

Association on
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And Disability®

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8015 West Kenton Circle, Suite 230
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Volume 35, Issue 2, Summer 2022

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Journal of Postsecondary Education and Disability

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From the Editors

It has been over two years since the onset of the COVID-19 pandemic. During this time, postsecondary education has undergone historic changes in its day-to-day functioning and operation. In 2020, teaching rapidly changed to remote instruction across the country, and much of the world. Disability services, counseling services, and other student support services were forced to instantly figure out how to serve their students without typical in-person interactions. In some places this was followed in 2021 by a less abrupt but still jarring return to in-person education and services. The ways that these changes affected college students, and continue to affect them, is just starting to be understood. Even less well understood is how these changes affected disabled students. Much more scholarship will be needed to know what happened, what is continuing to happen, and what should happen in the future to support disabled students.

The postsecondary aspects of the pandemic have been taking place in the context of the broader public health crisis, which has also been a personal health crisis for many. The staggering death and hospitalization tolls of COVID-19 can never fully be reconciled with postsecondary education's attempts to move on in a supposedly "new normal." Moreover, these health-related crises disproportionately affect disabled individuals, which has gone unacknowledged and unaddressed by many higher education institutions. The continued, exacerbated, and/or new needs for disabled individuals in higher education have often been ignored in the rush to return to "normal." The sudden shift online, followed by a return to campus and removal of many protective health regulations, typically did not center the needs of disabled students, staff, or faculty. This normative ableism in higher education is not new, but the pandemic has more clearly revealed and/or amplified this problem.

The health crisis was paired with an economic crisis that impacted individuals directly through reduced incomes, loss of work, or other financial hardships. For some this led to increased food, housing, or basic needs insecurity. This was compounded by institutions that were in real or perceived financial trouble reducing funding for faculty, staff, or crucial services on campus. Many institutions either froze hiring altogether or struggled to find and train new staff members in the midst of transitions from office to remote work to the office once again. In disability services offices, an austerity approach often meant needing to do even more, with even less. Again, this was not new, but was raised to a new level since the

pandemic started. Combined with the "great resignation" that has taken place in the US labor market, student support offices are often understaffed and with remaining staff who are overworked and burned out.

These health and economic crises happened alongside an ongoing crisis related to racial justice gaining broader public consciousness following the murder of George Floyd and the continued activism of the Black Lives Matter movement. Additionally, a failed political response to the pandemic also invigorated anti-Asian racism rooted in ignorance and misinformation about COVID-19. These two crises in racial justice—coupled with a pandemic and public health interventions that disproportionately harmed BIPOC persons—make clear the pervasiveness of white supremacy in American society and higher education. Simply put, the intersection of racism and ableism cannot be overlooked amid these crises. The impact on disabled Students and Staff of Color in postsecondary education is vital to understand better and to address proactively.

While it can be daunting to know how to respond to historically impactful events such as these, at *JPED* we can do our small part by trying to convey knowledge through research and professional practice about what happened, what happens now, and what should happen next. AHEAD members and *JPED* readers are well positioned to do this work. Through their expertise and viewpoints, more empirical research can be disseminated on these topics. Additionally, more briefs that examine professional practices during phases of COVID-19 are needed. Many professionals have been forced to try new things during the pandemic. What has worked? What hasn't? How do you know? And how can we use this knowledge going forward to improve postsecondary education for disabled individuals?

JPED's first article related to COVID-19 came out in 2021, issue 34(1). Joseph W. Madaus, Nicholas Gelbar, Michael Faggella-Luby, and Lyman L. Dukes III wrote "Experiences of Students with Disabilities During the COVID-19 Interruption of In-Person Instruction." In the issue prior to this one, 35(1), we also presented the article "Academic Performance and Mobile Technology Use During the COVID-19 Pandemic: A Comparative Study," by Catherine Fichten, Mary Jorgensen, Alice Havel, Anick Legault, and Jillian Budd. While these were a good start, much more needs to be known about disability, higher education, and COVID-19.

The current issue is bookended by two articles that continue to add to our limited knowledge base about COVID-19 and disability in higher education. The first article, by **Emily Tarconish, Ashley Taconet, Joseph W. Madaus, Nicholas Gelbar, Lyman Dukes, III, and Michael Faggella-Luby** examines how disabled students perceived the transition to online learning, including both what was negative as well as what was positive. The authors present students' perceptions of the responses by the institution broadly, as well as disability services offices specifically, concluding with recommendations based on these results.

The last article of this issue is a brief by **Katherine C. Aquino and Sally Scott**. They focus on disability resource professionals' experiences in attempting to address student mental health during the COVID-19 pandemic. This includes taking care of their own mental health in order to be able to serve students well. Providing insight on an issue that was already challenging on college campuses, but greatly exacerbated by the pandemic, the authors provide recommendations for practice going forward.

Additional work in this issue focuses on attention-deficit/hyperactivity disorder (ADHD), with two research articles investigating different aspects of the higher education experience. The first, by **Molly S. Daffner, George J. DuPaul, Arthur D. Anastopoulos, and Lisa L. Weyandt**, uses quantitative analysis of survey data to investigate predictors of academic performance and retention for students with ADHD. They include both pre-college and in-college factors, concluding with recommendations for practice as well as implications for future research.

The second study related to ADHD is by **Jeanne Lagacé-Leblanc, Line Massé, and Nadia Rousseau**. Using qualitative data from interviews with Canadian college students with ADHD, as well as relatives and counselors, they examine how ADHD has manifested in students' academic lives. In addition to reporting on a number of functional impairments, students discuss their relationship with the label of ADHD.

These are followed by a study of self-advocacy development among disabled students at a Hispanic Serving Institution (HSI), by **Kristopher Hawk Yeager, Gabriela, Alejandra Gandara, and Cecilia Martinez**. Their qualitative study leads to insights about the components and phases of the development of self-advocacy, which lead to suggestions for programming and practice related to this type of support.

The final research article examines the physical accessibility of campuses in China. **Kai Yung (Brian) Tam, Mei Zhao, Randy L. Seevers, Yuan Liu, and Lyndal M. Bullock** show that campus facilities are

inadequate and are not meeting the standards set forth by the Chinese government. This is important work to move beyond the US context, to the most populous nation in the world where changes to accessibility have the potential to have a very large impact.

Ezekiel Kimball, Ph.D.

Ryan Wells, Ph.D.

Executive Editors

Perceptions of College Students with Disabilities Regarding Institutional and Disability Services Offices' Response to Sustaining Education During COVID-19

Emily Tarconish¹
Ashley Taconet²
Joseph W. Madaus²
Nicholas Gelbar²
Lyman Dukes, III³
Michael Faggella-Luby⁴

Abstract

Postsecondary institutions across the United States shifted to remote learning during the spring 2020 semester due to the COVID-19 pandemic. This study qualitatively explores responses to a subset of five open-ended questions that were part of a larger national survey of college students with disabilities (Madaus et al., 2021). Student perceptions of institutional and disability service offices' response to remote learning are examined, as well as remote practices students wish to continue when face-to-face instruction resumes. Results indicate communication and continued services from disability services offices were important to students, as well as remote learning preparation, regular communication, and flexible school policies from institutions. With regard to disability service offices, students expressed a desire for virtual meetings and an online accommodation portal when in-person learning resumed. Recommendations for practice and areas for future research are discussed.

Keywords: COVID-19, college students with disabilities, remote learning, disability services, postsecondary education, higher education

The COVID-19 pandemic had a rapid and significant impact on institutions of higher education in the spring of 2020. March 5, 2020, no schools had transitioned to or announced a transition to online learning, but by April 4, 2020, 1,388 schools had transitioned to online learning with an additional 25 having announced an imminent transition (College Crisis Initiative @ Davidson College, 2020). The total estimated number of students impacted ranged from 10 million to over 14 million (Johnson et al., 2020; Hess, 2020). The shift was so unprecedented, comprehensive, and rapid that it was described as “lurching” (McDaniel et al., 2020, p. 5) and required a triage approach to operations (Means et al., 2020).

Triage approaches were unquestionably necessary in order to continue delivery of services to students with disabilities (SWD). According to the U.S.

Department of Education's National Center for Education Statistics (2019), SWD constituted 19.4% of all undergraduates nationwide during the 2015-2016 academic year. In May, 2020, the Office for Civil Rights directed that institutions must continue to provide services and supports for these students regardless of conditions created by the pandemic. The guidance was unequivocal, noting:

Whether an institution serves students in a brick and mortar or an online environment, the institution must ensure that students with disabilities have an equal opportunity to access educational programs, consistent with protecting the health and safety of the student and those providing that education to the student (Office for Civil Rights, 2020, p. 2).

¹ University of Illinois Urbana Champaign; ² University of Connecticut; ³ University of South Florida; ⁴ Texas Christian University

Regarding the shift to remote learning during the spring 2020 semester, Behling (2020) described the resulting planning and effort required to ensure the accessibility needs of SWD at one institution in the northeast. These included, but were not limited to, moving all meetings with students to remote delivery as well as promptly and appropriately meeting the needs of students in crisis, checking to ensure student chronic health needs were met, working with faculty to ensure accessible remote instruction and ability to proctor online exams, and ensuring students had access to necessary technology including Wi-Fi. Behling also described the challenges students expressed, such as dealing with the impact of anxiety and other disability related issues, that impacted their ability to learn during the rapid transition.

Research is emerging documenting the perceptions of SWD regarding the rapid and complex college-wide changes in the spring 2020 semester. Zhang (2020) surveyed 147 students from one institution ($n = 147$) at the outset of the pandemic, 28 of whom reported a disability or health concerns. The SWDs expressed more concerns regarding whether they could meet requirements in an online course and the impact on their grades than their peers without disabilities. They also reported increased mental health concerns. Kunkes (2020) also surveyed SWD from a single institution ($n = 119$). These students reported the need to change the types of accommodations utilized in remote instruction, typically to allow for additional time and flexibility believed to be necessary to address novel distractions and shifting workloads.

Soria et al. (2020) presented the results of a survey of 30,099 students who were enrolled in nine public research universities during the pandemic transition, 1,788 of whom were students with physical, learning, or cognitive disabilities. The SWD were more likely to have experienced financial hardships due to the transition, in particular related to both technology and housing expenses. They were more likely than their peers without disabilities to report symptoms of depression and anxiety. Additionally, they were less likely to believe their institution supported them during the pandemic and shared a decreased sense of campus belonging.

Madaus et al. (2021) conducted an electronic survey of 316 SWD from a range of postsecondary institutions across the United States. The students were asked to respond to a variety of yes/no, Likert scale, and open-ended questions. Results of the yes/no and Likert-scale items indicated over one-third of the respondents took courses in three formats: synchronous, asynchronous, and courses that were a combination of the two. Fifty-eight percent indicat-

ed needing new or different accommodations in the remote environment, and in general, the respondents reported feeling less connected to other students and their instructors and also lower levels of motivation in the remote environment. Nearly one-third of students converted courses to pass/fail. Notetaking and time management were noted as areas of difficulty, and the respondents also indicated family demands impacted their learning in ways that differed from prior semesters, while one-third of the sample also reported financial concerns. Overall, the results indicated students felt somewhat supported or better by their institution (3.6 out of a 6-point scale), their disability services office (3.8 out of a 6-point scale), and their faculty (4.0 out of a 6-point scale).

As noted, the survey conducted by Madaus et al. (2021) also included a set of open-ended responses that enabled respondents to expound upon their experiences during the 2020 spring semester. The present study focuses on qualitative analysis of SWDs' responses to five questions regarding their perspectives of what disability services offices and their institutions did well in response to transitioning to remote learning, and ways in which each could have improved. Students were also asked to identify any disability services or institutional policies used during remote learning that would be beneficial to continue upon the resumption of face-to-face instruction.

Methods

A description of the data collection instrument and the procedures used to distribute the survey and collect responses follows. Data analysis methods, including measures used to establish trustworthiness, are also discussed.

Data Collection Instrument

The *Survey of College Students with Disabilities during COVID-19*, an electronic survey, was designed to "measure the perceptions of college SWD about their experiences with instruction during the shift to online learning and services in the spring 2020 semester," (Madaus et al., 2021). Initially modeled after items on the AHEAD Ireland *Learning from Home During Covid-19* Survey (AHEAD, 2020, used with permission) and an open-source question set, the EDUCAUSE DIY Survey Kit: Evaluating the 2020 Spring Semester (EDUCAUSE, 2020), the *Survey of College Students with Disabilities during COVID-19* asked participants to provide demographic information, information regarding the format of remote classes (e.g., asynchronous), the types of instructional methods used (e.g., video lectures, uploaded read-

ings), and to respond to Likert-scale items related to how supported they felt during the shift to remote learning and their ease of learning in the remote environment. As noted, the survey included a total of eight open-ended questions. Five of these questions focused on students' perceptions of what their disability services and institutions did well, what could have been improved, and what practices should continue (see Appendix A for the specific wording of each of the five questions). This manuscript focuses on the analysis of these responses.

Before participants were able to access the survey, they were directed to read an informed consent statement. The statement explained the survey purpose, length, potential risks of participating, that consent was anonymous and voluntary, and who to contact with further questions. Before continuing onto the survey, participants were required to give consent to participate.

Survey Procedures for Data Collection

Institutional Research Board Exempt Approval was received at the institution of the lead authors. The electronic survey link was distributed to two disability services offices (one at a public institution and the other at a private institution), the email distribution list of a national postsecondary education and disability conference, and two moderators of national groups for college SWD. The link was accompanied by a request to share the survey with their respective students. Additionally, several recipients requested and received permission to distribute the survey to other networks related to postsecondary education and disability. Data were collected between early August and late September 2020.

Sample

A total of 316 students completed the full survey, and of these, 244 participants, or 73%, completed one or more of the open-ended questions included in this qualitative analysis. The remaining information in this study exclusively examines the findings from those 244 participants. Each of the five open-ended questions had between 166 and 202 complete responses, with an average of roughly 179 complete responses per question. When the response text field was left blank, these responses were not included in the analysis and, therefore, are not listed in the response number totals.

The majority of participants in the final sample of focus for this study identified as female ($n = 177$, 72.5%) and were enrolled in bachelor's degree programs ($n = 169$, 69.3%). The most frequently reported disability categories were ADHD ($n = 134$,

40.1%), mental health disabilities ($n = 125$, 37.4%), and learning disabilities ($n = 92$, 27.5%). Additionally, about half of the sample reported having two or more disabilities ($n = 168$, 50.3%). The sample was predominantly comprised of participants who indicated attending a four-year college with 54.9% ($n = 134$) attending a public four-year college and 29.9% ($n = 73$) attending a private four-year college. Fifteen percent ($n = 37$) of participants reported attending a two-year college and 36 of those participants stated that it was a public college. Responses for institution size were mixed, with 57.0% ($n = 139$) of participants stating their institution had a student body of over 10,000, while 42.6% ($n = 104$) stated their institution had a student body less than 10,000. Roughly half of students indicated their institution was in the New England region (CT, ME, MA, NH, RI, VT) ($n = 116$, 47.5%).

Data Analysis

As one of the first studies to examine these questions for a national population of postsecondary SWD, manifest content analysis was used to explore this topic. Typically used when limited research exists, content analysis can be employed to identify meaning in a dataset by "isolating small pieces of the data that represent salient concepts" (and "organizing large amounts of text into categories that reflect a shared meaning" (Kleinheksel et al., 2020, p. 127-128). Manifest content analysis relies on "what the informants actually say, stays very close to the text, uses the words themselves, and describes the visible and obvious in the text" (Bengtsson, 2016, p. 10).

Four steps were carried out to conduct the manifest content analysis: decontextualization, recontextualization, categorization, and compilation. Decontextualization entailed the researchers familiarizing themselves with the data by performing several close reads of the text to learn "what is going on?" (Bengtsson, 2016, p. 11). Next, two members of the research team performed open coding, identifying each meaning unit with a word or phrase to encapsulate its meaning. Codes were developed inductively, relying on and using participants' words to name codes which is common in manifest content analysis. During this process, each researcher maintained a coding list which explained each of the codes, a method used to increase reliability. The researchers repeated the coding process multiple times, returning to different sections of the data to relate participants' words to codes.

During recontextualization, the researchers returned to the data to reread it and ensure the content was captured in the coding schema. Sections of text

that were unmarked were either labeled with pre-existing codes, developed into new codes, or if the text did not relate to the overall findings, were excluded from further analysis. Categorization involved reflecting on the codes and organizing them into larger categories and themes. Codes were examined in relation to each of the five specific questions and grouped together based on similarities among codes which were then encapsulated into larger categories. The researchers moved back and forth between codes and categories to develop the most accurate organization of the data. Finally, in the compilation phase, the researchers established their positionality to enable them to approach the analysis from a neutral perspective. The coding process was completed in Dedoose (Version 8.3.35). The process of data organization and analysis is summarized in Figures 1-5.

Trustworthiness Measures

Elo et al. (2014) suggested methods to establish the trustworthiness of qualitative content analysis during the planning stages of data analysis, during the analysis itself, and when the findings are reported. Establishing trustworthiness is also considered best practice in the guidelines for conducting research regarding postsecondary students with disabilities (Madaus et al., 2020). A description of how the research team applied this guidance follows.

Planning and Preparation

To achieve trustworthiness in the data collection method, the researchers considered what type of data collection would best answer the research question. As the primary research question involved uncovering college SWDs' experiences with remote instruction and services during the spring 2020 semester, the research team used an electronic survey featuring quantitative and qualitative questions. Not only was the virtual nature of the survey intended to maximize access, it was also strategically distributed to networks that would enable timely completion by a large, national sample of SWD. Additionally, the open-ended responses allowed students to explain their experiences in their own words, an important feature of inductive analysis. The researchers also decided that the "most suitable unit of analysis" would be any word or phrase that captures "relevant meaning," (Elo et al., 2014, p. 5) in the participants' descriptions.

Data Organization & Analysis

Several steps were taken to support the trustworthiness of the data organization and analysis processes. First, study participants as well as the researchers who performed the qualitative analysis are

accurately identified and described; the researchers included statements of positionality to accomplish the latter. The first two authors independently carried out the analysis and then met to discuss their results and resolve divergent opinions. Once the agreed upon categories and themes were established, the researchers returned to the data to ensure that the interpretation of categories and themes were "true to the data," (Elo et al., 2014, p. 5) and accurately captured students' accounts.

Positionality Statement

The two researchers who carried out manifest content analysis clarified the positions from which they approached this analysis in order to minimize bias. Each has previously worked as a postsecondary disability services professional (DSP), currently identifies as a graduate SWD, and remains active with student groups for undergraduate SWD. The researchers' backgrounds and experiences enhanced their understanding of participants' descriptions of experiencing disability in postsecondary education. To ensure that the researchers stayed close to the participants' words and did not project bias onto their accounts, both researchers intentionally acknowledged their positionalities and applied researcher triangulation at multiple stages of analysis. This process enabled each researcher to independently analyze the data and then compare their individual analyses; analyses were also continually checked against individual codes and raw transcripts to remain close to the participants' words. These reflexive processes were performed to establish trustworthiness of findings.

Reporting

Throughout this paper, we have attempted to explain the research process as thoroughly and transparently as possible, "allowing readers to draw their own conclusions regarding the trustworthiness of the results" (Elo et al., 2014, p. 7). To complement this description, a table displaying examples of codes, categories, and themes is also included (see Table 1). We also include representative quotations throughout this article to "show a connection between the data and the results" and allow the findings to "reflect the participants' voices" (Elo et al., 2014, p. 6).

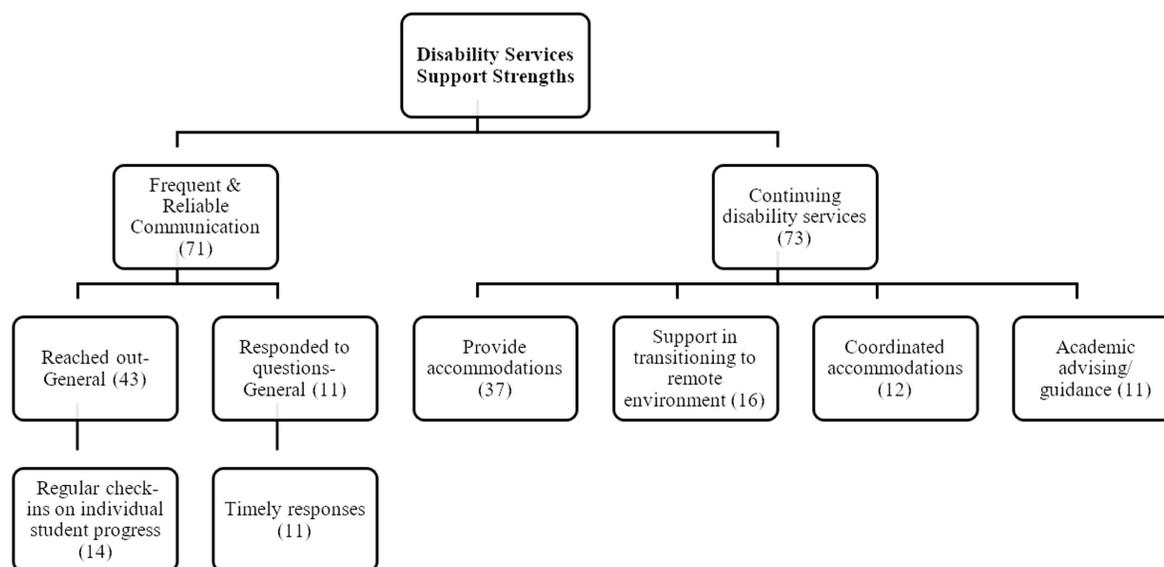
Results

Student perceptions of disability services' and institutional strengths and areas of concern are discussed as well as new practices they hope will continue when face-to-face instruction resumes. As mentioned above, 244 students provided at least one

Table 1

Example of Coding, Categorization, and Theme Development

Excerpt	Code	Categories	Theme
"They regularly reached out to check in on me"	Regularly reached out	Consistent check-ins	Maintaining frequent and reliable communication
"Be in constant contact with students with disabilities"	Constant contact		
"They communicated often and responded quickly to my questions"	Frequent communication; quick responses	Frequent and timely communication	

Figure 1*Disability Services Support Strengths Coding Tree*

Note. Numbers in overarching categories may not match as some items were double coded.

qualitative response and are therefore included in the analysis below. Figures 1 and 2 represent the qualitative coding trees for each of the broad result areas.

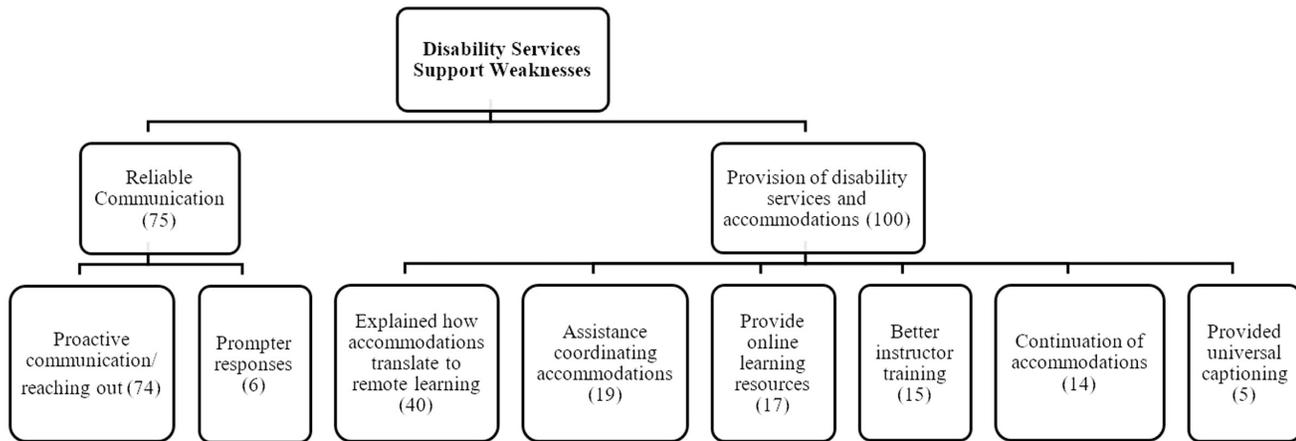
Evaluation of Disability Services Supports Support Strengths

The analysis suggested that the two most frequently occurring ways disability services offices supported students during the transition to remote learning included (1) maintaining frequent and reliable communication and (2) continuing to provide

disability services in the new learning environment. Seventy-one students shared that consistent and timely communication from the disability services office assisted with the shift to remote learning. Specifically, students described offices providing updates on services, DSPs “reaching out to check in” on individual student progress and quickly responding to questions as helpful practices. One student even noted that as all operations were online, it seemed easier to contact and receive responses from DSPs.

Figure 2

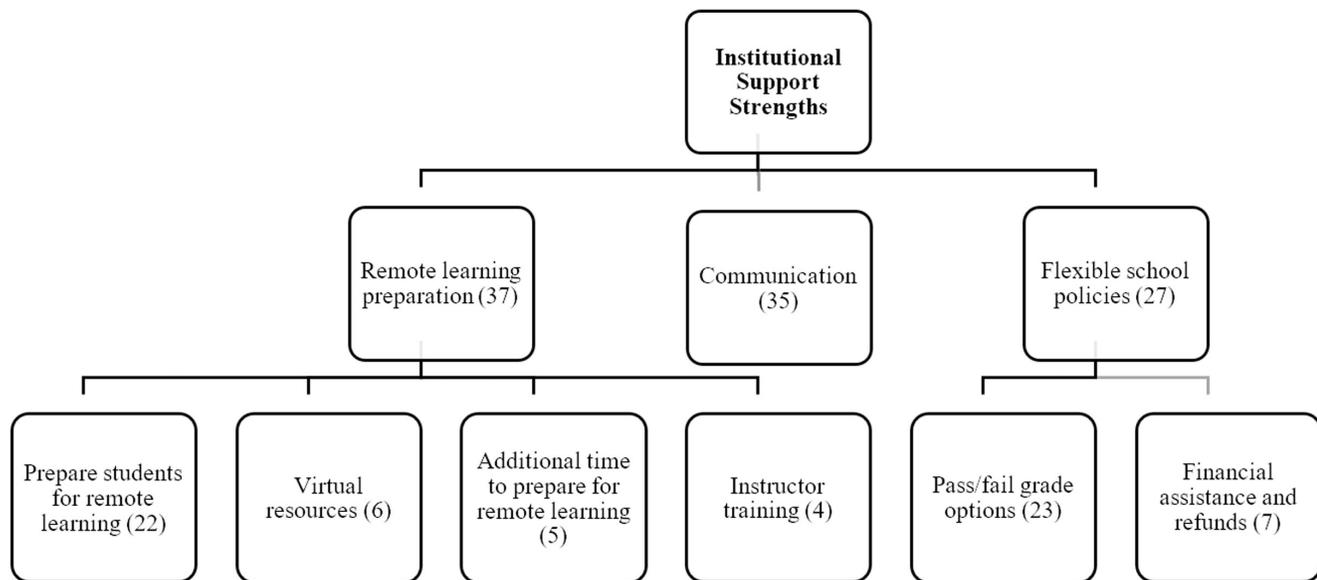
Disability Services Support Weaknesses Coding Tree



Note. Numbers in overarching categories may not match as some items were double coded.

Figure 3

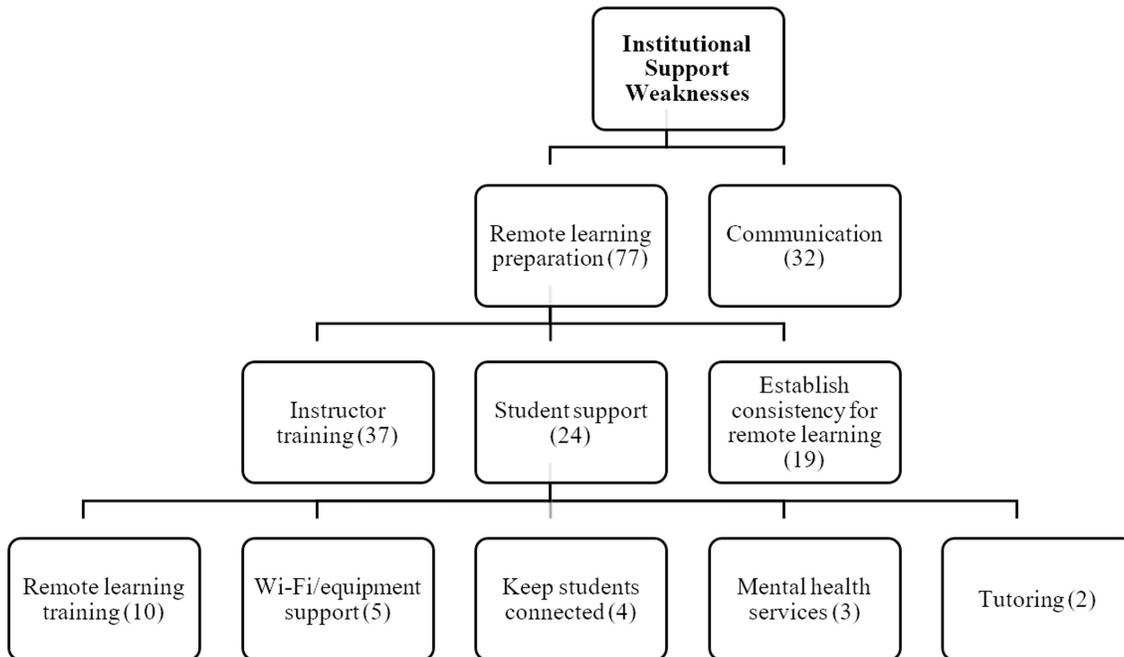
Institutional Support Strengths Coding Tree



Note. Numbers in overarching categories may not match as some items were double coded.

Figure 4

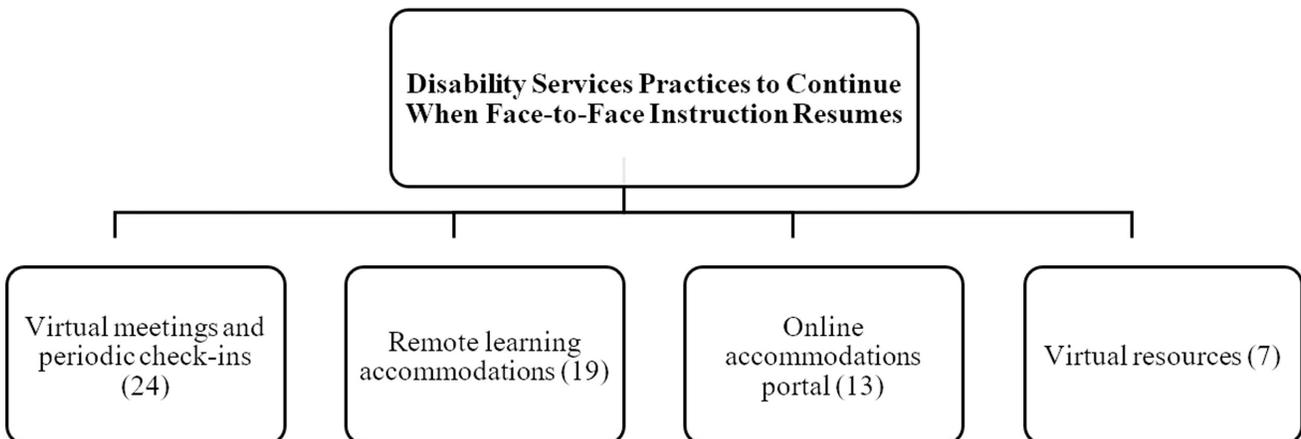
Institutional Support Weaknesses Coding Tree



Note. Numbers in overarching categories may not match as some items were double coded.

Figure 5

Disability Services Practices to Continue When Face-to-Face Instruction Resumes Coding Tree



Note. Numbers in overarching categories may not match as some items were double coded.

In addition to frequent and reliable communication, the next most frequent response code regarding effective transition of services to remote environments. Seventy-three students described that DSPs continued to provide the same services that were available for in-person learning, including academic accommodations such as extra time for exams and note-taking supports, and meeting remotely with DSPs. Moreover, of this group, sixteen students explained that they received specific support relating to transitioning to remote learning. One student clarified, "They helped me smoothly transition online by providing detailed instructions and plans for moving forward." Another area of transition involved coordinating accommodations with professors and ensuring accommodation plans were followed ($n = 12$). One female student from a 4-year public institution described the process used by the disability services office in this way:

They provided an email with clearly laid out instructions on how to access the accommodations and how to relay important information to the professors if needed. They also notified the professors and gave them helpful tips on how to best handle the disability accommodations.

Concerns with Supports

While support strengths were identified, concerns with supports were more frequently represented in the data. For example, the two most frequently occurring concern themes suggest some students described disability services as not offering enough support in the same two areas: (1) reliable communication and (2) provision of disability services and accommodations. Seventy-five students expressed a preference for more proactive communication from disability services staff, including reaching out or checking in, from their DSPs. The second major concern, and highest frequency theme in the dataset noted by one hundred students, desired additional support regarding transitioning to remote learning. Moreover, forty of these individuals indicated they wanted disability services to explain how accommodations would translate to remote learning. For example, one student shared, "They could have made their services more clear and the ways in which they were planning to adapt their services for students when learning remotely."

Identified areas of concern included confusion about how to access extra time or find distraction-free locations for online exams and how to receive note-taking support for virtual lectures. Students also wanted more information regarding how accommodations

can best be used in remote settings. For instance, one student described, "They could have provided more detailed information about possible accommodations and technologies that could be helpful to us that we may have previously been unaware of." Another noted, "I think just a clear outline of how accommodations work for online vs. in-person learning vs. hybrid learning would have been very helpful." Other areas in which students desired additional support from disability services included assistance coordinating accommodations with professors ($n = 19$), providing more guidance to professors regarding how to assist SWD in remote environments ($n = 15$), and providing learning resources specific to remote learning ($n = 17$), such as how to stay organized, manage one's time, study for and take virtual exams, and use online tutoring services.

Evaluation of Institutional Support Support Strengths

Reflecting on actions taken by their institutions, students' qualitative responses coalesced around three major types of support: (1) remote learning preparation, (2) regular communication, and (3) flexible school policies. Thirty-seven students stated their institution prepared them to learn remotely, including ensuring they had access to laptops and Wi-Fi, providing instructions regarding how to use online learning management systems, and extending spring break to allow students more time to prepare for remote learning. Participants indicated that communication was a strength of their institution during the switch to remote learning. Thirty-five students revealed their institution kept students informed by sending consistent email updates. Students also appreciated that their institutions implemented flexible policies to accommodate the sudden changes ($n = 27$). The two policies mentioned most frequently included flexible grading options, such as converting all grades to a pass/fail scale, and offering tuition or residential life refunds.

Concerns with Supports

Throughout the qualitative data it was clear students desired more institutional support for themselves. Twenty-four students responded they wished their institution provided trainings for students to use online learning systems or offered related support. Shared examples included Wi-Fi provision, groups to keep students connected, and virtual mental health resources.

While many students were pleased with how frequently their institution communicated with them, thirty-two students believed updates from their

schools were unclear or not frequent enough. Several individuals described how it can take additional time for SWD to adapt and coordinate their learning. One student from a 4-year public school encapsulated her experience as follows:

My school touted the possibility that we might come back until the last possible second. We were one of the last universities to make a final decision in our state. Because of this, most people did not bring back important belongings from their dorm. I myself left my printer, which is so vital to my learning style (remote and in person) because I like to print out lecture slides before the lecture and annotate them during.

Remote Practices to Continue when Face-to-Face Instruction Resumes

Disability Services Practices

Students identified specific benefits to disability services operating remotely. Sixty-three students described several practices that should be continued when face-to-face instruction resumes, including virtual meetings with DSPs and using an online portal to coordinate accommodations. Virtual meetings with DSPs were easier for students to schedule or attend, especially if they were dealing with disability-related issues that would prevent them from attending in-person meetings. One nonbinary student from a 4-year public institution described the benefits of “Meeting with disability counselors virtually rather than being required to show up in office.” This student stated, “As a person with a chronic illness, it has always been difficult to show up and I've always found it to be inaccessible of them to request from everyone regardless of disability prior to now.” Others felt that the virtual format of meetings facilitated additional opportunities for DSPs to check in on students and their accommodations. One female student from a 4-year private school commented,

They [the DSPs] checked in with me a few times on how notes/note taking was going. It would be nice they checked during face to face (sic) classes too to ensure that I am getting all the notes and things I need. Sometimes, it can be intimidating to contact them with a problem regarding taking notes or not receiving my notes from the note taker. So, it would be helpful if they periodically asked if it was going okay.

Some students described that during face-to-face instruction, their disability services office required them to hand-deliver accommodation letters to instructors. During remote learning, however, students detailed

how this process became digital, allowing them to request accommodation letters through an online portal, which DSPs then emailed to instructors. All students ($n = 13$) who described this change indicated the new process was preferred. Nineteen additional students explained that in a remote-learning environment, some accommodations were automatic and did not even need to be requested, such as captioning and receiving recordings of lectures.

Discussion

Student perceptions of effective and challenging DSP and institutional support services during the spring 2020 semester, through an analysis of the qualitative data, is discussed.

Student Perceptions of How Services Worked

This analysis examined postsecondary SWDs' experiences during the spring 2020 semester transition to remote learning, specifically their perceptions of disability services and institutional support. Students were also able to identify benefits they experienced during remote learning and practices they would like continued when face-to-face instruction resumes. Of particular note, participants described the same two areas as the primary ways that disability services offices performed well and could have improved — clear and proactive communication and support in transitioning to remote learning. This finding may indicate SWD in this study valued being informed about how services would be provided. Receiving proactive communication from service providers also helped students feel supported. Additionally, the opposing responses from different respondents (e.g., disability services communicated sufficiently versus insufficiently) may suggest disability services offices adopted different approaches to communicating with and providing services to students. Alternatively, it may reflect that SWD experienced a range of needs, some of which were not met by the services offered by their specific disability services offices.

A similar contrast was found regarding how students perceived the support offered by their institutions. Students reported on three matters their institutions provided: appropriate preparation for online learning, clear and frequent communication, and flexible school policies involving grades and fees. Other students, however, believed their institution underperformed with regard to clear and regular communication as well as preparation for online learning.

Students shared a preference for aspects of remote disability services, such as virtual check-ins and emails with their DSPs and coordinating accommodations through a virtual accommodation portal (ver-

students being required to hand-deliver accommodation letters to instructors). These changes required less physical effort and time from students (e.g., walking to the disability services or instructors' offices) which accommodated their accessibility needs.

Limitations

As both a qualitative study and novel survey, limitations related to sample size and generalizability should be considered. The majority of responders identified as female. Additionally, many participants reported attending four-year institutions and/or attending a school in the Northeast or Mid-Atlantic regions. ADHD, mental health disabilities, and learning disabilities were also reported in high numbers, so results may not be as generalizable to students with other disabilities. This survey also asked students to self-report their disability, so there is no way to externally confirm if the information is accurate.

Recommendations for Practice

To ensure SWD are aware of and able to access available services, DSPs as well as institutions may need to develop procedures to provide consistent and clear communication; improving communication methods may be especially critical during times when typical academic instruction is altered. Banerjee and Lalor (2020) recommended ways to augment the clarity of disability services websites, including making the website welcoming (using tabs to delineate specific areas of information) and accessible (ensuring all users can equally access its features). Disability services offices should clearly present how to contact and register with the office, eligibility requirements, and include specific information regarding accommodation processes, protocols, and additional disability resources (Banerjee & Lalor, 2020; Banerjee et al., 2020). Additionally, disability services offices may consider reevaluating the accessibility of their practices, including requiring in-person meetings or hand-delivery of accommodation letters, to determine if they could be simplified to minimize physical effort or time requirements. Finally, disability services offices may collaborate with centers for teaching and learning, offices that can support faculty and facilitate specific training on the needs of SWD (Behling & Linder, 2017).

Future Work

Moving forward, research should continue to be conducted to determine the impact of remote learning on college SWD. This examination focused on the spring 2020 semester, and research should also examine experiences with remote learning in the 2020-2021 academic year. During the spring 2020

semester, there was a rapid transition to remote learning, which left disability service offices and institutions with little time to prepare for the change. In the fall 2020 and spring 2021 semesters, students may have different experiences because these entities had additional time to prepare courses. Once typical face-to-face instruction has resumed, another area of potential research could be to examine whether disability service offices and institutions continued to use any methods that began during remote learning, such as virtual office hours.

Moments of crisis, such as the COVID-19 interruption during the spring of 2020, provide a critical window to view DSP and university service delivery systems for SWDs. Exaggerated stress on a postsecondary system, as measured in the current student qualitative responses, indicates both practices to continue and those that require revision. It is likely that how DSPs and institutions reflect on the lessons learned during this unprecedented trial will be fundamental to an institution's future ability to attract, retain, and ultimately to graduate SWDs. Using the data presented here to examine current practice and future service delivery is an important place to start.

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About the Authors

Emily Tarconish, Ph.D. is a teaching assistant professor at the University of Illinois Urbana Champaign. She teaches classes involving the culture of disability, characteristics of disability, transition, and special education practices for general education. Her research interests include accommodation provision to students with disabilities in higher education, examining how to improve support for postsecondary students with a range of disabilities, with a specific focus on students with traumatic brain injuries, and the development of peer supports for students with disabilities.

Ashley Taconet is a Ph.D. candidate at the University of Connecticut studying special education with a focus on transition and postsecondary education. She is the co-advisor of a student club called Diversability which provides a community space to discuss disability and coordinates advocacy projects. Prior to starting her Ph.D. she worked at an inclusive higher education program and as an employment specialist.

Dr. Joseph W. Madaus is the Director of the Collaborative on Postsecondary Education and Disability, and a Professor in the Department of Educational Psychology in the Neag School of Education at the University of Connecticut. His research and publication interests include postsecondary education, transition, assessment and postschool outcomes of adults with disabilities.

Dr. Nicholas Gelbar is an Associate Research Professor at the University of Connecticut in the Department of Educational Psychology. Previously, he was an assistant professor at the University of Connecticut Health Center (School of Medicine) and the research director for the UConn University Center for Excellence in Developmental Disabilities. He earned his Ph. D. in Educational Psychology (with concentrations in School Psychology, Special Education, and Gifted/Talented Education) from the University of Connecticut in 2013. He is a licensed psychologist and has served as the internal evaluator for several OSEP-funded projects including the Early Childhood Personnel Center. His post-doctoral research has focused on the experiences of college students with disabilities, especially those with ASD, and has authored two seminal publications in this area (Gelbar, Smith, & Reichow, 2014; Gelbar et al., 2015). In addition, he edited a book for Oxford University Press entitled *Adolescents with Autism Spectrum Disorder: A Clinical Handbook*. Dr. Gelbar has authored 46 peer-reviewed articles and six book chapters.

Dr. Lyman Dukes III, is a Professor of Special Education and Doctoral Program Coordinator in the College of Education at the University of South Florida with more than 25 years of educational experience. He has served in higher education in a number of capacities both academically and administratively. He has co-edited two books, *Preparing Students with Disabilities for College Success: A Practical Guide to Transition Planning* (2010) and, most recently, *Navigating the Transition from High School to College for Students with Disabilities* (2018). He has published and presented extensively on topics related to secondary and post-secondary education for students with disabilities and awarded federal, state, local, and private educationally focused grant funding. His current research interests include transition from school to college for students with disabilities, universal design for learning in higher education, guidelines for research on postsecondary education and disability, standards for practice in higher education accessibility services, and the impact of COVID-19 on schools and colleges. He can be reached via email at: ldukes@usf.edu

Dr. Michael Faggella-Luby is Professor of Special Education and Director of the Alice Neeley Special Education Research and Service (ANSERS) Institute. His research interests focus on embedding learning strategy instruction into subject-area courses to improve reading comprehension for all levels of learners and improving the access and quality of postsecondary education for students with disabilities. Dr. Faggella-Luby is the

immediate Past-President of the Division for Learning Disabilities of the Council for Exceptional Children. He teaches courses related to preparing educators to evaluate, select, plan, and implement research-based methods and instructional materials for teaching students with and without disabilities who are at risk for failure.

Appendix A

Open-Ended Questions Analyzed in this Investigation

What things did your campus disability services office do well in supporting you in making the transition to remote learning?

Describe any practices that your campus disability services office used during the remote learning period that could be helpful to you (and other students) when face-to-face instruction resumes.

What could your campus disability services office have done to better support you in making the transition to remote learning?

What things did your institution do well in supporting you in making the transition to remote learning?

What could your institution have done to better support you in making the transition to remote learning?

From Orientation to Graduation: Predictors of Academic Success for Freshmen with ADHD

Molly S. Daffner¹
George J. DuPaul¹
Arthur D. Anastopoulos²
Lisa L. Weyandt³

Abstract

More students with attention-deficit/hyperactivity disorder (ADHD) are pursuing higher education. Existing studies have investigated the postsecondary educational outcomes of college students with ADHD, finding that these students typically have lower academic performance and higher dropout rates than their non-ADHD peers. Far fewer studies address the reasons for these poor outcomes. The current study sought to better understand which pre-college and college factors are related to the (1) academic performance (i.e., cumulative grade point average) and (2) retention of college students with ADHD. Data collected through direct testing and self-report ratings were analyzed for 228 first year college students with ADHD. Results indicated that two pre-college factors, gender (i.e., being male) and lower standardized test scores, significantly predicted lower GPA. Conversely, only one college factor, greater motivation, was found to significantly predict higher GPA and retention. Taken together, findings draw attention to several variables that both secondary and postsecondary institutions can target for intervention to support a more successful transition to college. Additionally, findings highlight the need for future research to elucidate factors related to college academic success for students with ADHD.

Keywords: Attention Deficit/Hyperactivity Disorder, undergraduate college students, academic performance

Improved diagnostic measures and treatment options are enabling more students with attention-deficit/hyperactivity disorder (ADHD) to pursue postsecondary education. Although students with ADHD are more likely to be enrolled in 2-year community college, technical, or vocational schools (Kuriyan et al., 2013; Morningstar et al., 2015), more of these students are enrolling in 4-year colleges and universities (Eagen et al., 2014). This rise in college attendance among students with ADHD highlights a need for further research addressing how to best serve this population. In particular, although college students with ADHD have worse academic functioning than their peers, including lower academic performance and higher dropout rates (Advokat et al., 2011; DuPaul et al., 2009; Koch et al., 2018), studies have not thoroughly investigated why this is the case.

Academic Functioning of College Students with ADHD

Students with ADHD who attend college represent a distinct subset of individuals with the disorder (Blase et al., 2009; Kaminski et al., 2006; Schwanz et al., 2007; Weyandt & DuPaul, 2008). Glutting et al. (2005) contended that “college students with ADHD are likely to have (a) higher ability levels, (b) greater academic success during primary and secondary school, and (c) better compensatory skills than individuals with ADHD from the general population” (p. 44). Although college students with ADHD may have higher academic functioning than their non-college ADHD peers, there is considerable evidence suggesting that the former group is still at risk for academic impairment.

¹ Lehigh University; ² University of North Carolina-Greensboro; ³ University of Rhode Island

The transition to college is often challenging for adolescents; in fact, the initial years after high school have been referred to as a “period of floundering” (Halpern, 1991, p. 203). Although most incoming freshmen struggle with the increased academic rigor, loss of parental supervision, and reduced structure of college, students with ADHD may encounter additional hurdles due to their attention problems, executive functioning deficits, and under-developed self-regulation skills (Fleming & McMahan, 2012; Weyandt & DuPaul, 2008). Furthermore, few college students with ADHD have experience advocating for themselves to get the support they need (Stamp et al., 2014). These challenges put college students with ADHD at greater risk for poor academic functioning.

Compared with their non-ADHD peers, college students with ADHD demonstrate lower academic performance. Cross-sectional studies have reliably found that college students with ADHD obtain significantly lower college grade point averages (GPA) than college students without ADHD (Advokat et al., 2011; Blase et al., 2009; Heiligenstein et al., 1999). Students with ADHD also have a higher prevalence of withdrawal from courses (Advokat et al., 2011) and placement on academic probation (Heiligenstein et al., 1999) than their peers. These students report greater academic concerns than their non-disabled peers (Blase et al., 2009), with medium effect sizes ($d=.48$; Rabiner et al., 2008). They tend to have inferior test-taking strategies (Reaser et al., 2007), less developed organizational skills based on self-report ($d=-2.95$), and greater overall executive dysfunction ($d=2.10$; Weyandt et al., 2013). Unfortunately, these poor outcomes occur despite similar hours spent studying (Kaminski et al., 2006).

Poor academic performance contributes to greater dropout rates for students with ADHD¹. Several studies have found that individuals with ADHD typically complete fewer years of school compared to their peers (Barkley et al., 2006; Wagner et al., 2005), with only 28% actually graduating, approximately half of the graduation rate for students without disabilities (Gregg, 2009). There is also some research suggesting that students with ADHD are at greater risk of dropping out during their first year of college. For example, Koch et al. (2018) followed students with disabilities, including ADHD, over the course of three years and found that students with disabilities were more likely to drop out of college during their first year compared to their peers without a disability. Additionally, the odds of withdrawing in the first year

were 85% greater for students with ADHD, learning disabilities, or psychiatric disabilities than for students without disabilities.

Taken together, academic performance and retention outcomes highlight both the need to better understand the academic functioning of college students with ADHD and the need to examine the “factors that may contribute to their academic failure or success at the college level” (Weyandt & DuPaul, 2008, p. 314). In line with this call for further research, the purpose of this study was to investigate the variables that predict the academic performance and retention of college students with ADHD.

Predictors of College Academic Functioning: General Population

Many studies have examined potential predictors of college academic performance and retention. Most examine two predictor categories: pre-college variables and college variables. Pre-college variables, which remain relatively stable throughout the lifespan, include demographics, past academic achievement, and cognitive skills. College variables include academic support, internalizing symptomology, and learning strategies. The distinction between pre-college and college variables in the proposed study is informed by similar research (LaRose et al., 2019), and offers a paradigm that acknowledges the differing support structures available in the pre-college and college settings, though its application also requires some arbitrary distinctions between variables.

Pre-college Predictors of GPA and Retention Demographics

Gender is consistently a significant predictor of college GPA, with females outperforming males (DeBerard et al., 2004; Mattson, 2007). Research regarding the influence of gender on college retention, however, is inconsistent (Alarcon & Edwards, 2013; Ishitani, 2016). Studies examining the effect of race on college GPA and retention have found that minority students are more likely to have a lower GPA and drop out from college more often than non-minority students (Murtaugh et al., 1999; Ransdell, 2001). Research regarding the influence of socioeconomic status (SES) on college academic performance and retention is mixed, with some showing poorer academic outcomes for students from low SES backgrounds, while other studies show no effects of SES (Baier et al., 2016; Pritchard & Wilson, 2003).

¹ College dropout is not solely attributable to a lack of academic success. There are many factors that might influence a student’s decision not to return to their postsecondary institution including several variables that will be examined in the present study such socioeconomic circumstances and mental health issues.

Past Academic Achievement and Cognitive Skills

Standardized aptitude tests (e.g., Scholastic Aptitude Test [SAT]) and cognitive skills (e.g., measures of a person's reasoning abilities, such as IQ) are significant positive predictors of GPA and retention (Burks et al., 2015; DeBerard et al., 2004; Shaughnessy & Evans, 1983). For example, Ridgell and Lounsbury (2004) found that general intelligence significantly predicted college GPA, accounting for nearly 15% of the variance. Because standardized aptitude test scores (i.e., SAT scores) are highly correlated with IQ test scores (Frey & Detterman, 2004), however, the current study only examined the latter. Several studies have also reported that scores on standardized achievement tests (e.g., Wide Range Achievement Test, Woodcock Johnson Test of Achievement) are significantly predictive of college GPA (e.g., Kaufman et al., 2012; Shaughnessy & Evans, 1983). Research examining the association of achievement test performance on college retention, however, is limited.

College Predictors of GPA and Retention *Academic Support*

The frequency and quality of student non-classroom discussions with faculty, including through academic advising, is significantly and positively correlated with academic achievement and retention (Baier et al., 2016; Pascarella, 1985). Additionally, students who use academic support center services (e.g., tutoring, workshops, study groups) are more likely to have higher grades and graduate compared to students who did not (Grillo & Leist, 2013).

Internalizing Symptomology

There is a growing body of research supporting the connection between internalizing symptoms and impaired college functioning, including decreased academic functioning. Due to common symptoms associated with depression, such as persistent sadness, discouragement, loss of self-worth, and decreased interest in daily activities, students experiencing depression may lose interest in learning, disengage from classes, and consequently perform poorly on exams and assignments. For example, depression significantly predicts lower college GPA and dropping out of college (Eisenberg et al., 2009; Heiligenstein et al., 1996). Studies examining anxiety's impact on college academic performance and retention, however, have yielded inconsistent findings, with some studies showing deleterious effects while others show no impact (Eisenberg et al., 2009; Pritchard & Wilson, 2003).

Learning Strategies

Self-efficacy and motivation positively influence college academic performance and retention (Alarcon & Edwards 2013; Cheng & Ickes, 2009; Robbins et al., 2004). Effective time-management skills also predict higher GPAs (Kaminski et al., 2006).

Predictors of College Academic Functioning: ADHD Population

Though many studies examine predictors of academic success among college students generally, there are relatively few similar investigations of students with ADHD. The limited studies focused on students with ADHD examine some of the same pre-college and college variables, as well as ADHD symptomology and medication use.

Pre-college Predictors of GPA and Retention *Demographics, Past Academic Achievement, and Cognitive Skills*

Other than research utilizing the same sample as the current study (e.g., Anastopoulos et al., 2018; DuPaul et al., 2018), to date, there have been no studies examining the influence of gender, race, SES, past academic achievement, or cognitive skills on college academic performance or retention in college students with ADHD.

ADHD Symptomology

Researchers have investigated how ADHD symptomology predicts college academic performance and retention among college students generally (Norvilitis et al., 2010; Pope, 2010; Schwanz et al., 2007) and college students with ADHD specifically (Rabiner et al., 2008). In the former studies, participants completed ADHD rating scales (Norvilitis et al., 2010; Pope, 2010; Schwanz et al., 2007). Results across studies suggest that inattentive symptoms, not hyperactive-impulsive symptoms, are associated with worse academic performance and higher college dropout rates.

College Predictors of GPA and Retention *Academic Support*

Studies investigating the influence of college accommodations on academic performance have not yielded positive findings (as cited in Gormley et al., 2019). However, some research supports the educational benefits of receiving specific services and interventions such as faculty support (Koch et al., 2018), tutoring (Sibley & Yeguez, 2018), coaching (Prevatt & Yelland, 2015), and academic skills assistance (DuPaul et al., 2017).

Medication Use

Though considerable evidence supports stimulant medication as an effective treatment for children and adolescents with ADHD (Greenhill, 2002), research on the impact of medication on college students with ADHD is more limited. No studies have examined medication use's effects on retention. Results among studies examining the impact of medication on college GPA generally suggest no added benefit (Advokat et al., 2011; Rabiner et al., 2008; Gray et al., 2018).

Internalizing Symptomology

Aside from the DuPaul et al. (2018) study that utilized the same sample as the current study, only one study has examined how internalizing symptoms predict outcomes among college students with ADHD. Prevatt et al. (2015) found that students with ADHD who have high levels of inattention and anxiety may be at greater risk for lower academic performance and drop-out.

Learning Strategies

College students with ADHD have reported that organization, time-management, test preparation, problem solving, self-awareness, and self-control skills bolster their academic performance (Advokat et al., 2011; Kaminski et al. 2006; Sibley & Yeguez 2018). Higher levels of motivation have also been linked to stronger academic performance (Dvorsky & Langberg, 2019).

Gaps in the Literature and Study Purpose

Given the paucity of literature examining predictors of academic functioning and retention specifically for college students with ADHD, it is tempting to apply findings from general undergraduate samples. It is unclear, however, whether these findings would hold considering the documented differences in academic functioning between students with and without ADHD across all school levels. More research investigating college students with ADHD is needed to identify which variables best explain these students' academic functioning.

Although the extant literature targeting academic functioning among college students with ADHD is growing, there are several gaps. First, many of the studies claiming to investigate the relationship between ADHD and academic functioning used students from the general college population as opposed to the ADHD-specific college population (Norvilitis et al., 2010; Pope, 2010; Schwanz et al., 2007). Other studies examined students previously diagnosed with ADHD, mostly relied on student self-report (Ado-

vokat et al., 2011; Koch et al., 2018; Rabiner et al., 2008). There is an obvious need for studies that use multi-method, multi-informant evaluation systems to confirm the diagnosis of ADHD, especially in light of the potential biases of self-report (Mannuzza et al., 2002). Second, qualitative studies inform much of our understanding in this area (Sibley & Yeguez, 2018). Quantitative designs are needed to provide additional data regarding the degree to which college academic performance is associated with various pre-college and college variables. Third, research on the college success of students with ADHD has primarily focused on isolated individual characteristics. There have been no studies comprehensively examining pre-college and college-variables together. Consequently, the relative power of academic performance (pre-college or college) predictors for students with ADHD remains unclear. Research in this area is imperative to inform future interventions.

The present study aimed to address limitations in the extant literature by examining pre-college and college factors related to academic performance and retention for college students with ADHD. In particular, the following research questions were investigated:

Research Question 1: What pre-college (demographics, past academic achievement and cognitive skills, and ADHD symptoms) and college (college service use, medication use, internalizing symptomology, and learning strategies [Time Management, Motivation]) variables significantly predict first year cumulative GPA for college students with ADHD?

Hypothesis 1: Based on previous research, gender and race were hypothesized to significantly predict first year cumulative GPA; female gender and a non-minority status would predict significantly higher GPA. Lower cognitive skills, lower standardized tests scores, higher inattentive ADHD symptoms, and higher depressive symptoms were hypothesized to significantly predict lower first year cumulative GPA. The use of college services and learning strategies, such as better time management and higher levels of motivation, were hypothesized to significantly predict higher first year cumulative GPA. Based on prior literature, it was hypothesized that several variables would not be significant predictors, including, SES, hyperactive-impulsive symptoms, use of medication, and anxiety symptomatology.

Research Question 2: What pre-college (demographics, past academic achievement and cognitive skills, and ADHD symptoms) and college (college service use, medication use, internalizing symptomology, and learning strategies [Time Management, Motivation]) variables significantly predict retention for first year students with ADHD?

Hypothesis 2: Based on existing research it was hypothesized that race would be a significant predictor of college retention, with higher dropout rates among minority students. Lower cognitive skills, higher inattentive symptomology, and higher depressive symptoms were hypothesized to significantly predict lower rates of retention. College service use and learning strategies were hypothesized to significantly predict retention. Several variables were hypothesized to not be significant predictors of retention including gender, SES, hyperactive-impulsive symptoms, and anxiety symptoms. Given the limited research examining the influence of achievement tests or medication on retention for students with ADHD, no specific hypotheses in these areas were stated.

Method

Participants

Participants for the current study are a subsample from the Trajectories Related to ADHD in College (TRAC) Project study (Anastopoulos et al., 2018; DuPaul et al., 2018), a longitudinal, multi-site study examining the experiences of college students with and without ADHD. Participants were recruited over the span of two consecutive years (i.e., Fall 2012 and Fall 2013). Recruitment efforts included flyers, Facebook posts, campus wide emails, freshmen orientation sessions, office of disability referrals, and campus fairs. Students who indicated interest were screened for eligibility for the ADHD or comparison group (see below for detailed description of screening procedures). The resulting sample included 456 first year college students (228 with ADHD, 228 comparison students) who were followed for four years. The present study, however, only examined data from first year college students with ADHD (109 males, 119 females). The majority of students identified as Caucasian (76.8%) and were approximately 18 years old ($M = 18.27$, $SD = 0.58$).

Procedures

A multi-gating, multi-method assessment procedure was used to determine group status. Students and their parents first completed ADHD Rating Scales. Researchers next administered a semi-structured ADHD interview to each student whose self-report and parent-report indicated the presence of at least four or more symptoms of hyperactivity/impulsivity or inattention on the ADHD Rating Scales both in childhood (before age of 12) and in the past six months. To be included in the ADHD group, students needed to report five or more symptoms of either hyperactivity/impulsivity or inattention during the inter-

view, and meet all other DSM-5 criteria for ADHD. To be included in the comparison group, students or parents could endorse no more than three symptoms on either the ADHD Rating Scale or semi-structured ADHD interview. Following screening assessments, a panel of four ADHD experts evaluated participant data to ensure that diagnostic criteria for ADHD were met and to determine if comorbid conditions might also be present. To address comorbidity, panel members independently reviewed diagnoses and information collected from the Structured Clinical Interview for DSM Disorders (SCID-I; First et al., 2002), Beck Anxiety Inventory (BAI; Beck & Steer, 1993); Beck Depression Inventory-Second Edition (BDI-II; Beck et al., 1996). Unanimous panel agreement was required for group and comorbid status determinations. Eligible students then completed a series of measures over two to three meetings led by trained research assistants.

Screening Measures

ADHD Rating Scales (Parent Version, Childhood Version, and Past Six Months)

Three different versions of the same 18-item questionnaire (DuPaul et al., 1998) were administered to obtain the participant's self-report ratings of ADHD symptoms in childhood and over the past six months, as well as parent ratings of the participant's ADHD symptoms over the same time spans. Each form yielded three scale scores and severity scores corresponding to the three presentations of ADHD: Inattention, Hyperactive-Impulsive, and Combined.

Semi-Structured ADHD Interview

Adapted to the DSM-5 criteria (American Psychiatric Association, 2013), the adult semi-structured ADHD interview assesses symptom presentation and impairment. Half of the interview's 18 questions focus on inattention symptoms, and half focus on hyperactivity/impulsivity symptoms. The interview produced Inattention, Hyperactivity-Impulsive, and Combined scale scores, which have high internal consistency ($\alpha = .90$, $.85$, and $.93$ respectively).

Structured Clinical Interview for DSM Disorders (SCID-I; First et al. 1996)

The SCID-I is a computer-based semi-structured interview that assesses clinically significant presentations of psychiatric disorders. Only the modules for mood episodes/disorders and anxiety, somatoform, and eating disorders were administered.

Beck Anxiety Inventory (BAI; Beck & Steer, 1993)

The BAI is a 21-item self-report measure that assesses anxiety severity for individuals 17 and older. The scale measures symptom severity over the past week. Each item is rated on a 4-point Likert Scale (0 = *not at all*, 3 = *severely*), with higher scores indicating greater anxiety severity. The BAI has adequate levels of reliability and validity (Beck & Steer, 1993).

Beck Depression Inventory-Second Edition (BDI-II; Beck et al., 1996)

The BDI-II, a self-report measure, assesses depression severity in individuals 13 and older. Participants complete 21 four-point Likert scale items (0 = *not at all*, 3 = *severely*) measuring depressive symptoms over the past two weeks. Higher ratings indicate greater depression symptom severity. The BDI-II has adequate internal consistency among college students and strong test-retest correlations (Beck et al., 1996).

Independent Variables***Demographics***

Participant age, gender, race, ethnicity, parental education, and parental occupation were collected via demographic questionnaire. Participants were asked to indicate all races with which they identified (Caucasian, African American, Asian, Native American, Multiracial, or Other). As a proxy for socioeconomic status, participants were asked to indicate each parent's highest level of education and current occupation. For the current study, gender, race, and parent education level were used as dichotomous independent variables (gender: 0 = *female*, 1 = *male*; race: 0 = *minority*, 1 = *non-minority*; parent education level: 0 = *no parent had a college education*, 1 = *at least one parent had a college education*).

Past Academic Achievement and Cognitive Skills

The Wechsler Individual Achievement Test-Third Edition (WIAT-III; Wechsler, 2009) was administered early in freshman year to capture students' baseline academic achievement. Specifically, the word reading and numerical operations subscales were used. These subscales have excellent reliability and validity among young adults (Wechsler, 2009). Cognitive skills scores (i.e., FSIQ) were ascertained from participants' scores on the Wechsler Abbreviated Scale of Intelligence-Second Edition (WASI-2; Wechsler, 2011), and has acceptable or adequate strong reliability and validity (Wechsler, 2011).

Conners' Adult ADHD Rating Scale- Self Report: Long Version (CAARS; Conners et al., 1999)

The CAARS is a rating scale that measures

ADHD symptomology and severity for adults. The measure consists of 66 four-point Likert scale items (0 = *not at all/never*, 3 = *very much/frequently*). The CAARS manual specifies that the scale has adequate factorial, discriminant, and construct validity as well as internal consistency reliability. For the present study, the DSM-IV Inattentive symptoms and DSM-IV Hyperactive-Impulsive symptoms T-Scores were used as independent variables.

College Service Use

Students self-reported their college service use on the Services for College Students Interview—College Version. This semi-structured interview was created for the TRAC Project. Students were asked about the following services: “meet with a professor or your advisor to discuss your academic performance/progress,” “campus tutoring services,” “academic skill assistance,” “writing/speaking assistance,” “career counseling,” and “formal disability service accommodations.” Because the literature supports meeting with faculty, tutoring, and receiving academic skills assistance, the current study included these services as dichotomous independent variables. All responses were coded as a binary “yes” or “no” indicating whether the student used the service.

Medication Use

For the current study, the medication use independent variable was determined based on participant response to a question about medication use on the SCS-College Version (i.e., “at any time during the fall semester, did you take medication for ADHD-related difficulties?”). Students who answered “yes” were coded as a 1 and students who said “no” were coded as a 0.

Internalizing Symptomology

Participant ratings of anxiety and depression were collected as part of study screening procedures using the BAI and BDI-II, respectively (see previous descriptions). For the present study, BAI and BDI-II total scores were used as independent variables.

The Learning and Study Strategies Inventory (LASSI; Weinstein & Palmer, 2002)

The LASSI is an 80-item self-report inventory that measures students' learning and study strategies related to “skill, will and self-regulation components of strategic learning” (Weinstein & Palmer, 2002, p. 4). The LASSI is comprised of 10 subscales: Anxiety, Attitude, Concentration, Information Processing, Motivation, Self-Testing, Study, Selecting Main Ideas, Test Strategies, and Time Management. Each

subscale contains eight five-point Likert scale items (*a = not at all typical of me, e = very typical of me*). The measure yields a raw score for each of the 10 subscales with higher scores indicating more positive functioning. The LASSI has adequate internal consistency and reliability (Weinstein & Palmer, 2002). For the current study, scores on Motivation and Time Management subscales were included as independent variables given that the constructs represented by these scales consistently and significantly predict college GPA and retention in the greater literature.

Dependent Variables

First Year GPA

One outcome measure of interest for the present study was first year cumulative GPA. With student consent, first year cumulative GPA was collected using archival information from college registrar offices. When archival information was unavailable, GPA data were collected via student self-report ($n = 4$). GPAs were reported on a 4.0 scale for all but one university where GPAs were reported on a 4.3 scale. For the current study, the latter was converted to a 4.0 scale.

Retention

The other outcome measure of interest was student retention between freshman and sophomore year. Information about student retention was collected from the registrar's office. Students enrolled in greater than 0 credits in either the fall or spring of their second year were coded as retained. Spring data were considered because several students who did not enroll in fall classes returned for their spring semester.

Data Analysis Plan²

Descriptive statistics were calculated for all variables. Before conducting the hierarchical linear regression analyses, assumptions of normality, linearity, homoscedasticity, and absence of multicollinearity were tested. Normality was tested using skewness and kurtosis. Linearity, normality of residuals, and homoscedasticity were tested through visual examination of relevant graphs. Multicollinearity was tested using variance inflation factor (VIF; values less than 5) and evaluating a correlation matrix (no intercorrelations greater than .8; see Table 1). Several efforts were also made to detect outliers including Cook's D and studentized residuals. For the hierarchical lo-

gistic regression analysis, the following assumptions were checked: (1) the variable of interest was a dichotomous variable, (2) outcomes were statistically independent, (3) the model was correctly specified (i.e., contained all relevant predictors and no irrelevant predictors), (4) the categories under analysis were mutually exclusive and collectively exhaustive, (5) the sample was large, and (6) absence of multicollinearity among predictors (Wright, 2003).

A hierarchical multiple regression analysis was used to answer the first research question regarding predictors of first year cumulative GPA. The predictor variables were entered incrementally. The hierarchical multiple regression predicting first year cumulative GPA contained three blocks, grouped conceptually based upon the availability of literature supporting the factors as related to college GPA. The first block of variables entered included student demographic characteristics (i.e., race, gender, SES-parent education level). The second consisted of pre-college variables (i.e., WASI-2 FSIQ score, WIAT-III numerical operations subscale score, WIAT-III word reading subscale score, CAARS inattentive T-score, CAARS hyperactive-impulsive T-score). The third included college variables (i.e., college service use, medication use, internalizing symptomology, and learning strategies). A hierarchical logistic regression was used to answer the second research question regarding predictors of retention. Predictor variables were entered in the same blocks as outlined for Research Question 1.

Results

Research Question 1

Descriptive statistics for both research questions are listed in Table 2. Because hierarchical multiple regression analyses require complete data sets, cases with missing data were removed and explored. For the first research question predicting college GPA, 34 cases (14.9%) were removed, leaving 194 complete cases. Results indicated that excluded cases did not differ from included cases with respect to GPA, ADHD symptom severity, gender, race, or SES. All assumptions of the procedure were checked and met.

The first model predicting first year cumulative GPA containing only demographic variables failed to reach statistical significance ($p = .162$; see Table 3 for hierarchical regression statistics). The addition of pre-college factors resulted in a statistically sig-

2 A post-hoc power analysis using G-Power3 software (Faul et al., 2007) was conducted for each research question. The parameters were an effect size of .15 (i.e., a medium effect size), alpha probability error of 0.05, sample size of 194 (Research Question 1) and 204 (Research Question 2), and 16 predictors. The results indicated power $(1-\beta)=0.94$ for Research Question 1 and power $(1-\beta)=0.95$ for Research Question 2, both of which are well above the accepted level of .80, thus indicating that sample sizes have adequate power to detect a medium effect size.

Table 1

Intercorrelations Between the Hierarchical Multiple Regression Variables for First Year Cumulative GPA Among College Students with ADHD

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1. Cumulative GPA	-09																
2. Gender	.03	.03															
3. Race	.13	.06	.21**														
4. Par. Ed.	.18**	.11	.13	.15*													
5. WASI FSIQ	.15*	.10	.14*	.18*	.25**												
6. WIAT Word	.40**	.28**	.06	.10	.42**	.27**											
7. WIAT Num	.00	.09	-.04	-.16*	-.11	.02	.04										
8. CAARS Hi/Imp	-.10	.20**	.02	-.03	.01	-.03	.02	.38**									
9. CAARS Inatt	.05	.01	-.01	-.05	-.10	-.16*	.08	.00	-.01								
10. Col Serv: Tutor	-.10	-.04	-.06	-.07	.04	-.00	-.05	.03	-.05	.21**							
11. Col Serv: Aca	-.11	-.04	-.07	-.16*	.04	-.03	-.14	-.03	-.12	.17*	.16*						
12. Col Serv: Prof	.15*	.04	-.11	-.01	.03	.02	.05	-.11	-.19**	.14	.12	.12					
13. LASSI: Time	.36**	-.11	-.17*	-.02	.13	.13	.15*	-.04	-.22**	.09	.07	.12	.62**				
14. LASSI: Motiv	-.03	-.21**	-.05	-.13	-.12	.02	-.17*	.27**	.07	.09	.09	-.08	-.03	-.02			
15. BAI	-.12	-.21**	-.09	-.18**	-.18**	-.16*	-.16*	.20**	.15*	.17	.03	-.03	-.21**	-.17*	.61**		
16. BDI-II	.07	-.00	.25**	.10	.14	.07	.11	-.12	.04	-.06	.12	-.04	.13	.03	-.06	-.19**	
17. Medication																	

Note. * = $p < .05$; ** = $p < .01$. Parent Ed = highest parent education level; WASI FSIQ = Wechsler Abbreviated Scale of Intelligence-Second Edition Full Scale IQ Score; WIAT Word = Wechsler Individual Achievement Test-Third Edition Word Reading; WIAT Num = Wechsler Individual Achievement Test-Third Edition Numerical Operations; CAARS Hi/Imp = Conners' Adult ADHD Rating Scale Hyperactive/Impulsive Symptoms; CAARS Inatt = Conners' Adult ADHD Rating Scale Inattentive Symptoms; Col Ser: Tutor = College Service Use-Tutoring; Col. Ser: Aca = College Service Use = Academic Skills Assistance; Col. Ser: Prof = College Service Use-Meeting with Professor; LASSI: Time = Learning and Study Strategies Inventory Time Management; LASSI: Motiv = Learning and Study Strategies Inventory Motivation; BAI = Beck Anxiety Inventory; BDI-II = Beck Depression Inventory Second Edition; Medication = Medication Status

Table 2*Descriptive Statistics for Dependent and Independent Variables*

Gender (% Male)	47.8%
Race (% Non-Minority)	76.8%
African Americans	11%
Asian	2.5%
Multiracial	4.4%
Other	5.3%
Parent Education (% at least 1 parent with college ed)	74.6%
WASI Full Scale IQ (Standard Score)	$M = 110.86, SD = 12.67$
WIAT Word Reading (Standard Score)	$M = 107.88, SD = 10.08$
WIAT Numerical Operations (Standard Score)	$M = 107.17, SD = 15.45$
CAARS Hyperactive/Impulsive (Standard score)	$M = 63.46, SD = 13.42$
CAARS Inattentive (Standard score)	$M = 78.52, SD = 12.24$
Tutoring Services (% Receiving Service)	34.2%
Academic Skills Assistance (% Receiving Service)	19.7%
Meeting with Professor (% Receiving Service)	58.8%
LASSI-Time Management (Raw score)	$M = 19.68, SD = 6.00$
LASSI-Motivation (Raw score)	$M = 28.79, SD = 6.09$
BAI (Raw Score)	$M = 14.33, SD = 11.00$
BDI-II (Raw Score)	$M = 15.52, SD = 9.62$
ADHD Med Use (% Medicated)	43.4%
Cumulative GPA	$M = 2.91, SD = 0.70$
Retention (% Retained)	70.2%

Note. $N = 228$; BAI = Beck Anxiety Inventory; BDI-II = Beck Depression Inventory Second Edition; LASSI = Learning and Study Strategies Inventory, Medication = Medication Use; WASI = Wechsler Abbreviated Scale of Intelligence-Second Edition; WIAT = Wechsler Individual Achievement Test-Third Edition

Table 3*Hierarchical Multiple Regression Statistics for Model Predicting First Year Cumulative GPA*

Model	Variable	<i>R/B</i>	<i>R</i> ² / β	<i>SE</i>	<i>p</i> -Value	ANOVA <i>F</i>	Model <i>p</i>
1		.16	.03	.70		1.73	.162
	Gender	-.10	-.71	.10	.329		
	Race	.03	.02	.12	.788		
	Parent Ed	.24	.15	.12	.044		
2		.45	.20	.64		5.84	<.001
	Gender	-.27	-.19	.10	.008		
	Race	-.02	-.01	.11	.869		
	Parent Ed	.18	.11	.11	.110		
	WASI FSIQ	.00	.05	.00	.480		
	WIAT Word Reading	.00	.03	.01	.686		
	WIAT Numerical Op.	.02	.41	.00	<.001		
	CAARS Hi/Imp	.00	.04	.00	.626		
	CAARS Inattentive	-.00	-.04	.00	.598		
3		.55	.30	.61		4.66	<.001
	Gender	-.21	-.15	.10	.038		
	Race	.07	.04	.11	.561		
	Parent Ed	.16	.10	.11	.151		
	WASI FSIQ	.00	.04	.00	.581		
	WIAT Word Reading	-.00	-.02	.01	.806		
	WIAT Numerical Op.	.02	.34	.00	<.001		
	CAARS Hyp/Imp	.00	.02	.00	.761		
	CAARS Inattentive	.00	.02	.00	.740		
	Col Serv: Tutoring	.06	.04	.10	.553		
	Col Serv: Academic Skills	-.16	-.10	.11	.157		
	Col Serv: Meeting w/ Prof	-.09	-.06	.10	.391		
	ADHD Medication Use	-.00	-.00	.10	.975		
	BAI	.01	.08	.01	.401		
BDI-II	-.01	-.10	.01	.247			
LASSI-Time Management	-.00	-.04	.01	.685			
LASSI-Motivation	.04	.31	.01	<.001			

Note. *N* = 194; Parent Ed = highest parent education level; WASI FSIQ = Wechsler Abbreviated Scale of Intelligence-Second Edition Full Scale IQ Score; WIAT Word Reading = Wechsler Individual Achievement Test-Third Edition Word Reading; WIAT Numerical Op.= Wechsler Individual Achievement Test-Third Edition Numerical Operations; CAARS Hi/Imp = Conners' Adult ADHD Rating Scale Hyperactive/Impulsive Symptoms; CAARS Inattentive = Conners' Adult ADHD Rating Scale Inattentive Symptoms; Col Ser: Tutoring = College Service Use-Tutoring; Col Ser: Academic Skills = College Service Use = Academic Skills Assistance; Col Ser: Meeting w/ Prof = College Service Use-Meeting with Professor; BAI = Beck Anxiety Inventory; BDI-II = Beck Depression Inventory Second Edition; LASSI: Time = Learning and Study Strategies Inventory Time Management; LASSI: Motivation = Learning and Study Strategies Inventory Motivation

nificant change in R^2 , $F^\Delta(5, 184) = 8.10$, $p < .001$, uniquely accounting for 17.5% of the variance, with the whole model predicting 20.2% of the variance. The addition of college variables also resulted in a statistically significant change in R^2 , $F^\Delta(8, 176) = 2.09$, $p < .001$, uniquely accounting for 9.6% of the variance and indicative of a large effect size ($f^2 = .42$). Among coefficients, only gender ($\beta = -.15$, $p = .038$), WIAT numerical operations ($\beta = .34$, $p < .001$), and LASSI-motivation ($\beta = .31$, $p < .011$) significantly predicted first year cumulative GPA among college students with ADHD. Specifically, being male significantly predicted lower GPA, while having higher scores on the WIAT numerical operation subscale and LASSI-motivation scale significantly predicted higher first year cumulative GPA. Furthermore, examination of squared correlations revealed that 1.7% of the variance in first year cumulative GPA was uniquely explained by gender, 7.5% of was uniquely explained by WIAT numerical operations score, and 5.1% was uniquely explained by LASSI-motivation scores.

Research Question 2

Similar to hierarchical regression analyses, logistic regression analyses require complete data sets. For the second research question predicting freshman year retention, 24 cases (10.5%) were removed. When exploring missing data for research question 2, no significant differences were found between participants with complete and incomplete data in terms of hyperactive-impulsive symptom severity, gender, race, or SES. However, participants with complete data had significantly lower inattention symptom severity ($M = 77.5$, $SD = 12.1$) than participants with missing data ($M = 85.04$, $SD = 11.87$). All assumptions of the procedure were checked and met.

The first and second models predicting retention of first year students failed to reach statistical significance (Model 1: $\chi^2[3] = .68$, $p = .878$; Model 2: $\chi^2[8] = 9.44$, $p = .307$). The third model, however, was approaching statistical significance ($\chi^2[16] = 23.5430$, $p = .10$) and indicative of a medium effect size ($f^2 = .19$). This model correctly classified 76.5% of cases. Only one variable significantly predicted retention for first year students with ADHD. Specifically, higher LASSI-motivation score was associated with increased likelihood of first year retention (OR = 1.08, 95% CI: 1.01-1.16; $d = .04$; see Table 4 for hierarchical logistic regression statistics).

Discussion

Research Question 1 Findings

Consistent with several of the study's initial hypotheses, results indicate that three variables significantly predict better first year cumulative GPA: female gender, higher standardized test scores (i.e., WIAT-III numerical operations subscale), and possessing greater levels of motivation. These findings replicate past research indicating females outperform males academically (DeBerard et al., 2004; Mattson, 2007) potentially because females have been demonstrated to have higher levels of organization, dependability, and self-discipline (Duckworth & Seligman, 2006; Jacob, 2002; Riegle-Crumb, 2007). Males may also have lower GPA due to their generally greater symptom severity (Barkley, 2006) and increased likelihood of engaging in risk-taking behaviors such as alcohol use, illicit substance use, and risky sexual behaviors (Pollack et al., 2018), all of which may detract from academic success. The WIAT-III numerical operations subscale score's status as a significant predictor of first year cumulative GPA aligns with research suggesting that many of the skills needed to do well in math, such as critical thinking, logical reasoning, and problem-solving skills, benefit students across content areas (Bull & Johnston, 1997; Hecht et al., 2001). Finally, results mirror those in the greater literature suggesting that motivation is positively and significantly linked to cumulative GPA (Cheng & Ickes, 2009; Robbins et al., 2004). Motivation has been proposed as a protective factor for students who lack organizational skills, such as those with ADHD, because students with high motivation may direct greater effort toward overcoming organizational limitations (Cheng & Ickes, 2009). An examination of squared correlations, however, reveals that only 14.3% of the 29.8% of variance explained in the final model is accounted for by these three significant predictors. This finding suggests that some non-significant predictors described below are also contributing to the variance, albeit not at a statistically significant level.

Contrary to hypotheses and past research, several pre-college variables, including race, cognitive skills, and standardized testing reading scores did not significantly predict first year cumulative GPA. Though the lack of a predictive effect of race is difficult to interpret, it is plausible that family characteristics that typically put minority students at a disadvantage (e.g., first generation college student) were not as relevant in the current study, where 74.6% of participants had at least one parent with a college education. In terms of the lack of findings for FSIQ score and WIAT-III

Table 4*Hierarchical Logistic Regression Statistics for Model Predicting First Year Retention*

Model	Variable	B	SE	Wald	df	p-Value	Odds-Ratio	Nagelkerke R ²	Model p
1	Gender	.15	.32	0.21	1	.645	1.16	.01	0.878
	Race	-.12	.38	0.10	1	.752	0.89		
	Parent Ed	.23	.36	0.42	1	.519	1.26		
2	Gender	-.11	.34	0.10	1	.758	0.90	.07	0.307
	Race	-.24	.39	0.38	1	.536	0.78		
	Parent Ed	.06	.38	0.03	1	.875	1.06		
	WASI FSIQ	.00	.02	0.07	1	.789	1.00		
	WIAT Word Reading	.02	.02	1.82	1	.177	1.02		
	WIAT Numerical Op.	.02	.01	3.22	1	.073	1.02		
	CAARS Hi/Imp	-.01	.01	0.14	1	.709	0.99		
	CAARS Inattentive	.01	.02	0.14	1	.706	1.01		
3	Gender	-.15	.38	0.16	1	.687	0.86	.16	0.100
	Race	-.19	.43	0.19	1	.661	0.83		
	Parent Ed	.05	.41	0.02	1	.897	1.06		
	WASI FSIQ	.00	.02	0.03	1	.863	1.00		
	WIAT Word Reading	.03	.02	1.81	1	.178	1.03		
	WIAT Numerical Op.	.01	.01	0.71	1	.400	1.01		
	CAARS Hyp/Imp	.00	.02	0.06	1	.814	1.00		
	CAARS Inattentive	.01	.02	0.75	1	.387	1.01		
	Col Serv: Tutoring	.37	.39	0.91	1	.339	1.45		
	Col Serv: Academic Skills	-.13	.43	0.09	1	.769	0.88		
	Col Serv: Meeting w/ Prof	.01	.38	0.00	1	.985	1.01		
	ADHD Medication Use	.51	.37	1.94	1	.164	1.67		
	BAI	-.03	.02	2.32	1	.127	0.97		
	BDI-II	-.00	.02	0.02	1	.879	1.00		
	LASSI-Time Management	-.00	.04	0.01	1	.920	1.00		
LASSI-Motivation	.08	.04	4.33	1	.037	1.08			

Note. N=204; Parent Ed = highest parent education level; WASI FSIQ = Wechsler Abbreviated Scale of Intelligence-Second Edition Full Scale IQ Score; WIAT Word Reading = Wechsler Individual Achievement Test-Third Edition Word Reading; WIAT Numerical Op.= Wechsler Individual Achievement Test-Third Edition Numerical Operations; CAARS Hi/Imp = Conners' Adult ADHD Rating Scale Hyperactive/Impulsive Symptoms; CAARS Inattentive = Conners' Adult ADHD Rating Scale Inattentive Symptoms; Col Ser: Tutoring: College Service Use-Tutoring; Col Ser: Academic Skills = College Service Use = Academic Skills Assistance; Col Ser: Meeting w/ Prof = College Service Use-Meeting with Professor; BAI = Beck Anxiety Inventory; BDI-II = Beck Depression Inventory Second Edition; LASSI: Time = Learning and Study Strategies Inventory Time Management; LASSI: Motivation = Learning and Study Strategies Inventory Motivation

word reading subscale score, it is possible that the WIAT-III numerical operations subscale score, which was significantly correlated with both the FSIQ score and WIAT-III word reading subscale score, may have captured variance that would have otherwise been attributed to cognitive or standardized testing scores.

Unexpectedly, several college variables also did not significantly predict first year cumulative GPA. Neither inattentive ADHD symptoms nor depression symptomatology significantly predicted first year cumulative GPA. Sample characteristics may account for this outcome. This study's average CAARS inattention score fell in the clinically elevated range (i.e., T-score greater than 65), suggesting a possible ceiling effect. This restricted range of inattention scores may have attenuated correlations, leading findings to diverge from the greater literature. As to depression symptoms, moderate-to-severe depression is more strongly associated with poor academic outcomes (Heiligenstein et al., 1996), whereas the average BDI-II score in the present study was 15.52, indicating only mild depression (Beck et al., 1996). Results suggest that neither academic support service use nor time management learning strategies predict first year cumulative GPA.

There are several potential reasons why the present findings depart from the previous literature. Regarding academic support services, the present study did not collect data on the frequency of service use, quality of services offered, or the amount of student engagement in sessions. These findings may therefore represent the minimal effectiveness of academic support services. Relatedly, because this study only inquired about support-service use at one point in time, it is possible that data collected did not capture students who began using academic support services after being surveyed. Regarding time-management learning strategies, the present study's findings may diverge from the greater research because the LAS-SI-time management variable was significantly correlated with the LASSI-motivation variable ($r = .62$, $p < .01$). Consequently, the LASSI-motivation variable may have accounted for variance that would have otherwise been attributed to the LASSI-time management variable.

Research Question 2 Findings

The findings' capacity to adequately predict retention is limited because the final model is only approaching statistical significance. Nevertheless, among pre-college and college predictors, there was one factor, motivation, that significantly predicted retention as hypothesized. Students with higher motivation had an 8.1% greater likelihood of being retained.

According to Weinstein and Palmer (2002), the LAS-SI-motivation subscale assesses students' diligence and self-discipline. It is operationally defined by the students' willingness to exert the effort necessary to successfully complete academic requirements (sample item: *When work is difficult I either give up or study only the easy parts*). Students who score low on this scale benefit from increasing investment in their academic outcomes and learning how to set and use goals to help accomplish specific tasks. It follows, then, that students in the current study with higher LASSI-motivation subscale scores were more invested in studying and performance, fostering behaviors such as preparing for class, completing assignments on time, and being diligent in studying. Consequently, high-motivation students were more likely to reenroll for sophomore year. These findings add to the considerable evidence that suggests that college retention rates are higher among motivated learners (Alarcon & Edwards, 2013; Robbins et al., 2004).

Current findings conflict with the greater literature on several predictor variables. First, race did not emerge as a significant predictor of retention, potentially due to how this study operationalized race as a dichotomous variable (i.e., minority and non-minority) whereas previous investigations examined multiple categories (Murtaugh, 1999). Although collapsing race into a binary predictor was necessary for this study due to small cell sizes (e.g., only 6 Asian students), doing so could have diminished subtle but important nuances between racial groups retention outcomes. Second, cognitive skills did not significantly predict college persistence. In light of several studies finding personality traits more predictive of post-secondary educational performance than intelligence (e.g., Di Fabio & Busoni, 2007), it is possible that unexamined personality variables here accounted for greater variance in retention than did intelligence. Third, inattentive ADHD symptoms did not significantly predict lower rates of retention, possibly due to the exclusion of participants with missing data who had significantly higher inattention symptom severity. Excluding these individuals may have mitigated the impact of inattentive ADHD symptoms in the overall analysis. Finally, this study's findings that several college variables did not significantly predict retention conflict with prior research. As with the first year cumulative GPA findings, these departures may be accounted for by type of data collection (i.e., academic support services data did not reflect quality of services), sample characteristics (i.e., mild depression levels), and intercorrelations among variables (i.e., LASSI scales were significantly correlated).

Limitations

The current study's findings must be interpreted in light of its limitations. First, the study sample consisted only of students with ADHD enrolled at 4-year universities. Recognizing research suggesting that students with ADHD are more likely to be enrolled in 2-year college, community college, technical, or vocational schools than 4-year colleges (Kuriyan et al., 2013; Morningstar et al., 2015), it is unclear whether these results could be generalized to students not enrolled in 4-year institutions. Second, the study's dataset presented methodological difficulties. The study's use of self-report to measure some independent variables may have impacted reliability and validity data based on the participants' understanding of interview and questionnaire items, and participants' ability to accurately recall past behaviors. Further, because data were collected at one point in time, they may not have captured changes during the year. Third, internalizing symptoms were assessed using a dimensional measure which only reflects experiences over the past few weeks as opposed to a more stable categorical measure (i.e., expert panel's diagnostic classification). Fourth, the present analysis collapsed multiple categorical variables, such as race, socioeconomic status, and medication use, into binary variables, detracting from analysis of specific racial backgrounds, level of income, and medication dosage impacts on academic performance and retention. Fifth, findings also may have been affected by the fact that participants included in Research Question 2 analysis had significantly lower inattention symptom severity than the overall sample. This factor may have attenuated the impact of some variables (e.g., those measuring pathology) on retention. Finally, the operationalization of retention limited study results. Students were considered retained if they were enrolled in greater than 0 credits in either the fall or spring of their sophomore year. Though this definition has been used in prior studies (Ishitani, 2016), it lacks practical significance given that most single-semester college courses are worth three credits and the majority of four-year colleges require 120 credit hours to graduate (Johnson et al., 2012). A more appropriate operationalization may have been students who were enrolled in six or more credits, as this is the minimum number of credits needed to be considered a part-time student at most colleges and universities.

Considerations for Future Research and Practice

Present findings raise several important directions for future research. First, additional research regarding predictors of academic performance and retention of college students with ADHD is needed, as the final

models only accounted for 29.8% and 15.8% of the variance, respectively. Second, the study's motivation findings call for further exploration of academic performance and retention of college students with ADHD through prevailing motivational theories such as achievement goal theory, self-determination theory, and attribution theory. Third, further research should target community college and vocational settings, as these are institutions that students with ADHD are more likely to attend (Kuriyan et al., 2013). Finally, because 30% of students with ADHD in this study were not retained, future studies should monitor students who drop out to see whether they return and, if so, what predicts their return.

This study also offers several implications for practice. First, results suggest male college students with ADHD need more academic support, as they have significantly lower first-year cumulative GPAs than females. Recognizing this population is at-risk, high schools and colleges should offer preventative academic services directed toward male students with ADHD. Promising interventions also include coaching, study groups, workshops, mentors, and CBT (Anastopoulos & King, 2015; Matthews et al., 2013; Prevatt & Yelland, 2015). For example, Anastopoulos and King (2015) found that an eight-week CBT program paired with individual mentoring led to education gains including a 0.2 increase in GPA and decrease rates of academic probation. Second, findings suggest student use of academic support service was limited (i.e., 19.7% report receiving academic skills assistance, 34.2% report receiving tutoring services, and 58.8% report meeting with professor or academic advisor). It is possible that some of the students in this study never learned that resources specifically for students with ADHD were available. For post-secondary institutions seeking to best serve students with ADHD, it is recommended they follow a more proactive model of service delivery. If students have disclosed their diagnosis, universities should follow up with them to inform them of services available to them. A flyer or guide to campus for ADHD students may also be a useful tool to help students familiarize themselves with available resources. Third, results highlight the importance of motivation to college success. Consequently, motivation is something that college counselors, academic advisors and even high school counselors need to pay attention to and foster with their students. There are several evidence-based motivational interventions that can be used at the high school and college level to increase levels of motivation, including attributional retraining and achievement motivation training programs. The goal of attributional retraining is to help students reframe

what they think about success and failure, encouraging them to take responsibility for their academic outcomes, whereas the purpose of achievement motivation training programs is to change students' achievement motive through teaching them to think, feel, and behave like high-achievers (Wagner & Szamoskozi, 2012). According to Wagner and Szamoskozi's (2012) meta-analysis, both attributional retraining and achievement motivation training programs have significant effects in enhancing academic motivation ($d = .30$ and $d = .53$, respectively). Secondary and postsecondary educators should consider using these intervention approaches to help increase student motivation before, during, and after the transition to college.

Conclusions

This study adds to the growing body of research examining college academic performance of students with ADHD. As the first study using a relatively large, rigorously defined, multi-site sample to examine pre-college and college factors contributing to academic functioning of college students with ADHD, this investigation identified several key variables related to college academic success. Specifically, motivation was found to predict first-year cumulative GPA and retention, and gender and standardized test scores significantly predicted first year cumulative GPA. Though these findings highlight potential targets for intervention at the high school and college level, additional studies are required to fully understand which factors promote college academic achievement and retention for students with ADHD as well as to facilitate improved educational outcomes for this population.

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About the Authors

Molly Daffner received her BA degree in psychology from Georgetown University and Ph.D. from Lehigh University. Her experience includes conducting assessments, providing consultation, and implementing individual, group, and family therapy to children and adolescents with diverse presenting needs, such as ASD, ADHD, anxiety, depression, and other disruptive behavior disorders. Previously, she worked as a predoctoral intern at the Judge Baker Children's Center; currently, she is a postdoctoral fellow at the Lurie Center for Autism at Massachusetts General Hospital. Her research interests include evidence-based and family-based interventions for youth with neurodevelopmental disorders. She is also interested in helping children and their families during major developmental transition periods. She can be reached by email at: mod215@lehigh.edu.

George J. DuPaul received his BA degree in psychology from Wesleyan University and Ph.D. from the University of Rhode Island. His experience includes faculty positions at the University of Rhode Island and the University of Massachusetts Medical School. He is currently Professor of School Psychology and Associate Dean for Research in the College

of Education at Lehigh University (Bethlehem PA). His research interests include assessment and intervention for youth and emerging adults with ADHD and related behavior disorders. He can be reached by email at: gjd3@lehigh.edu.

Dr. Arthur D. Anastopoulos received his B.A. in Child Study from Tufts University, his M.A. in General/Experimental Psychology from Wake Forest University, and his Ph.D. in Clinical Psychology from Purdue University. His experience includes completing a one-year clinical internship at the University of Oklahoma Health Sciences Center, serving as a Staff Psychologist in the Department of Pediatrics at the University of Iowa Hospitals and Clinics, and holding a joint appointment as an Associate Professor in the Departments of Psychiatry and Pediatrics at the University of Massachusetts Medical Center. Dr. Anastopoulos is currently a Professor in the Department of Human Development and Family Studies at the University of North Carolina Greensboro. His research interests include the assessment and treatment of individuals with ADHD across the lifespan, with a current focus on college students with ADHD. He can be reached by email at: ada@uncg.edu.

Dr. Lisa Weyandt received her B.S. at Penn State University and her Ph.D. from University of Rhode Island. She is a psychology professor at the University of Rhode Island and the Director of the Interdisciplinary Neuroscience Program. She is a nationally recognized expert regarding ADHD in college students and specializes in clinical neuroscience topics such as prescription stimulant misuse and executive functions in ADHD and nonclinical populations. She can be reached by email at: lisaweyandt@uri.edu.

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Academic Impairments Faced by College Students with Attention-Deficit Hyperactivity Disorder: A Qualitative Study

Jeanne Lagacé-Leblanc¹
Line Massé²
Nadia Rousseau²

Abstract

Few qualitative studies have focused on the experiences of students with attention-deficit/hyperactivity disorder (ADHD) pursuing postsecondary education, and in particular, how their academic difficulties manifest themselves. This study provides a better understanding of how ADHD affects students in their studies. In-depth interviews were conducted with 29 college and university students with ADHD, their relatives ($n = 26$), and their counselors ($n = 9$). Participants reported significant academic impairment (e.g., difficulties related to attention, emotional regulation, motivation, time management, inhibition, working memory, organization, and planning) and a complex relationship with the ADHD label. The difficulties experienced by students seem to be closely related to deficits in executive functions. This interrelation complicates the understanding of functional impairment. Implications for practice provide recommendations based on the literature on how to improve the academic success of students with ADHD in postsecondary education.

Keywords: ADHD, college students, academic impairments, executive function, qualitative study

Attention-deficit/hyperactivity disorder (ADHD) often persists into adolescence and adulthood (Barkley et al., 2008). It is characterized by clear evidence that symptoms of inattention, hyperactivity, and impulsivity interfere with or reduce the quality of social, academic, or occupational functioning (APA, 2013). Assessing these limitations is central to understanding ADHD (Gathje et al., 2008). Conceptually, it is important to distinguish between ADHD symptoms—“the behavior expressions associated with the disorder”—and impairments—“the consequences that ensue for the individual as a result of these behaviors” (Barkley et al., 2006). Examples would be poor academic performance, professional problems, or frequent conflicts (APA, 2013). Research has shown substantial academic impairment for these individuals. However, research on ADHD impairment has largely been quantitative and focused on children. This gap in the research is concerning. Thus, this study aims to contribute to knowledge in focusing on academic impairments on college and university students with ADHD.

Despite the significant difficulties associated with ADHD, more and more people are continuing

their education after high school (Pryor et al., 2012). Samples of college students have shown prevalence rates of current ADHD ranging from approximately 2% to 8% in the United States (DuPaul et al., 2009) and 7.11% in Canada (Yallop et al., 2015). College students with ADHD differ from peers with ADHD who do not attend college; they have higher cognitive abilities, past experience with school success, and better coping skills (Glutting et al., 2005). Nevertheless, students with ADHD face additional challenges in adjusting to college or university life compared to students without ADHD (Weyandt & DuPaul, 2013). Indeed, students with ADHD are more likely to interrupt their education (Brown, 2005), drop courses (Advokat et al., 2011), or fail to graduate (Barkley et al., 2008) than their counterparts without the condition. Moreover, students with ADHD admitted to postsecondary institutions tend to get lower grade point averages (GPAs) than their peers (Green & Rabiner, 2012). They also face several academic difficulties affecting their success. Compared to students without ADHD, they report having difficulty estimating time (Prevatt et al., 2011), needing more time during examinations, having more difficulty completing tests

¹ Katholieke Universiteit Leuven; ² Université du Québec à Trois-Rivières

on time (DuPaul et al., 2009), and tending to put off studying and completing assignments (Kane et al., 2011). Students with ADHD find it more difficult than students without ADHD to avoid distractions and stay focused, take class notes, remember necessary items, persist in cognitively challenging tasks, and think through the consequences of their actions (Advokat et al., 2011; Fleming & McMahon, 2012). They also have to read material repeatedly to understand it (Lewandowski et al., 2008). Students with ADHD report needing to work harder than their peers to earn good grades (DuPaul et al., 2009) and feeling less confident about their ability to succeed academically (Blase et al., 2009; Heiligenstein et al., 1999; Kane et al., 2011; Lewandowski et al., 2008). Many students with ADHD feel shame and guilt about their academic achievement, which can lead to avoidance and procrastination behaviors (Stamp et al., 2014). In addition, they have difficulty sitting still during classes and exams or when writing assignments (Gilbert, 2005).

ADHD is now viewed as involving far more than just its diagnostic symptoms of inattention, impulsivity, and hyperactivity. Current research indicates that executive-function deficits can play a large role in the academic functioning and performance of students with ADHD (e.g., Weyandt et al., 2013). Moreover, college represents a unique environment wherein the effective use of complex executive functioning skills, such as planning and organization and self-regulation of behavior, is frequently required. Multiple models of ADHD have garnered substantial empirical support, and future conceptualizations of the disorder will likely acknowledge that no simple cognitive impairment adequately explains all cases of ADHD (Willcutt, 2014). Among these models, the one proposed by Barkley (1997, 2015) is one of the most recognized. ADHD has come to be understood as a disorder associated with impaired executive functioning and motivational deficits that manifest at various points throughout development. According to Barkley (2012), the executive functions can be viewed as “those self-directed actions needed to choose goals and to create, enact, and sustain actions toward those goals” (p. 60). Barkley describes executive functions as essentially conscious, effortful actions. Self-management across time, self-organization and problem solving, self-restraint (inhibition), self-motivation, and self-regulation of emotions are impaired executive functions in adults with ADHD. Furthermore, Barkley views less conscious functions, such as alertness, attention, and memory, as quite different from executive functions, which operate more automatically on a “pre-executive level.” Barkley considers

excessive daydreaming, getting bored easily, feeling like being in a fog, being underactive, having difficulty staying alert in boring situations, and so on to be symptoms of “sluggish cognitive tempo” (SCT), which is a disorder distinctly different from ADHD. SCT does, however, significantly impair executive functioning and adaptation in daily life. In comparison, Brown (2013), who proposed a quite similar model, argued that executive functions operate mostly in automaticity, without deliberation or conscious choice. Nevertheless, Brown included “focus” and “memory” among executive functions impaired in ADHD. Regardless of some differences, ADHD is viewed as a developmental impairment of executive functions. This is consistent with studies suggesting that the academic difficulties experienced by students with ADHD are probably due not only to symptoms of inattention or hyperactivity/impulsivity, but also to a lack of adequate preparation in terms of organization, time management, and studying (Advokat et al., 2011; Blase et al., 2009; Lewandowski et al., 2008; Reaser et al., 2007; Weyandt et al., 2013). For example, executive-function deficits related to organization, planning, and self-control can affect educational outcomes for students with ADHD (Garner, 2009; Heiligenstein et al., 1999).

Undeniably, students with ADHD at the postsecondary level face a number of difficulties that can affect their academic success. Moreover, little qualitative research has focused on the experience of students with ADHD in postsecondary education and, in particular, on how they experience academic difficulties. Much more research in this area is warranted (DuPaul et al., 2009), and, in particular, including students’ voices is crucial. By learning about the academic experiences of students with ADHD, colleges and universities might be better equipped to understand and respond inclusively. Therefore, it is necessary to better understand the difficulties confronting them in order to gain a better understanding of the disorder and develop appropriate interventions. This research was conducted as part of a larger study that aimed to document the experience of students with ADHD in postsecondary education. The purpose of this qualitative study was to elicit greater understanding of how ADHD can affect the student in the college or university environment. Two questions guided this study: (a) How does ADHD affect students in learning?, and (b) How do students with ADHD perceive having ADHD in postsecondary education?

Methods

Participants

The sample consisted of 29 French-speaking Canadian students with ADHD, including 19 women and 10 men, aged 18 to 36 ($M = 23.9$, $SD = 4.61$); 9 students were over 25 years old (older than the typical age) and reported being back in the system after a hiatus ($M = 2.15$ years, $SD = 1.74$). The students were attending CEGEP (postsecondary general and vocational colleges specific to Quebec; it's the step between secondary school and university) in preuniversity ($n = 6$), technical programs ($n = 4$), or university in certificate ($n = 1$); bachelor's ($n = 13$); master's ($n = 4$); or doctoral ($n = 1$) programs. All participants had a primary diagnosis of ADHD made by a family physician (62.0%), neuropsychologist (34.5%), or psychologist (3.5%). A total of 51.7% of participants were diagnosed with at least one comorbidity, with anxiety disorders accounting for 42.8% of the comorbidities and learning disabilities for 35.7%. The majority of participants (82.8%) took medication (self-reported) for their ADHD. Twenty of the 29 participants were receiving academic accommodations (e.g., extended examination time) for condition-related limitations. A designated relative (18 parents, 7 partners, 1 cousin) volunteered to participate in the study for 26 of the students. In addition, the participants' counselors from institutional offices of disability services (ODSs) ($n = 9$) were interviewed. The counselors had an average of 5.5 years of experience (min = 0.5 years, max = 15 years) working with postsecondary students with ADHD.

Measures

Based on prior professional experiences with ADHD and the fields of school psychology and higher education, the primary researcher and two other researchers developed a semi-structured interview guide. The interview guide was tested with a student with ADHD and their parent to be sure the questions were clear and understandable. It included a list of questions asked in each interview, and which encouraged participants to talk freely, in line with the exploratory nature of the study. For the purpose of this article, we focus on the actual impairments due to ADHD (theme 1 of the interview guide). Two central questions were asked: (a) How does your ADHD affect you in your studies? Can you give me some examples?, and (b) What do you think affects you the most? Can you tell me more about it?

Procedure

All the following procedures were approved by the institutional review board (IRB) of the principal researcher. Participants were recruited from six postsecondary institutions in the province of Quebec (Canada). ODS staff at each institution sent recruitment emails directly to students with ADHD. Information about the research project and instructions for contacting the first author were sent. In addition, flyers publicizing the study were posted on campus, in counseling-center waiting rooms, and on institutional websites. Students volunteering to participate in the study contacted the first author by email; a meeting was then organized. Inclusion criteria included (1) being a student at a college or university participating in the research project and (2) having a diagnosis of ADHD attested by a professional assessment. No exclusion criteria were employed.

The first author conducted in-depth semi-structured interviews with all the participants. Interviews with students, lasting from 50 to 120 minutes, were conducted in a private office on the campus of their postsecondary institutions. Students received \$20 as compensation for participating. They also had to provide contact information for a designated relative and for their ODS counselors, if applicable. Informed consent was obtained prior to the interviews. Telephone interviews lasting 15 to 45 minutes were organized with the relatives. Interviews with counselors, running from 50 to 100 minutes, were conducted in their offices. The audio of all the interviews was recorded and transcribed while respecting anonymity and data confidentiality.

Data Analysis

The collected data were analyzed with NVivo version 11.4.3 (Qualitative Solution and Research Software [QSR], 2017) using mixed thematic analysis (Miles et al., 2014). All data were stored in a secure database; participants were assigned identification codes (IDs). The coding was first carried out based on the literature on executive functions affecting the education of students with ADHD, followed by giving attention to emerging themes (Creswell, 2014; Miles et al., 2014). Specifically, the codes were revised from a more inductive perspective leading to the development of new codes that were added to the original code grid. In addition, a master's student established interrater reliability based on 10% of the total corpus, that is, all of the interviews with three students, three relatives, and one counselor. The master's student received training before coding took place; the definition of each code and examples representing them were discussed. Meetings were organized with

the principal researcher: the first with the master's student to discuss coding issues and the second with another researcher to reach a consensus on certain themes. Nvivo was used to obtain the Kappa coefficient (Cohen, 1960). This nonparametric test was used to quantify the agreement between the principal researcher and the master's student in the qualitative data. This coefficient is between -1 and +1. Coefficient between 0.40 and 0.60 is average, from 0.60 is satisfying, and above 0.80 is excellent. The more the coefficient is closer to 1, the more the judges have a high degree of agreement. The interrater reliability (IRR) obtained was excellent ($k = 0.90$). Reports on each of the categories were produced to select the quotes that best represented the perceptions of the participants. The data for the different categories of respondents were triangulated.

Results

Two main themes emerged from the qualitative analysis: (1) ADHD functional impairments and (2) the relationship with the ADHD label.

Theme 1: ADHD Functional Impairments

Seven interrelated subthemes emerged related to ADHD functional impairments, namely impairments related to (a) attention difficulties, (b) emotional-regulation difficulties, (c) motivational difficulties, (d) time-management difficulties, (e) inhibition difficulties, (f) working-memory difficulties, and (g) organization/planning difficulties. The percentage presented for each subtheme refers to the proportion of participants who reported this difficulty (S=student, R=relative, and C=counselor).

Attention Difficulties (S = 100%; R = 76.9%; C = 77.7%)

Participants reported significant functional impairments related to attention difficulties. They had difficulty sustaining their attention for a certain period of time, causing them to lose track of what was being taught in class, taking longer on exams, or forgetting to answer test questions. With regard to one participant, relatives reported that, without medication for ADHD, "[the student] has a much harder time concentrating" [Male, ID 212]. Several students also mentioned that reading assignments demands great attention and takes much more time. One student provided some details:

I understand what I read. But often when I read, my mind starts to wander after a while, sometimes after just 5 minutes I see the words, but they

don't seem to have any meaning. At some point, I realize that I don't know what I've read. [Male, ID 117]

Moreover, the difficulties encountered can also cause them to struggle in selecting the most important pieces of information, such as in a text or a teacher's presentation. One student recounted the following.

Everything often seems relevant to me in class. I have a hard time synthesizing and saying to myself, "This is irrelevant, this is it, this is irrelevant." So, I listen, listen, listen, listen, listen, and listen. I get to a point where I don't listen anymore because everything is important. [Female, ID 108]

Without medication, students can face crippling attention difficulties that are demanding in terms of time and energy, as reported by one student: "When I tried to read, it would take about 15 minutes and I was exhausted. I had to nap for at least an hour to get over it" [Male, ID 111].

Some students reported that their listening skills in class are limited, especially during classical (lecture-style) teaching. A counselor also described this as a major challenge reported by students with ADHD:

They told me that students with ADHD are really challenged when instructors use traditional teaching methods, don't give examples, don't put students to work, and don't break down the class into teams. Such courses just seem like a flood of words. [Female, ID 305]

One student said that, even with ADHD medication, it was still difficult to stay alert during lectures: "Even at 72 [mg], I have a hard time following a lecture" [Male, ID 117]. It also seems problematic when the context requires the student to manage and share their attentional resources. For example, students have trouble taking notes in class while paying attention to what the teacher is saying. One student stated: "If I listen to the teacher, taking notes is harder. It's like one or the other" [Female, ID 126]. One student found note taking was a significant challenge when starting university, as it was the first time in her school career that course notes were not provided. While significant at the start of her education, this problem has decreased over time: "At the beginning, taking class notes was really complicated. I had trouble focusing on what the teacher saying and writing at the same time. While it was difficult, over time I finally managed" [Female, ID 101].

Emotional-Regulation Difficulties ($S = 48.2\%$; $R = 61.5\%$; $C = 77.7\%$)

Students reported difficulties in managing their emotions related to their learning. Some tended to exaggerate situations or push the “panic button” easily, anticipate the future, and let themselves be overcome by more negative emotions. One student reported what she experiences when she feels overwhelmed by emotions caused by academic tasks:

It’s really like the level in an overflow rising when I have a lot of assignments to do and can’t see my way clear. I know I will manage, but, for now, it’s just too much; just overload and then (gagging noise). [Female, ID 103]

In addition, the stress generated by tests seemed quite important for some students, even to the point of causing memory lapses in some. One student mentioned that she was not performing up to her potential because of this:

I had an examination in the only subject I thought I knew fairly well. But the exam didn’t go well because I had lost a lot of self-confidence and had big blanks during the exam. It looks like I forgot just about everything and I was really disappointed. [Female, ID 109]

As this student mentioned, academic anxiety was closely related to self-esteem. Another student related: “I get really stressed out. I have a hard time trusting myself. This is also affecting my self-esteem so that I’m always afraid of not being good enough” [Female, ID 110]. Students pointed to academic success being a major source of stress and that was also raised by several relatives. One mentioned her child is constantly questioning her success: “She is always anxious about whether she will pass or not. And if she passes, she gets anxious about passing the next exam” [Female, ID 203].

When overwhelmed by emotions, students can struggle to contain themselves and deal with the situation’s emotional load adequately. A student reported that worrying makes him less productive and this disrupts his schedule. Others said they sometimes have to leave their class because they were so emotional about the situation. For example, some students mentioned that this happened after receiving a bad exam grade, because of a teacher’s comment, or due to misunderstanding a concept being taught. In addition to experiencing strong emotions, they can find it difficult to divert their attention away from whatever is upsetting them emotionally. In this regard, a student

described her emotional state when she felt ridiculed by her teacher for being unable to answer a question:

Since I am highly sensitive, I experience emotions strongly. For example, if something happens to me, I really feel it. That’s what happened in that situation: I almost cried! It’s often like that. If someone says something unpleasant to me, it weighs down on me for a long time and I’m more irritable. [Female, ID 108]

Some relatives reported that the students with ADHD experienced extreme emotions. For example, they could slide “from laughter to tears” [Female, ID 208] or quickly get angry or upset. In this regard, a relative mentioned that her son “flies off the handle at the drop of a hat; so let’s say he is short-tempered” [Female, ID 213].

Motivational Difficulties ($S = 55.1\%$; $R = 11.5\%$; $C = 66.6\%$)

Participants frequently reported the students had difficulty initiating work or tasks. Often, the hardest part was “getting started” [Female, ID 123]. A student [Male, ID 106] also pointed out that the problem was in overcoming inertia: “I can make a plan, but then it has to be carried out.” Another student explained that making out her schedule was not a problem, but finding the motivation to stick to it was a major challenge:

Right now, writing is very difficult, because I make my own schedule. It’s quite a challenge [...] I try to set my own routine. I try to put the time in, but I have a really hard time sticking to my routine. [Female, ID 123]

As one student explained [Male, ID 106], the difficulty in getting started and maintaining inertia “impact the quality of my work.” Another student [Male, ID 112] also said he “has to really like what he’s working on or risk botching it.”

In addition, students found it more difficult to get down to work when they were off their ADHD medication. One student noted, “without medication, I am like a larva” [Female, ID 103]. Another shared, “when I don’t take them, it’s easy to give up” [Male, ID 113].

Some students explained that, even though they intended to do a particular task, they often had other things more interesting to do. In fact, simply thinking about doing the work could generate more negative emotions that discouraged the student. For others, even enjoyable tasks were more difficult to start because they could be easily distracted. In this regard,

one student mentioned that “motivating myself to do the task is always difficult because there are always a thousand distractions” [Female, ID 101]. Students also had a strong tendency to procrastinate: they would start tasks at the last minute, even if it were something important such as studying for an exam or completing a long assignment. They associated the task with negative emotions, which led to procrastination, as one student explained:

Telling myself that I’m going to do something does not motivate me. I could try to spread it out on a daily basis to finish in time, but that doesn’t motivate me. I try to find motivation, but it’s still hard. I tell myself that I have to get it done before the due date. [Male, ID 113]

For other students, the pressure they felt seemed to play a role in procrastination. One explained that he was unable to study until he felt the pressure of an approaching deadline. For another, it was the opposite: the greater the pressure he felt about the task, the more he avoided the task. Either way, they put off studying or doing assignments until the last minute. Students also reported that they lacked persistence in completing tasks, got tired easily, and quickly lost interest in what they were doing.

***Time-Management Difficulties* ($S = 44.8\%$; $R = 11.5\%$; $C = 66.6\%$)**

Students reported having difficulty managing time, especially with respect to priorities over time. As this student explained, such difficulties can impact academic performance:

I have a hard time prioritizing my time. It’s like being on a treadmill and having to jump over obstacles and I don’t want to fall. That has resulted in many, many, many delays. [Female, ID 128]

In addition, a counselor explained how challenging it was for a student with ADHD who has to juggle several other responsibilities:

They also have a lot to manage at university.... There is a lot more studying, but [university] requires spending quite a bit of time reading. The financial aspect is also an issue, because students often have to have a job. [Female, ID 304]

Another counselor added that “it’s the same for older students coming back after a hiatus, because they might have children or a family or gone through a separation or heartbreaking experience. All that adds

up to more burdens” [Female, ID 303]. Some students pointed out that balancing family, study, and work called for adjustments, such as finding time to study and for their families. Moreover, having to deal with several things at once, in addition to school, has an even greater impact on managing emotions. One student related how she felt about managing scholarship applications: “It’s over-overwhelming. It’s like drowning. So, for example, just applying for scholarships literally puts me in crisis mode” [Female, ID 120].

Students also reported having trouble estimating the time required to complete a task. Some overload their schedules, thinking they can do everything planned, only to realize that it was too much and that they could not stick to the original plan. One student attributed this to a poor perception of time: “I managed to overload my schedule, because I wanted to do everything! One day, I want to do it all, but that’s attention deficit. We don’t see time, we don’t see real time” [Female, ID 108]. Similarly, another student reported having requested extensions several times to complete work.

While some struggle planning ahead to avoid being at the last minute, others underestimate the time it takes to complete a task, so that work piles up and finishing it becomes an issue. Another student explained that his difficulties with time management were related to planning issues: “I have trouble projecting myself into the future, like with my schedule. I have trouble devising a schedule, a fixed one for the week” [Male, ID 102].

***Inhibition Difficulties* ($S = 48.2\%$; $R = 15.3\%$; $C = 33.3\%$)**

In terms of inhibition, students with ADHD had a hard time resisting distractions. Indeed, they had difficulty focusing only on selected stimuli without being distracted by other sources. This could significantly limit their concentration and make reading difficult:

What bothers me the most about my ADHD is the fact that there are so many things going on around me that keep me from concentrating all the time... So, I have to reread material. Sometimes when I read, I reread a line or paragraph. [Male, ID 125]

They also found it difficult to reign in their thoughts. One student [Male, ID 102] said “my brain is in overdrive” and, according to him, that significantly affects his concentration. A relative also related that this difficulty impacts on sleep: “Sometimes he has a really hard time falling asleep at night because of the thoughts racing around in his head” [Female, ID 205].

Indeed, students reported having difficulty being still. One mentioned that “it’s stronger than me. I’ll jiggle a leg. It’s like overflowing with energy. I’ve got energy to spare” [Male, ID 102]. For other students, this agitation was more mental than physical. For example, one student mentioned that: “I still get fidgety legs. It is incredible, but it’s a lot less worse; it’s really more in my head” [Male, ID 105]. Many students find sitting for a long period of time difficult. One also reported an impact on concentration: “If I sit too long, I just have to fidget. It looks like I’ve lost control; I have a lot of tics. Since I move around a lot, I get distracted, too” [Female, ID 115]. According to one relative, having several classes in a day also increased a student’s physical agitation: “When he had several classes the same day, he not only had trouble concentrating but just sitting still” [Female, ID 205]. Another student [Female, ID 126] reported that her agitation increased when she didn’t exercise: “I’ve had a harder time sitting still since starting CEGEP because I had to really cut back on sports since I have less time than in high school.” One student indicated that she sometimes said whatever comes into her head without thinking about the consequences: “The words just come out faster than I can control” [Female, ID 115]. Others reported talking a lot and, for one student [Female, ID 128], this was true even when taking her ADHD medication: “I talk a lot, a real chatterbox despite the medication.”

Working Memory Difficulties ($S = 34.4\%$; $R = 19.2\%$; $C = 33.3\%$)

Students had difficulty remembering what they read. One [Female, ID 116] stated: “No matter how much I reread something, it just doesn’t sink in.” Another pointed out that this difficulty is particularly an issue when she doesn’t take her ADHD medication:

If I don't take my medication, whenever I have to read, I have to reread it 8 times because I can't remember. So, the issue's more at the level of being able to retain information and being able to concentrate on doing something. It's a definite challenge. [Female, ID 103]

One student [Male, ID 111] underscored that encoding information when reading “took all of his energy.” In addition, he has trouble remembering information when the subjects are complex or he had little interest in the content. A few students also mentioned lack of “confidence in retaining information.” Others found it difficult to remember what they had read if they had multiple tasks in a week. For example, a student [Male, ID 121] recounted: “It’s sometimes a little hard

to remember everything when I have other classes in the same week.” Moreover, it affected their ability to retrieve information and to explain what they had read. One student recounted:

At the master’s level, the teachers were much more...let's say that they would often ask for our input, like explaining what we read that week some issue... When confronted point-blank like that...I have the impression that I can't actually deliver what I have studied. [Male, ID 121]

Another student [Female, ID 115] finds remembering what she heard problematic: “It goes out as fast as it comes in.” This difficulty led her to consider dropping out of her program.

Organization/Planning Difficulties ($S = 37.9\%$; $R = 3.8\%$; $C = 55.5\%$)

The students tended not to write down important information, leading to consequences such as: “I was like ‘Ah, it’s okay I’m going to do this then.’ But if I don’t write it down somewhere, I forget it. And then small tasks accumulate in a large pile” [Male, ID 117]. Students also reported difficulties with organizing and synthesizing their ideas when writing for assignments. As this student mentioned, structuring their ideas is challenging: “Another big problem is that I find myself facing a huge body of ideas, lots of ideas that I want to develop, but they shoot off in every direction. Organizing them is really complicated!” [Female, ID 123]. According to another student, the problem was not getting ideas but ordering them: “Let’s say I’m able to realize that I have all these ideas and can put them down on paper. Prioritizing is what’s difficult. Everything is equally important” [Female, ID 128].

Theme 2: Relationship with the ADHD Label ($S = 17.2\%$; $R = 15.3\%$; $C = 11.1\%$)

Some students reported negative outcomes related to their diagnoses. One student [Female, ID 109] viewed her condition “as being a very big inconvenience.” The difficulties she experienced academically led her to question her ability to succeed in university. She wondered: “Am I supposed to be in college? Am I supposed to continue studying? Is school right for me or should I have quit after my technical degree?” Another student had similar reflections: “It’s also that your self-esteem is really fragile, because you tell yourself, ‘I just must be no good. I just must not deserve anything. Maybe I’m not in the right place’” [Female, ID 123]. These words echo the self-esteem of other students in this study. They

mentioned that their diagnosis severely undermined their self-confidence because they had the feeling, for example, of not being “equal to the others in the group.” Another student brought this comparison to students without ADHD which appears to affect her self-esteem:

What affects me the most and hurts me the most—I don't know—but maybe it's that it affects my self-esteem and that colors everything else. I want to study more...because I feel like I'm not really [good] enough, specifically because, if I compare myself to others, I have to work harder. [Female, ID 110]

For other students, what affected them most about their ADHD was the feeling that they needed the medication to function in everyday life. As one student explained: “What I find really annoying about having ADHD is that I need to take a pill. I'm not myself without it” [Female, ID 129]. Another student expressed embarrassment with his symptoms of hyperactivity: “Sometimes, I'm so embarrassed to tell people I have ADHD. Sometimes, I just want to say I have ADD, because I don't consider myself hyperactive” [Male, ID 125]. Such perceptions appear to be strongly influenced by the opinions of others: “Based on my personal experience, we consider hyperactive people as—I don't know how to say it—as aggressive and taking up a lot of space. They aren't necessarily liked” [Male, ID 125].

Two students mentioned that “school is not adapted” for people with ADHD. One mentioned that having ADHD in college “is very difficult every day. Even now, with the success I'm having, it is still extremely painful” [Male, ID 111]. While recognizing the major difficulties encountered at school by her child, a parent explained that ADHD has also had positive impacts:

In fact, having ADHD at school, I think, got her through some very difficult times and times where she almost lacked confidence. Her ADHD has made her the she is today... So, in the end, her ADHD has really helped her work hard and become the person she is. [Female, ID 203]

Discussion

The purpose of the current study was to elicit greater understanding of how ADHD affects the student in the college or university environment. Interviews with participants provided a better understanding of the academic difficulties experienced

by college students with ADHD, which seem to be closely related to deficits in executive functions. The close relationship between executive functions when difficulties arise shows the complexity of what they experience. Their points of view also help contextualize in detail what they are going through.

How Does ADHD Affect Students in Their Studies?

Many of the difficulties reported by participants relate to problems implementing learning and study strategies. Students find it difficult to maintain their attention and remember what they read, to take notes while they listen to the instructor, to prepare for exams, and to plan and write their assignment on time. These difficulties and others can be explained by the close relationship between executive functions when difficulties arise (Barkley, 2012). For example, college and university classes require students to draw upon working memory and attention skills (Bauerlein, 2011). The results of our study show, however, that ADHD often impairs these skills. Thus, the encoding difficulties reported by students can be explained by students having difficulty in staying focused. Similarly, the trouble in inhibiting behaviors, cognitions, and emotions can affect their attentional abilities and thus account for the difficulties on this level. Because of these inhibition difficulties, students with ADHD can encounter deficits in auditory-verbal and visual-spatial working memory (Groppe & Tannock, 2009), which could also explain the significant difficulties with working memory and managing emotions reported by students.

Indeed, some of the students in our study discussed having difficulty managing their emotions, which seems to impact their performance, whether in terms of exams or daily school tasks. There is some evidence that stress and anxiety might be related to executive functioning and academic achievement (Petersen et al., 2006). Similarly, students in our study reported poor emotional management, which seems to affect other functions such as attention, memory, and time management. These findings are consistent with past research work reporting that students had a tendency to worry about their studies, had significant anxiety during tests, and failed to apply appropriate learning strategies, leading to difficulties in adapting to university life (Advokat et al., 2011; DuPaul et al., 2009). According to Kwon et al. (2018), the constant worrying reported by students with ADHD could be a result of their history of repeated negative experiences and failed efforts, leading them to doubt themselves and their ability to achieve their goals. This research might suggest that experiences of students in our study can account for their lack of self-con-

confidence. This lack of confidence might also relate to low academic self-efficacy (e.g., less confidence in their ability to perform academic tasks). Self-efficacy can also impact motivation and persistence in mastering difficult academic tasks (Bandura, 1993). This hypothesis is also plausible given the significant motivational deficits reported by students in our study. For example, students in our study reported difficulty generating positive emotions that might help them organize behavior in anticipation of the future and to pursue long-term goals and self-interest; in other words, converting intent into action. This outcome is consistent with the principle that motivation shares a close relationship with the executive functions needed in setting long-term goals, planning and scheduling, implementing tasks, and reevaluating goals (Barkley, 1997). Individuals with ADHD are more likely to choose smaller immediate rewards rather than larger rewards that take longer to obtain (Sonuga-Barke et al., 2008). Thus, the experience of dealing with delay can be frustrating, leading to choices that minimize delay. For example, some students in our study reported consistently put off studying, even if another option produced a greater reward after a longer delay.

Participants also reported significant problems with time management and organization/planning. These problems are indeed very often reported in the literature for students with ADHD (e.g., Weyandt et al., 2013). The poor time management reported by students in our study can be explained by challenges they report in planning and completing tasks because of procrastinating (Asherson et al., 2007). Rabin et al. (2011) documented that executive functions of initiation, plan/organize, inhibit, self-monitor, working memory, task monitor, and organization of materials are significant predictors of academic procrastination. Once again, executive-function deficits shed light on the findings of our study. In addition, the difficulties related to time management and organization/planning reported by the students might be exacerbated by the students entering adulthood and dealing with the challenges that this represents. For example, they must face new financial responsibilities, maintain good personal health, and become academically independent (Schulenberg et al., 2004), making it even more difficult for them to manage their education. They must therefore implement major adaptation strategies (Farrell, 2003), which are often beyond them.

Students in our study report functional impairments in various contexts, such as when studying, doing assignments, or attending class. They also report experiencing more problems with traditional teaching. This is consistent with Jansen et al. (2017), who reported that traditional teaching tended to in-

crease the chances of students with ADHD to encounter problems. ADHD medication should also be considered at the onset of functional impairments in students with ADHD. Even with ADHD medication, many students reported having trouble functioning in their studies and experience significant suffering. Other students, however, reported that the medication does not always help. On the one hand, these perceptions are not surprising, since medication helps students but cannot completely eliminate academic deficits. On the other, these perceptions raise the importance of considering a multimodal approach, combining medication and psychosocial intervention.

How do Students Perceive Having ADHD in Postsecondary Education?

In this current study, the participants reported negative outcomes related to their diagnosis of ADHD. Students perceived that postsecondary institutions are not adapted for students with ADHD. According to Heiney (2011), there is an incompatibility between the learning style of students with ADHD and the traditional way in which material is taught in the higher education system. The relationship of the students in our study with their ADHD diagnosis is similar to the results obtained by Lefler et al. (2016), who reported diagnosis-related stigma and embarrassment. The students in that study also reported that ADHD had positive impacts, which was not the case in our study. This could be explained by the formulation of our interview question, suggesting negative impacts due to ADHD. As has been documented more broadly, the ADHD label can be stigmatizing for students, which can sometimes lead to the internalization of collective beliefs and cause the students to doubt their abilities and have lower self-esteem (Corrigan & Watson, 2002). This could also explain the embarrassment that some students experience with their condition and the doubts expressed about their ability to succeed. In addition, it is important to consider the discomfort students feel about needing ADHD medication to function in everyday life, because it could possibly represent a risk for nonadherence to pharmacological treatment (Franklin, 2019).

Limits

This study has some limitations. First, the student participants were French-speaking Canadians attending CEGEPs and universities in Quebec. Consequently, caution must be applied when generalizing these results to young adults and adults in other countries, cultures, and age groups. In addition, care must be taken in interpreting the participants' individual per-

ceptions, as other factors in the students' lives might have influenced their perceptions. The fact that some students in our study were enrolled in and benefited from the adapted services of their institutions might have influenced how they perceived their experiences. Similarly, a large majority of the students were taking ADHD medication. We know that medication has a positive influence on the academic sphere by attenuating negative impacts (Weyandt et al., 2017). Therefore, our results might be influenced by this variable. No data were collected to verify whether the students receiving medication adhered to their doses or whether they took the medication only during the week or during the examination period. Lastly, the study was designed and structured to capture a "moment in time." Ideally, a full picture of the experience of a college student with ADHD would include multiple interviews over several years. This timespan would allow researchers to have a more complete picture of the difficulties experienced by students on their pathway to postsecondary education. This would yield a better idea—in "real time"—of the functional impairments that might emerge throughout a student's academic career and which might influence their experiences. Despite these limitations, we believe that this study is important because it is one of the few that qualitatively analyzes how ADHD affects students in their schooling. In addition, this study involved postsecondary students in the Province of Quebec (Canada) which is a population that has received little research attention. In addition, collecting information from relatives and counselors ensures a comprehensive understanding of the academic experiences of the students with ADHD and contributes to the richness of analysis and data triangulation.

Implications for Practice and Research

The results of this study have many implications. Although modest, this study constitutes an important contribution to the literature by presenting the unique perspective of French-speaking Canadians students with ADHD about their condition. In particular, they reported significant functional impairments academically. Institutions need to be aware of these impairments because results reflect more complex problems related to the inclusion of students with ADHD. Although some students seem to be functioning quite normally on the surface, their distress is unquestionable. Indeed, even though they reported having succeeded in school, it can still be extremely painful to live with that condition in postsecondary education. Efforts should be made to develop a more inclusive learning environment. For ODS counselors, it is also

essential that they assess and describe the functioning of students, thereby improving decisions on accommodations (Weis et al., 2019) and service offering. Counselors should consider past and present functional impairment rather than the diagnosis itself in guiding future interventions.

As discussed, it appears more than relevant to focus on executive functions in students with ADHD to improve their situations. For most of them, the issue is not so much setting goals and willingness to do things, but rather that ADHD is an obstacle to the constant progress towards their goals, especially when results are not immediate. Indeed, it is more difficult for a person with ADHD to tackle a task that is not fundamentally pleasant, unless forced to, such as by an approaching deadline. These deficits presented by students in our study have important implications for postsecondary education, where tasks are often spread over long periods of time and where distractions abound. Strategies to increase motivation to pursue long-term goals should therefore be an important component of interventions for students with ADHD. In addition, it seems important that initiatives involving cognitive-behavioral therapy (CBT) be developed in postsecondary institutions. This type of intervention can successfully treat executive dysfunctions in young adults and adults with ADHD (Safren et al., 2005; Solanto et al., 2010). Treatments that incorporate such approaches have also been found to be effective in addressing irrational beliefs and negative self-attributions (Ramsay & Rostain, 2015). More recently, short-term interventions (three or six sessions) to enhance time management and organizational and planning skills have also been shown to improve self-rated ADHD symptoms (Van der Oord et al., 2020).

Similarly, ODSs might benefit from including coaching programs or intervention programs focused on organizational skills in their practices to help students with ADHD manage their time more effectively (LaCount et al., 2015). Coaching is another approach to help college students with ADHD to identify important goals as well as to develop plans and strategies for achieving them, focusing on barriers that might affect academic success, such as difficulties with organizational and time management (Zwart & Kallemeyn, 2001). Considering the results of our study, this intervention approach is particularly relevant because it improves the feeling of self-efficacy and the level of self-confidence of students academically. Parker and Boutelle (2009) also showed that coaching was very effective in helping students with ADHD achieve their goals and reduce the daily anxiety associated with pursuing and succeeding in

postsecondary education. For instructors, it might be appropriate to adopt the principles of universal design for learning (UDL) (Rose & Meyer, 2006), which could benefit all students and not just those with ADHD. UDL offers several ways that specifically target deficit in executive function in students with ADHD. Overall, several approaches are effective in improving ADHD in students with ADHD. Nevertheless, it is essential to keep in mind that the most important thing is to help students transition from intent to action. Thus, ODS and instructors have a key role to play.

With respect to students' negative perceptions of their ADHD, it might be appropriate to support them in developing a better understanding of their diagnoses and inform them of supportive measures. Thus, there should be efforts to offer interventions that allow students to get to know themselves (e.g., strengths, needs, etc.), to accept themselves, to understand the impacts of the disorder, and to identify their needs. These are all essential skills in succeeding in postsecondary education (Getzel & Thoma, 2008). In addition, many students are unaware of the difficulties they might encounter in their courses (managing deadlines, organizing study, etc.). We must therefore inform them and help them make the right choices. Lastly, since the students most at-risk rarely take advantage of support services (Phillion et al., 2010) postsecondary institutions must work to promote services in place and to reflect on their accessibility.

The academic experience of students with ADHD can be heterogeneous from one student to another, even if they live with the same condition. It would therefore be interesting to better understand the differences that may exist within this specific group of students. Future research could examine academic impairments in specific groups of students with ADHD, such as advanced or professional school grad students, first-generation students, or students returning to school.

Finally, further research should continue to focus on understanding the experiences of students with ADHD in the context of postsecondary education, and the characteristics of learning environments that influence academic success. What's interesting with aspects of students' voice research lies in its ability to think out of the box and enable researchers or clinicians to examine academic impairments through a different lens. As this article has shown, listening to what students with ADHD have to say about their experiences as learners, leads to better understanding and finer appreciation of these experiences and contributes in improving students' academic success.

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About the Authors

Jeanne Lagacé-Leblanc received her master's degree and Ph.D. in psycho-education from the Université du Québec à Trois-Rivières. She is currently a postdoctoral fellow in the research Unit of Parenting and Special Education of the Faculty of Psychology and Educational Science at Katholieke Universiteit Leuven (KU Leuven). At the time of this study, she was a Ph.D. candidate at Université du Québec à Trois-Rivières in Canada. Her research interests include the experiences of postsecondary students with disabilities, particularly those with ADHD, the effectiveness and barriers to implementing reasonable accommodations, and inclusive teaching practices for postsecondary instructors. She can be reached by email at: Jeanne.lagace-leblanc@kuleuven.be.

Line Massé received her Ph.D. in psychology from the Université du Québec à Montréal. Her experience includes working as a special teacher and educational consultant for different school boards in the province of Quebec, Canada. She is currently a full professor in the Department of psycho-education and head of the Research and intervention Laboratory on Psychosocial Difficulties at School at the Université du Québec à Trois-Rivières. Her research interests include school inclusion and students with emotional and behavioral difficulties. She can be reached by email at: line.masse@uqtr.ca.

Nadia Rousseau received her master's degree in Special Education and her Ph.D. in educational psychology from the University of Alberta. She is currently a full professor in the Department of Education Sciences at Université du Québec à Trois-Rivières. She is co-head of the Laboratory for Research and Development to Support Diversity. Her research focuses on the academic experience and self-awareness of youth with learning disabilities, inclusive education, and the key factors to promote qualification in youth with significant academic difficulties. She can be reached by email at: nadia.rousseau@uqtr.ca.

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“It’s Bigger Than Me:” Influence of Social Support on the Development of Self-Advocacy for College Students with Disabilities

Kristopher Hawk Yeager¹
Gabriela Alejandra Gandara¹
Cecilia Martinez¹

Abstract

As the number of college students with disabilities continues to grow, self-advocacy programs have become an increasingly important tool to help students access disability-specific and general student services. Yet, few studies have explored processes surrounding the development of self-advocacy for students with disabilities, in particular the role of social support in fostering important knowledge and skills. In this study, we conducted semi-structured interviews with 28 students receiving disability services (DS) from a large Hispanic serving institution (HSI). Our analysis yielded findings related to four subcomponents of self-advocacy, (a) knowledge of self, (b) knowledge of rights, (c) communication, and (d) leadership. Students attributed formal and informal social support to their progression in each area, distinguishing between initial and advanced phases of self-advocacy development. Recommendations for future research and implications for secondary and postsecondary education are provided.

Keywords: self-advocacy, social support, college students with disabilities, qualitative interviews

Over the past few decades, postsecondary enrollment rates have increased for students with disabilities (Newman et al., 2010). The most recent national data show that 19.4% of undergraduate students and 11.9% of graduate students report having a disability (U.S. Department of Education, 2020). Still, graduation rates, especially at 4-year universities, continue to be low (Newman et al., 2009). Among other factors, research has found that both disability-specific services (e.g., accommodations) and general student services (e.g., tutoring) are associated with higher grades and graduation rates (Dupaul et al., 2017; Newman et al., 2019; Troiano et al., 2010). However, only about 22% of students who received disability-related services in high school received accommodations at 4-year colleges (Newman & Madaus, 2015), and only 53% of students with learning disabilities (LD), the largest subgroup of college students with disabilities, received general student services (Newman et al., 2019).

Given that the receipt of such services is dependent on students either disclosing their disability or

actively seeking assistance, researchers have identified self-advocacy as a critical component of postsecondary success (Gelbar et al., 2020; Getzel & Thoma, 2008; Ju et al., 2017). To foster self-advocacy, researchers have developed various programs, designed for students in secondary (Cuenca-Carlino et al., 2019; Doren et al., 2013; Holzberg et al., 2019; Rowe et al., 2021) and postsecondary settings (Hsiao et al., 2018; Parker & Boutelle, 2009; Walker & Test, 2011). However, more common than direct instruction, students tend to develop self-advocacy through trial and error with ongoing support from friends, family members, and caring professionals (Daly-Cano et al., 2015; Ju et al., 2017; Kimball et al., 2016). Additional research is needed to better understand how support from others influences self-advocacy development for college students with disabilities.

Literature Review

Our research is guided by a conceptual framework developed by Test et al. (2005), who identified

¹ University of Texas at El Paso

four subcategories of self-advocacy—(a) knowledge of self, (b) knowledge of rights, (c) communication, and (d) leadership. Often, self-advocacy is considered a subset skill under the self-determination umbrella, which includes other important skills such as choice-making, problem-solving, and goal setting (Wehmeyer, 2005). However, we also draw on more recent work by Trainor (2017) who argued that self-determination is not just a set of skills but “a set of ways of knowing and doing” (p. 117), which are largely influenced by one’s social and cultural context. Multiple studies support the notion that students learn and enact self-determination and self-advocacy in different ways depending on their cultural, linguistic, and socioeconomic backgrounds (Banks, 2017; Murray & Naranjo, 2008; Yamamoto & Black, 2015).

Depending on their backgrounds, students also have varying access to social support (Stanton-Salazar, 2011), which researchers have identified as an important contributor to self-advocacy development (Lombardi et al., 2016; Scorgie et al., 2010; Stein, 2012). Sarason and Sarason (2009) argued that social support provides a buffer to stress and the sense of attachment necessary for individuals to take the risks needed for personal growth. For college students with disabilities, social support is not only associated with higher levels of self-advocacy but also increased levels of college adjustment and academic performance (Lombardi et al., 2016; Murray et al., 2013). Furthermore, qualitative studies have found that supports can act as role models for initiating self-advocacy and sources of encouragement for persistence in self-advocating behaviors (Daly-Cano et al., 2015; Getzel & Thoma, 2008; Kimball et al., 2016).

Inversely, through negative interactions, individuals or groups can act as barriers to support, hindering a student’s development of self-advocacy (Banks, 2017; Grimes et al., 2020; Hong, 2015; Lightner et al., 2012; Mamboleo et al., 2020). Experiences with stigmatization, low expectations, or discrimination from educators or peers in secondary or postsecondary settings can contribute to a desire to shed disability labels and avoid services (Banks, 2017; Grimes et al., 2020). Additionally, when students perceive college faculty and staff as intimidating or uncaring, the process of self-advocacy can become overly burdensome (Hong, 2015; Mamboleo et al., 2020). Thus, if college students decide to disclose their disability, they often wait until they experience a crisis or until they identify a supportive individual who can act as a facilitator (Lightner et al., 2012). Stanton-Salazar (2011) used the term “empowerment agents” to describe these types of individuals who support individuals from marginalized backgrounds and use their social capital to advocate for systemic change.

Although social support and the development of self-advocacy for college students with disabilities are clearly linked (Daly-Cano et al., 2015; Ju et al., 2017; Lombardi et al., 2016), there is a need for additional research clarifying the extent of this relationship. In particular, there is a need to explore the role of social support in the development of each of the four components of self-advocacy (i.e., knowledge of self, knowledge of rights, communication, leadership; Test et al., 2005). Recent work by Pfeifer et al. (2020) explored the four components of self-advocacy with college students with attention-deficit/hyperactivity disorder (ADHD). Knowledge of self and knowledge of rights tended to promote the development of skills in communication and leadership with agency acting as a moderator (Pfeifer et al., 2020). For college students with various disabilities, the current study expanded on these findings by detailing the way self-advocacy develops over time, considering student perspectives on the influence of social support. The research addressed the following questions:

Research Question 1: How do college students with disabilities develop self-advocacy?

Research Question 2: How does social support contribute to the development of self-advocacy?

Methods

The focus of our study was to explore the influence of social support on the development of self-advocacy for college students with various backgrounds and disabilities. We employed a basic qualitative methodology to gain insight into key stakeholder experiences (Merriam, 2009). Semi-structured interviews (Creswell, 2014) and a collaborative coding process (Saldaña, 2016) helped isolate four specific components of self-advocacy and overarching themes related to their development (Test et al., 2005). Using this methodology, we were able to highlight the diverse voices and experiences of individuals with disabilities, a growing field of study in secondary (Gonzalez et al., 2017) and postsecondary education (Ju et al., 2017).

Setting

The setting for the research was a large Hispanic Serving Institution (HSI) in the Southwest that enrolls approximately 25,000 students. Of the overall student population, approximately 80% are Hispanic and 50% identify as first-generation college-going students. The surrounding community has a high percentage of bilingual and binational residents. Research activities took place virtually due to safety

measures put in place in response to the COVID-19 pandemic. Our research team, a faculty member and two graduate students, communicated with participants via email, phone, and video conference (i.e., Zoom). We placed consent procedures and a demographics survey on QuestionPro, an online survey tool, and gave students the option of completing interviews on the phone or video conference. A little less than half (43%, $n=12$) chose the phone and over half (57%, $n=16$) chose video conference. For video interviews, the interviewers, the first and third authors, chose to display the plain walls of their workrooms as the background with their faces taking up most of the foreground. Participants joined from their offices, couches, or dining room tables.

Participants

Per the university's disability services (DS) center, approximately 1,300 students (i.e., 1,100 undergraduates and 200 graduates), or 5% of the overall student body, receive accommodations or support services for a documented disability. All students with a documented disability were eligible to participate in the study. Consulting previous literature (e.g., Pfeifer et al., 2020), we sought a purposive sample of between 15 and 30 participants with a goal of having representation from each college at the university, demographics representative of the student body, and participants with a wide range of disabilities. Our goal was to identify students with diverse knowledge, skills, and experiences related to self-advocacy. Through the DS email listserv, students received an initial email invitation to join the study. Then, they received two follow-up emails about two and four weeks after the initial invitation. In total, 33 students responded via email to the first author indicating interest or questions about participating, and 28 students chose to complete consent procedures and all study activities.

Each item on the demographics survey had a "prefer not to answer" option or offered a written response that participants could choose to leave blank. Although there were more females (75%, $n=21$) than males (25%, $n=7$), the race/ethnicity of the sample was similar to the university as a whole with 71% ($n=20$) identifying as Hispanic/Latinx. There was also balanced representation from each college, between undergraduate and graduate students, and by age range. Table 1 provides the specific demographic information for each category and additional information on identified disabilities. We developed disability categories with guidance from recent literature (e.g., Mamboleo et al., 2020). The largest subgroup (35.7%, $n=10$) identified multiple disabilities from

multiple categories. For example, one individual identified emotional or psychological conditions (i.e., post-traumatic stress disorder; PTSD), a hearing impairment, medical conditions (i.e., knee and back injuries), and a traumatic brain injury. The second group (25%, $n=7$) identified various medical conditions, including Lupus, diabetes, seizure disorders, pregnancy, chronic regional pain syndrome, and knee, back, or shoulder injuries. The third group (17.9%, $n=5$) identified various emotional or psychological conditions, including PTSD, schizophrenia, depression, bipolar disorder, and anxiety. The fourth group (14.3%, $n=4$) identified a learning disability (LD), with some using the term dyslexia, and the fifth group (7.1%, $n=2$) identified ADHD.

Researchers

The first author participated in all aspects of the study. He is a white male with a background in special education. Two graduate student researchers assisted with specific components of the study. Both are Hispanic females. The second author participated in data analysis, assisting with qualitative coding. The third author participated in interviews and completed transcriptions of interview recordings. To reflect on our positionality, we had conversations about how our personal and academic backgrounds (e.g., special education, mental health counseling) might influence participants during the interview or the analysis of data. These conversations led us to decide to take a few minutes to build rapport with participants prior to asking the official interview questions, discussing our background and reminding them that we were unaffiliated with DS. We also decided to discuss differences of opinion during coding. For each interview excerpt, at each stage of the coding process, we came to a consensus on which code to apply, reflecting on our differences of opinion (Harry et al., 2005).

Interviews

Over the course of a month, each participant completed an individual semi-structured interview (Creswell, 2014). These interviews lasted between 25 min and 50 min. The first author conducted all interviews with a graduate student present at most, except those that took place on weekends or nights. Both took detailed notes throughout the interview and discussed them afterward. All participants had the option of completing the interview in English or Spanish and with or without a recording device. However, all chose English and allowed recording.

The researcher-developed semi-structured interview questions guided the conversation around the participant's (a) personal and educational back-

Table 1*Participant Demographics*

Category	Percentage
Gender	
Female	75% (<i>n</i> =21)
Male	25% (<i>n</i> =7)
Race/Ethnicity	
Hispanic	71% (<i>n</i> =20)
White	25% (<i>n</i> =7)
Black	4% (<i>n</i> =1)
Age Range	
18-22	29% (<i>n</i> =8)
23-29	29% (<i>n</i> =8)
30-39	21% (<i>n</i> =6)
40 and over	21% (<i>n</i> =6)
College Level	
Undergraduate	57% (<i>n</i> =16)
Graduate	43% (<i>n</i> =12)
Degree Field	
Liberal Arts	29% (<i>n</i> =8)
Health Sciences	29% (<i>n</i> =8)
Science	18% (<i>n</i> =5)
Education	11% (<i>n</i> =3)
Business	7% (<i>n</i> =2)
Engineering	7% (<i>n</i> =2)
Disability	
Multiple Categories	36% (<i>n</i> =10)
Medical Condition	25% (<i>n</i> =7)
Emotional or Psychological Condition	18% (<i>n</i> =5)
Learning Disability	14% (<i>n</i> =4)
Attention Deficit/Hyperactivity Disorder	7% (<i>n</i> =2)

ground, (b) development of self-advocacy, and (c) role of social support. Table 2 lists the guiding questions. First, participants discussed their backgrounds and their experiences learning about their disability and interacting with disability-related and general student services. Second, participants evaluated what self-advocacy meant to them and how they developed the ability to self-advocate over time. Third, participants described their social support, how it developed over time, and how it contributed to or deterred their ability to self-advocate. We asked follow-up questions throughout the interview to define key terms and obtain additional concrete details.

After the completion of the interview, we gave participants a gift card via email and uploaded the recording to Otter.ai, an online transcription service. Then, we listened to all recordings, corrected errors in the preliminary transcription, and removed personally identifiable information (e.g., names, specific places or programs, unique descriptions). Finally, we emailed a copy of the transcription to each participant for a member check. Here participants had the opportunity to review their responses, make changes, or request the removal of personally identifiable information that was overlooked. No participants requested major changes to their responses, but many identified a few minor changes to wording. Two participants volunteered to review findings after the analysis of data to ensure the appropriateness of identified themes, student descriptions, and selected quotations.

Analysis

After the completion of member checks, we uploaded the deidentified transcripts to Dedoose, an online qualitative coding platform. We followed a multi-stage team coding process, beginning with a priori coding of the four components of self-advocacy developed by Test et al. (2005). The first author began by line-by-line coding all excerpts (i.e., individual statements in interview transcripts that expressed a complete idea) into knowledge of self, knowledge of rights, communication, and leadership. Given the overlap between categories, some excerpts had two codes (e.g., knowledge of self and communication). Then, to provide researcher triangulation, the graduate student re-coded all unique ideas, using the test (i.e., interrater reliability) function in Dedoose. This generates a report of all similarities and differences in coding. Instead of reporting interrater reliability, we decided to discuss all differences and come to a consensus on the appropriate code(s). After a complete review, we coded 126 excerpts as knowledge of self, 98 excerpts as knowledge of rights, 167 excerpts as communication, and 52 excerpts as leadership.

For the next stage, we identified themes through process coding (Saldaña, 2016). With this technique, we coded individual excerpts from each self-advocacy category with a phrase that represented the action taking place. For example, we coded the excerpt, “One of my classes last semester, I had to do a paper and PowerPoint on accommodations. So, that’s where I learned a lot about what actual [DS] was, and what was actually available and who all qualified,” as *learning about accommodations and DS in a college course*. With this technique, we coded all excerpts to consensus. After process coding, we discussed patterns and merged similar codes. Following the same example, we identified a pattern of codes related to students whose initial experiences learning about rights came in college. Then, we merged similar patterns and identified a broader theme, *gaining initial information about rights through research or knowledgeable individuals*. Using this process, we identified three themes for each self-advocacy category for a total of 12 themes.

Findings

Knowledge of Self

Knowledge of self is defined as an individual’s knowledge of their disability, including their strengths, preferences, interests, and needs (Test et al., 2005). This knowledge is part of an essential first step in the process of developing self-advocacy. One student, Maya, an undergraduate with an undisclosed health condition, described its importance, saying, “To me, self-advocacy is being able to find yourself, then, doing whatever you need to succeed in your classes or with life.” The process of finding oneself, or developing knowledge of self, is influenced by a student’s personal characteristics, past experiences, and support system. In this study, students became well-versed in their disability and developed self-management skills at various stages in their lives. However, a few common themes emerged from the data, clarifying this process.

Negotiating Stigma and the Decision to Seek Support

In developing knowledge of self, students often described an arduous process of negotiating stigma and deciding whether or not to seek support. Most students experienced an ongoing struggle with stigma at some point in their journey toward acceptance, including before they received their initial evaluation and after they received services in college. For example, Jose, a graduate student with schizophrenia, described his negotiation with internalized stigma prior to receiving services.

Table 2*Semi-Structured Interview Questions*

Topic	Guiding Question
Background	<p>Can you please describe your background, disability (if comfortable), and college experience?</p> <p>Can you please describe your experience seeking and receiving disability-related and/or general student services in college?</p> <p>If applicable, can you please describe your experience receiving disability-related services in grade school or the workplace?</p>
Self-Advocacy	<p>What does self-advocacy mean to you (provide definition if needed)?</p> <p>How has your ability to self-advocate changed over time?</p>
Social Support	<p>What factors have helped or hurt your ability to learn and enact self-advocacy?</p> <p>What does social support mean to you (provide definition if needed)?</p> <p>Who are your key social supports? How have they changed over time?</p> <p>How have these specific individuals or groups supported you?</p>
Combined	<p>How have specific individuals or groups influenced your ability to self-advocate?</p> <p>What types of support were most influential for your development of self-advocacy?</p>

I had been dealing with voices in my head for about 11 years without treatment...it comes with some kind of stigma, and I didn't want to deal. But me not dealing with it has led to many problems like drug abuse, alcohol consumption.

Different forms of stigma impacted students' decisions to seek support such as accommodations in college or the workplace, counseling or therapy, or guidance from friends and family. When requesting accommodations with DS in college, students often reported feeling undeserving. For example, Juliet, a graduate student with emotional and psychological conditions and a seizure disorder, reflected on her thought process.

The stigma was too big at the time. And I thought, 'No, I don't need it [DS]. Some people need it, and it would just be taking advantage of the system.' I guess I had internalized a certain discourse that my family had been feeding me throughout my life.

After receiving services in college, many students felt validated. However, others continued to feel uneasy. Diana, a graduate student with depression and anxiety, said, "I still do resist using the accommodations. I guess I still associated some sort of stigma to using them."

Becoming Self-Aware and Empowered through Research and Reflection

As students negotiated stigma and initial self-advocacy experiences, they were able to research their disability and self-reflect, gaining additional knowledge of self. Some students researched on their own, and others did research as part of a college course. Having heard about his ADHD at meetings in grade school, Justin, now an undergraduate, took it upon himself to do independent research. He said, "It wasn't until middle school when I just kind of figured it out myself by Googling it." Others discussed doing research later in life, including in college courses that addressed the history and science surrounding disability. Research and reflection often contributed toward feelings of self-awareness and, in some cases, empowerment. For instance, Maria, an undergraduate identified with dyslexia, described how learning about neurodiversity helped her with acceptance. She explained her current viewpoint, saying, "It just takes me a little bit longer to read something than it would take someone that's neurotypical." Others described how self-awareness helped them gain confidence in their strengths over time. George, who was identified

with LD and anxiety in grade school, was a successful business owner, seeking his second master's degree in science. He reflected, "I'm a stickler for self-improvement and development. And I'm always fond of learning, even if it doesn't come easily at times." Students often attributed their empowerment to succeeding in situations that required self-reliance or perseverance, such as entering adolescence or adulthood, beginning undergraduate or graduate studies, or starting a new job.

Drawing on Social Support Throughout Process of Becoming Self-Aware

Along with research and self-reflection, many students drew on social support in their process of gaining knowledge of self. Students drew from both formal (e.g., counselors, DS staff) and informal (e.g., friends, family) supports. Often, personal connections with informal supports helped students gain the confidence to seek formal support. For instance, Adriana first addressed her bipolar disorder with a professor, who became a close advisor and friend. She said, "[The professor helped me in] understanding that, you know, this is not in your head. This is real." With this type of support, students were able to reach out to counselors or other professionals, who guided further self-reflection and the development of self-management strategies. Along with formal support, many students expressed that a supportive family environment, or other informal supports, contributed to their ability to gain knowledge of self. For example, Lili-ana, an undergraduate with ADHD, attributed her development of self-esteem to her parents.

Starting off young, my parents had always integrated in us the importance of standing up for yourself and taking care of yourself and taking care of others as well. So, having that at a young age really helped me to develop in a way that self-care matters.

Inversely, others reflected that their lack of support from informal sources contributed to a delay in gaining knowledge of self. In particular, Andrea, a graduate student, said that her negative interactions with others hindered her ability to self-reflect on her ADHD for years.

I think the lack of support in just understanding from peers and even from family early on is why it did take me so long to understand more about what my condition is and how best to be efficient. I think that kind of stunted my growth.

Knowledge of Rights

Knowledge of rights is defined as an individual's knowledge of their personal and educational rights, along with their knowledge of disability-related policies, services, and accommodations (Test et al., 2005). Along with knowledge of self, knowledge of rights is necessary for students to self-advocate for appropriate services in college. In this study, students tended to gain knowledge of rights through interactions with knowledgeable sources and experiences advocating for services. Some became experts in the nuances of laws and policies, while others gained just enough information to navigate their unique circumstances. The following sections discuss common themes related to the development of knowledge of rights.

Gaining Initial Information about Rights Through Research or Knowledgeable Individuals

Most students expressed having limited knowledge of rights upon seeking services for the first time, gaining initial information from research or knowledgeable individuals. At first, students often did not know that they could receive services for emotional or psychological conditions or temporary disabilities, such as pregnancy or injuries. Reflecting on her initial lack of knowledge, Sharon, an undergraduate, said, "I didn't think that I was really covered because pregnancy is not a disability...I looked online first, I went to the [DS website], and it very clearly says that pregnancy is a temporary disability." Beyond doing independent research, students gained initial information about rights through knowledgeable individuals, including special educators, college professors, and DS staff. For instance, Hugo, an undergraduate with LD, learned about the process for requesting accommodations from attending special education meetings with a transition specialist in high school. Once in college, students tended to learn about their rights from professors, who shared information about DS in their syllabi or spoke individually with students they mentored. Others learned about their rights from individuals at DS, either by going to their office or hearing from them at events on campus. For example, Andrea described going to their office for the first time. She explained, "I walked in and was like, okay [name of person at DS], I don't really know what can request, what are the options, and so she spelled that out really well."

Navigating Rights Violations and Gaining Additional Knowledge

Beyond initial information, students tended to gain additional knowledge of rights when navigating rights violations and inaccessibility. Although many students described mainly positive experiences, oth-

ers struggled with frequent resistance to accommodations, discrimination, and inaccessible contexts. For example, Allison reflected on a negative experience with a professor. She said, "He [professor] just completely told me that I would never be successful because I have a disability." She reported the incident to multiple channels (e.g., DS, department chair), but stated the professor did not face any consequences. Through negative experiences, students researched the nuances of the law and gained strategies to navigate difficult situations. Similarly, Javier, an undergraduate with multiple disabilities including a hearing impairment, described a situation where a professor refused to use a microphone connected to an assistive listening device during lectures. Even after reporting the incident, the professor continued to be noncompliant. In researching his rights, Javier reflected, "If someone really wanted to sue, they're breaking considerable laws...That's discrimination. They just don't care." In the community, students also gained additional knowledge and strategies to manage challenges to their rights. For example, students with service dogs, including Mark, Juliet, and Daniel, often became well-versed in policy due to frequent questions from others. To navigate these situations, Mark, a graduate student with multiple disabilities, said, "I carry a folder with me most of the time to show [dog's] paperwork, his training, and the federal laws."

Making Informed Decisions Based on In-Depth Knowledge of Rights

Through gaining in-depth knowledge of rights, students made informed decisions about services and provided recommendations for systems improvement. For example, students who gained knowledge of DS policies could make informed decisions about their individualized situation. Andrea explained, "I request all the accommodations for all the classes just so they're there in case I decided I need them. I use less than half of what I'm actually granted." With experience, students also formed opinions about new policies and the limitations of current legal systems. Policy change suggestions included the need for additional accessible parking, more online course offerings, and increased flexibility in taking tests. Even with a detailed knowledge of rights, many students believed that they still had to be cautious about disclosing their disability due to a lack of enforcement, especially in the workplace. Often, students with emotional or psychological conditions expressed these concerns about accountability in the legal system. George explained his thoughts regarding limitations in current workplace policies.

While accommodations are provided, there are sneaky managers and sneaky companies out there that may loop around it and get rid of you if you're not able to compete with the rest of their staff.

Beyond disability-related policies, many students also discussed a knowledge and passion for addressing other topics, including immigration, health care, and veterans' rights.

Communication

Communication is defined as an individual's ability to express themselves, including their disability and rights, to others with an effective level of assertiveness (Test et al., 2005). Communication for self-advocacy relies on having a strong knowledge of self and rights. Although all students in the current study had the communication skills to receive an official evaluation for a disability and register for accommodations, they had differing experiences learning to communicate and differing preferences. Many gained initial and more advanced skills through encouragement from formal and informal supports, honing skills through experience self-advocating. The following sections describe common themes related to the development of communication.

Initiating Communication with Encouragement from Others

Although a few students expressed having naturally strong communication skills, most attributed their development to encouragement from others. Often, students mentioned a specific individual who supported them through their first experience self-advocating. For some, this was a professional, such as a teacher, librarian, counselor, or professor. Adriana described how a high school teacher influenced her.

Having a teacher that advocated for me before I even started advocating for myself, proved to me that it's a normal conversation and that people notice. If she hadn't done that, I probably wouldn't have initiated conversations with a lot of people.

For others, a family member or close friend helped initiate communication. Conversations with informal supports often gave students the confidence to speak with others and seek services for the first time. For Liliana, her sister provided the emotional support necessary to communicate her needs with professionals.

When I first went to [the evaluation center], I didn't really want to admit that I needed, like, help talking things through. And so, she [sister]

went to the office with me for the first time. She sat there while I filled out the forms

Developing Confidence and Preferences with Communication

As students developed communication skills by interacting with formal and informal supports, they began to express confidence in their abilities and preferences. Confidence often came from positive experiences and practice. For example, Guadalupe attributed it to practice in her undergraduate studies. She said, "Once I got into graduate school, I was not afraid to advocate for myself and went straight to [DS] and was able to request the accommodations that I was needing." Over time, students also developed a wide range of preferences, from being very selective to being very open. Many felt that discussing disability was private. For example, Javier explained that he only brought up his PTSD when absolutely necessary, saying, "I tell the counseling department but it's on a need-to-know basis, right? I don't think anyone should disclose that information unless there's risk of life." In some cases, students were selective in their communication due to past negative experiences. For example, Maya chose not to disclose the name of her health condition to professors or peers.

I don't tell people [about disability] because some people have compassion, and some people say, "You are weak. You are a person who only wants to be a victim. You want more time to do assignments or you want this, and you want that."

Alternatively, many students stated that they began talking openly about their disability upon meeting others in similar situations or having positive experiences self-advocating. For example, Diana opened up about her experiences going to counseling to manage her depression and anxiety, saying, "I'm a big mental health advocate. So, I tried to normalize talking about those sorts of things."

Gaining Tactful Communication Strategies for Challenging Situations

In facing challenging situations that required self-advocacy, students developed strategies for tactful communication, such as being proactive and persistent. Proactive communication included speaking to professors at the beginning of the semester or going to the DS office or another professional as soon as a new issue arose rather than waiting for an emergency. Persistent communication included reaching out to professors and DS multiple times, rather than just once, to ensure adequate services. For example,

Tammy described being tactful, letting others know about her accommodations early, to avoid crises with her diabetes.

I don't want there to be a problem in the future. And so, I try to be prepared not only by making sure I always have snacks and drinks with me. But also making sure that other people are aware in case something happens.

Even with strong communication, students experienced continued challenges, including burdensome paperwork, unsupportive individuals, and inaccessibility. Alice described the lengthy process of requesting appropriate services that strained her communication efforts.

It was kind of pulling teeth to get there initially. I had to request multiple times. Because I would request for say three different accommodations, and I'd only get one on the record... so it's been kind of a process of addition.

Similarly, Jose explained the burden of constant communication with university, medical, and government systems to receive services. He said, "I try [to communicate]. I think it's really costly too, and it's horrible sometimes. It just seems like I'm fighting with the world. You have no idea how it is to constantly just tell someone [about disability and needs]." Facing challenges, students were forced to communicate with professors, department chairs, deans, and DS to receive appropriate services. Some had success resolving inaccessibility, while others continued to face barriers that did not seem to have solutions. For example, Justin explained that his specific department had a history of not following accommodations despite self-advocacy from students with disabilities. He said, "The teachers have been reported before to the higher ups and it does nothing except for make them mad at that student."

Leadership

Leadership is defined as an individual's ability to advocate for others through individual or collective action (Test et al., 2005). Although all students in this study expressed knowledge of self, knowledge of rights, and communication, only some expressed interest in or experience with leadership. The students who discussed leadership tended to have the most confidence communicating their knowledge of self and rights with others. They were also the ones who expressed positive relationships with others, access to supportive communities, and time to participate in

organizations. Although leadership is most associated with advocating for others, students who expressed leadership said they benefited from it, too. The following sections describe themes related to the process of developing leadership.

Learning to Act as an Informal Support to Others

Many students began their development of leadership by supporting those around them. Most started by assisting people that they knew such as family members and friends. For example, after becoming comfortable sharing her experiences with PTSD and depression with her sister, Gabriela began offering support to others in her family. She said, "People reach out, so I encourage them to get help. My mom started seeking therapy as well because of my sister and I advocating for her." Then, students discussed becoming leaders for people who they did not know well, including classmates and other students at DS. Mark, a veteran, wanted to help others in similar circumstances. He said, "Anytime I see a veteran, I always ask them if they're registered with [DS]...because if they have a disability, they qualify." Often by sharing their story, others came to them for support. For example, Alison made the decision to be a leader by telling her classmates about her accommodations and answering their questions about them.

I decided to be very vocal about needing those accommodations, and I've had multiple people in my class reach out to me and ask about the process of getting accommodations and how beneficial it was for me going and seeing counseling.

Others even decided to join DS and provide accommodations to give back. Sharon said, "I've helped other students. I've been a note taker, and I've done that for two or three of my classes."

Broadening Leadership Impact through Career Path

Beyond helping family members, friends, and classmates, many students desired or enacted leadership through a career path. To help others with disabilities or similar backgrounds, many students sought careers in fields such as education, counseling, and health care. For example, Gabriela wanted to broaden her impact to help people going through health challenges.

Both my parents have struggled with their health their whole lives. It's difficult for them to have access to health care. I was like, "What if I could be someone who can provide that access to people like my parents?"

Once in the career, students were able to apply life lessons to their work. Juliet explained that her experiences in special education as a child helped her become a more understanding teacher.

My personal experience has helped me empathize and listen better to other people. And I'm here to help my students. I'm not here to impose or threaten any type of power, I'm here to guide them, and they are all individuals. Everyone works differently.

Similarly, as a speech therapist, Guadalupe shared her disability with the children and parents she worked with, hoping to teach self-advocacy and be a positive role model.

I worked a lot with children with dyslexia. Something I was always pushing is that you're smart... it's okay to raise your hand. It's okay to tell the teacher to repeat what she said. It's okay to sit in the front...I tried to break those walls.

Addressing Societal Issues Through Leadership in Organizations

Lastly, through work in local, state, and national organizations, students developed the leadership skills to advocate for larger societal issues. Students volunteered with a variety of organizations related to their disability or other topics important to them. Through involvement in these groups, students promoted changes in policy and became leaders in their community. For example, Javier joined a veteran's organization to help support other veterans and address issues in the local government.

I joined a group, so it's kind of like a union, so to speak. So, we could address issues as a consensus rather than individually to kind of get more of a voice in the community and in the local government.

By joining advocacy groups, students were able to broaden their leadership efforts and connect with others to further develop their own self-advocacy skills. Juliet explained how involvement in a mental health organization helped her negotiate stigma at a personal and societal level.

The fact that I'm very involved with [mental health organization] at the state level is helping me with that stigma because I think that even unconsciously it's still affecting me, and I'm sometimes afraid of what people will think, in terms of other classmates or instructors, or even friends, but I try because I see that it's bigger than me.

Discussion

Semi-structured interviews revealed the diverse perspectives of 28 college students with disabilities at an HSI. To address our first research question, our analysis revealed 12 process-oriented themes on the development of self-advocacy (i.e., knowledge of self, knowledge of rights, communication, leadership; Test et al., 2005). Most importantly, we identified processes associated with initial and more advanced self-advocacy development. Initial phases included gaining disability-awareness, learning about specific rights and policies, and developing communication skills through seeking an evaluation, disclosing one's disability to others, and requesting access to services. Advanced phases of self-advocacy development included gaining a sense of empowerment, learning the nuances of policies, and excelling in communication and leadership skills aimed at navigating complex situations, offering help to others, and advocating for improved systems. Our findings help contextualize self-advocacy, highlighting the way students learn and perform self-advocacy differently depending on their unique backgrounds and experiences (Trainor, 2017). Like Pfeifer et al. (2020), we found that agency and views on disability impacted self-advocacy development. Some students preferred gaining knowledge and skills independently, while others relied more on formal and informal supports. Similarly, some students felt comfortable discussing disability with others, while others were more private. By considering these contextual factors, practitioners can adapt current self-determination and self-advocacy programs (e.g., Ju et al., 2017; Rowe et al., 2021) to be more personalized and culturally responsive.

To address our second research question, we identified specific themes related to the influence of social support on self-advocacy development. Our findings extend prior research on the interconnectedness of self-advocacy, social support, college experiences, and postsecondary outcomes (Daly-Cano et al., 2015; Kimball et al., 2016; Lombardi et al., 2016). Confirming prior literature, our study found that students benefited from both formal and informal social support (Bromley et al., 2020; Stein et al., 2012). Early socialization from friends, family members, and educators tended to shape students' experiences learning self-advocacy (Daly-Cano et al., 2015; Kimball et al., 2016). This finding confirms the importance of early self-advocacy instruction (Rowe et al., 2021), especially for students who lack social support. For more advanced self-advocacy development, students benefited from engagement with various social networks (Kimball et al., 2016; Pfeifer et al., 2020; Stein et al., 2012). Having a diverse and comprehensive set

of supports helped students develop the self-advocacy necessary to navigate challenging situations and systemic barriers (e.g., multiple forms of stigma, inaccessible contexts, burdensome policies; Grimes et al., 2020; Hong, 2015; Mamboleo et al., 2020).

Importantly, we identified multiple students who received support from empowerment agents (Stanton-Salazar, 2011), such as teachers or professors who went above and beyond their typical duties to advocate for students from marginalized backgrounds. Participants who were first-generation college-going students especially benefitted from this support in accessing DS, counseling, or other general student services. Often, these students stated that their informal support networks lacked the social capital to access these services. Furthermore, although not all students identified leadership as part of their self-advocacy development (Pfeifer et al., 2020; Test et al., 2005), many became leaders and worked as empowerment agents for others. They believed that helping members of their community and working with organizations to address societal issues was intertwined with their own self-advocacy development. These students saw self-advocacy as "bigger than me," blurring the distinction between self-advocacy and activism (Kimball et al., 2016). This finding strengthens the need to develop self-advocacy programs that incorporate authentic support and connections to social and political organizations on campus.

Implications for Practice

Self-advocacy and self-determination are considered evidence-based predictors of postsecondary attainment for students with disabilities (Mazzotti et al., 2016). For secondary educators, Rowe et al. (2021) detailed multiple evidence- and research-based programs that are effective in increasing self-determination and self-advocacy skills (e.g., Self-Determined Learning Model of Instruction, Self-Advocacy Strategy, Take Charge curriculum). Specifically, to teach knowledge of rights and communication, we recommend that educators consider implementing programs, such as the Self-Directed IEP, that prepare students to lead formal special education meetings (Sanderson & Goldman, 2020). In our current study, students who attended special education and transition planning meetings in grade school expressed confidence in accessing DS in college. When implementing these programs, educators should collaborate with students' families and other key supports to identify cultural and community assets to leverage during the transition to postsecondary education (Achola & Greene, 2016).

For college students with disabilities, a literature review by Ju et al. (2017) found that the self-determination programs with the most research support included self-advocacy training models, the personal strengths program, and peer-based coaching services. Our findings support the use of these programs, as many students expressed benefitting from interactions with DS, professionals, and peers. Park and Boutelle (2009) found that peer-coaches provided students the encouragement needed to become autonomous. To implement such a program, DS can recruit students with disabilities, like many in our study, who possess leadership skills and a desire to advocate for others. DS can also encourage these students to collaborate with activist groups on campus to address stigmatization and other inequities facing individuals with disabilities (Kimball et al., 2016). However, many students in our study expressed feeling uncomfortable discussing their disability with peers and may benefit more from a professional-led or family-led approach. Achola and Greene (2016) described a person-family centered approach for assets-based and culturally responsive transition planning with students from culturally and linguistically diverse backgrounds. With such a model, professionals act as facilitators who convene a diverse team of formal and informal supports to determine how best to deliver services. For a person-family centered approach to self-advocacy in postsecondary settings, DS can develop first-year experiences, workshops, or support groups that incorporate students, their families, friends, and other key supports.

Limitations and Suggestions for Future Research

Our findings are limited in several ways. First, although the sample included students with a diverse range of disabilities, it included few students with physical or sensory disabilities and no students with intellectual or developmental disabilities (e.g., autism spectrum disorder). Further research is necessary to better understand self-advocacy development for these students, especially students with intellectual or developmental disabilities who are attending college at increasing rates (Gilson et al., 2020). Our sample also skewed toward students identified with multiple categories or emotional or psychological conditions. We interviewed fewer students with LD or ADHD despite those categories being some of the most prevalent. Second, our findings are limited to students at a single HSI who were registered with DS. Although many students discussed their cultural and linguistic backgrounds, future research should specifically examine these influences on self-advocacy development. Furthermore, many students do not self-disclose their disability in college for vari-

ous reasons. Although many participants in our study shared their experience of not self-disclosing, often for years, the perspectives of students who never disclosed were not captured by this study. Additional research should address these perspectives, perhaps through longitudinal studies with students who received disability-related services in grade school. Third, our findings may be limited due to the use of phone and video conference interviews rather than in-person methods. Although we suspect that there may be value to conducting qualitative interviews remotely, especially with individuals with disabilities, that should be studied further (e.g., ease of scheduling, increased accessibility, comfort in participating from home), we acknowledge that some individuals may prefer in-person interviews and may have been more open in interviews if they had been able to meet the researchers in-person.

Conclusion

Interviews with 28 college students with disabilities revealed process-oriented themes related to the development of self-advocacy. Findings detail the influence of social support in students' initial experiences self-advocating and later experiences learning more advanced knowledge and skills. By better understanding the unique experiences of college students with disabilities and the barriers they face, key stakeholders can design more responsive systems with increased accessibility and accountability. By promoting self-advocacy and reducing stigma, we can improve students' experiences in college and increase the likelihood of smooth adjustment, academic success, and overall positive outcomes.

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About the Authors

Kristopher Yeager received his M.Ed. and Ph.D. in Special Education from The University of Nevada Las Vegas. His experience includes working as a high school special education teacher for the Clark County School District. He is currently an assistant professor at the University of Texas at El Paso in the Department of Counseling, Special Education, and Educational Psychology. His research interests include transition planning, social support, and qualitative methodologies. He can be reached by email at: khyeager@utep.edu.

Gabriela Alejandra Gandara received her B.A. in Psychology from the University of Texas at El Paso and is currently completing her M.S. in Mental Health Counseling at the same institution. Her experience includes working as a research assistant in the Department of Counseling, Special Education, and Educational Psychology. Her research interests include advocacy and social-emotional learning. She can be reached by email at: gagandara@miners.utep.edu.

Cecilia Martinez received her M.Ed. in Special Education from the University of Texas at El Paso. Her experience includes working as a research assistant in the Department of Counseling, Special Education, and Educational Psychology and working as a special education teacher in Portland, Oregon. Her research interests include transition planning and self-advocacy. She can be reached by email at: cmartinez65@miners.utep.edu.

Examining Physical Accessibility of Campuses for University Students with Mobility Impairments in China

Kai Yung (Brian) Tam^{1,2}
Mei Zhao³
Randy L. Seevers⁴
Yuan Liu²
Lyndal M. Bullock⁵

Abstract

Various education laws in China clearly state that students with disabilities should be provided with the opportunities to fully participate in all activities in society, including studying at higher education institutions (HEIs). The present descriptive study examines physical accessibility of three university campuses in China. A checklist for data collection was developed based on the 2012 Codes for Accessibility Design (Codes) that was released by the Chinese government. The study reveals that facilities are inadequate in providing physical access to people with mobility impairments across all three universities' campuses. Poor government oversight, lack of university commitment, and invisibility of students with disabilities on university campuses are the probable reasons for the lack of accessible facilities across the university campuses. Three recommendations are made: (1) advocating to make amendments to current legislation, (2) addressing the importance of government enforcement and communication, and (3) committing to supporting an inclusive environment on campus.

Keywords: university students, mobility impairments, physical accessibility, university campus, China

The 2008 Summer Paralympic Games (Games) that took place in Beijing, China marked an important milestone for individuals with disabilities in China. About 4,000 athletes from 146 countries took part. The Games significantly raised awareness of disability and made transportation and other public services more accessible for persons with disabilities in China (EurActiv, 2008). Beijing, the host city, invested approximately 70 to 80 million U.S. dollars in organizing public awareness campaigns and in installing and improving accessible facilities in public transportation (e.g., subway routes to sporting venues, buses, taxis) to popular tourist attractions and places of interest, and other venues such as hospitals, museums, hotels, restaurants, and banks (EurActiv, 2008; People's Daily Online, 2008). The Games also provided the participating athletes and people with disabilities who attended the sports events with wireless hearing

devices and video sign language translation software. Because of the Beijing Olympics and Paralympics, the level of accessibility related to inner-city transportation in other major cities in China (e.g., Shanghai, Shenzhen) also improved significantly. Bus and subway lines provided in major cities and airports as well as train stations in China are now accessible (Paralympic Org, 2014; People's Daily Online, 2008). The Beijing Olympics and the Paralympics have brought attention to the importance of accessible facilities for individuals with disabilities in China. Since then, the Chinese government has recognized the need for and mandated the construction of accessible facilities in public and private places, including school campuses and buildings.

¹ University of Wroclaw, Poland; ² Xiamen University of Technology; ³ Xiamen University; ⁴ University of Houston-Clear Lake; ⁵ University of North Texas

Legislation on Disability in China

Similar to the Americans with Disabilities Act (ADA) of 1990 in the United States, the Law on the Protection of Disabled Persons (National People's Congress, 1990) and its 2008 revision (National People's Congress, 2008) has been enacted in China to safeguard the lawful rights and interests of persons with disabilities, including the rights to education. The Law on the Protection of Disabled Persons states that a person with disabilities refers to "one who suffers from abnormalities or loss of a certain organ or function, psychologically or physiologically, or in anatomical structure and who has lost wholly or in part the ability to engage in activities in a normal way" (Article 2, National People's Congress, 2008). This definition includes individuals with "visual, hearing, speech or physical disabilities, intellectual disabilities, psychiatric disabilities, multiple disabilities and/or other disabilities" (Article 2, National People's Congress, 2008). Prior to the 2008 revision of the Law on the Protection of Disabled Persons, the Law of People's Republic of China on Higher Education (National People's Congress, 1999) asserted "higher education institutions must accept the enrollment of students with disabilities if they meet the entrance standards set by the State and shall not refuse students with disabilities based on their disability" (Article 9, para 3).

On May 15, 2015, the Ministry of Education of China and the China Disabled Persons' Federation jointly issued Administrative Regulations for Persons with Disabilities to Participate in the Unified National College Entrance Examination and Enrollment of Higher Education Institutions (Provisional) (Ministry of Education, 2015) to further support and encourage students with disabilities to participate in the unified college entrance examination. These administrative regulations require examination centers or venues to provide necessary and reasonable accommodations for persons with disabilities, including Braille and/or large font-size examination papers, being the first to enter examination venues, and an extension of the prescribed time for examination completion (Zhao, 2015). Candidates with visual impairments are allowed to bring auxiliary apparatus and equipment (e.g., Braille pen, Braille writing pad, Braille drawing tools, rubber pad, non-storage Braille typewriter, desk lamp, optical magnifier, tactile stick) to answer examination questions. Candidates who are hearing impaired are permitted to carry hearing aid equipment and auxiliary listening devices such as hearing aids and artificial cochlea. Candidates who have mobility impairments can use wheelchairs and crutches and bring, if needed, their own special tables and chairs to participate in the examination (Zhao, 2015).

Although the Law on the Protection of Disabled Persons of 2008 (Revision) (National People's Congress, 2008) addressed the importance of accessible environments for persons with disabilities, the Barrier-Free Environment Construction Regulations (Regulations) (The State Council, 2012) mandated public and private places in China to include accessible facilities. Article 9 of the Regulations states that "new urban construction, reconstruction, expansion of roads, public buildings, public transport facilities, residential construction and residential areas should meet the construction standards for the barrier-free facilities" (para 1). Any buildings "that are not in conformity with the barrier-free facility construction standards, the government agency responsible for housing and urban and rural construction should order the responsible party to make amends and impose penalties according to the laws, if amendments have not been made" (Article 31).

Students with Disabilities in Higher Education in China

Two large-scale nationwide household surveys on disability have been conducted in China since 1949: (1) First National Sampling Survey on Disability in 1987 (First China National Sample Survey on Disability & National Bureau of Statistics of the People's Republic of China, 1987) and (2) Second National Sampling Survey on Disability in 2006 (Second China National Sample Survey on Disability & National Bureau of Statistics of the People's Republic of China, 2006). In the first survey, it was estimated that a total of 51.64 million people experienced some form of disability which accounted for 4.9% of the total national population. In the second survey, an estimated 82.96 million persons with different types of disabilities were reported, which constituted 6.34% of the total national population. According to *About the Aim of Fairness for Candidates with Disabilities* (China Education News, 2016), there are 85 million Chinese who have at least one disability.

China has approximately 3,000 colleges and universities. The total undergraduate enrollment was 28.31 million in 2018 (Ministry of Education, 2019). The China Disabled Persons' Federation reported more than 11,154 students with disabilities were accepted in regular higher education institutions (HEIs) in 2018 (Xinhua Net, 2019), less than one percent of the overall university student population. In addition, 2,053 students with disabilities were enrolled in one of the 18 special HEIs in China. These institutions specifically admit students with disabilities including physical disabilities, visual impairments, and hearing impairments (Ma & Sun, 2012). Approved by

the Ministry of Education and regional examination authorities, these 18 universities conduct their own university entrance examinations and have their own admissions criteria (China Disabled Persons' Federation, 2016).

Since the promulgation of the Law on the Protection of Disabled Persons in 1990 (National People's Congress, 1990), the overall social status and living conditions of people with disabilities in China have improved to a great degree as a result of the constructive work of local governments and non-government agencies (Wang, 2016). The rights of university students with disabilities and their full participation in academic, social, and cultural activities have been brought to public attention since the enactment of the Law of People's Republic of China on Higher Education (National People's Congress, 1999). It has been anticipated that the Administrative Regulations for Persons with Disabilities to Participate in the Unified National College Entrance Examination and Enrollment of Higher Education Institutions (Provisional) (Ministry of Education, 2015) is going to encourage more students with disabilities to enroll in regular universities in China. However, the key question is if China is ready to enroll more students with mobility impairments, as it has been reported that many universities are not equipped with accessible facilities (Fang et al., 2005; Li, 2013; Ma, 2012; Wang, 2013; Yu et al., 2010; Zhang, 2014; Zhao, 2007).

Literature Review

Campus Disability Access in North America

China is now addressing the issue of providing physically accessible campuses for university students with disabilities, similar to what the United States and Canada experienced in the 1990s. Research literature in these two countries provides a historical narrative; therefore, a comparison on the development of physically accessible university campuses between North America and China is useful.

Descriptors used to identify relevant English literature were "accessibility," "university/college," and "students with disabilities." Research studies found are presented chronologically to narrate the development of physically accessible campuses in both Canada and the United States. Hill (1992) examined the level of accessibility for students with disabilities in 27 universities across Canada to identify specific problematic areas, in particular physical barriers, that might prevent students from pursuing university studies. A questionnaire was mailed to either the coordinator of services for students with disabilities or dean of students at each university. The findings

showed that accessibility was a problem at both small and large universities and that wide variation of barriers was found for different disability groups.

A subsequent study explored the experiences of nine students with disabilities in one Canadian university (Low, 1996). While some of the buildings on campus were equipped with ramps and elevators, some older buildings were equipped only with freight elevators or no elevators at all. Freight elevator doors were so heavy that patrons with disabilities could be crushed if they let the doors go quickly. Moreover, no accessible toilets were available in those buildings. Other problems included objects left obstructing corridors and steep ramps making wheelchair users unsafe. There was also an issue with the amount of time and energy climbing and walking required. Students who relied on braces and crutches could not run to make their next classes. One interesting observation reported by the students was that the university slapped a disabled sticker on a freight elevator and called the building accessible.

The findings reported in Canadian studies are also found in a number of U.S. university campuses. A large-scale study examined the extent to which HEIs in the United States offer structural accessibility to students with orthopedic disabilities (Singh, 2003). A survey was sent to the directors of services for students with disabilities at 137 universities across the United States to accrue data describing the selected facilities and services for students with disabilities. The results showed that only 10% of the universities in the study offered structural accessibility to the students who have orthopedic disabilities. Moreover, public universities offered more accessibility than private HEIs except the accessibility of dorm living. However, there were no differences in structural accessibility of institutions according to size. Several studies on accessibility of university's campus showed that ADA compliant implementations were uneven across campuses of respective universities (Knapp, 2008; Simonson et al., 2013; Stumbo et al., 2010/2011). Although the campuses in these studies were found to be ADA compliant, there were places where it was difficult or impossible for people with disabilities to access programs or facilities, especially those programs or facilities housed in older buildings.

In one study, 325 students with disabilities completed a survey including questions about campus climate, satisfaction with the university, and use of campus services and resources (Fleming et al., 2017). The students largely described accessibility negatively by using words such as inadequate, completely inaccessible, and without equal access to the campus and its laboratories. Specific complaints from stu-

dents included entry push buttons and ramps to buildings on campus, inaccessibility related to the on-site facilities, and the danger imposed by heavy exterior doors of freight elevators.

Similar results were reported in another study using photovoice research methodology (Aamlid & Brownfield, 2019). The photographs taken by students with disabilities that were perceived negatively included high water fountains, wall soap dispensers in the bathrooms that were unreachable from wheelchair users, and elevators that did not accommodate more than one or two wheelchairs at a time. Moreover, most students spoke about difficulty maneuvering around campus and the challenge of using elevators. Other problems included elevators and sidewalks that were not in good repair or working properly and holes in sidewalks.

Even with the presence of legislations and relevant building codes protecting the rights of university students with disabilities, these U.S. and Canadian studies reported that there were still university campuses where it was difficult for students with disabilities to access facilities today.

Campus Disability Access in China

Chinese descriptors used to identify relevant literature were “accessibility,” “university/college,” and “students with disabilities.” Since 2015, after the passage of Administrative Regulations for Persons with Disabilities to Participate in the Unified National College Entrance Examination and Enrollment of Higher Education Institutions (Provisional) (Ministry of Education, 2015), more students with disabilities have begun to be admitted to regular universities via college entrance examination (Li, 2018). Thus, only journal articles that focus on university accessibility in China from 2005 to 2019 were included. Of 20 articles found, 18 were opinion papers, and only two were research articles. Most opinion articles addressed the general concerns over students with disabilities in higher education in China, such as the shortage of investment in education, insufficient policy support and legal protection, imperfect policies involving both entrance examinations and financial assistance, and great difficulty in employment and further studies after graduation, with brief mentions of the importance of accessible facilities on university campuses (Fang et al., 2005; Huang, 2011; Li, 2013; Ma, 2012; Meng, 2005; Zhao, 2007). One opinion paper specifically addressed the importance of barrier-free university libraries in China and provided suggestions on specific areas for university libraries to meet the barrier-free standards (Zhang, 2014). A computer teacher in a technical institute of special

education made recommendations to construct a barrier-free computer room for students with disabilities by modifying input and output devices of computers and using related software to support inclusive education (He, 2012). Two articles provided ideas and methods based on general architectural design concepts to construct a barrier-free campus environment (Han & Wang, 2015; Wang, n.d.).

Using participant observation and semi-structured interviews, a research study examined the barriers and their impacts to postsecondary education experienced by six students with disabilities in Hong Kong, China (Gilson & Dymond, 2010). The respondents did not report that physical accessibility on campus was a common concern. Nonetheless, environmental barriers, such as noise level outside the classroom and slippery paths during rainy weather, often posed challenges for students with disabilities. The authors highlighted the importance of legislation to eliminate barriers for people with disabilities in employment, education, and public accommodation.

Yu and Wang (2008) investigated the support service needs of 253 university students with visual impairments. Of the four needs reported by the participants, barrier-free environment was ranked as the third most important need after career planning and development and campus life, and before learning and examination. The more severe the visual impairment, the more the need for a barrier-free environment. Students who attended special high schools before entering universities were in greater need for barrier-free environments than those from mainstream schools.

Given the relevant findings from research studies reported in this literature review, it could be concluded that the presence of students with disabilities on campus, human rights legislation and local building codes have mandated university campuses to provide accessible facilities for students with disabilities (Gilson & Dymond, 2010; Hill, 1992). The lack of Chinese literature is especially disturbing, since such literature could help convince academics in China to work towards admitting more students with disabilities to universities. The present study is the first research endeavor to provide empirical data to fill the void in the paucity of information on university campus accessibility in China. The research aim is to examine if the campuses of three universities in this study are equipped with physically accessible facilities for students with mobility impairments.

Methods

Setting

This study used convenience sampling procedures to select three regular universities in China for the study (Johnson & Christensen, 2016), as these universities are all located in the same metropolis of the same province, along the southeastern coast of China, and their campuses are easy to reach. University A has a full-time student population of 21,000. The university has three campuses; the main campus was the focus in this investigation. University B has a total full-time student enrollment of 27,000. The main campus received accolades as one of the classic and high-quality construction projects in China. University C has three campuses with a full-time student population of 40,000. Two campuses from University C were investigated in this study.

The campuses and buildings of Universities A, B, and C1 were constructed before the 2012 Regulations. However, there have been new constructions, alterations, and additions in all three campuses since 2012. University C2 campus started to operate in September 2012 (i.e., commencement of lecture). University A moved into the current campus in October 2005. University B was completed in May 2008. University C1 campus and its buildings were constructed in the 1920s.

Instrument

The researchers developed a checklist for data collection based on the *Codes for Accessibility Design* (Codes) (The Standardization Administration of the People's Republic of China, 2012) which was jointly released on March 20, 2012 by the Ministry of Housing and Urban-Rural Development and the General Administration of Quality Supervision, Inspection, and Quarantine. The Codes are the mandatory standards in China that are enforced by laws and administrative regulations with the purpose of protection of human health, personal property, and safety. The date of implementing the Codes in China was September 1, 2012.

Based on the Codes, 13 accessible facilities were included in the checklist addressing (1) curb ramps; (2) tactile ground surface indicators; (3) accessible entrances; (4) wheelchair ramps; (5) accessible routes and doors; (6) accessible stairs and steps; (7) wheelchair accessible elevators; (8) public toilets and individual washrooms for wheelchair users; (9) wheelchair accessible seats; (10) accessible vehicle parking lots; (11) low-height service facilities (including drinking facilities and emergency phones); (12) reminders (accessible signs, braille, and voice

prompts); and (13) handrails. The content of the checklist contained check boxes for the absence or presence of each of the 13 accessible facilities, yes or no check boxes for meeting the requirements if an accessible facility was present, and space to take note of the condition of an accessible facility. Sample items from the checklist included the absence or presence of an accessible entrance, wheelchair user's rotation space, slip resistance or slope flatness of a curb ramp, width and height of a wheelchair accessible elevator, absence or presence of automatic doors, and absence or presence of obstacles, among others.

Procedures

Public areas on each of these campuses were assessed for accessibility (present or not present) in the following five areas: (1) campus pavement/sidewalk; (2) public toilet for wheelchair users; (3) accessible vehicle parking lot; (4) signage; and (5) low-height service facilities (see Table 1). The cafeterias and libraries on each of the four campuses were reviewed in six areas: (1) accessible entrance; (2) wheelchair ramp/handrail; (3) accessible route/door; (4) accessible stair/step; (5) wheelchair accessible elevator; and (6) toilet for wheelchair users (see Table 2). The same areas addressed in the cafeteria and library were also checked for accessibility in 18 buildings on Campus A, eight buildings on Campus B, 22 buildings on Campus C1, and nine buildings on Campus C2 (see Table 3).

The four campuses of the three universities are open to the public. However, the administration buildings of all three universities required researchers to present their ID cards, register personal information, and state the purpose of the visit. The researchers were unable to visit student housing in each campus for security reasons. Two researchers involved in the current investigation visited the campuses of University A, B, and C2. The same two researchers and one additional researcher visited University C1 campus. On each campus visit, a checklist as previously described was used to measure if a physically accessible facility was available and met the required standards as stated in the Codes. The researchers walked around the campuses together and entered each building to examine physical accessibility.

When the researchers independently observed a physically accessible facility that was not available in the building, they ticked 'NO' on their respective checklists. When the researchers independently observed a physically accessible facility that was present, they first ticked 'YES' on their respective checklists, then checked if the facility met the required measurement (e.g., the width of the elevator car). If

Table 1*Accessible Facilities Campus Public Areas*

Accessible Facilities	University Campus			
	A	B	C1	C2
Campus Pavement/Sidewalk:				
Tactile Ground Indicator (TGI)	X	X	X	√ ^a
Curb Ramp	X	X	X	√
Public Toilet for Wheelchair User	X	X	√ ^b	X
Accessible Vehicle Parking Lot	X	X	X	X
Accessible Signs Reminder	X	X	X	X
Low-Height Service Facilities (emergency phones, accessible drinking facilities,)	X	X	X	X

Note. X = Not Present; √ = Present. ^aCampus C2: colorless TGI; too close to trees/bushes; no warning indicator; no audible pedestrian signal; rough and bumpy road surface. ^bCampus C1: only 1 public toilet for wheelchair users was found; an accessible sign was shown; no automatic door; the width of door entrance less than 0.8 m as required; the total area of interior less than 1.8 m x 1 m as required; no accessible urinal.

Table 2*Accessible Facilities in Cafeteria (C) and Library (L)*

Accessible Facilities	University Campus			
	A C/L	B C/L	C1 C/L	C2 C/L
Accessible Entrance	X/√ ^a	X/X	X/X	X/X
Wheelchair Ramp/Handrail	X/√ ^a	√ ^{b/X}	X/X	X/X
Accessible Route/Door	X/X	X/X	X/X	X/X
Accessible Stair/Step	X/X	X/X	X/X	X/X
Wheelchair-Accessible Elevator	X/√ ^a	X/X	X/X	X/√ ^c
Toilet for Wheelchair Users	X/X	X/X	X/X	X/√ ^c

Note. X = Not Present; √ = Present. ^aCampus A Library: 1 side of the wheelchair ramp had a row of steel shelves for placing umbrellas, limiting space to pass through; only 1 elevator (not designated as wheelchair accessible) found big enough for one wheelchair to use at a time; braille number and alphabet buttons provided. ^bCampus B Cafeteria: the wheelchair ramp with handrails not located at the main entrance but at the side-door; the ramp was in poor condition as tiny loose rock fragments found on the surface; grass grew tall along the handrails. ^cCampus C2 Library: a sign of 'wheelchair accessible' with a phone number posted on the wall at the sub-level of the library building; elevators were available, big enough to accommodate a wheelchair user to enter; no elevator displayed an accessible sign; no voice prompt or handrails inside each elevator; braille number and alphabet buttons provided; all toilets for wheelchair users were locked at the time when the study was conducted.

Table 3*Accessible Facilities in Campus Buildings*

Accessible Facilities	University Campus			
	A (n=18)	B (n=8)	C1 (n=22)	C2 (n=9)
Accessible Entrance	√ ^a	X	√ ^c	√ ^d
Wheelchair Ramp/Handrail	√ ^a	X	√ ^c	√ ^d
Accessible Route/Door	X	X	√ ^c	X
Accessible Stair/Step	X	X	X	X
Wheelchair-Accessible Elevator	X	X	√ ^c	X
Toilet for Wheelchair Users	√ ^a	√ ^b	X	√ ^d
Wheelchair Accessible Seat	X	X	X	X

Note. X = Not Present; √ = Present. ^aCampus A: wheelchair ramp/handrail were found in all buildings; 1 elevator present for 1 building, braille numbers were found; all toilets for wheelchair user were locked/used for storage; 2 elevators in another building but not wheelchair accessible; doors of all toilets for wheelchair user were removed/a water boiler was found inside each one. ^bCampus B: 2 toilets for wheelchair users were found but both doors were locked; no accessible facilities were found in large stadium. ^cCampus C1: a wheelchair ramp with handrail was found in 3 buildings but only 2 had accessible entrances, route and door; wheelchair accessible elevators found in 2 of the buildings; automatic doors at the ground level in the convention center but no accessible stairs, steps and wheelchair-accessible elevators to the 2nd or above floor; an accessible urinal (men) and wash basin were available; no automatic door for each public toilet was found. ^dCampus C2: no physically accessible facilities were found on 4 U-shaped buildings; ramps with handrails were found in 5 M-shaped buildings; no automatic doors connected to the ramp; each door required a key card to open; of the 4 buildings 2 toilets for wheelchair user were found but one was used for storage.

the facility met the required standards, the researchers independently recorded meeting the requirement on their checklists. If the facility did not meet the required standards, the researchers independently recorded not meeting the requirement. When the visit to one building was complete, the researchers compared the information recorded on their checklists to ascertain if there was any discrepancy between the two researchers' recordings (three recordings on Campus C1). Visual inspections were also conducted to examine if an accessible facility lacked maintenance such as loose, broken, or worn-out items and any trip and fall hazards. If any of these items were observed, it was documented as a facility in poor condition. Throughout the data collection process, all the researchers were able to agree whether or not areas of physical accessibility were present or not present on each campus. Researchers also agreed upon whether or not the available physically accessible facilities met or did not meet the required standards set by the Codes.

Limitations

There are two limitations in this study. First, only three universities in one province were included, although they largely represent three common types of universities in China. Our findings on three universities' campuses cannot be overly generalized to other university campuses in other provinces of China, as this study is the first and only research study in China examining and reporting physical accessibility on university campuses for students with disabilities. Second, to investigate if a physically accessible facility meets the required standard(s) set by the Codes, the researchers used measurement tapes to measure the height, width and breadth of and plastic protractors to measure the angles of an available physically accessible facility. Therefore, the researchers could not confidently report that all the measurements recorded were the exact measurements of the facilities, as only low-tech measurement tools were used.

Results

Tables 1, 2, and 3 present the results of the investigation. The accessibility of campus public areas is summarized in Table 1. Three out of four campuses had no tactile ground indicators or curb ramps. No accessible public toilets for persons with disabilities were found on three out of four campuses. Four out of four campuses had no accessible vehicle parking lots. Likewise, no accessible signs reminder or low-height service facilities were found on any of the four campuses.

Table 2 (cafeteria and library accessibility) indicates that none of the cafeterias on campuses provided accessible entrances, accessible routes and doors, accessible stairs and steps, wheel-chair accessible elevators, and accessible toilets for people who use wheelchairs. Only one of the four campus cafeterias provided a wheelchair ramp with handrails. Three out of the four campuses had no accessible entrances or wheelchair ramps to the library and no accessible toilets in the library. None of the four campuses had libraries with accessible routes/doors or stairs/steps, but two of the four campuses provided wheelchair-accessible elevators in the libraries.

The results of campus buildings accessibility are shown in Table 3. Three out of the four campuses had at least one building with an accessible entrance, wheelchair ramp, or accessible toilet for a person using a wheelchair. One campus out of four had a building that provided an accessible route/door, and one campus out of four had accessible elevators in two different buildings. None of the four campuses had buildings that provided accessible stairs/steps, or wheelchair accessible seats.

Discussion

The present study investigated the physical accessibility on campuses of three universities in China. Findings show a lack of physically accessible facilities on the four university campuses. Similar to the findings of some U.S. studies (Aamlid & Brownfield, 2019; Fleming et al., 2017; Stumbo et al., 2010/2011), a number of accessible facilities found on campus were in poor condition and lacked regular maintenance (e.g., spalling and cracking on the curb ramp; weeds and other vegetation growing in curb sections). Some had not been used or used for other purposes (e.g., wheelchair accessible toilets were locked or used as storage rooms). None of the four campuses meet all the standards set by the Codes (e.g., no elevator displaying an accessible sign; no voice prompt or handrails inside each elevator). These findings corroborate the concerns raised by a number of Chinese academics who reported the non-existence or a lack of physically accessible facilities on university campuses in mainland China (Fang et al., 2005; Li, 2013; Ma, 2012; Wang, 2013; Yu et al., 2010; Zhang, 2014; Zhao, 2007).

Also, our findings are similar to the results of some studies that were conducted in the United States and Canada in the 1990s which reported that accessibility was a serious problem at both small and large universities and at both public and private universities (Hill, 1992; Low, 1996; Singh, 2003). It

should be noted that these U.S. and Canadian studies were conducted over 20 years ago. Today's accessible campus development in China is similar to the then accessible campus development in the United States and Canada in the 1990s. The U.S. studies presented in this paper were conducted at least 30 years after the passage of two major pieces of legislation, Public Law 93-112, Section 504 of the Rehabilitation Act of 1973 and Public Law 94-142, The Education of all Handicapped Children Act of 1975, mandating the integration of both children and adults into the "mainstream" of society. That is, preceding the passage of legislation protecting the rights of individuals with disabilities, HEIs in the United States were not friendly toward individuals with disabilities.

Moreover, some recent studies reported that ADA compliant implementations are uneven across individual campuses (Simonson et al., 2013; Stumbo et al., 2010/2011). There are still places, especially older buildings, where physical accessibility is limited for students with disabilities. The Canadian studies (Hill, 1992; Low, 1996) were conducted 10 years after the proclamation of Ontario's Bill 82, An Act to Amend the Education Act of 1980 (Ontario Ministry of Education, 1980), and 1985 enactment of Section 15 of the Canadian Charter of Rights and Freedoms in The Constitution Act of 1982. Even with the legislation mandate, it has taken years for IHEs in the United States and Canada to provide an accessible campus for students with disabilities. Therefore, it is no surprise to observe that, at present time, most universities in China lack an accessible or a barrier-free campus, and that it will take an unforeseeable amount of time for universities in China to comply fully with the 2012 Regulations.

It appears that administrators at the three universities in our study are aware of the issues related to students with disabilities, as there is the existence of a small number of accessible facilities on campus. Also, a few major universities in China have begun to conduct research on barrier-free facilities (e.g., a Barrier-free Construction Projects Joint Research Center was established in Tongji University in May 2011). Our findings, nonetheless, suggest that an accessible or a barrier-free campus environment has not been considered as an important, urgent matter by the university administrators as compared to other campus issues, such as energy efficiency and conservation, green campus, and the use of ecological materials. We speculate that the lack of accessible facilities for students with disabilities across all four university campuses may be attributed to three reasons: poor government oversight, lack of university commitment, and invisibility of students with disabilities on

university campuses. However, future research must ascertain why the universities in this study are not in compliance with China's legislation on disability regarding accessible campuses.

Poor Government Oversight

The municipal government of the city where the three universities in our study are located is responsible for enforcing the 2012 Regulations. However, it is unclear how the municipal government enforces the 2012 Regulations. Our findings show that as of 2016, the number of accessible facilities on all four campuses is still small. There have been new constructions, alterations, and additions on all campuses in our study, in particular, on University Campus A and C1. Yet, no accessible facilities were found in these new constructions, alterations, and additions which raises an important question as to whether the government agency has done an adequate job to enforce the 2012 Regulations.

Lack of University Commitment

Each universities' buildings and grounds department's web page in our study contained no information on physical accessibility. There was no disability office for students at any of the universities. The three universities' websites do not contain any information on disability policies, services available for students with disabilities, or accessible facilities on campus. Also, no information on the designated person(s) overseeing disability services was provided. We assume that the department of student services of each university is responsible for the welfare of students with disabilities on campus. However, when we reviewed the department's web pages of each university, no information on services for students with disabilities was found. This discovery leads us to question whether the department's student counselors in each university have received proper training in special education, including knowledge of current legislation, direct counseling services, facilitation of communication, awareness of community resources, among others - an important topic for future research.

Invisibility of Students with Disability on Campus

One reason why universities in China lack commitment to providing accessible facilities may be attributed to the very small number of students with disabilities on campus. It is rare to see students with mobility impairments at any of the three universities' campuses. These students remain somewhat invisible on campus (Zhang, 2020). Although the Law of People's Republic of China on Higher Education (National People's Congress, 1999) protects the rights

of students with disabilities to enroll in regular universities, it has been reported that some universities have imposed restrictions to deny the admissions of students with disabilities (e.g., Huang, 2011; Wang, 2013; Wang, 2016; Yu et al., 2010), as the Chinese government has given individual universities the authority to make their own rules and decisions on admission to candidates with disabilities. Moreover, most colleges and universities in China do not have the proper teaching conditions and living facilities available for students with disabilities. Lack of specialized, trained staff further discourages students with disabilities from applying to regular universities (Yu et al., 2010).

Unlike the United States and Canada, there are 18 universities in China that have a special education college for students with disabilities which have a total annual student enrollment of about 2,000. These universities have their own entrance examinations and admissions requirements. The campuses of these universities have installed accessible facilities for students, including accessible classrooms, accessible housings and telecommunication devices. In addition, the administrative and teaching staff have credentials and experiences in special education to provide assistance for students with disabilities. Students with disabilities may, therefore, opt to go to universities with a special education college, although they are qualified to attend regular universities. As only a very small number of students with physical disabilities attend regular universities, the management of these universities may be led to believe that accessible facilities on campus are not necessary. This oversight by the university management may also explain why some of the accessible facilities on campus have not been well maintained or been used for other purposes.

Recommendations

Advocate to Make Amendments to Current Legislation

The 2008 revision of the Law on the Protection of Disabled Persons has been the legal mandate protecting the rights of people with disabilities in China for over a decade, yet there are still no liability issues for non-compliance in serving the needs of people with disabilities. Therefore, consequences for non-compliance or government actions for non-compliance must be included in the future amendments of the legislation. Compliance with the legislation can be costly to universities in China, government at various levels can provide funding to support the effort of constructing the necessary accessible facilities on university campuses.

Address the Importance of Government Enforcement and Communication

In China, government at various levels is the primary enforcer of the laws and regulations. University management is not going to fulfill its responsibilities if there are no penalties for failing to comply with the 2012 Regulations. Government must actively promote accessible university campuses via mass communication to gain support from the public and the whole university community. Government should also encourage students with disabilities to let their voices be heard by reporting universities that fail to comply with the 2012 Regulations. Government must meet with the university administration to provide specific suggestions, with specific timelines, as to what should be done to comply with the 2012 Regulations.

Commit to Supporting an Inclusive Environment on Campus

As more and more students with disabilities are admitted to mainstream universities in China, it is imperative for universities to establish an office of disability services on campus with trained staff members who have a working knowledge of students with disabilities. Disability service providers must ensure that institutions meet their obligation to provide students with disabilities with greater opportunities for increased social support, integration into campus life, and more access to available resources. A university's office of disability services should provide training/workshops for its student counselors and university instructors to better understand the various types of issues students may encounter due to their impairment(s) and to provide support. Furthermore, disability service providers must work in collaboration with other university departments (e.g., Facilities Management, Office of Student Affairs, etc.) to create a holistic, inclusive environment for students with disabilities. Funds should be appropriated to provide appropriate services for students with disabilities and to lawfully comply with the building regulations.

Conclusion

Universities in China might argue that providing an accessible campus for students with disabilities is not necessary as it is not worth spending so much money for so few students (or no students). They might further argue that the money should be spent on the priorities that are important to the welfare and needs of the majority of students on campus. Although students with disabilities have been and will likely be the "invisible" group on college campuses in China for some years to come, they are nonethe-

less entitled to the same services as their non-disabled peers. Most importantly, various laws in education in China have clearly stated that students with disabilities should be provided with the opportunities to participate fully in all activities in society. China today has the will, money, and resources to care for individuals with disabilities, as is evident by the establishment and enactment of legislations and regulations, and as demonstrated by its willingness to be the host country of the Paralympic Games in 2008. University students with disabilities are a minority group on campus across the globe. The presence of students with disabilities on campus, human rights legislation, and local building codes are the forces for the universities to modify existing buildings (Hill, 1992). These forces exist today in China. It entirely depends on whether the government and the university community have the commitment to enforce the laws to provide accessible facilities for university students with disabilities. It is our sincere hope that there will be more accessible campuses for students with disabilities in China. We also hope that our findings will open the door for more detailed research on the areas of accessibility for university students with disabilities in China as well as in other developing countries.

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About the Authors

Kai Yung (Brian) Tam received his B.S. degree in Elementary Education from the University of North Texas and Ph.D. degree in Special Education from The Ohio State University. He is a Professor in the School of Cultural Industries and Tourism at Xiamen University of Technology, China, where the research was done. His current research interests include teaching and learning in higher education, disability issues in higher education in China and cross-cultural communication. He can be reached by email at: kyb-tam@xmut.edu.cn.

Mei Zhao received her Bachelor degree in Education from Shandong Normal University, China and Ph.D. degree in Developmental and Educational Psychology from Beijing Normal University, China. Her experience includes working as a university student counselor, consulting psychologist, and university instructor for Chinese language and psychology. She is currently an Associate Professor in the School of Journalism and Communication at Xiamen University, China. Her research interests include communication and psychology, and Chinese culture. She is the corresponding author and can be reached at: zhm1207@xmu.edu.cn.

Randy Seevers received his B.S. and Ph.D. degrees in Special Education from The Ohio State University. His experience includes working with a wide range of learners across the life span. He is currently an Associate Professor in the Department of Counseling, Special Education, and Diversity at the University of Houston-Clear Lake. His research interests include teacher preparation and inclusive practices. He can be reached by email at: seevers@uhcl.edu.

Yuan Liu received his B.S. degree in Management from Xiamen University of Technology, China. His experience includes working as a research assistant and a volunteer serving the LGBTQ community. He is currently a Partner Account Manager for an IT firm in China. He can be reached at: lanceyuan@foxmail.com.

Lyndal M. Bullock received his doctoral degree from the University of Kansas. He worked in higher education for many years where he specialized in preparing personnel to work with children and youth with troubling behaviors. Most recently, he was employed at the University of North Texas with the rank of Regents Professor in Special Education. His research interests are in the area of resiliency, advo-

cacy, and behavioral prevention and intervention for school-age children and youth. He may be reached at: sabre691@live.com.

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“They're Coming in Pretty Defeated:” Mental Health During the COVID-19 Pandemic (Practice Brief)

**Katherine C. Aquino¹
Sally Scott²**

Abstract

Limited research explores postsecondary disability resource professionals' (DRPs) perceptions and experiences supporting students during the COVID-19 pandemic. As part of a larger study utilizing national survey and interview data, this paper explores DRPs' experiences and observations related to student mental health during the pandemic-related lockdowns and subsequent transitions back to in-person campus settings. The findings of this study reveal DRPs are grappling with increasing student numbers, continuing need for expanded mental health accommodations and supports, and a persisting urgency to re-examine the role of the disability resource office (DRO) on campus related to student mental health. Implications and strategies for practice.

Keywords: disability resource professionals, mental health, higher education

Summary of Relevant Literature

The COVID-19 pandemic has negatively influenced postsecondary community members' mental health because of the disruption of daily routines, access to life necessities, and other associated factors (Caron, 2021; Flaherty, 2020; Petty, 2021; Scott & Aquino, 2020, 2021). Postsecondary students are experiencing additional stress and anxiety (Son et al., 2020), with a large proportion of young adults impacted by mental health problems associated with the COVID-19 pandemic (Anderson, 2020; Center for Postsecondary Research, 2021; Sontag-Padilla, 2020; Wood, 2021). Educators and other members of the higher education community have also experienced pressures impacting their overall mental health (Docka-Filipek & Stone, 2021; Zhai & Du, 2020). As research continues to document the changing and developing impact of the pandemic on mental health (Grubic et al. 2020; Madaus et al., 2021; Savage et al., 2020; Weissman, 2021), there is growing recognition of the long-term need to pay increased attention

to mental health of students and the broader campus community (Carrasco, 2022). This brief explores the practice of disability resource professionals (DRPs) supporting mental health needs during the pandemic.

Participants

Data for this paper were collected from a national project exploring the experiences and perceptions of DRPs during the COVID-19 pandemic. Specifically, three distinct data collections—two survey data collections in May and December 2020 and one round of interviews in July 2021—explored postsecondary disability support services, including how disability resource offices (DROs) supported student mental health, within the higher education environment. The first wave of data included 535 AHEAD members and the second wave of data included 631 AHEAD members. Detailed information on the first two waves of participants can be found in AHEAD whitepapers (Scott & Aquino, 2020, 2021). The last phase of this project, semi-structured interviews, included 11

¹ *St. John's University*; ² *The Association on Higher Education And Disability (AHEAD)*

DRPs recruited from the AHEAD listserv. Their professional roles included directors, coordinators, and specialists employed within postsecondary institutions' DROs. The practices described below reveal their experiences and observations supporting student mental health during the pandemic. All participant names are pseudonyms.

Depiction of the Problem: Trends in Practice Related to Student Mental Health

As members of the postsecondary community, DRPs provide a unique perspective on pandemic-related changes in student mental health. Observations and data related to student support and accommodation development throughout the pandemic provide insight into emerging barriers, student mental health needs, and DRO practices.

In the first few months of the COVID-19 pandemic, when postsecondary coursework and student support shifted to an online modality, students were required to access services remotely that were once typically available within an in-person setting. When asked about the barriers they were observing in the new remote environment, DRPs indicated that disabled students were having more difficulty accessing counseling and mental health services than their nondisabled student counterparts (60.7% to 56.1%, respectively; Scott & Aquino, 2020).

Nine months into the pandemic, nearly half (44.9%) of all DRP participants noted an improvement in disabled student access to counseling and mental health services. While this improvement is a positive indicator for disabled students' access and use of student support services, 13.7% of surveyed DRO professionals indicated no improvement and 15.7% indicated a worsening for disabled students' access to mental health services (Table 1; Scott & Aquino, 2021).

When surveyed participants compared DRO registration trends between the fall 2019 (pre-pandemic) and fall 2020 semesters, over half (59.4%) noted an overall increase in student registration specific to psychological disabilities related to mental and emotional health. Nearly eight percent of surveyed DRO professionals (7.7%) indicated that their offices did not track requests disaggregating by disability type (Table 2; Scott & Aquino, 2021).

Within the first nine months of the pandemic, DRPs reported notable patterns and shifts in practices related to student mental health. To learn more about these changes, we conducted individual interviews to further explore what the perspectives of DRPs reveal about mental health on campus. The following sec-

tion addresses how DRPs perceive the overall impact of COVID-19 on campus mental health, a year and a half following the start of the pandemic.

Picture of Mental Health in Higher Education: DRP Perceptions of Student Mental Health Practices

Eighteen months into the COVID-19 pandemic, DRPs had experienced numerous obstacles and shifting professional obligations in their continued work to support student accommodation needs. DRP interviews revealed the significant influx of student requests, as well as the varied responses in establishing institution-wide support for overall student mental health needs. Lastly, findings highlighted how DRP mental health was also impacted in their ongoing work to engage and support disabled students within their institutional environments.

The Exponential Growth of an Existing Crisis

Although the COVID-19 pandemic exacerbated mental health issues for individuals throughout the postsecondary environment, mental health was already a concern before the onset of the pandemic. Melissa, a DRO director within a four-year private institution whose office serves approximately 300 students on an annual basis noted the following: "Mental health needs are exploding, and I know that that's nationwide. I know that's global... but it was exploding in our campus before."

However, the COVID-19 pandemic increased mental health concerns within the postsecondary community. As one DRP observed about students, "They have mental health issues because by the way, we're in a pandemic and also people are being underpaid and undervalued. And so, there's a lot of stress at home. So, there's a whole bunch of stuff going on and they're coming in pretty defeated already." Melissa, whose office has a staff of two DRPs and who has worked for less than five years within the higher education environment emphasized:

I think that that is a fight, unfortunately, a challenge that needs to be addressed, probably not just in my little microcosm, but more globally because it's like...they have this, they have that. It's knowing what's going on and still saying, "Hey, you're capable."

The Relationship with the Institution's Counseling Center

The interviews illuminated the varied organizational placement for their institutions' DROs and

Table 1

Change in Access to Counseling and Mental Health Services for Disabled Students, December 2020, By Percent

DRP Perceptions of Change	
Improvement	44.9
No Improvement	13.7
Gotten Worse	15.7
Never a Barrier	9.4
Do Not Know	16.3

Table 2

Change in Students Registering with DRO for Psychological Disabilities Related to Mental and Emotional Health, Fall '19 to Fall '20, By Percent

Trends in DRO Data	
Increase Reported	59.4
No Increase Reported	9.2
Office Does Not Track	7.7
Not Applicable	3.7
Do Not Know	20.0

counseling centers. This often contributed to the relationship the DRO and counseling center had going into the COVID-19 pandemic. As Theresa, a DRO director of a suburban, private four-year institution, whose office serves approximately 100 students annually, noted, “Just the way that we’re structured there’s always that collaboration, ... that synergy between those two offices is always there.” Thomas, a DRO director whose office supports approximately 65 students annually, shares the vague yet supportive working environment with his institution’s counseling center:

I guess we haven’t defined our relationship, but we definitely work together. We know one another, we’ll check in. If, you know, there’s a high-level student issue and nine times out of 10, I trust them to do what they do and it’s the same [with the counseling center].

Although all participants noted the importance of collaborating with their institutions’ counseling center, participants either noted existing alliances or limited interactions which either promoted or hindered student mental health initiatives intensified by the COVID-19 pandemic. Claire, a DRO director in an urban, private four-year institution located in the Northeast whose office serves approximately 500 students, noted, “I can always just call him up and talk to him and he can do the same for me... We just have that relationship with one another.” Melissa explained, despite the placement of the offices, there is a need to better collaborate with the counseling center for better student support:

I have said...it would be awesome for the two of us to be under the same umbrella where we really know when it’s honestly disability or not, because like she has people with diagnoses, but they’re not registered in my office...so that’s the problem.

With the increased mental health requests, DROs and counseling centers are still trying to clearly identify their roles and placement in student mental health needs. For Claire, creating partnerships and defining roles are essential for successful student support:

Creating a good community partnership is important...Our office has a lot of touch points with students and programs...so I think those are important. And so those will continue to include mental health check-ins. So, when you start being a disability resource officer...you recognize that...it’s like, what should you do? And what shouldn’t

you do? Because we’re not counselors. We shouldn’t be counselors.

Additionally, Melissa emphasized:

My office... and counseling...we all kind of come in and support each other. I think what we have learned is that looking at the whole person is incredibly important. We knew it before, but it has kind of cemented that again, we have a lot of people that are struggling financially. Mental health is crazy, and COVID just highlighted it to a huge degree.

Amidst the increasing student needs and growing student numbers, DRPs are seeking connections with campus counseling services in different ways.

Supporting Students with Mental Health Concerns Who Do Not Formally Disclose

Another theme emerging from the interviews was the need to better support and create outreach strategies for student mental health needs, even when the students were not formally disclosing with the DRO. For DRPs, it was important to still engage with students, even if not through the typical intake process. For Amanda, an accommodations coordinator in a public four-year institution, it was always important to ask students, “What’s your experience without actually disclosing?” She noted it is important to support student mental health within the higher education environment, even if they are not formally disclosing a disability or seeking accommodations. Amanda, who works in an office of six DRPs that supports approximately 1,000 students annually, emphasizes with students that mental health is an ongoing journey and that some days are better than others:

It’s okay [for the students] not to be great. And I’m not a counselor by any means, but this is a community on campus who wants to support you and wants to help [you] through these things. That said, I think we have a real peak right now on [student] anxiety. We have a real peak right now on [student] depression.

Helen, an access specialist and counselor in an urban, public four-year institution in the west, indicated how institutions can do a better job supporting student mental health before it negatively impinges on various aspects of their lives:

I definitely think that because of a pandemic... there was a lot more opportunity for students to

kind of see what was going on with their mental health and figure out okay, this is something that they've struggled with, or maybe something developed because of the pandemic for some students. So, I think that it is going to be really important that universities keep tabs on students' wellbeing.

Thomas, a DRP in a rural, private four-year institution with less than 1,000 students in overall enrollment, has tried to find creative outreach approaches to support students' mental health. Through collaborations with other administrative areas, he is committed to support student mental health before accommodations are needed:

I've been working with the dean's office. I've been working with the director of athletics to create these morning programs, having morning yoga, breathing exercises and breathing techniques, just those small things that I feel like can help our students cope a little bit more...it's those students who I see more often, they're struggling with just everyday coping. So, it was just always kind of, okay, let's talk about it, let's get it out. Now, let's work on strategies for success. They needed this kind of every day, checking in with themselves type of help. And so I feel like that we need to just have, whether it's flyers all throughout their dorms, or, like I said, the morning yoga... these wellness classes to help develop the student holistically, instead of just kind of looking at, they need accommodations.

While DROs may not always have the capacity to support mental health outreach, some participants noted that their institutions bring in other administrative areas to better support this work. For Tim, an accommodations specialist in a private urban four-year institution, student mental health can be an institution-wide collaboration before formal self-disclosure occurs:

I would say I know that the university as a whole is definitely focusing more on those things. We've got extensive outreach, especially for students who were online only last year, whether they were living close to campus or living literally anywhere around the world. So I would say that our office has not, we're not necessarily increasing anything, anything in those areas, but the university as a whole certainly is.

Although pre-disclosure may be an area beyond the traditional scope of DROs, many participants noted that student mental health is still important to be

aware of and support well in advance of students' self-identification and request for accommodations.

Disability Resource Professionals' Mental Health

DRPs work to support student needs, including mental health-related accommodations. In order to do this important work, participant comments revealed that a new type of mental health support was needed—their own. Within the interviews, participants indicated two emerging themes related to DRP mental health: (1) factors impacting their own mental health during the COVID-19 pandemic and (2) the need to create work environments to support colleagues' mental health. For Yvonne, an assistant director at a public two-year institution whose office serves approximately 1,000 students annually, it was important for her to make intentional changes to better safeguard their own mental health during the COVID-19 pandemic:

I've had to work on being able to separate myself because it's taken a lot...it also takes a toll on you. I hear the desperation and the worry [from the students] and it's me, myself, I'm trying to help them. But on the flip side, on the personal side, I have those same concerns and those same worries and that self-care, that has been a big challenge because I'm so focused on work. And then my family. At times, I'm like, well, I need a minute. You know, I need to think about me, because if I can't, if I'm not good, how productive am I going to be for my students or for my family?

And while institutions may not have anticipated the need to safeguard employee mental health throughout the COVID-19 pandemic, administrators in leadership positions can still create supportive environments to support colleague mental health. Claire, with approximately 10 years of experience in the higher education environment, stressed the need to create positive work environments for her team:

I think that they all know that I am extremely supportive of their own mental health and ...taking time off, if they need to take care of it, go to the doctors, see a therapist, but also making arrangements so that they feel comfortable and are supported within the office. So, of course, the university does absolutely nothing, but hopefully I, as a boss and as their supervisor, can provide a good place to work. Just being able to talk about that, I'm not a therapist and none of that was therapy, but just being able to talk about that is I think a good thing for a community to create.

In the constantly changing institutional return-to-campus plans, many members of the institutional community may feel left out in the process. Throughout the pandemic, administrative roles changed, and work may have increased. As the shift to remote learning impacted not only students and faculty, but DRP administrators as well, being more aware and supportive about the mental health of all institutional members will continue to be important in this post-lockdown transition for the higher education environment.

Implications and Recommendations

The findings of this study reveal DRPs are grappling with increasing student numbers, continuing need for expanded mental health accommodations and supports, and a persisting need to re-examine the role of the DRO on campus related to student mental health. DRPs themselves are experiencing personal and professional stressors in the wake of the pandemic which is a necessary aspect to address if DRPs are going to be able to appropriately serve students. Trauma experts note that the mental health ramifications of the pandemic will persist long after the physical threat of COVID-19 declines (Yong, 2021). These findings have important implications and suggest the following recommendations for practice.

Enhance Virtual Options and Flexibility to Support Access to DRO Services

Many students with mental health concerns will be unfamiliar with the supports available across campus or even aware they may be eligible for disability services. With a recently acquired or intensified mental health concern, a student may have little or no understanding of accommodations and how they may support access and learning. DRPs now more than ever need to ensure that simple and straightforward information about campus supports and potential accommodations are widely available. Innovative practices that were quickly generated out of necessity at the onset of the pandemic provide insights to new approaches to traditional DRO outreach to students. Expanding information and access through such means as providing a virtual front desk for making appointments and asking questions, a chat feature on the DRO website, online office hours for “walk-in” appointments, and instructional videos about accommodation procedures are emerging practices (Scott & Aquino, 2020). The initial transition to remote services also challenged DRPs to think about disability documentation in new ways. Telehealth and teleassessments, as well as student self-report, are increasingly recognized as valuable sources of

documentation needed to undergird accommodation decision-making with this population (Krentz et al., 2021). Emerging DRO practices reveal that expanding outreach strategies that provide students with enhanced virtual options and flexibility are essential going forward.

Lead Campus Decision-Makers to Reexamine Mental Health Accommodations

During the pandemic-induced transitions of the last two years, some of the bastions of higher education (including instructional delivery and classroom policies) have been subjected to unprecedented flexibility. Krentz et al. (2021) observed that what was once considered “a firm no” related to classroom accommodation requests, such as flexible attendance policies, now need to be reconsidered. Other potential accommodations related to mental health that are the topic of ongoing dialogue in professional listservs such as the AHEAD Community and the DSSHE include requests for remote class participation, extended deadlines for projects and papers, and the availability of online sections of required courses. DROs will be well-served to lead campus decision-makers in re-examining existing practices and policies in these areas. Precedents that were set during the pandemic suggest that a broader range of classroom accommodations may now be considered feasible (Krentz et al., 2021).

Contribute DRP Expertise to Strategic Campaigns for Mental Health

Beyond accommodations, the findings of this study reveal that DRPs are exploring connections with campus counseling services to clarify roles and fill gaps in student supports. Some DRPs are finding that sharing administrative reporting lines and working with mutual students has resulted in synchrony across offices. Others report ambiguity in roles and challenges of defining what mental health concerns reach a level of “disability.” Given the predictable continuation of a mental health crisis on campus in the years ahead, it behooves DRPs to reach out to these campus colleagues to explore and clarify roles and services that best meet the needs of the campus community.

The time is right for DRPs to also explore new partnerships in campus-wide efforts to support mental health. As proactive supports and a holistic frame for viewing student health and well-being are becoming institutional priorities (Moody, 2022), there is opportunity for DRPs to participate. National resources such as those offered by Mental Health First Aid (n.d.) and the JED Foundation (n.d.) offer a variety of strategies and supports targeted to colleges that work to educate community members, increase the

network of support, and promote strategic campaigns for overall mental health and equity (JED, n.d.). As campus initiatives (including, for example, mental health summits, awareness campaigns, listening sessions, town halls, and task forces) bring together campus constituents to share expertise and problem solving, DRPs have a valuable perspective to share. DRP knowledge and skill sets in the areas of promoting equity, destigmatizing disability, and supporting inclusive design strategies have great potential for informing the conversation about proactive mental health support on campus.

Recognize and Support Professional Mental Health Needs

An incidental but important finding emerging from the interviews with DRPs was the candid report of mental health strain. Working to support the growing number of student requests and within the rapidly changing working conditions, DRPs experienced their own personal challenges to health and wellbeing while also supporting their institutions. Eikenberry (2022) described “leadership fatigue” (para. 1) as a current hazard in the workplace that requires moving past an achiever mindset, to recognize personal levels of strain and fatigue that may impact work performance. Emerging resources such as those generated by the American College Health (ACHA) Co-VAC initiative (ACHA, n.d.) highlight the importance of campus personnel strategies. Practices such as virtual drop-in groups supported by a mental health professional are needed to ameliorate individual-level symptoms of burnout (H. Zesiger, personal communication, February 9, 2022).

DRP supervisors are encouraged to extend flexibility and new capacities for remote work where possible. Strategies to reduce some forms of work load such as acquiring a DRO data management system take on new importance in alleviating DRP role strain. On a personal level, DRPs are reminded it is more important than ever to take advantage of the vibrant community of DRO professionals available to problem solve dilemmas, vent frustrations, and celebrate successes. Whether colleagues on campus, online list serves, or state and national level professional gatherings, sharing experiences and brainstorming solutions has never been more important for supporting the important work of DRPs.

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About the Authors

Sally Scott is Director of Research for the Association on Higher Education and Disability. She holds a doctorate from the University of Virginia and has over 25 years' experience as faculty member and director of disability resource offices. She has published and presented nationally and internationally on postsecondary disability. Recent research activities include disability resource office student-staff ratios, campus structures for ADA Coordinators, program evaluation practices in disability resource offices, and COVID-19 experiences of disability resource professionals. She can be reached at sally@ahead.org.

Katherine C. Aquino is an assistant professor in the Department of Administrative and Instructional Leadership for the School of Education at St. John's University. She received her B.S. degree in psychology, MA in school psychology, Ph.D. in higher education leadership, management, and policy, and advanced certification in instructional design and delivery. Her research interests include the socio-academic transitioning into and within the higher education environment for students with disabilities and post-traditional students. She can be reached at czadoak@stjohns.edu.

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Purpose

The purpose of the *Journal of Postsecondary Education and Disability* (JPED) is to publish research and contemporary *best practices* related to disabled college students, college and university disability services offices, disability educators, and disability studies as a field within and lens for the study of higher education institutions. The sponsoring organization for the JPED is the Association on Higher Education and Disability (AHEAD, www.ahead.org), the primary source of disability related expertise on accessibility, legislation, rights, and any other disability-related information as it pertains to higher education. Consistent with the overall goals of AHEAD, each JPED article includes practical *implications for disability services educators* in colleges and universities.

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The JPED is peer-reviewed and uses a masked-in-both-directions review process. Although our reviewers take care to provide developmental feedback, it is essential that prospective authors follow the guidance and formatting instructions in this document carefully. The editorial process is not typically able to address major issues of conceptualization or craft in a way that leads to eventual publication.

Manuscript Topics and Types

Published manuscripts will advance JPED's purpose as detailed above (i.e., research, best practices, implications for disability services educators).

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Manuscripts demonstrate scholarly excellence using one of the types of articles described in the *Publication Manual of the American Psychological Association* (7th edition, American Psychological Association [APA], 2020) sections 1.1-1.8. These include quantitative, qualitative, mixed methods, replication, meta-analyses, literature review, theoretical, and methodological articles. ***Inclusive of all manuscript elements (including title page, references, tables, and appendices) research articles cannot exceed 35 pages and typically are between 25-30 pages.***

Practice Briefs

Manuscripts describe innovative programs, services, or contemporary best practices that support disabled

college students or disability services, and are organized using the following first-heading levels (APA 2.27):

- **Summary of Relevant Literature:** provide a succinct summary of the most relevant and contemporary literature that provides context for what is already known about the practice/program.
- **Setting and/or Participants Demographics:** provide enough information about the implementation context for the practice described for the reader to make an informed assessment regarding similarity to their own practice environment--using a pseudonym or compositing as needed to provide anonymity for participants / institutions involved;
- **Depiction of the Problem:** provide a statement of the problem being addressed.
- **Description of Practice:** briefly describe the intended outcome for the innovative practice/program and how it has been implemented to date. Tables and figures may enhance specific details.
- **Evaluation of Observed Outcomes:** summarize formative and/or summative data used to evaluate the efficacy of your practice/program; support claims with evaluation data.
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Inclusive of all manuscript elements (including title page, references, tables, and appendices) practice briefs cannot exceed 15 pages and typically are between 8-12 pages.

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reviews provide:

- An overview of the book, identifying the book's stated purpose, the author's and his/her viewpoint, and a general summary of the content.
- An evaluation of the book's strengths, elaborating on the author's objectives and how well those objectives were achieved.
- Recommendations about the audiences that might find the book useful, why, and how you would suggest the book be used. Please be sure to address its potential contribution to the field. For any gaps in the book's content, rather than framing as weaknesses, consider offering suggestions about other works or perspectives that could be used in tandem with this book. In other words, of what conversations in our field could this book be an important part?

Inclusive of the text of the review itself, book reviews should typically be between 750-1250 words. Book review submissions should also be accompanied by a complete citation for the book reviewed as well as references for any additional citations in the text of the review.

Manuscript Preparation

All manuscripts must be prepared according to the standards of the APA publication manual (7th edition). Authors submitting manuscripts to the JPED will be well-served to thoroughly understand Section 12 of the APA manual where the publication process is described as preparing for publication, understanding the editorial publication process, manuscript preparation, copyright and permission guidelines, and during and after publication.

When submitting a manuscript to the JPED, follow these specific guidelines:

- Submit *one* complete Word document (.doc or .docx) that contains all manuscript components (i.e., title page, abstract, body, references, tables/figures).
- Provide a separate cover letter (APA 12.11) asking that the manuscript be considered for publication and stating that it has not been published, or is not being reviewed for publication, elsewhere.
- Manuscripts should have one-inch margins in 12-point Times New Roman font. Double space the abstract, body, and references; single space the title page and tables/figures.
- The title (APA 2.4) should not exceed 12 words.
- Place the abstract (maximum 250 words, APA 2.9) on page two (following the title page). Include three to five keywords (APA 2.10) below the abstract (does not apply to book reviews).
- Use APA Section 1, Scholarly Writing and Publishing Principles, related to types of articles and papers; ethical, legal, and professional standards in publishing; ensuring the accuracy of scientific findings; protecting the rights and welfare of research participants and subjects; and protecting intellectual property rights.
- Use APA Section 2, Paper Elements and Format, to align paper elements, format, and organization. Indent paragraphs (APA 2.24), and adhere to heading levels (APA 2.27) to organize the manuscript.
- Content and method are important. Use APA Section 3, Journal Article Reporting Standards, related to overview of reporting standards; common reporting standards across research designs; and reporting standards for quantitative, qualitative, and mixed methods research. Please refer to Madaus et al. (2020) for research guidelines for higher education and disability where instructions are provided for describing samples and study locations, and appropriately selecting and describing the methodologies employed.
- Writing is important, carefully edit and proofread the manuscript.. Use APA Section 4, Writing Style and Grammar, related to continuity and flow, conciseness and clarity, verbs, pronouns, and sentence construction. Use APA Section 6, Mechanics of Style, related to punctuation, spelling, capitalization, italics, abbreviations, numbers, statistical and mathematical copy, presentation of equations, and lists. Refer to APA 6.32-6.39 to properly report numbers expressed as numerals or in words.
- APA Section 5, Bias-Free Language and Guidelines provides guidance for writing about people, identity, and other topics wherein bias in writing is common. Although generally useful, this section's discussion of disability is reductive. Authors should follow their best judgment in this regard. Additional guidance is provided below.
- Regarding language related to disability, authors must determine the type of wording that is best for their given study - typically person-first or identity-first language. (See the "AHEAD Statement on Language" for details about these options and for additional resources on the topic.) We encourage authors to be explicit about their choices in the manuscript, informing

readers about the rationale for their choice of language. When research or program participants are disabled and it is possible to determine their preferences, the preferred language of those individuals should be prioritized ahead of researcher or practitioner decisions. Additionally, aligned with the AHEAD statement in terms of outdated language use, we discourage “the use of outmoded euphemisms such as ‘special needs,’ ‘physically or mentally challenged,’ differently- or alternatively-abled, etc.” unless there is an explicit reason, such as referring to past practices or terminology to learn something valuable from it for current practice.

- Use APA Section 8, Works Credited in Text, related to general guidelines for citation, works requiring special approaches to citation, in-text citations, and paraphrases and quotations. All citations must be referenced, and all references must be cited; avoid undercitation and overcitation (APA 8.1). Double-space and block quotations of 40 words or more (APA 8.27).
- Provide a complete reference list (APA 2.12) rather than a bibliography following the manuscript. References should be formatted consistently, following APA examples in sections 9-11. Please be sure to carefully edit references as manuscripts will not be sent out for review until they conform to APA guidelines and references represent the most common challenge point for submitted manuscripts.
- Mask any information that could reasonably reveal the identity of the authors to the reviewers. For example, citations that would identify an author should be replaced with “citation omitted” and the corresponding reference removed from the reference list (APA 8.3). This does not mean that all author citations must be removed, only those that are likely to reveal an author identity by being self-referential. Those which are “in press” or “under review” should also be removed as they are typically from an author. Mask institutional identities in manuscripts if they are likely to reveal the institution of an author. Please do not use a title that can be searched in order to find a previous iteration of the work (e.g., a conference presentation, a dissertation). We will ask you to unmask these elements of your manuscript subsequent to acceptance. These examples are not exhaustive, but it is the author’s job to minimize any information that can reveal author identity.
- Tables and/or figures, following references, are in black and white only, and must conform to

APA standards in APA Section 7. Follow examples related to table lines. Align numbers in tables to the single digit or the decimal. If tables and/or figures are submitted in image format (JPEG, PDF, etc.), an editable format must also be submitted along with a text description of the information depicted in the table/figure. This will be provided as an alternate format in the electronic version of the JPED, making tables/figures accessible for screen readers.

- In submitted manuscripts, all tables and figures should be placed at the end of the manuscript with a corresponding indication in the text, “< Place Table/Figure X approximately here>”. During layout editing, tables and/or figures should will be embedded in the text either as noted in the manuscript or after its first mention in text (APA 7.6)
- Do not include footnotes, instead, incorporate footnote narratives into the manuscript.
- Because of the importance of articles including practical implications for disability services educators in colleges and universities, authors will be well-served to include in the discussion a multiple paragraph subsection where practical implications for disability services educators are discussed.
- Before submission, ensure that the manuscript is ready by using strategies, examples, and checklists provided by APA:
 - Sample papers (end of Section 2, pp. 50-67).
 - Strategies to improve your writing (APA 4.25-4.30).
 - Tables checklist (APA 7.20).
 - Figure checklist (APA 7.35).
 - In-text citation styles (Table 8.1).
 - Examples of direct quotations in the text (Table 8.2).
 - Reference examples (section 10 and 11).
 - Manuscript preparation (APA 12.9-12.13).

Manuscript Submission

Before you decide to submit your manuscript, authors are encouraged to read past articles in the JPED (available at <https://www.ahead.org/professional-resources/publications/jped>) to better understand the types of submissions we print. **A manuscript must be submitted electronically as an attachment via email to jped@ahead.org, and must include the following:**

- Subject line: JPED manuscript submission.
- Include in the body of the email a statement

that you are submitting a manuscript for consideration for the JPED. Include the title of the manuscript and the full contact information for the corresponding author (APA 2.7).

- Attach to the email your complete manuscript, prepared as directed above, and a cover letter as outlined above.
- You will receive an email reply from Richard Allegra (Managing Editor of JPED) to confirm receipt of your submission within seven business days.
- Manuscript submissions by AHEAD members are especially welcome.

Upon Acceptance for Publication

For manuscripts that are accepted for publication, we will request additional information at two separate intervals:

- First, corresponding authors will be asked to respond to copyediting suggestions shortly after acceptance. As part of this process, Cassie Sanchez (Copyeditor) will contact you with a proposed copyedited draft of your submitted manuscript and/or specific questions requiring your response.
- Second, once your manuscript has been assigned to a future issue, Valerie Spears (JPED Editorial Assistant) will contact the corresponding author to request: 1) a 40-50 word bibliographic description for each author; 2) and a signed copyright transfer form (Valerie will send templates for both); and 3) approval of galley proofs of the article ready for publication.

Although JPED reserves the right to edit all material for space and style, corresponding authors will be notified of changes.

Special Issues

The JPED occasionally publishes special issues which feature a series of articles on a particular topic. The JPED welcomes ideas for special topic issues related to the field of postsecondary education and disability or disability studies. The issue can be formatted as a collection of articles related to a particular topic or as a central position paper followed by a series of commentaries (a modified point-counter point). If the issue has the potential to be valuable to the readership of the JPED, modification to the journal's content or format may be possible. Authors who wish to discuss a special issue should contact the editorial team at jped@ahead.org.

Publication Information

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Editorial and Review Teams

The editorial team is composed of Ezekiel Kimball, Ryan Wells, Valerie Spears, Richard Allegra, and Cassie Sanchez. The review board is composed of more than 70 international disability scholars and disability services educators with expertise on disabled college students, disability services, disability studies, and research methodologies.

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