Access and Inclusion: The Experiences of Postsecondary Students with Mobility-Related Physical Disabilities

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Abstract
Relatively little is known about how physical and social environments influence access to and inclusion in educational and leisure activities for students with a mobility-related physical disability attending a post-secondary institution. Understanding how environments shape access is important because educational and leisure activities affect one's emotional, social, mental, and physical health. The aim of this qualitative exploratory study was to gain an understanding of the lived experiences of access and inclusion for students with a mobility-related physical disability, and specifically, the barriers and facilitators within the physical and social environments which shape access and inclusion. One-on-one semi-structured interviews were conducted with nine students attending a post-secondary institution in Nova Scotia, Canada who self-identified as living with a mobility-related physical disability. From an analysis of the interviews, five themes emerged: 1) navigating disclosure; 2) invisibility (and passing) and visibility; 3) accommodations and supports; 4) the prevailing conceptualization of mobility-related disabilities; and 5) places and spaces for the "normal" body. Although there have been actions taken by the post-secondary institution to transform environments and improve access and inclusion, additional efforts are urgently needed, and it is suggested that Universal Design is one possible strategy.

Introduction

Access to resources and services is a constitutional right for all people living with a disability in Canada (Council of Canadians with Disabilities, 2004). Many individuals, however, continue to experience barriers to access and inclusion in numerous settings including post-secondary institutions (Council of Canadians with Disabilities, 2004). Universities are environments where access and inclusion are critical. In this context access includes the ability of students to "get there", and inclusion encompasses the ability of students to remain in these spaces, participate fully, and have their contributions valued (Negrón-Gonzales, 2017; Oliver, 1996). Within a capitalist neoliberal society, access to post-secondary education enables individuals to meet neoliberal values of productivity and individual responsibility and is a means to wealth (Shanouda & Spagnuolo, 2021; Tesh, 1995). Long-term health is also linked to educational attainment given that those with higher incomes tend to have better overall health than those with lower incomes (Mikkonen & Raphael, 2010). In this context, access to post-secondary education and associated experiences within the institution is important for one's health, and it is also a matter of social justice that disabled students access education as easily as non-disabled students (Baker, 2019).

Studies have explored barriers and facilitators for students with mobility-related physical disabilities within post-secondary institutions in Canada and internationally, highlighting barriers and facilitators within the classroom (Osborne, 2019; Ostrowski, 2016). However, the postsecondary experience involves additional educational activities outside of the classroom such as paid research positions, study sessions, and use of the library. Leisure activities are also a part of the postsecondary experience (Martin & Griffiths, 2016). Leisure activities, defined as activities that bring meaning to an individual's life (Iwasaki, 2007), are critical for all students,

and access to leisure activities within a post-secondary setting is important for individuals' health

including their social, emotional, mental, and physical health given the links between leisure and

health (McQuoid, 2017). Leisure activities support, for example, social connectedness, help to

manage and reduce stress, and often involve physical activities which are important for mental

and physical health (Jessup et al., 2010; McQuoid, 2017). There has been research on access to

physical activity in postsecondary institutions for students with disabilities (Devine, 2016), but

access to a variety of leisure activities (e.g. social clubs, art events) also contribute to social,

emotional, mental, and physical health and therefore access to these activities is also imperative.

Discussions of access to such a variety of leisure activities appear less frequently in the literature.

This qualitative study explored access to educational and leisure activities, focusing on

how the physical and social environments within a post-secondary setting in Nova Scotia,

Canada shape access for students with mobility-related disabilities[1]. The physical environment

was defined in terms of the natural environment (e.g. weather, naturally occurring terrain) and

the built environment (e.g. buildings, roads) (McKenzie et al., 2017). The social environment

followed the model outlined by McLeroy et al. (1988) which conceptualizes the social

environment as having different components or levels which include the intrapersonal (e.g.,

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[1] The language used to describe people with disabilities has changed over time but for the purposes of this study the term "disability" was used as this term was reclaimed by the disabled community in the early 1980s (Hosking, 2008). Person-first language has largely been used in scholarly writing (e.g. "student with a disability"), to help reduce stigma towards individuals with disabilities (Dunn & Andrews, 2015). However, there has been a growing movement among disability rights communities and disabilities studies scholars to promote the use of identity-first language (e.g. "disabled student") because it places greater value and pride on the collective and cultural experiences of being disabled (Dunn & Andrews, 2015). Some argue that person-first language separates the person from the disability, suggesting a negative connotation to the disability, whereas disability is seen as neutral or positive with identity-first language (Dunn & Andrews, 2015). The desire to utilize person- or identity-first language as an individual may depend on one's stage of disability identity development (Dunn & Andrews, 2015). Both terms are used throughout this paper given that the authors are outsiders to this community. The first author has some some knowledge of the disability community through a family member's disability.

beliefs, skills, knowledge, experiences), interpersonal (e.g., relationships with friends),

organizational (e.g., policies and services within the organization), community (e.g.,

relationships among organizations), and public policy (e.g., provincial policies).

Current research on barriers to access within postsecondary institutions indicates that

there are a number of barriers in both the physical and social environments (Baker, 2019;

Moswela & Mukhopadhyay, 2011). The physical environment presents barriers such as stairs

leading to buildings (Myers et al., 2014), and the social environment creates barriers including

institutional administrative arrangements which prevent students from receiving appropriate and

timely accommodations (Baker, 2019). It is important to understand the potential array of access

barriers to identify ways to improve accessibility. Further, it is imperative to understand how any

changes to the environment that have transpired over time given the increasing understanding of

disabilities and the rights of people with disabilities, might or might not support inclusion. First-

hand experiences of individuals with mobility-related disabilities are needed to inform

opportunities for change as those who do not live with a mobility-related physical disability do

not necessarily know if a given environment is truly accessible (McMillan et al., 2016). For

example, a student first-hand experience of a new building at a Canadian postsecondary

institution which had an automatic door at the front of the building but none inside, highlighted a

barrier to attending classes which was not foreseen by building designers (Myers et al., 2014).

Our study focused on students who self-identified as having a mobility-related physical

disability. However, the researchers acknowledge that students with such disabilities are not the

only ones who can speak to barriers and facilitators within both the physical and social

environment. Individuals with many types of disabilities including mental health and sensory-

related disabilities may also be impacted by the physical and social environment. The rationale

for specifically seeking the perspectives of those with mobility-related disabilities is that, in the

Canadian context, the most prevalent type of disability for those over 15 years old is related to

pain, flexibility and mobility (Statistics Canada, 2015). The province of Nova Scotia has the

highest prevalence of disability in Canada (Statistics Canada, 2015) although, Nova Scotians

with disabilities remain underrepresented in the student population (Myers et al., 2014). In

addition to barriers within post-secondary institutional settings, there may be barriers preventing

those with mobility-related disabilities from attending these institutions, such as feeling that they

do not belong (Foy, 2019).

Models of Disability

There are several key models for understanding disability that are briefly outlined to

highlight changes over time, and why the critical disabilities theory informed our study. The

medical or individual model of disability was prevalent in the mid-19th century (Hughes, 2002;

Olkin, 2002), underpinned by two key ideas: 1) that the 'problem' of disability is located "within

the individual"; and, 2) that "the cause of this problem" stemmed "from the functional

limitations or psychological losses which are assumed to arise from disability" (Oliver, 1996, p.

32). The social model of disability, which emerged in the late 19th century, rejected these tenets,

placing the 'problem' of disability within a society that fails to enable and meet the needs of

disabled people (Oliver, 1996; Olkin, 2002). Through the lens of the social model, individual-

level interventions for ensuring inclusion are inadequate as they do not address environmental

barriers (Dirth & Branscombe, 2017). Although the social model was much needed at the time, it

has been critiqued for not recognizing the complex relationship between the environment and

bodily experiences of disability (Hosking, 2008).

The theoretical framework that informed our study was critical disability theory which builds upon the social model of disability and argues that "disability is not fundamentally a question of medicine or health, nor is it just an issue of sensitivity and compassion; rather, it is a question of politics and power(lessness), power over, and power to" (Devlin & Pothier, 2006, p.2). Critical disability theory challenges assumptions of able-bodied norms and productivity (Devlin & Pothier, 2006) and aims to identify and eradicate systems of oppression experienced by individuals with disabilities, and to do so through societal transformation (Hosking, 2008). Critical disability theory is inherently allied with race, feminist, class, and queer studies in terms of making sense of how exclusion and oppression occurs based upon multiple identities (Goodley, 2018). Critical disability theory was the lens through which data were analyzed for our study.

Disability in post-secondary institutions.

Dolmage (2017) argues that post-secondary institutions in Canada are neoliberal businesses, touting values of equity and inclusion while placing much of the responsibility of achieving such values on individuals. Further, Dolmage (2017) maintains that post-secondary institutions are motivated primarily by financial considerations unless changes are legally required in terms of equitable access for disabled students (Dolmage, 2017). Critical disability scholars have explored the role of post-secondary institutions as both "the key for the extension of social and economic rewards and opportunity in [neoliberal] society" (Baker, 2019, p. 100) and as an institution which "reproduce[s] the status-quo" (Baker, 2019, p.164) and contributes to the cultural production of a "normal" person in society. Disabled students are expected to take steps to emulate the "normal" student (white, able-bodied, middle/upper class, young) to be deserving of success (Baker, 2019). Numerous scholars argue that, in Canada, most post-

secondary institutions demonstrate little accountability to ensuring equitable access to education, and instead rely on the provision of individualistic accommodations to facilitate access (Baker, 2019; Dolmage, 2017; Shanouda et al., 2020; Shanouda & Spagnuolo, 2021). As disability scholars have argued, this process of providing accommodations essentially strives to assimilate disabled students into the institution or "normalize through accommodation" (Baker, 2019, p. 144) rather than changing the setting to suit all students, including those with disabilities.

Baker (2019) describes accommodations within the inherently ableist post-secondary environments as "symbolic" (Baker, 2019, p. 113), or a way for institutions to be seen as championing diversity and inclusion, but not guaranteeing access in practice. Receiving accommodations frequently involves the time- and energy-consuming requirement of providing medical documentation or "proof" from an external authority and "coming out" to staff, faculty, and other students (Samuels, 2003). For students with "invisible" disabilities such as chronic pain, the decision to "come out" as disabled can be a complex process involving claiming the label "disabled" and the stigma associated with this label, and dealing with the reactions of others (Samuels, 2003). Disclosure of an "invisible" disability is often met with skepticism or denial, hostility or mockery, suspicion, and silent disapproval (Samuels, 2003). For these reasons students with an "invisible" disability may prefer not to disclose or seek accommodations to avoid stigma and discrimination (Samuels, 2003). However, this can lead to challenges later if accommodations are needed (Samuels, 2003).

Disability and health.

Health promotion emphasizes the need to address environmental and social inequities in health, and not focus only on individual-level interventions (Batras et al., 2016; Fry & Zask, 2017; Lupton, 2015). Despite this, scholars have noted that within a neoliberal society,

government and commercial initiatives centre on personal responsibility in managing health (Fry & Zask, 2017; Lupton, 2015; Veitch, 2010). Examples of this individualization of health include promoting "lifestyle" changes such as eating healthy and exercising to improve health (Fry & Zask, 2017; Lupton, 2015; Veitch, 2010). The individualization of health is inherently problematic given the majority of factors affecting health are out of one's control (Mikkonen & Raphael, 2010). Individual responsibility for health is a neoliberal ideal, and shifts the moral and financial onus from governing bodies onto the individual, thereby creating inequities in health (LaMarre et al., 2017; Lupton, 2015; Shanouda & Spagnuolo, 2021; Tesh, 1995). Our study endeavors to reject the glorifying of "good" personal health and strives to identify ways to improve social and physical environments within the post-secondary environment to promote social equity in health.

Methodology and Research Design

The aim of this qualitative exploratory study was to gain an understanding of the lived experiences of post-secondary students with a mobility-related physical disability. More specifically, the key goal was to hear participants' stories of the barriers and facilitators to access and inclusion they faced in the post-secondary context. A modified grounded theory approach was utilized to develop a conceptual understanding of individuals' experiences. Strauss and Corbin (1998) note that a grounded theory methodology can be utilized to obtain conceptual ordering of key ideas, which goes beyond a simple description, and is the stage wherein the data are organized "according to a classificatory scheme" (Strauss & Corbin, 1998, p.19). Although conceptual ordering can be a precursor to developing a theory, Strauss & Corbin (1998) argue that it can also be the desired end point for researchers, as it is in our study. As Strauss and

Corbin (1998) note, "Some will use our techniques to generate theory, others for the purpose of doing very useful description or conceptual ordering (classifying and elaborating)" (p. 9).

Participants.

Recruitment for our study occurred by contacting academic program departments on the largest campus of the post-secondary institution where the study was conducted and asking that they distribute recruitment materials to students via email. The city campus of the post-secondary institution was chosen as the location for recruitment as it spans over two kilometers and thus allowed for an examination of potential barriers across distance. Inclusion criteria included being currently enrolled at the institution as a student, living with a mobility-related physical disability (self-reported), and having completed at least one year of studies at the institution to ensure experiences across a range of activities over a period that included different types of weather and seasons (e.g., how accessibility may be impacted by the presence of rain, snow, and ice). Students were eligible regardless of whether they had an accommodation plan. Support for adequacy and appropriateness of the sample size drew on the work of Patton(1990) who argues that 10-15 participants are reasonable for in-depth qualitative inquiry. Given that this was an exploratory study, the recruitment goal was 8-10 participants.

Data collection and analysis.

Data were collected through semi-structured interviews conducted by the lead author. The interview guide was developed by the first and second author in consultation with other team members, and it was reviewed for relevancy by a representative from accessibility services at the post-secondary institution. The representative was asked to review the interview guide because of their position working with students with a disability and their potential knowledge of some of the key challenges experienced by students on campus. The representative made no

suggestions for changes to the interview guide, and upon reflection, engaging students with a disability in this review may have been preferable as they may have provided some critical feedback. Engaging with students with a disability would also have highlighted their knowledge and expertise, rather than reinforcing the bureaucratic hierarchy within the post-secondary institution where accessibility services are viewed as experts and gatekeepers to access (Baker, 2019).

The interviews were voluntary and confidential, and at the time of the interview participants were assigned a pseudonym sourced from a random name generator. Interviews were transcribed verbatim by the lead author and analyzed using the constant comparative method and inductive analysis (Strauss & Corbin, 1998). Open coding (line-by-line) was utilized to identify key categories of barriers and facilitators, and focused coding (observing contexts within the data) helped to organize the categories thematically (Strauss & Corbin, 1990). To help ensure the credibility of the data interpretation, the lead author engaged in ongoing peer debriefing (Creswell, 2014) with the second author, as well as periodic debriefing with the other authors. Other credibility strategies used included rich description of the research setting and data collection procedures, and researchers' reflexivity as individuals without a mobility-related physical disability.

Participants

Nine students who self-identified as living with a mobility-related physical disability participated in this study. It should be noted that the presence of these students on campus suggests that they had sufficient socio-economic and/or familial or other supports to enable them to undertake an undergraduate and/or graduate degree (Shah, 2010). Of the nine participants, six identified as female and three identified as male. Although no other socio-demographic

information was explicitly collected, during the interviews additional socio-demographic information was revealed indicating that participants included a mix of graduate and undergraduate students.

During the interviews, a few participants shared how they experienced living with a mobility-related physical disability in addition to other coexisting conditions. Participants discussed a variety of health concerns such as mental health disorders, sleep disorders, skin conditions, and hearing impairments, and they shared how they experienced challenging environments through multiple embodied realities. Several participants also indicated that their experiences of pain (often daily), stiffness, and fatigue impacted their mobility. Some experienced pain due to a past injury, and others due to a long-term disability/condition. A few participants indicated that when they were recovering from an injury which occurred during a school term, mobility aids such as crutches were used. One participant experienced weakness on one side of their body, making walking or standing for long periods difficult, and another participant experienced low vision which made it difficult to move around campus in low-lit settings. Several participants noted that their pain, stiffness, and fatigue fluctuated depending on the day due to weather, stress, and other factors.

When volunteering to participate in the study participants identified themselves as living with a mobility-related physical disability. However, during the interview several participants indicated that they did not feel "that disabled", using the word "disabled" or "disability" only when speaking about having to disclose their disability. Several participants also stated that compared to some, they felt that their mobility-related challenges were relatively minimal.

Results

Participants' discussion of access and inclusion indicated that there were elements within both the physical and social environments on the post-secondary institution campus which represented significant barriers. Many students noted that even when the institution made efforts to support access and inclusion there were still some barriers to participation, or the efforts fell short of what they needed. At the same time, some participants spoke of aspects of the physical and social environments that did work or did support access. It should also be noted that various aspects of the social and physical environment were sometimes experienced differently by participants. For example, disclosure facilitated access for some but was a barrier for others.

From an analysis of the interviews five themes related to access and inclusion, and that highlight some key barriers and facilitators, were identified, and are discussed below: 1) navigating disclosure; 2) invisibility (and passing) and visibility; 3) accommodations and supports; 4) the prevailing conceptualization of mobility-related disabilities; and 5) places and spaces for the "normal" body. Participant quotes are used to illustrate key ideas and are identified by a pseudonym.

Navigating disclosure.

At the post-secondary institution where this study took place, and at the time of this study, organizational policies and norms required students with disabilities to disclose their disability to begin the process of receiving accommodations. This disclosure could be through formal avenues such as accessibility services in addition to informal avenues such as disclosing to instructors and peers. A few participants reportedly disclosed their disability formally *and* informally to receive accommodations, and that this disclosure led to support and understanding from instructors and peers. Several other participants discussed how their fear of others' reactions was a barrier to disclosure. Specifically, they feared that some people may not believe

they have a disability because their disability did not always require a mobility aid making it "invisible". Several participants experienced challenges with disclosing their disability, explaining that it was exhausting, uncomfortable, or could have potential repercussions. One participant, for example, feared that her professors would see her as less capable which could impact letters of reference. As Miriam explained:

"…if I was in a class and I suddenly was like, "Oh, I can't stay," I would still stay for the whole time […] because […] I just feel like I… have to. […] It's not really that I'm worried about missing content, I'm more worried about making a bad impression on the profs. […] like these are the people who are gonna, like, write my recommendations…"

Invisibility (and passing) and visibility.

Most participants had "invisible" disabilities which meant that they often "passed" as someone without a disability. This could be useful in interpersonal situations where they did not wish to disclose their disability but could be challenging in situations when they needed to receive accommodations but were met with disbelief or disapproval upon disclosure. There were a few participants who used a mobility aid which made their disability visible to others, and they were unable to avoid the stigma associated with having a disability. Two participants who used a mobility aid, Naomi and Eloise, indicated that they sometimes felt uncomfortable with how people reacted to them. As Naomi explains, "A lot of the attitude is just either pity or dismissal. So, people will either look at you too long or they won't look at you at all. […] there's either too much sympathy or none." Eloise explained that although her disability was visible due to her mobility aid, she was sometimes 'made invisible' when people saw her mobility aid and ignored her. She spoke of several instances when others bumped into her or did not give her enough space even though her disability was visible.

Accommodations and supports.

Participants reported several organizational supports available to help enable access within the environment, but which fell short of what was needed for access. For example, some participants explained that gaining an accommodation plan required a significant amount of work and yet could still be insufficient in terms of meeting their needs. Accommodation plans that permitted students to audio-record lectures, for example, were found to be inadequate for one student because the sound quality was poor given that the student had to sit at the back of the room to stand up frequently to relieve her pain.

Communication between the post-secondary institution and students about available organizational supports was also identified by a few participants as insufficient for enabling access, as were the high costs for renting wheelchairs, and re-enrolling in courses when a student was unable to complete the course or courses due to mobility challenges. Some participants also identified issues in the community of unreliable and challenging public transportation as falling short of what they needed. Although this is a community-level barrier, it impacts the students within the environment of the post-secondary institution because city buses travel onto campus and impact access to activities at the institution.

For some participants, accommodation plans were useful facilitators of inclusion. However, much of the support for inclusion was through informal interpersonal supports from family, friends, classmates, faculty, staff, romantic partners, or athletic trainers/coaches. Other organizational facilitators were unintentional in the sense that were available to all students such as online lectures and the availability of student bus passes during the summer months.

Often the work of ensuring access and participation in educational and leisure activities was undertaken individually. Participants discussed avoiding activities that would leave them

with little energy for school obligations, going to the gym to reduce stiffness and pain, hosting leisure activities in their own space, using pain or condition-specific medication, taking breaks, moving closer to campus, and paying the cost of having someone accompany them to a conference to help support them. The effort and hidden work of students with mobility-related disabilities to support their inclusion needs to be acknowledged because although accommodation services exist, many participants in this study found they were often ineffective at enabling full access and inclusion.

The prevailing conceptualization of mobility-related disabilities.

The comments made during participant interviews demonstrated that the prevalent conceptualization of "disability" in the post-secondary environment was that mobility-related disabilities are visible or can be known when one sees, for example, a walker, a cane, or a wheelchair. This was detrimental to those with invisible or less visible disabilities in instances where they had difficulty proving they had a disability. Another related issue discussed by one participant was the general perception or belief that chronic pain (which several participants experienced), mainly affects older adults and thus post-secondary students who tend to be young were not viewed as experiencing chronic pain. One participant discussed how, within the post-secondary institution, it was expected that chronic pain and fatigue would be static, unchanging, or predictable. Many participants noted, however, that their mobility could fluctuate for a variety of reasons such as the lighting of a space, the time of day, the weather, stress levels, and the level of fatigue or eyestrain. Viewing disabilities as static or unchanging can act as a barrier because it sets an expectation that students should be able to come to class each day, to plan ahead, and that any need for accommodations (or lack of need) is predictable and unchanging. For some students with disabilities this was challenging because their pain, stiffness, and/or fatigue varied day-to-

day. Miriam discussed how the expectation that she can predict how she might feel in a few weeks and thus her potential level of participation in future events caused her stress and she noted that she felt stressed whenever she had to sign up for an event: "… I'm like, "Okay, I'll sign up," but then I… like I don't know what's gonna happen a week and a half from now."

Mobility can also be impacted by disabilities involving sight. For example, Kathleen found it difficult to see in the rain with low vision: "… when it's dark and raining, for example, lights reflect off everything and it makes things really difficult to see." For her, it is difficult to participate in activities that occur at night, and as she explains, "I would say the main thing is just, like, the timing of events [if they happen] after dark. And I don't feel fully comfortable navigating spaces in the dark by myself." Kathleen also was not able to drive due to her disability but commented that there was an expectation from instructors and others at the institution that students are able to access activities off-campus because they can drive to such activities.

Places and spaces for the "normal" body.

Many participant comments pointed to the post-secondary environment as built to suit students *without* mobility-related disabilities. For example, distance between buildings on campus acted as a barrier for Kalim, who explained that students who experience pain or fatigue often did not have enough time to walk from one building to the next between classes. The temperature and lighting of building spaces was another barrier commented on by a few students. The temperature of classrooms was spoken of as often too cold, making pain and stiffness worse, and thus it was difficult to focus and take notes. One participant also discussed how the lighting was sometimes inconsistent, and that it was challenging to see in these dark spaces. Some participants also noted that there were some spaces on campus without elevators which made it

difficult for those using mobility aids. Participants further identified issues with doors not having activator buttons, opening the wrong way (towards the individual), doors that were heavy, and doorways with a step leading to the door which posed challenges for access. Eloise described challenges she experienced when she was using a scooter because of the lack of activator buttons on doors throughout some buildings on campus, and as she explained "… the hardest thing I found in [one building on campus] was that some doors are accessible, and then there's all kinds that aren't […]. The first few doors are all accessible. If you go into the wings, they're not."

Even certain changes made to the post-secondary environment which were intended to support access and inclusion often fell short of truly supporting participation. Physical elements such as steep and slippery ramps, ramps placed at corners with low visibility, small elevators, stairs leading to and from elevators, poor labelling of elevator location, uncomfortable seating, seating for disabled students only available at the back of the room, lack of available accessible parking spaces, and insufficient snow and ice clearing were discussed by participants.

Despite several barriers and elements of the environment that did not work, many discussed several aspects of the physical environment that helped or facilitated access and use of educational and leisure activities. Some facilitators were intentional insofar as they involved renovations and maintenance that supported inclusion (e.g., shallow ramps and snow clearing) but others were unintentional in that they were not implemented specifically for students with disabilities, but they did facilitate access. For example, the spacing of students in the desks they sit at during exams provided more room to reposition and reduce pain and stiffness and was considered a facilitator for at least one participant.

Discussion

Participants in this study described challenges they experienced in access and inclusion within the physical and social environments of the post-secondary institution thus affirming what is known about issues navigating disclosure, invisibility (and passing) and visibility, accommodations and supports, the prevailing conceptualization of mobility-related disabilities, and places and spaces for the "normal" body (Baker, 2019; Dolmage, 2017; Price et al., 2017; Samuels, 2003). Participant responses demonstrated how the individualization of disability and health prevails within the post-secondary institution. Individual time, money, and energy were often required of students with a mobility-related physical disability to participate in various educational and leisure activities. Others have also found that the onus of ensuring access and inclusion is frequently placed on students (Osborne, 2019; Ostrowski, 2016; Shanouda & Spagnuolo, 2021). It is important to acknowledge this effort and the hidden work of students with mobility-related disabilities, but also to take action to "lessen the demand for individual resilience" (Ignagni et al., 2019) by addressing environmental barriers. The additional work engaged in by students is an injustice and a hidden barrier to participating in various activities and may contribute to health inequities in so far as students may have less time, energy, and money to participate in activities on campus. Clearly, these environments point to a lack of equity in access between students with and without disabilities and individuals with disabilities experience mental, emotional, and/or physical stressors when navigating barriers within the post-secondary institution.

The analysis of participant interviews points to power dynamics within the post-secondary institution setting between the administrative control of accommodations, and disabled students who want or need an accommodation This issue has been identified by other

researchers such as Baker (2019), who argued that provision of accommodations relies on placing students in a vulnerable position wherein they must "plead" for accommodations (p. 144). Baker (2019) argues that the barriers to receiving accommodations and the inability of accommodations to promote true inclusion suggests that accommodations are mainly symbolic. Further, Baker (2019) argues that providing accommodations does not automatically create a more inclusive environment because students with disabilities become "normalized through accommodation" (p. 144). In other words, the diversity of students is not celebrated but is hidden when accommodations work to make disabled students "pass" in the post-secondary environment.

Rather than students with a disability being "normalized" into the institution, norms should be challenged through environmental changes that make disabled students' needs visible, such as the ready availability of accessible online materials and the use of captioned videos (Dallas & Sprong, 2015). These types of changes fall under the principles of Universal Design, defined in the 2005 Disability Act as "the design and composition of an environment so that it may be accessed, understood and used […] without the need for adaptation, modification, assistive devices or specialized solutions, by any persons of any age or size of having any particular physical, sensory, mental health or intellectual ability or disability…" (National Disability Authority, 2014). Universal design, coined in the 1970s by disabled architect Ronald Mace, aims to prevent the need for individual accommodations (Dallas & Sprong, 2015). The implementation of Universal Design would be beneficial for all students and would lessen the amount of work required by students with disabilities to obtain access (such as the work involved in obtaining documentation to prove their need for accommodations and to seek out those accommodations) (Scott et al., 2003). Universal Design also removes the challenges associated

with disclosure, and can be applied to leisure activities as it extends the design of accessible physical and social environments to student gyms and pubs. Some examples include accessible parking, accessible entrances, and accessible bathrooms. Although Universal Design "aims to create accessibility for the greatest range of bodyminds possible" (Price et al., 2017) there is no exhaustive and static checklist for creating a universally accessible environment as one modification can be a barrier for one person in one context, and a facilitator for another individual in another context. For Universal Design to be successful, it must be constantly evolving and flexible (Dolmage, 2015; Price et al., 2017). This need for flexibility was demonstrated and highlighted by many participants in our study. Although questions were posed to participants in terms of barriers or facilitators, what emerged in the responses was that some aspects of the environment, such as accommodation plans, can be an enabler for one person but a barrier for another.

Recommendations.

The aim of critical disability theory is to identify and eradicate systems of oppression, and challenge able-bodied norms. Universal Design is one avenue for pursuing these goals as it can help to shape the post-secondary setting to meet the needs of all students thereby impacting existing power dynamics. Although Universal Design is a long-term endeavor, there are actions that can be taken in the short-term to help move towards a barrier-free environment as a means of helping to address the purpose of equity, diversity, and inclusion statements[2]. A key recommendation is the removal of the diagnosis requirement for accommodations and moving

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[2] Short-term actions could include appropriate lighting and heating, effective snow and ice removal on campus, use of collaborative software (i.e. closed captioning and livestreaming), awareness of invisible mobility-related disabilities on campus, communicating available supports, peer supports and peer navigation, discussion of Universal Design on campus, and ongoing evaluations of the effectiveness of accessibility on campus including assessments by students with mobility-related disabilities.

toward more open/inclusive versus medicalized approaches to demonstrating the need for accommodation. This is recommended because there are significant barriers to receiving a formal diagnosis, and it reinforces medical (and often non-disabled) authority over the experiences of individuals (Dolmage, 2017; Shanouda & Spagnuolo, 2021). Requiring a diagnosis may also be contributing to reduced uptake of accommodation services.

It should be noted that the COVID-19 pandemic may have fast-tracked the acceptance of much-needed changes to post-secondary environments in Canada specifically in terms of adapting course content for online learning. Disability advocates have long been advocating for these changes and have sometimes met resistance when these changes are needed for students with disabilities. Post-pandemic, the delivery of online courses should continue to be an option to offer greater flexibility for all students including those with disabilities.

Conclusion

This study has revealed that there are a variety of barriers to access and inclusion in educational and leisure activities at the post-secondary institution in Nova Scotia where this study took place. Discussions with students found that some aspects of the physical and social environment that are intended to support access are largely "symbolic" and do not necessarily meet the needs of some students, fall short of their needs, or involve stress and a burden of work for students. There are some elements of the physical and social environments that students indicated facilitated and supported inclusion but findings from this study make it clear that there is still work to be done by the institution to address several different types of barriers in the physical and social environments. It is only by addressing these barriers that those with disabilities can participate more fully.

Although some issues raised in this study may be applicable to other post-secondary institutions, research will be needed at other universities to understand issues of access and inclusion in different contexts. Addressing barriers to access and inclusion are key to reducing the inequities in health-promoting opportunities. To properly address the various barriers to inclusion, the voices of students with disabilities on campus need to be valued and efforts made to implement Universal Design so that all students experience access and inclusion on campus. Ongoing dialogue with students will be needed as Universal Design is implemented.

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