

Exploring Student Mental Health in Campus Spaces

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Abstract

This study explores the relationship between the built environment in postsecondary institutions and student mental health, focusing on how emotional experiences can guide the future development of accessible campus spaces. Using a questionnaire, students identified preferred campus locations for different emotional states and rated the influence of various design features on their space selection. Findings showed that the library was frequently chosen during negative emotional experiences, suggesting its potential as a comforting space. Design features such as layout, cleanliness, access to natural light, and noise control consistently influenced space selection across all emotional states. The research emphasizes the need for accessible and inclusive campus environments for all students, including those facing mental health challenges, regardless of formal diagnoses. The study calls for a shift in campus design to prioritize mental health, highlighting the importance of creating spaces that support emotional well-being and foster positive experiences for all students.

Keywords: student mental health, built environment, accessibility, campus design, emotional well-being

The World Health Organization (2022) describes mental health as a state of mental well-being in which an individual realizes their own abilities, can cope with the normal stresses of life, can work productively, and is able to make a contribution to their community. Others add that mental well-being is a state of emotional, psychological, and social health marked by feelings of contentment, the ability to bounce back from difficulties, and effective coping with life's challenges (e.g., Gautam, 2024). These definitions collectively reflect mental health as a continuum, a diagnosis (i.e., mental illness), and general contentment. The idea of mental health broadly representing these constructs is important when examining data. For example, in the Canadian Survey on Disability, 7.3% of individuals aged 15 and older report having a mental health-related disability, or a long-term mental health condition or impairment that limits a person's daily activities (Government of Canada, 2020). However, among postsecondary students, a significant number of people experience mental well-being issues, with 88.2% feeling overwhelmed, 76.2% feeling sad, 68.9% experiencing anxiety, and 63.6% feeling hopelessness, regardless of whether they have a mental health diagnosis (American College Health Association, 2019).

Embracing a continuum of mental health is also crucial to understanding how it coexists with other conditions or disabilities. For example, neurodivergence, an umbrella term encompassing neurodevelopmental disabilities such as attention-deficit/hyperactivity disorder (ADHD), autism, or learning disabilities, affects how individuals process information, interact with the world, and experience emotions (Kroll et al., 2024). People who identify as neurodivergent have increased vulnerability to mental health issues, such as anxiety and depression (Accardo et al., 2024).

The COVID-19 pandemic further heightened stress for postsecondary students, as demonstrated in increased rates of psychological distress, sleep disturbances, depression, and anxiety (Patterson et al., 2021; Zarowski et al., 2024). This finding is further evidenced in a report by the Canadian Alliance of Student Associations (2022) in which 75% of students indicated that they faced challenges with their mental well-being in the 2021-2022 academic year (The New Abnormal, 2022). Fatigue, loss of motivation, isolation and loneliness, depression, anxiety, and post-traumatic stress disorder impact today's postsecondary students (Haloulos, 2023; Sillcox, 2022).

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Postsecondary students dealing with chronic distress and mental health issues are more likely to engage in substance misuse, face relationship problems, experience more frequent absences or dropout rates, participate in higher risk behaviors, contemplate suicidal thoughts (Linden & Stuart, 2020), and experience lower job prospects (Moghimi et al., 2023). While postsecondary institutions have made efforts to address the crisis with initiatives such as comprehensive mental health services and well-being strategies, enhancing student outcomes requires postsecondary professionals, including disability service providers, to adopt more creative and innovative interventions. Exploring the relationship between the built environment and student mental represents one such avenue.

The built environment (e.g., human-made surroundings and structures) has significant implications for our emotional, psychological, and physical health and well-being (Evans 2003; Shepley & Pasha 2017). The relationship between people and the built environment has been studied in such environments such as workplaces (e.g., impact on employee psychological comfort) and healthcare settings (e.g., impact on patient outcomes) yet, at the time of this study, there is limited academic research examining the built environment in postsecondary settings, especially beyond the classroom setting. Thus, the built environment presents a novel opportunity for postsecondary institutions to explore innovative, accessible designs and uses of spaces to better deliver services and supports.

The purpose of this study is to explore this under-examined area, particularly how student emotional responses and experiences can guide the development of more inclusive, supportive postsecondary built environments. By crafting environments that are inclusive, institutions acknowledge the wide-ranging nature of mental health. Such environments signal to students that they are valued and supported, fostering a campus culture where mental well-being is a shared priority.

Mental Health and the Built Environment

Academic research has explored how the built environment of specific campus spaces (e.g., learning spaces) impacts postsecondary student mental well-being. For example, studies have shown that sensory aspects of classroom and meeting spaces, such as noise levels, crowding, and access to natural light, can affect social interaction and inclusion for autistic students (Brandsen et al., 2024). Additionally, research on classroom environments highlights the significance of biophilic design—connecting people with nature within built environments—in improving concentration and reducing stress (Determan et al.,

2019). However, there is limited research examining student mental well-being and the built environment beyond learning spaces.

There is much we can learn from looking at the research examining the built environment and mental health in other contexts. Many peer-reviewed studies report on how aspects of the built environment impact mental health (Beemer et al., 2019; Evans, 2003; Hoisington et al., 2019). Research demonstrates that the built environment affects mental wellness both directly (e.g., crowding, noise, indoor air quality, and light) and indirectly (e.g., perceived control, density, social supports; Evans, 2003; Shepley & Pasha, 2017; Vischer, 2008). Either direct or indirect impacts can alter psychosocial processes such as wellbeing, motivation, engagement, and belongingness (Evans, 2003; Vischer, 2008; Zeisel, 2013), which can result in stressors. These stressors, in turn, produce known psychological outcomes such as increased agitation, anxiety, depression, learned helplessness, and emotional exhaustion (Codinhoto et al., 2009; Evans, 2003; Sullivan & Chang, 2011). Understanding the effect that the built environment can have on mental health highlights the importance of incorporating it into the built environment planning and implementation processes. Doing so can not only help mitigate potential stressors but also foster environments that promote mental health.

Based on an extensive review of existing literature examining the built environment and mental health, there is a body of research focusing on urban settings, healthcare environments, and workplaces. These studies emphasize specific design elements (Table 1) that have the potential to contribute to an improved state of mental well-being (Brennan et al., 2002; CSA 2020; Evans 2003; DuBose et al. 2018; Hoisington et al. 2019; Parsons 2015; Shepley et al. 2016; Vischer and Wifi 2015). Collectively, the features can inform the design, implementation, and maintenance of accessible, campus spaces that support student mental health.

These design features also support a Universal Design approach. Universal Design principles offer a complementary framework through which we can consider accessible campus environments that support student mental health. The seven principles of Universal Design—equitable use, flexibility in use, simple and intuitive use, perceptible information, tolerance for error, low physical effort, and size and space for approach and use (Centre for Excellence in Universal Design, 2024)—align closely with the design features identified in Table 1 as beneficial for mental health. For example, the principle of flexibility in use could support the creation of multi-purpose spaces that can accommodate diverse student needs,

Table 1*List of Design Features that Could Influence Mental Health and Wellbeing*

Design feature	Brennan, 2002	Evans, 2003	Parsons, 2015	Vischer, 2015	DuBose, MacAllister, et al., 2016	Shepley, Watson, et al., 2016	Hoisington, 2019	CSA Z2003:20
Layout of the space	x	x	x	x	x			
Access to comfortable furniture			x	x		x		
Space is orderly and clean						x		
Quality of indoor lighting	x	x	x		x	x		
Access to natural lighting	x			x	x		x	
Access to a view of nature		x		x	x	x	x	
Noise control in the space	x	x	x	x	x	x	x	
Temperature control in the space	x		x	x			x	
Indoor air quality	x	x	x	x			x	
Space allows them to connect meaningfully with others		x				x		
Space fosters a sense of community		x						x
Space is flexible and accessible to adapt to diverse needs and activities								x
Space supports diverse cultural practices and ceremonies (i.e., smudging, ablution, prayer)								x

while low physical effort could align with the importance of creating restorative environments that reduce emotional and cognitive load, something that could assist with self-regulation and focus of students with ADHD. Universal Design in campus spaces can promote inclusivity, reduce stigma, and create environments that are inherently supportive of mental well-being (Burgstahler, 2022). By integrating Universal Design principles with the specific design features known to support mental health, postsecondary professionals, ranging from campus planners to student service providers, can create more holistic environments. These spaces can better accommodate the diverse needs of the student population, potentially reducing stress and improving overall mental well-being on campus.

Emotions as an Indicator of Mental Health

Given the World Health Organization's (2022) definition of mental health, there are many ways to approach it in the context of this research. Emotions play a pivotal role in mental health and are essential to the concept of well-being. They serve as indicators of how we react, respond, and cope with stressors (Zautra et al. 2005), influencing our emotional experiences (Shuman and Scherer 2015). These emotional experiences, in turn, can either facilitate or impede our ability to navigate daily life events (Zautra et al. 2005). Emotional affordance represents the ability of an environment to promote a cohesive emotional reaction by meeting an individual's social and psychological requirements and offering opportunities for the development of a sense of identity, pleasure, and agency (Karol & Smith, 2021). Previous research indicates that emotional responses to the built environment or its features may manifest in patterns of use, habits, and social connections (Karakas & Yildiz, 2020). For example, spaces that induce relaxation or happiness may encourage people to spend more time in those areas, whereas environments that incite stress or discomfort may be avoided. Similarly, the built environment can influence the development and maintenance of social connections by promoting or discouraging interaction among its occupants.

Studying emotions in relation to the built environment helps us understand the complex ways in which our surroundings affect our mental health. This approach also aligns with the reality that mental health exists on a continuum, affecting everyone to varying degrees. By probing emotions, we can see how they are shaped by our surroundings or how they play a role in shaping spaces. The knowledge gained from exploring emotional responses and experiences can guide the development of more inclusive, supportive,

and stress-reducing built environments, ultimately enhancing mental health for those who live and work within them.

Methods

The goal of the present study was to explore the question, *Where do students go on campus when experiencing certain emotions and when in those spaces, how do they perceive the influence of design features?* The study took place at Carleton University, a comprehensive, medium-sized institution located in Ottawa, Ontario, Canada. Established in 1942, Carleton is an urban-based, single-location campus that is situated on unceded Algonquin territory beside the Rideau Canal and Rideau River. The University was founded by the community and offers academic programs and conducts research across multiple disciplines at the undergraduate, graduate, and professional levels.

Recruitment for student participants was conducted from March to April 2022 using a purposive sampling approach to ensure that participants met specific criteria relevant to the study's objectives. To be eligible for the study, students had to meet the following criteria: they needed to be eighteen years of age or older, able to read and write in English, currently enrolled as undergraduate or graduate students at the university, and familiar with the university's physical campus. The study received clearance from the research ethics board. Participants were recruited using multiple channels, including departmental administrators, professors, the disability student services office, student services and societies, and Sona, a research participation tool.

The study was open to the general student population. This decision was made because of the number of students who struggle with mental well-being but perhaps do not identify as being mental ill or even relate to the broader concept of mental health. For example, many students may experience mental health challenges but never seek a formal diagnosis, or they may be diagnosed with conditions that are not typically recognized as disabilities in traditional frameworks (e.g., emotional distress, trauma survivors, sensory processing disorders, chronic stress). By avoiding the limitation of specific diagnoses, this study captured a broader, more inclusive spectrum of experiences, ensuring that students who did not meet diagnostic criteria were still recognized and included.

The primary data gathering method used was a questionnaire developed specifically for this study. The questionnaire had two parts: first, open-ended questions about how emotions relate to campus spac-

es; and second, a slider-scale question where students rated the perceived influence specific design features may have, based on the emotion statements. For the first part of the questionnaire, six separate emotion statements were introduced to participants (i.e., you are happy, sad, afraid, angry, surprised, or disgusted) to which they responded where they would go on campus when they felt this way. For example, “You are feeling happy or joyous. Where do you go on campus?” Respondents were asked to be as specific as possible when entering their answer in a text box. This process repeated for each of the six emotions. For the second part of the questionnaire, respondents adjusted a slider for thirteen distinctive design features to indicate how strongly a particular feature in the space may influence their decision to go there. The design features provided were determined by the results of the literature review conducted for the study (Table 1). The slider ranged from 0 (feature had no influence) to 100 (feature had the strongest influence), increasing in increments of ten. Respondents could also share other features not included in the original list. There was a “not applicable” option should a particular feature not apply.

MAXQDA 22, a qualitative analysis tool, was used to conduct deductive thematic analysis, using key words that could describe perceived direct and indirect influences of the built environment (Evans, 2003) and that repeatedly appeared in responses (Table 2).

Additionally, the Statistical Package for Social Sciences (SPSS) software platform was used to conduct preliminary descriptive analyses (frequencies and means) for the design elements.

Results

Participants

A total of 141 students responded to the questionnaire with one-third of the participants responding to voluntary demographic questions. The participants were predominantly undergraduates (93%), with a smaller proportion of graduate students (7%; see Table 3). The distribution across years of study was varied, with 11% in their first year, 30% in either their second and third years, 20% in their fourth year, 7% in their fifth year, and 2% in their sixth year or beyond. Twenty percent of participants identified as first-generation university students, while 80% reported that at least one family member had previously attended university. Twenty percent of the participants self-identified as having a disability. The ethnocultural background of the participants was predominantly White (57%), followed by smaller percentages of Asian (5%), Black (7%), Chinese (7%), Indian (2%),

Japanese (2%), Middle Eastern (2%), Nigerian (2%), Other (7%), Russian (2%), South Asian (5%), and Ukrainian (2%). Gender distribution showed that 23% of the participants identified as men, 75% as women, and 2% as non-binary.

Where Students Go on Campus

Students were asked where they would go depending on the emotions they experience. Students named a total of 35 unique campus buildings or areas. The top five spaces frequented by students across all emotions include the Library ($n = 101$), the outdoors ($n = 73$; e.g., walking by the Rideau River), University Centre (i.e., student union building; $n = 72$), Athletics ($n = 41$) and Richcraft Hall ($n = 25$), an academic building with a living wall and that overlooks the natural landscape of campus, including the Rideau River.

The selection of the Library was especially noticeable when students responded to emotion statements that could be perceived as negative, such as “sadness” ($n = 27$), “fear” ($n = 16$; tied with the University Centre), “surprise” ($n = 14$), or “disgust” ($n = 10$). The University Centre was the most common building when students experienced “happiness” ($n = 24$) and “fear” ($n = 16$; tied with the Library). The Athletics Complex was also a popular spot for students, particularly when they were “angry” ($n = 17$) or “happy” ($n = 13$).

Some students provided additional insights as to why they might go to a particular space on campus ($n = 23$). Regardless of the space named, the most frequented comments across all emotion statements related to sound ($n = 13$; see Table 4). For example, two students wanted to be somewhere they could be comfortable making or being around noise. As one student stated, “If I want some background noise, I will likely go to one of the tunnel seating areas.” Nine students indicated wanting quiet places, as indicated by one student who noted, “I will go somewhere for privacy and quiet like a study room in the library.”

The second most often used words related to crowding ($n = 9$). In seven of the responses, students expressed a desire for spaces where there were no people, while two students indicated they would seek out specific individuals to connect socially. For example, one student mentioned, “Tunnels (one of the many seating areas at the tunnel-level of a building where there are not many other people),” or “Try and find somewhere that is deserted, with no one else (or very few people) around and is very quiet.” Conversely, two students responded that they would seek out specific people, as represented by this comment: “I may be at Azrieli Pavilion, fourth floor, where other people of my program usually are.”

Table 2*List of Key Words Based on Evans (2003) that Repeated in Qualitative Responses*

Direct influences	Indirect influences
Crowd* or People or Busy* or Alone or Deserted or Priva*	Social or People or Commun* Friend*
Noise or Sound or Quiet or Loud or Traffic	Restore or Fatigue or Tired or Stress* Destress*
Light	Control
View or Out*	
Air	

Note. * denotes variations of the word may appear in the responses (e.g., priva* is inclusive of private, privacy)

Table 3*Demographic Information*

Demographic Information	Percentage
Level of Study	
Undergraduate	93
Graduate	7
Year of Study	
First	11
Second	30
Third	30
Fourth	20
Fifth	7
Sixth or more	2
First Generation	
Yes	20
No	80
Disability	
Yes	20
No	80
Ethnocultural	
Asian	5
Black	7
Chinese	7
Indian	2
Japanese	2
Middle Eastern	2
Nigerian	2
Other	7
Russian	2
South Asian	5
Ukrainian	2
White	57
Gender	
Man	23
Woman	75
Non-binary	2

Table 4*Frequency of Use of Associated Words in Qualitative Comments When Going to Spaces*

Direct influences	Number of occurrences	Indirect influences	Number of occurrences
Crowd* or People or Busy* or Alone or Deserted or Priva*	9	Social or People or Commun* Friend*	7
Noise or Sound or Quiet or Loud or Traffic	13	Restore or Fatigue or Tired or Stress* Destress*	2
Light	0		
View or Out*	3		
Air	1		

Note. * denotes variations of the word may appear in the responses (e.g., priva* is inclusive of private, privacy)

The Influence of Design Features

Students were asked how strongly particular design features in a campus space influence their decision to go there. Four design features ranked in the top features of influence, based on mean values, when students were selecting space (see Table 5). Participants perceived layout, orderly and clean, access to natural light, and noise control as having a stronger influence across all emotion statements, which could indicate these features are prominent in space preferences of students.

The features with perceived less influence included spaces that support diverse cultural practices, indoor air quality, temperature control, and the ability to connect meaningfully. Notably, the feature “connect meaningfully” showed the largest variation in mean scores, ranging from 46 when students were

sad to 66 when they were surprised. While not a primary consideration for space overall, when students are surprised or happy, they may prioritize spaces that support more meaningful connections.

Additional patterns emerged when looking at emotions that could be perceived as negative (e.g., sadness, anger, surprise or disgust). When students experienced these emotions, they were more likely to consider features such as layout and orderly and clean. This finding indicated that when in a negative emotional state, students could become more sensitive to the orderliness and hygiene of their environment. Students experiencing negative emotions were also less likely to consider space because of indoor air quality and temperature control which may point to a prioritization of more tangible or visually apparent design elements, such as layout and cleanliness.

Table 5

*Mean Values Indicating Level of Consideration Students Gave Coping Strategies on Space Selection
(Values could range between 0-100)*

Happy		
Design Features	Responses	Mean Values
Access to natural lighting	90.00	76.00
Orderly and clean	96.00	69.79
Access to a view of nature	88.00	69.09
Layout	97.00	65.26
Access to comfortable furniture	87.00	65.17
Fosters sense of community	89.00	65.06
Connect meaningfully with others	88.00	64.66
Quality of indoor lighting	82.00	63.54
Flexible, adaptable, accessible	91.00	62.75
Temperature control	85.00	57.88
Indoor air quality	75.00	56.27
Noise control	83.00	54.34
Supports diverse cultural practices	48.00	32.29
Sad		
Design Features	Responses	Mean Values
Noise control	77.00	74.29
Layout	79.00	73.42
Orderly and clean	76.00	70.53
Access to comfortable furniture	75.00	66.00
Access to natural lighting	74.00	65.54
Access to a view of nature	73.00	65.07
Quality of indoor lighting	69.00	58.12
Temperature control	73.00	56.44
Flexible, adaptable, accessible	65.00	52.77
Indoor air quality	62.00	50.65
Fosters sense of community	62.00	48.39
Connect meaningfully with others	61.00	46.07
Supports diverse cultural practices	24.00	32.08
Afraid		
Design Features	Responses	Mean Values
Layout	68.00	70.88
Noise control	73.00	64.11
Orderly and clean	74.00	62.70
Access to natural lighting	61.00	62.13

Access to comfortable furniture	70.00	60.29
Fosters sense of community	63.00	58.73
Quality of indoor lighting	64.00	56.88
Flexible, adaptable, accessible	59.00	56.44
Access to a view of nature	61.00	56.39
Indoor air quality	57.00	54.74
Temperature control	67.00	52.39
Connect meaningfully with others	60.00	51.83
Supports diverse cultural practices	21.00	32.38

Angry

Design Features	Responses	Mean Values
Layout	63.00	69.37
Orderly and clean	59.00	67.12
Access to natural lighting	57.00	65.79
Access to a view of nature	57.00	59.82
Noise control	60.00	58.50
Quality of indoor lighting	48.00	57.92
Temperature control	56.00	55.71
Access to comfortable furniture	50.00	52.60
Flexible, adaptable, accessible	53.00	52.45
Fosters sense of community	55.00	51.09
Indoor air quality	42.00	50.24
Connect meaningfully with others	51.00	50.20
Supports diverse cultural practices	16.00	36.88

Surprise

Design Features	Responses	Mean Values
Access to comfortable furniture	55.00	68.00
Orderly and clean	57.00	66.67
Connect meaningfully with others	52.00	65.96
Layout	56.00	64.46
Fosters sense of community	52.00	64.42
Access to natural lighting	48.00	61.04
Noise control	56.00	60.00
Access to a view of nature	47.00	57.66
Flexible, adaptable, accessible	43.00	57.44
Quality of indoor lighting	51.00	57.06
Temperature control	48.00	53.13
Indoor air quality	43.00	50.93
Supports diverse cultural practices	14.00	31.43

Disgust

Design Features	Responses	Mean Values
Orderly and clean	44.00	67.27
Layout	45.00	67.11
Noise control	46.00	63.04
Access to natural lighting	43.00	61.63
Flexible, adaptable, accessible	36.00	59.17
Access to a view of nature	39.00	56.92
Access to comfortable furniture	40.00	55.75
Fosters sense of community	39.00	54.87
Connect meaningfully with others	39.00	53.59
Quality of indoor lighting	37.00	52.16
Temperature control	41.00	50.00
Indoor air quality	33.00	47.58
Supports diverse cultural practices	11.00	33.64

When it came to noise control, there was a slightly different pattern. This feature was given stronger consideration when experiencing sadness, fear, and disgust.

The majority of the features had a mean value above 50 regardless of the emotion experienced. This finding suggests that students generally consider most spatial features to have a significant influence on their experience and a relative consistency in how students perceive the importance of these features, even as their emotional states change. The most notable exception to this finding was with the feature of “support diverse cultural practices,” where the mean was at its highest point when students were angry ($M = 36.88$) and lowest when surprised ($M = 31.43$). While this could suggest that students perceived this feature as less influential compared to others, it may also represent a lack of awareness for the importance of cultural practices in informing inclusive campus environments.

Overall, features consistently scoring above 50 across emotions may represent key priorities for students when considering spaces, while those with more variable scores might be seen as less critical. These findings suggest that while most features are generally considered important, there are subtle variations in how they are perceived based on emotional states.

Discussion

The Need for Dynamic Spaces

This study explores the concept of accessibility in the campus built environment, including the use of space for emotional access or affordance, by

examining it through design features (see Table 1). Having dynamic, emotionally accessible spaces are an important consideration for postsecondary institutions, particularly when considering student mental well-being, because these environments directly affect students' ability to learn, engage, and thrive both academically and personally. For example, neurodivergent students may process sensory information differently or struggle with emotional regulation, making a traditional, rigid environment overwhelming or restrictive for some. Students with mental health considerations can experience fluctuations in their emotional states, which impact their ability to focus, socialize, or participate campus life.

In this study, students used the same areas within the library or cafés for various purposes, including venting to friends, seeking privacy or a sense of disconnection, and studying, emphasizing a need for flexible, dynamic spaces. Spaces like student unions (e.g., University Centre) and libraries were important considerations in students' decision-making. From a space design perspective, having environments where students can discuss, debate, and converse are environments where meaningful learning takes place (Kolb & Kolb, 2005) while fostering connection with peers. This finding is representative in the evolution of informal learning spaces, such as library cafes becoming multi-functional hubs to support student experiences (Deng et al., 2019). Other research studies have found that student hubs and libraries provide opportunities for flexible, more personalized experiences particularly around socialization, connection,

and community building, which can positively impact students' overall postsecondary experience and academic success (Deng et al., 2019; Hurst, 2013; Lugosi, 2019; McLane & Kozinets, 2019).

Postsecondary institutions need to consider the design of multi-purpose spaces to reflect the nuanced understanding of the diverse, and at times conflicting, needs and activities of students. For instance, libraries, cafes, or student unions that are emotionally accessible can be designed to promote connection and engagement but also need to have flexibility to reduce sensory overload, provide quiet or calming areas, and offer features that accommodate different cognitive needs. By accommodating a spectrum of activities, such spaces directly influence more accessible experiences for students and recognize the importance of adaptability and personalization. Dynamic spaces are also instrumental in allowing students to build a sense of community. Such environments enable students to interact with peers, share experiences, and find support, which can mitigate feelings of isolation and loneliness and is particularly important for some mental-health related conditions (e.g., depression) and overall mental well-being. Furthermore, it is worthwhile for postsecondary institutions to consider how multi-functional hubs can be intentionally designed with mental health in mind, integrating direct support services within these spaces. Counseling centers, wellness workshops, and other mental health resources positioned in accessible, non-stigmatizing locations can encourage students to engage with support services, fostering a campus culture that prioritizes care and support.

The imperative for dynamic environments is underscored by the factors that draw students to, or perhaps deter them from, various campus spaces. This attraction or aversion illuminates the role that spaces play in meeting the multifaceted demands of student life but also presents some challenges. For example, students referred to social connection (e.g., access to communal spaces, wanting to meet up with friends, or being with other members of their program) as a motivator for where they would go on campus. Previous research on mental health and well-being and the built environment echoes the desire for the built environment to support social needs and connection (Deng et al., 2019; Hurst, 2013; Lugosi, 2019; McLane & Kozinets, 2019). However, it is important to note that social connection can also act as a deterrent in certain spaces. This finding is supported by feedback from students who expressed that some areas felt crowded due to an excessive number of people, or they actively avoided certain spaces if their friends were present, preferring solitude instead.

Qualitative data demonstrated that 44% of students used words that indicated sound, crowds, or busyness of space were deterrents in campus space selection. This finding provides support for other research that demonstrates environmental factors such as noise, overcrowding, and lack of privacy can negatively affect mental health (Evans & Kim, 2013). Sullivan & Chang (2011) noted that prolonged exposure to crowded and noisy environments can result in poor psychological outcomes including depression. The concept of crowding can also extend beyond the physical space itself. The social, cultural, and psychological contexts that shape spatial behavior influence the interpersonal distances with which we feel comfortable (Rios-Martinez et al., 2015). Consequently, these factors can impact our level of comfort and shape our social interactions (Nasrallah & Pati, 2021). When examining this through the lens of disability, neurodivergent students with sensory processing considerations, such as those with autism, might find it difficult to process multiple voices, body language, or even the ambient noise of social spaces. Such experiences can cause them to withdraw, leading to feelings of isolation, despite the intention of the space being inclusive.

The juxtaposition of attraction and aversion to certain spaces on campus sheds light on the complex role that physical environments play. This duality emphasizes the need for spaces that are not only conducive to learning but also support the varying needs students may have in pursuit of mental well-being. While some students thrive in social settings, others might find solace and productivity in quieter, more solitary environments. Understanding these challenges and designing spaces that allow for personal control, privacy, and sensory accommodations will ultimately help students feel more comfortable, supported, and engaged, potentially leading to better academic outcomes, social well-being, and mental health.

The Need for Restorative, Natural Spaces

Engagement with spaces designed for restoration can reduce emotional stress and support students with mental health concerns and contribute to improved health outcomes. Restoration spaces often promote renewal of cognitive energy (i.e., attention restoration), emotional management (i.e., emotional regulation) and stress management, such as quiet spaces for reflection and relaxation (Evans, 2003; Hoisington et al., 2019; Peters & D'Penna, 2020; Shepley et al., 2016; Wyles et al., 2019) both of which are key in managing mental well-being. Such spaces are of particular importance for students with mental health considerations (e.g., depression, anxiety, neurodivergence) because these students often face heightened

emotional and sensory sensitivities, which can make it challenging for them to manage stress, anxiety, and other emotional responses. Using nature-based strategies to regulate emotions can lead to increased positive emotions and decreased negative ones, fostering restorative psychological outcomes (Vitale & Bonaiuto, 2024). Research has shown that various types of landscapes and environments, including green spaces and areas with pleasant and natural sounds, can have a significant impact on the restoration of psychological and physiological function (Hipp et al., 2016; Kaplan & Berman, 2010; Peters & D’Penna, 2020; Zhang et al., 2023). The present study suggests that restorative spaces on campus may play a role in how students use space. For example, many students referenced the Rideau River, which showed up across all emotion statements as a space students would go to. Additionally, students referenced the Quad (an outdoor natural space on campus) and the indoor space of a building on campus, Richcraft Hall, which has windows that overlook the river as well as a living plant wall with a water feature.

For postsecondary institutions, the significance of restorative spaces and their impact on emotional regulation and mental health presents an interesting concept to explore. These spaces serve a vital role in creating an inclusive, supportive environment that caters to the diverse needs of students. By providing restorative spaces that assist in emotional regulation and stress reduction, institutions can help bridge the mental health gap, promoting equity across the student population. Beyond academic accommodations and accessibility services, prioritizing mental well-being is crucial for the comprehensive success of students with disabilities. Engagement with restorative environments can help students develop coping strategies and resilience, which are key factors in navigating postsecondary life.

Limitations

Generalizability

The study engaged participants that met defining characteristics, most notably of which was that students needed to have familiarity with the built environment of the campus. Given the study was conducted during a time when access to campus was restricted due to the COVID-19 pandemic, it was essential that study participants have previous exposure to the campus environment in order to name campus spaces that they might go to based on their emotions. While this requirement does limit generalizability to those without experiences of the built environment on campus (e.g., those in first year of study), it ensured a relevant, focused sample for the exploratory study.

The findings can still provide early insights into understanding how students use the campus based on their emotions and what spaces are sought more often than others. While the study was limited to one campus, the results indicate the use of spaces that are common elements on urban campuses (e.g., student unions, libraries, outdoors) that could later be examined in other settings.

At the end of the study, participants were asked demographic questions. The decision to make demographic questions voluntary was guided by an ethical consideration for participants to contribute to the study without feeling compelled to disclose personal information they might consider private. One-third of respondents provided demographic information which could limit the study's generalizability, as it may hinder the ability to assess whether the sample adequately represents a broader target population. For instance, it could be a challenge to determine if the findings are applicable across differing abilities or age groups. This lack of detailed demographic insights could mean that the study's conclusions may not be representative of diverse populations, reducing the reliability of applying the results to a wider context. That said, the study focused on common emotional experiences as representative of mental well-being rather than demographic variables, which suggests that the results can still offer valuable insights. Future studies can build upon this work by collecting more detailed demographic data to assess the transferability of the results to specific populations.

Gender

Another factor that may have impacted the results is the imbalance in gender self-identification in that the majority of the respondents identified as female (76%). Gender bias may be evident in the types of campus spaces shared by students. One study indicates that women exhibit greater active engagement, value aesthetics, and experience wellbeing associated with green spaces, suggesting a stronger connection to and appreciation for nature compared to men (Ode Sang et al., 2016).

Ethnocultural Groups

The study did not include culturally specific mechanisms (e.g., norms, values, beliefs, or practices; Matsumoto & Hyisun, 2022). Without these mechanisms, there would be difficulty in understanding how culture influences or contributes to student mental health and wellbeing as culture plays a role in shaping the processes of emotion (Chiao, et al., 2022).

Practical Implications

Understanding the link between mental health and the built environment can help tailor supportive, accessible campus spaces to enhance student outcomes. Strategies informed by this research can develop environments that reduce stress, improve focus, and enhance engagement, ultimately supporting diverse student needs more effectively. This research has practical implications for postsecondary professionals, including postsecondary institutions and professionals within the institutions such as disability service providers and educators.

Supporting Student Success

Postsecondary professionals, such as learning strategists, may be interested in how environmental factors influence learning styles, outcomes, and student mental well-being. Research findings can guide the development of strategies to create learning environments that cater to diverse student needs, reducing stress and enhancing focus and engagement. For example, disability service offices could design workshops or resources to help students navigate challenging campus environments by identifying and mitigating stressors related to their physical surroundings. By understanding how specific environmental factors relate to mental health, disability service providers can recommend targeted accommodations for students.

Supporting the Development of Dynamic and Multi-Purpose Spaces

The research supports the development of campus spaces that broaden the scope of what is deemed accessible. For postsecondary professionals, including disability service providers, “accessible” means designing environments that are not only physically accessible but also emotionally supportive, and offering a range of affordances to meet diverse emotional and psychological requirements. These spaces should be accessible and adaptable to different needs, incorporating sound-dampening materials and design elements to manage noise levels. Such features could be useful for students who experience different ways of sensory processing or are triggered by noise (e.g., autistic students, trauma survivors). Ensuring that spaces can be modified by students to suit their specific needs, while also addressing sensory requirements like lighting, acoustics, and temperature control, will enhance overall accessibility and give students a sense of control. Thoughtful design features that encourage feelings of safety, agency, and relaxation can enhance both accessibility and emotional affordance, and promote a balanced environment that supports

academic success, personal identity, and overall mental well-being.

Cross-Campus Collaborations

Disability service offices and other professionals can take on leadership roles in cross-campus collaboration. Partnering with facilities management and campus planning departments can result in developing dynamic and accessible spaces designed to support restoration and emotional regulation. Additionally, collaboration can influence the strategic placement of support services across campus. For instance, if many students frequently use the library, establishing satellite service desks in this high-traffic area can make accessing support services more convenient. This approach increases the visibility and accessibility of resources and helps normalize seeking help in everyday settings rather than clinical environments. By integrating support services into commonly used spaces, institutions can reduce stigma, facilitate easier access, and encourage students to utilize these resources more regularly.

This research underscores the importance of integrating mental health considerations into the design of campus environments and the strategic placement of support services. By understanding the relationship between the built environment and mental well-being, postsecondary professionals can create campus spaces that not only accommodate diverse student needs but also actively support their mental health.

Conclusion

This research holds significant importance for students with mental health disabilities, offering valuable insights into creating more accessible and inclusive campus environments. By focusing on accessibility rather than solely on disability, the research encompasses a broader spectrum of mental health challenges, including those without formal diagnoses. This approach aligns with the reality that mental health exists on a continuum, affecting all students to varying degrees.

The study's findings emphasize the critical role of the built environment in influencing students' emotional well-being and coping mechanisms, which is particularly relevant for those facing mental health challenges. By highlighting how students gravitate towards specific areas based on their emotional states, the research provides a framework for designing spaces that can serve as effective coping tools. For instance, the library's popularity during negative emotional experiences suggests its potential as a comforting sanctuary for students. The identification

of key design features such as layout, cleanliness, access to natural light, and noise control as consistently influential factors across all emotional states is especially valuable when considering overall student mental well-being. Awareness, support of, and mitigation of these features can help reduce stress and provide a more comfortable atmosphere. Furthermore, the promotion of dynamic, multi-purpose spaces addresses the diverse needs of students with mental health disabilities, potentially mitigating feelings of isolation and promoting social connection.

By creating flexible spaces that allow for personalized experiences, postsecondary institutions can better accommodate the varying needs of students with mental health disabilities, ultimately enhancing overall experiences and mental health outcomes for all students.

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