Behavioral Centers
- 204** The Gaudiani Clinic
- 205** Ellen West Foundation 206 Melrose Center
- 206** Melrose Center

- 207** The Center for Balanced Living
- 208** Pediatric Eating Disorder Center at Atlantic Health System
- 209** CEDC
- 210** Castlewood Treatment Centers
- 211** Torrance Memorial Medical Stabilization Program for Patients with Eating Disorders
- 212** F.E.A.S.T.
- 301** McCallum Place Eating Disorder Centers
- 302** The Center for Eating Disorders at Sheppard Pratt
- 303** Center for Change
- 304** The Emily Program
- 305** Walden Behavioral Care
- 306** EDCare
- 307** Children's Hospital Colorado Eating Disorders Program
- 308** University of Iowa
- 309** Structure House
- 310** Education, Inc.
- 311** Laureate Eating Disorders Program

- 312** Yellowbrick
- 314** Avalon Hills
- 401** UC San Diego Eating Disorders Center
- 402** Montecatini Eating Disorder Treatment Program
- 403** Monte Nido/Oliver-Pyatt Centers/ Clementine Programs
- 404** Center for Discovery
- 405** The Renfrew Center
- 406** Alexian Brothers Behavioral Health Hospital Center for Eating Disorders
- 407** River Oaks Hospital
- 408** Reasons Eating Disorders Center
- 409** Rosewood Centers for Eating Disorders
- 410** The Joint Commission
- 411** The Meadows Ranch
- 412** Selah House
- 414** REDC

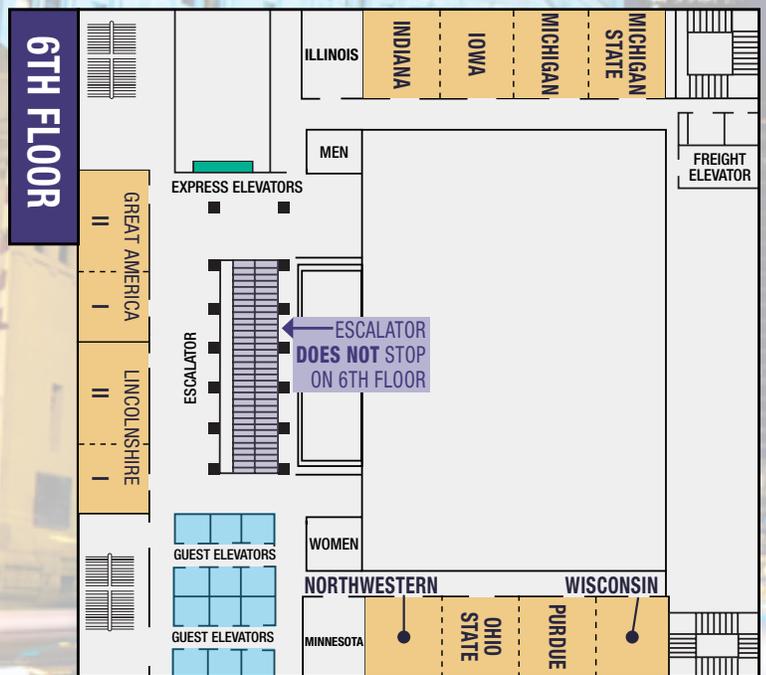
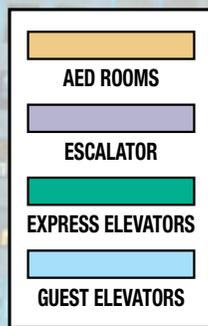
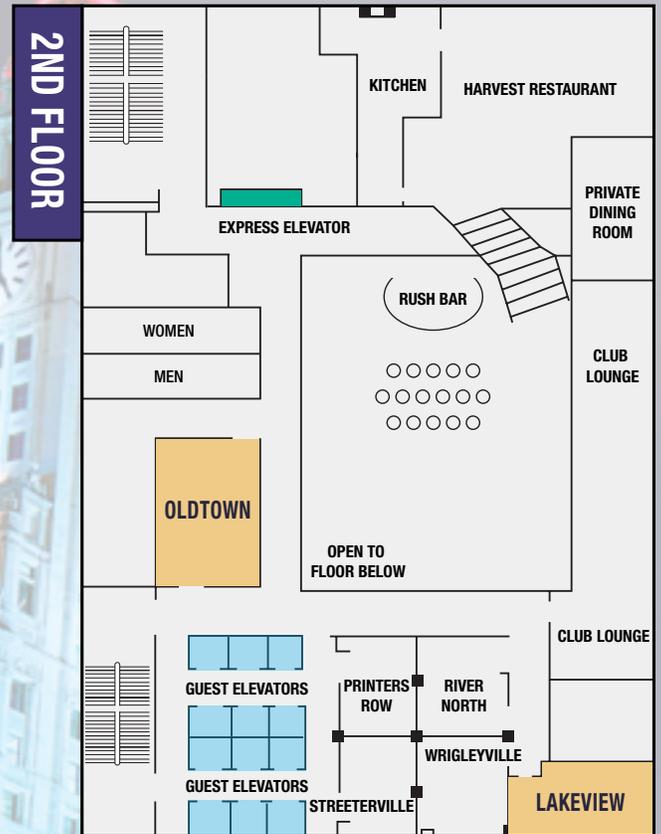


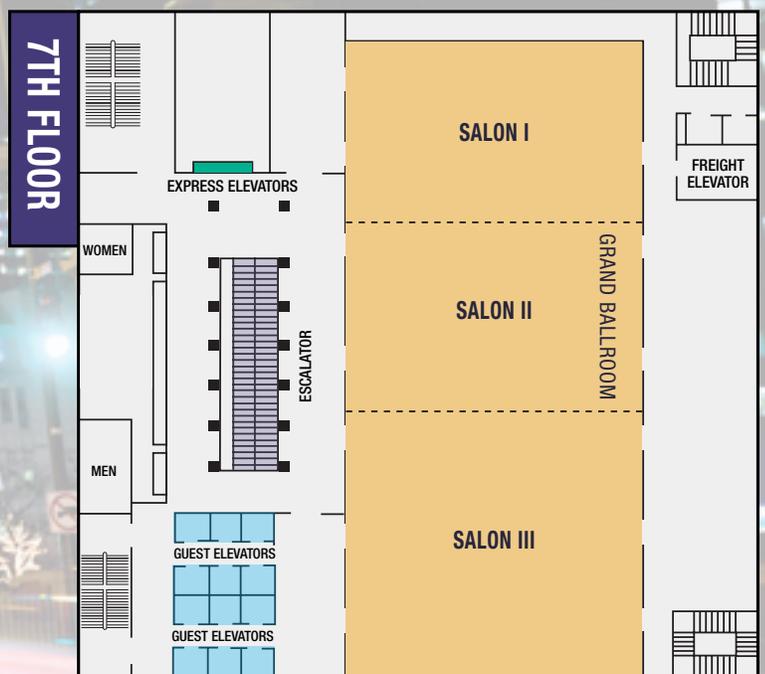
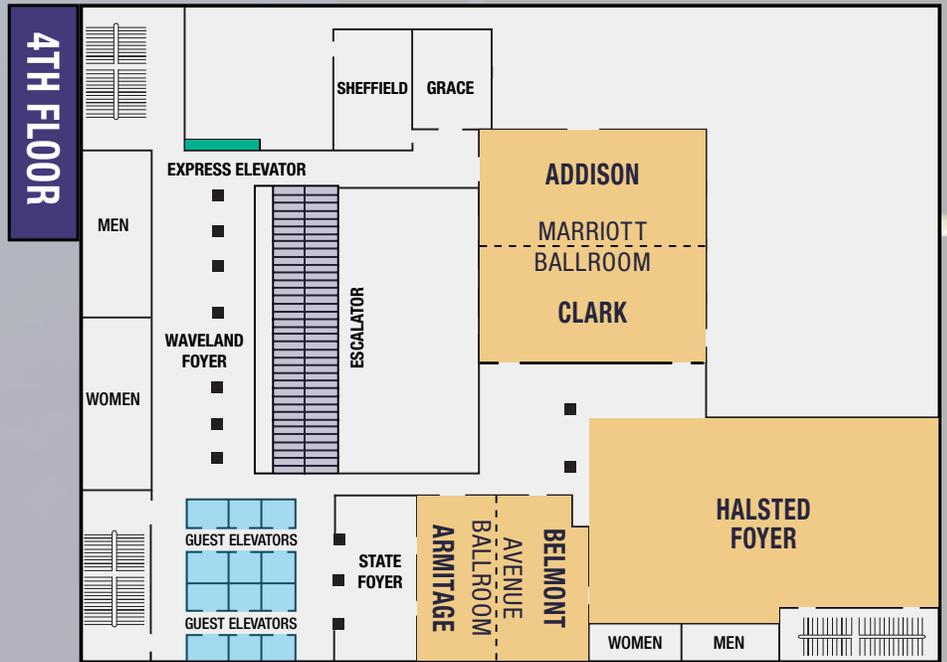
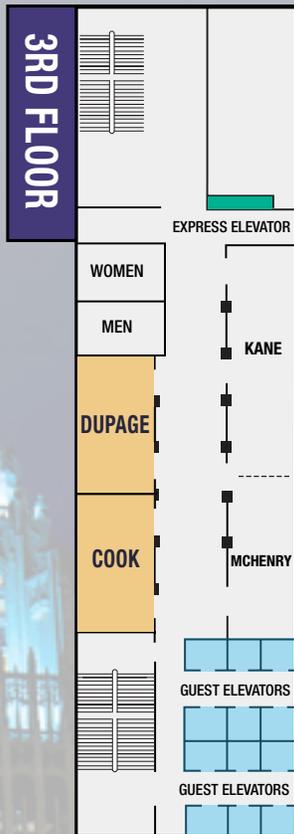
# ICED 2018

CELEBRATING

**25**  
YEARS

INNOVATION  
EXPANDING  
OUR COMMUNITY  
& PERSPECTIVES





ANZAED & AED

**ICED**  
**2020**

SYDNEY



Photo Credit: Ethan Rohloff; Destination NSW

**JUNE**  
**11-13**

CLINICAL TEACHING DAY/RESEARCH TRAINING DAY **JUNE 10**

