

ACCESS AND INCLUSION: THE EXPERIENCES OF UNIVERSITY STUDENTS
WITH MOBILITY-RELATED PHYSICAL DISABILITIES

By

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Abstract

Research indicates that physical and social environments are key determinants of health. However, little is known about how these environments can influence access to and inclusion in educational and leisure activities for postsecondary students with a mobility-related disability (MRD), activities that are important because they affect one's emotional, social, mental, and physical health. The key goals of this study were to gain an in-depth understanding of barriers and facilitators to accessing educational and leisure activities for postsecondary students with a MRD, and to understand what changes, if any, students think are needed to address the barriers. One-on-one semi-structured interviews were conducted with nine students with a MRD. This study shows that there are a variety of barriers to access and inclusion within both the physical and social environments, and even key elements of these environments that have been established to support access and inclusion do not work for some students.

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Chapter 1: Introduction

The Research Problem

Our health is shaped significantly by the social and economic conditions in which we live, which are known as the social determinants of health (Mikkonen & Raphael, 2010). As Mikkonen & Raphael (2010) state, “the primary factors that shape the health of Canadians are not medical treatments or lifestyle choices but rather the living conditions they experience” (p. 7). There are a number of models which describe the social determinants of health in different ways, but the model used in this study is one outlined by Mikkonen and Raphael (2010) because it specifically includes social exclusion as a social determinant that negatively impacts health. Social exclusion is defined in terms of “specific groups being denied the opportunity to participate in Canadian life” (Mikkonen & Raphael, 2010, p. 32) and is a key determinant of health for people with disabilities including those with mobility-related disabilities, which is the focus of this study. People with mobility-related disabilities are often excluded from activities (which people who do not live with a disability can readily access) because of barriers in both the physical environment (e.g. building design) and the social environment (e.g. stigma). Indeed, such barriers exclude individuals from physical activities and social activities that are important for physical, social, emotional, and mental health. This means that individuals with a mobility-related physical disability often experience poorer mental, emotional, social, and physical health than people who do not live with a mobility-related disability.

This study explored the experiences of postsecondary students with mobility-related physical disabilities in accessing and participating in educational (e.g. lectures) and leisure activities (e.g. student societies) at one university in Nova Scotia, Canada.

More specifically, this study explored the students' experiences of the barriers and facilitators to educational and leisure activities. Mobility-related physical disabilities as defined by Statistics Canada include difficulty walking, climbing stairs, carrying objects, and moving from one room to another (Statistics Canada, 2001), all of which can be impacted by a variety of factors such as pain, stiffness, weakness, fatigue, and low vision. For the purposes of this study, mobility-related physical disability assumes the presence of a mobility-related impairment and "the experience of externally imposed restrictions" (Holloway, 2001, p. 599). Over the last two decades, the use of the word "disability" has been generally agreed upon (Hosking, 2008a) and so the phrase 'students with mobility-related physical disabilities' is used throughout this study. There is a need to understand, from the perspective of people living with a mobility-related disability, potential barriers to access and inclusion because these barriers can lead to poorer mental, social, emotional and physical health.

It took several years of lobbying, demonstrations, litigation, and legal challenges by the Council of Canadians with Disabilities (at the time called the Coalition of Provincial Organizations of the Handicapped) to have individuals with disabilities included in the 1982 Canadian Charter of Rights and Freedoms (Council of Canadians with Disabilities, 2004). It was on January 1981 that "mental or physical disability" was included in the equality clause of the Charter (Council of Canadians with Disabilities, 2004). The 1982 Canadian Charter of Rights and Freedoms enshrined the right to equality under the law including the right of individuals with disabilities to access the activities which other Canadians also have the right to access. Although there are such constitutional rights, in "practice" people with disabilities often experience barriers to

participation. For example, buildings can continue to have inaccessible entrances, wherein there is a step leading into the building which is a barrier for individuals using a wheelchair.

This study focuses on the experiences of access to educational and leisure activities, which are two key activities for students in postsecondary institutions. For the purposes of this study, educational activities include any curricular activities inside and outside the classroom such as lectures, labs, field trips, professional development activities, meetings for group assignments, meetings with instructors, etc. Leisure activities in general can be defined as activities that are “freely chosen, intrinsically motivated, personally meaningful and enjoyable experiences” (Janke, Payne, & Puymbroeck, 2008, p. 235) and leisure activities may also be educational in nature, as for example when a student society provides educational events. For the purpose of this study, the focus was on formal and informal leisure activities which occur on campus, and formal leisure activities that occur off campus, given an interest in understanding access to activities that are organized or sanctioned by the University.

Local context: Dalhousie University.

This study focused on Dalhousie University because it is one of the oldest postsecondary institutions in Canada (Dalhousie University, n.d.b), and is the largest postsecondary institution in Nova Scotia in terms of full-time and part-time student enrollment (Association of Atlantic Universities, 2018). As of October 1st, 2018, student enrollment at Dalhousie for full- and part-time students was 19, 223 (Association of Atlantic Universities, 2018). Dalhousie University is composed of several campuses including campuses in Halifax, Truro, and Saint John; however, this study was centered

specifically on the Halifax campuses which had a greater student population than the Truro or Saint John campuses (Dalhousie University, 2018a).

Dalhousie University celebrated its 200th year in 2018, and so the university was established at a time when there were certain assumptions about who would be attending or working at the institution. When Dalhousie was established, universities were largely inaccessible to students with mobility-related disabilities, as efforts to include students with disabilities began after World War I (Madaus, 2011). Today, in 2019, however, efforts are (and have recently been) made to help promote inclusion, including inclusion for people with disabilities through renovations to architecture, provision of accommodation programs, and increased use of technology (Madaus, 2011).

Nevertheless, there are indications that there remain some barriers to educational and leisure activities for students with mobility-related disabilities in a postsecondary environment (National Educational Association of Disabled Students, 2018). This highlights a need to understand the barriers to educational and leisure activities given that some changes have occurred in order to facilitate access. It is also important to understand the first voice perspective of students with a mobility-related physical disability and their experiences of access to and inclusion in educational and leisure activities while at University, as those who do not live with a mobility-related disability perceive access and inclusion differently (and likely more positively) than those who do.

Educational & leisure activities and health.

Access to and use of educational and leisure activities for postsecondary students is important because of the immediate as well as long-term health benefits of such access. Access to educational and leisure activities is important for immediate health due to the

potential social, emotional, mental, and physical health impacts through such mechanisms as social connectedness, managing and reducing stress, and physical activity (Jessup, Cornell, & Bundy, 2010). Access to educational and leisure activities while attending a postsecondary institution also has potential long-term health benefits because education is a key determinant of health. Barriers to inclusion in such activities facing individuals with mobility-related physical disabilities while attending a postsecondary institution may impact their ability to complete a postsecondary education, and one's level of education can impact future employment opportunities and income, which are linked to health. That is, higher educational attainment and incomes are associated with better health outcomes (Mikkonen & Raphael, 2010).

Research Questions

There were two main research questions for this thesis: 1) How do the physical and social environments influence access to and use of educational and leisure activities for Dalhousie University students with a mobility-related physical disability? Specifically, what are the barriers and/or facilitators within the physical and social environments that influence access to and use of these activities on campus (Halifax campuses) or at Dalhousie sanctioned events off campus? 2) What changes, if any, to these environments do students with a mobility-related physical disability recommend, and why?

For the purposes of this study, the term "access" will be used to include access and use of activities. Access will also be used interchangeably with the term inclusion.

Study Design

This exploratory study used a qualitative approach, as such an approach helps to gain an in-depth understanding of individuals' experiences (Patton, 1990; Strauss & Corbin, 1998). One-on-one semi-structured interviews were utilized to ensure that students could express their individual experiences of access to educational and leisure activities. This study was informed by the social constructivist worldview which posits that there are various experiences of a phenomenon, and individuals develop meanings of their experiences through interactions with others (Creswell & Poth, 2018). Elements of grounded theory were used in the analysis of the interviews, and specifically, the process of constant comparisons of key expressions of experiences (Strauss & Corbin, 1998). Strauss & Corbin (1998) note that although grounded theory analysis can involve theory building, not all grounded theory research results in a theory as analysis can be descriptive in nature, as well as involve conceptual ordering. This study was not aimed at developing a theory, as it was an exploratory study, but moved beyond pure description to conceptual ordering, which refers to the organization of data into categories based on common themes and sub-themes in the data (Strauss & Corbin, 1998). The methodology and methods used in this study are discussed in detail in Chapter 3.

Significance of Study

Research indicates that perceptions of accessibility by individuals who do not experience mobility-related physical disabilities are often incongruent with actual accessibility (McMillan et al., 2016). An example of non-disabled individuals not understanding the experiences of disabled individuals is demonstrated by McMillan et al. (2016) who reported that when asked about the accessibility of their health clinics, health care providers often believed that their clinics were physically accessible for those with

mobility-related physical disabilities because of the presence of features such as automatic doors. In reality, patients experienced many physical barriers to care, such as the height of examination tables, and inaccessible parking (McMillan et al., 2016). These findings suggest that it is important to explore first-hand experiences of people with mobility-related physical disabilities in order to understand issues of access and thus this study sought to obtain the perspectives of students with mobility-related disabilities. With respect to postsecondary students with a mobility-related disability, it is important to understand the barriers and facilitators they face to participation in educational and leisure activities because the reality of accessibility may be very different than what people who do not live with a disability but study or work at the university believe.

Implications for Health Promotion

Students with mobility-related physical disabilities are at risk of social exclusion, and specifically exclusion from resources and services (Benoit, Jansson, Jansenberger, & Phillips, 2013). Barriers in the physical and social environments can limit access to and inclusion in educational and leisure activities and, as noted above, negatively impact health. Students with disabilities tend to have higher dropout rates than non-disabled students (Fleming et al., 2017) suggesting that barriers may impact retention, and thus access to education which is a key determinant of health.

This study is relevant to health promotion because of the focus on understanding barriers in the physical and social environment, and thus drawing attention to structural issues that potentially need to be changed to reduce inequities in access that impact health. Health inequity is defined as unfair differences between groups related to the opportunity to attain full health potential (World Health Organization, 2018a), and if

students with mobility-related physical disabilities face barriers to educational and leisure activities their immediate and future health and well-being may be impacted, creating inequities in health between this population and those without a mobility-related disability. The World Health Organization defines health promotion as “the process of enabling people to increase control over, and to improve, their health” (2018b), and health promotion moves beyond a focus on individual behaviour “towards a wide range of social and environmental interventions” (2018b). The goal of this study is to “move beyond” the individual-level to understanding structural barriers in postsecondary institutions, and specifically barriers in the physical and social environments that impact access. The study highlights the interactions between the individual and the environment, and thus draws attention to potential changes within the environment that might reduce barriers and promote facilitators. All populations should have a “fair opportunity to attain their full health potential [with] the absence of avoidable, unfair, or remediable differences among groups of people...” (World Health Organization, 2018a), and this includes people with mobility-related disabilities.

Summary

The purpose of this study was to explore experiences of the physical and social environments for students with mobility-related physical disabilities in order to understand issues of access, and suggestions participants might have for changes to these environments. Accessing educational and leisure activities is key for students with mobility-related physical disabilities, because such access can influence social, emotional, and physical health, in addition to retention in postsecondary education.

Retention is critical for future health and well-being as education plays a role in employment and income opportunities which are important for health.

Chapter 2: Literature Review

Social Determinants of Health and Social Exclusion

Medical care is important for health; however, the majority of factors that affect our health are located outside of the healthcare system (Goodridge et al., 2015). The numerous social factors that affect our health are generally termed the social determinants of health. Social determinants of health are conceptualized in different ways, but this study uses the model proposed by Raphael because it includes social exclusion as a social determinant of health, which is a central determinant of health for people with disabilities (Mikkonen & Raphael (2010).

Although there are a variety of different social determinants of health frameworks, they are rooted in the same understanding which is that it is important to move beyond individual behaviours and influences on health to the structural forces that impact health. The individual behaviour approach supports “a victim-blaming ideology” (McLeroy et al., 1988, p. 352), rather than identifying that structural or environmental factors influence behaviour and health. The social determinants of health framework also “contrasts with the traditional focus upon biomedical and behavioural risk factors” (Raphael, 2004, p. 1), which assumes that differences in health are largely due to genetic traits or biological attributes that develop over the life span (Etowa & McGibbon, 2012). The social determinants of health approach to health explores the social contexts of people’s lives and how the contexts impede or facilitate individuals’ ability to make choices that promote health. The social determinants of health framework highlights the ways in which variances in health are impacted by differences in social circumstances that are beyond the control of the individual (Etowa & McGibbon, 2012).

Physical and social environments.

In Nova Scotia, disabilities related to pain, flexibility, and mobility are the most common types of disabilities as reported by Statistics Canada (Statistics Canada, 2014). However, there continue to be barriers in both the physical and social environments for this population. The physical and social environments are key determinants of health, and barriers and facilitators within these environments can shape access and inclusion for individuals with mobility-related physical disabilities. The physical environment can affect social inclusion when individuals with mobility-related physical disabilities are denied equal access to the natural and built environment. Historically, the built environment has been designed to “reflect idealized assumptions about the inhabitants and users” of the spaces (Marks, 1999, p. 82). For individuals with mobility-related physical disabilities, this means that the built environment is often designed with the assumption of non-disability in mind. As a result, individuals with mobility-related physical disabilities may experience barriers to the natural and built environment such as inaccessible parks, buildings, and inaccessible bus systems.

The social environment may also shape experiences of social inclusion for students with mobility-related physical disabilities. In a similar manner to other marginalized groups, such as racialized groups, individuals with mobility-related physical disabilities have historically been prevented from exercising their full rights, causing them to be “systematically excluded from mainstream society” (Stuart, 2012, p. 366). This exclusion includes stereotypical and discriminatory attitudes in the social environment (Veselinova, 2013) which may make individuals with mobility-related physical disabilities feel unwelcome in various social settings. Individuals with physical

disabilities may also avoid certain social interactions in an effort to keep themselves from feeling and experiencing exclusion.

The social and physical environments are interrelated because of the way social norms and values often shape the design of physical environments, and the design of physical environments in turn can influence beliefs about who should be using those spaces. For example, there may be misperceptions that individuals with mobility-related physical disabilities are unable to or do not want to participate in physical recreation activities such as swimming. As a result, pools may be physically inaccessible.

Conversely, having these spaces inaccessible to individuals with mobility-related physical disabilities may produce and maintain perceptions that people with mobility-related physical disabilities are not able to or do not want to participate in leisure activities such as swimming. Additionally, inaccessible spaces in the built environment may lead to less social interaction with other individuals with mobility-related physical disabilities and with individuals who do not have a mobility-related physical disability (Veselinova, 2013), which in turn can lead to stereotypical and discriminatory attitudes. Social exclusion from these activities may contribute to health inequity by creating barriers to activities that are important for the social, emotional, mental, and physical health of people with mobility-related physical disabilities.

Social Exclusion: Stigma in Postsecondary Institutions

Stigma, ableism, and compulsory able-bodiedness.

Students with mobility-related disabilities may experience stigma from those they interact with, such as professors/instructors, peers, or other University staff. Erving Goffman (2017) identified stigma as the discrediting assumptions humans tend to make

about someone, without truly knowing, and these assumptions are typically based upon stereotypes (Goffman, 2017). The social stigma felt by those with physical disabilities is referred to as ableism by disability studies scholars (Lewis, 2017) and can be defined as “a system of beliefs that privileges normative notions of the body/mind and ability that are culturally constructed and views disabled people as inferior and lacking” (Bê, 2019). A concept closely related to ableism is the concept of compulsory able-bodiedness, a term first coined by Robert McRuer, which is akin to the concept of compulsory heterosexuality which refers to the widespread assumption of heterosexuality as the norm (McRuer, 2017). Compulsory able-bodiedness assumes disability is the opposite of ability, and the “natural” assumption is that individuals are able-bodied and able-bodiedness is natural, desirable, and normal (McRuer, 2017). McRuer (2017) argues that “like compulsory heterosexuality, then, compulsory able-bodiedness functions by covering over, with the appearance of choice, a system in which there actually is no choice” (p. 399). A key problem with the notion of compulsory able-bodiedness is that it assumes individuals including students are able-bodied until proven otherwise and the onus is on the student to “prove” that one is not able-bodied. This is similar to students who are part of the 2SLGBTQ+ community, who are assumed to be cisgender or straight until proven otherwise. Having to prove or declare one’s identity may create a feeling of discomfort, or individuals may feel unsafe about “coming out” to professors/instructors, peers, or other University staff. There has been a shift in some places to use inclusive practices to negate compulsory heterosexism (Weinberg, 2009), likewise a shift to employ various inclusive practices to negate compulsory able-bodiedness at least in some places, although in many places compulsory able-bodiedness still dominates (Kafer,

2003; Mog & Swarr, 2008).

Stereotyping of people with disabilities is also created and reproduced through the concept of the “supercrip.” Berger (2008) explains that the “supercrip” are individuals whose “inspirational stories of courage, dedication, and hard work prove that it can be done, that one can defy the odds and accomplish the impossible” (p. 648). Berger argues that this may create unrealistic expectations about what individuals with disabilities can or should achieve (2008). This concept also places the onus of “defying the odds” on the individual, rather than on the systemic and institutional barriers. Faculty, peers, and other University staff, in addition to individuals with disabilities themselves, often internalize these messages which can mean there are expectations that students with disabilities need to achieve certain goals or standards, regardless of whether or not those achievements are reasonable. For student with disabilities, internalizing these messages may mean that their emotional health is impacted because they may feel that they are not able to meet these unrealistic expectations.

It is important to note that a physical disability itself is not the cause of limitations in a given environment, but it is the environment that shapes or influences barriers to participation when it fails to account for the presence of diverse bodies in social and physical spaces. In many postsecondary institutions, accommodation plans exist but they do not reflect the importance of the environment and how the environment creates and shapes barriers for people with mobility-related disabilities. Accommodation plans may reflect the medical model of disability, a model which assumes that students are responsible for overcoming barriers themselves (Ostrowski, 2016). In other words, the medical model “identifies the source of the disadvantage experienced by disabled people

as their medical condition [and] seeks to abolish disabling impairments” (Hosking, 2008a, p. 7-8). When students with disabilities are required to register with accessibility services, prove their eligibility, and repeatedly disclose their challenges to faculty and staff, they are being told that the problem is with their impairment, which they need to overcome (Ostrowski, 2016).

Exclusion from educational activities.

Students with mobility-related physical disabilities may experience barriers to educational activities, and such educational activities at a postsecondary institution can include lectures, field trips, group study sessions, visiting the library, accessing academic support services, etc. Access to these various resources is important for one’s health including one’s mental, social, physical, and emotional health. For example, participation in educational activities can be important for one’s social health insofar as it can support social inclusion, and help to create social bonds, a sense of belonging, and a sense of self. Access to educational activities is also important for completion of one’s program, which is key to one’s health and well-being in the long-term given the links between education, and employment and income. Stigma and discriminatory attitudes of peers or instructors can act as barriers to participating in educational activities such as school field trips or study groups, and this may lead to increased social isolation, stress, and poor physical, mental, or emotional health. The physical environment may also be a barrier to participating in educational activities as, for example, may be the case if academic support services such as writing supports are in spaces that are not wheelchair accessible. Inaccessible offices or other academic spaces in the built environment can also limit access to instructor office space or classrooms which are important to one’s education.

Exclusion from leisure activities.

Students with mobility-related physical disabilities may also experience various barriers to University-related leisure activities including recreational activities, orientation activities such as scavenger hunts or camping, membership in student clubs or associations, and so forth. If the activities are not physically accessible, individuals with mobility-related disabilities may be excluded, or if there are misconceptions that students with mobility-related physical disabilities are not capable of participating, students with mobility-related physical disabilities may experience exclusion. Additionally, even if physically accessible spaces exist they may not be designed to allow socialization between individuals with mobility-related physical disabilities and individuals without mobility-related physical disabilities as happens when seating arrangements at plays or sporting events are built so that able-bodied individuals are not able to sit next to a peer in a wheelchair, but behind them (Taub, McLorg, & Bartnick, 2009). Exclusion in the social and physical environments may influence individuals' feelings of isolation, and their ability to be physically active. Such exclusion may also impact retention of students with mobility-related physical disabilities if these barriers lead to reduced feelings of social belonging, and the decision to leave the University setting because one does not "fit."

Valuing diversity.

This study sought to understand the experiences of people with mobility-related disabilities in order to highlight barriers to access that might be addressed, and facilitators that might be scaled up, to move towards equality for all. Critical disability theory informed this research study and is a framework that "recognizes and welcomes the

inevitability of difference and conceives of equality within a framework of diversity” (Hosking, 2008a, p. 11). Barriers in the social and physical environment contribute to a culture where diversity is not valued and as such need to be eliminated because they represent a societal devaluing of individuals with disabilities. Critical disability theory seeks to do away with binaries such as abled/disabled, and instead to see ability as a continuum, along which every person travels throughout their lives (Flynn, 2017). This allows disability to be viewed as opportunity and possibility (Goodley, 2013). Each person may experience disability in some way, even temporarily, at varying degrees of severity, and understanding disability as experienced by all of us in some form or another throughout our lives can help to remove the dichotomy of us/them, disabled/abled, sick/healthy, and move us to an understanding that people with all types of disabilities are everywhere in our lives, and so all spaces need to be accessible.

Accessibility in Postsecondary Institutions

The 1990 World Declaration on Education for All seeks to improve education so that it is more inclusive of students with disabilities (Anderson, Boyle, & Deppeler, 2014), and inclusion is defined as a “process of addressing and responding to the diversity of needs of all learners... it involves changes and modifications in content, approaches, structures and strategies...” (UNESCO, 2006, p. 13). In 2006, the UN produced the Convention on the Rights of Persons with Disabilities and the Convention’s purpose is to “promote, protect and ensure the full and equal enjoyment of all human rights and fundamental freedoms by all persons with disabilities, and to promote respect for their inherent dignity” (United Nations, 2006, p.4). The World Declaration on Education for All and the UN Convention on the Rights of Persons with Disabilities point

to an interest in making spaces and places at Universities inclusive, but the actual accessibility experienced by students in postsecondary institutions is not always “full and equal.” Berggren et al. (2016) note, for example, that many postsecondary institutions have a list of accommodations they are able to provide, but they do not always meet the needs of students. Additionally, students are often required to take the time and energy to disclose their disability to professors, without consistently getting the accommodations they need (Berggren et al., 2016). It is therefore important to explore the actual experiences of social exclusion/inclusion to understand what elements of the physical and social environments need to be changed.

With respect to Student Accommodation Policy at Dalhousie University, the university, which is the site of this study, accommodations requested must be “reasonable” and not impose “undue burden” upon the university and students must make requests “reasonably in advance” (Dalhousie University, 2014). These policy statements suggest that accommodations may be limited by “justifiable” budgetary and logistical considerations, and students may experience social exclusion even though there are accommodation policies. The existence of policies to promote inclusion do not necessarily translate to feelings and experiences of inclusion.

Summary

Access to educational and leisure activities within the University context is important for individuals’ physical, social, mental, and emotional health. Access to educational and leisure activities is also important for retention in postsecondary institutions and obtaining a University education is key to employment and income, which are important for health. Access to educational and leisure activities for individuals

with mobility-related disabilities is important for health equity. Postsecondary education institutions often were founded before efforts were made to incorporate individuals with disabilities, but more recently there is an interest in inclusionary policies and practices. Nevertheless, there is a need to understand the actual experiences of people with disabilities given that declarations or policies of inclusion do not necessarily translate into inclusionary practices.

Chapter 3: Methodology and Study Design

Theoretical Approach

Social constructivism.

The goal of this study was to explore the barriers and facilitators to access and inclusion in educational and leisure activities for students with mobility-related disabilities, and it was important to understand these experiences from the point of view of students with mobility-related disabilities in order to understand their unique contexts. Therefore, social constructivism was a useful theoretical foundation as it is an interpretive framework which comes from the belief that there is no one true reality that can be studied, rather, there are a multitude of realities, each rooted in individual context (Creswell & Poth, 2018). In other words, social constructivism involves understanding “the complex world of lived experience from the point of view of those who live it” (Schwandt, 1994, p. 221). This means that the researcher gains an understanding of the experiences of individuals from their perspective, and how their reality was shaped by past experiences (Creswell & Poth, 2018) and how the individual interprets these experiences (Guba, 1990).

The findings of this study are not intended to be generalizable, however, there is potential for individuals living in similar contexts to experience similar challenges and opportunities (Guba, 1990). Interpretive research requires first-hand understanding of experiences (Guba, 1990) which is key for research involving barriers and facilitators to accessing educational and leisure activities because perceived accessibility on the part of people who do not live with a mobility-related disability often does not reflect actual accessibility for individuals with mobility-related disabilities. Qualitative data collection

methods were therefore of value in order to explore participants' "lives, lived experiences, behaviours, emotions, and feelings..." (Strauss & Corbin, 1998, p. 11).

Elements of grounded theory.

One approach to qualitative research is grounded theory, which is a qualitative research design that supports the development of a "theory" based on the data. Strauss & Corbin (1998) argue, however, that building a theory is not always the goal of a grounded theory research project as such studies can result in useful description, or conceptual ordering (Strauss & Corbin, 1998). Conceptual ordering is the organizing of data based on a set of common themes and subthemes within the data, and this research project used such a modified grounded theory approach in that it did not develop a theory, but instead a conceptual understanding of the issues experienced by participants in order to highlight the wide variety of barriers and facilitators, and the complex experiences of participants, rather than selecting key concepts for theorizing and predicting (Strauss & Corbin, 1998). This is an exploratory study, and so the aim was to allow patterns to emerge from the data, and to use conceptual ordering to "paint a vivid picture" (Strauss & Corbin, 1998, p. 25) of the issue.

Critical disability theory.

A key theoretical framework for this research was critical disability theory, which is a branch of critical theory. The goal of critical theory is to "foster freedom and meet the needs of all members of society" (Baum, 2015, p. 420), and it aims to reduce the domination of certain groups over another by increasing human freedom, with emancipation being its aim (Hosking, 2008a). Critical theory also seeks to improve society by identifying and exploring oppression in order to eradicate it (Baum, 2015).

Through this, critical theory seeks to understand how prejudice and discrimination are socially constructed and politically supported to produce inequality and the domination of certain groups over another, often through the distribution of power, income, and wealth (Baum, 2015). Critical disability theory is a type of critical theory because it seeks to understand and eradicate inequality and oppression experienced by individuals with disabilities. Through barriers in the social and physical environments, reducing access to educational and leisure activities is a form of oppression for students with mobility-related physical disabilities because these students often have inequitable access to these activities compared to students without mobility-related disabilities. This paradigm is also useful for this study because a core aim is to offer suggestions for change to environments that contribute to oppression at Dalhousie University, and one of the key aims of critical disability theory is to transform society (Hosking, 2008a).

Critical disability theory also shares theoretical foundations with the social model of disability, which acknowledges: (1) that disability is socially constructed, rather than an unavoidable result of impairment; (2) that disability is a complex and interrelated relationship between impairment, response to impairment at the individual level, and the physical and social environments; and (3) that social disadvantage felt by people with a disability is the result of the physical and social environment which fails to meet the needs of people who do not meet the ideals of 'normal' (Hosking, 2008a). The goal of the social model is to improve access and inclusion for individuals with disabilities (Olkin, 2002). These assumptions are vital for this study because it stresses the importance of addressing environmental barriers in order to increase access and inclusion.

Critical disability theory and the social model of disability are critiques of the medical model of disability, which views disability as an illness or disease that must be diagnosed, treated or prevented through medical and technological interventions (Marks, 1999). The medical model of disability is the most pervasive model, and is often used in health care settings, within professions such as physical therapy (Roush & Sharby, 2011) and has been identified as the theoretical foundation of most accommodation policies in post-secondary institutions (Ostrowski, 2016). The medical model also places blame on the individual when they do not follow through with supports or treatment that is known to benefit them, without considering the physical or social barriers they may be experiencing (Olkin, 2002). The social model of disability sees disability as a product of structures in the social and physical environment, and critical disability theory seeks to understand the sources of oppression in order to address those structures and reduce inequity.

Language.

Critical disability theory views language as “inherently political,” (Hosking, 2008a, p. 13) and which both “reproduces and contests the social oppression of disabled people” (Hosking, 2008b). In other words, the language used to describe or identify people with disabilities may contribute to oppression or negate oppression. Such language may become attributed with negative social connotations over time due to how individuals are portrayed in the media (often as helpless, vulnerable, and tragic) and, as a result, becomes contested and frequently changed in an effort to reduce these negative connotations (Hosking, 2008a). The term “disability” was reclaimed by the disabled community in the early 1980s (Hosking, 2008a). Throughout this thesis, person-first

language will be used such as “person with a disability.” Person-first language emerged “in an effort to reduce stigma, stereotyping, and prejudice toward people with disabilities” (Dunn & Andrews, 2015, p. 256). It is important to note however that there has been a debate about the use of person-first language as some argue this language separates the person from the disability, implying that it separates the person from an undesirable label (Dunn & Andrews, 2015). Some disability studies scholars have been advocating instead for the use of identity-first language such as “disabled person,” arguing that it gives greater value to the disability and experiences of the disabled person and promotes their agency through self-naming (Dunn & Andrews, 2015). Although identity-first language may be more widely used in the future, for the purpose of this thesis person-first language is used to help reduce the stigma, stereotyping and prejudice towards people with disabilities, and because the researcher did not want to assume that participants were comfortable being referred to as “disabled persons.”

Physical and social environment framework.

This study uses a physical and social environment framework for understanding the barriers and facilitators to educational and leisure activities. Studies show that “individuals with mobility limitations perceive that particular barriers and facilitators of the environment – particularly in the physical and social domains – restrict or enhance their participation in life activities” (Keysor, 2006, p. 97). Given this, it was useful to explore the barriers and facilitators in terms of various aspects of the physical and social environments.

For this study, the *physical environment* encompasses the natural and built environment (McKenzie et al., 2017). The natural environment includes naturally

occurring elements such as weather, forests, beaches, etc. The built environment is space that has been designed by humans such as buildings (school buildings, offices, recreational facilities, restaurants, etc.), roads and sidewalks, transportation, and all design elements within these (doors/doorways, hallways, counters, elevators, ramps, stairs, activators/signaling mechanisms, bathrooms, seating, etc.). These elements may be facilitators or barriers to participation. For example, ramps may facilitate entrance into school buildings, however, elevators may be too narrow for students using wheelchairs, doors may close too quickly, buttons may be out of reach, and turns in a ramp may be too sharp, thus creating barriers in the physical environment.

The *social environment* has been conceptualized in this study according to Bronfenbrenner's ecological model (1977), which delineates various types of social influence through division into distinctive levels (McLeroy et al., 1988). Adapted for health promotion, these levels include intrapersonal, interpersonal, organizational, community, and public policy levels (McLeroy et al., 1988), and may all play a role in social inclusion or exclusion (see Figure 1). It is important to note that these levels are separated for analytical purposes, but they are interconnected in that each level could impact another.

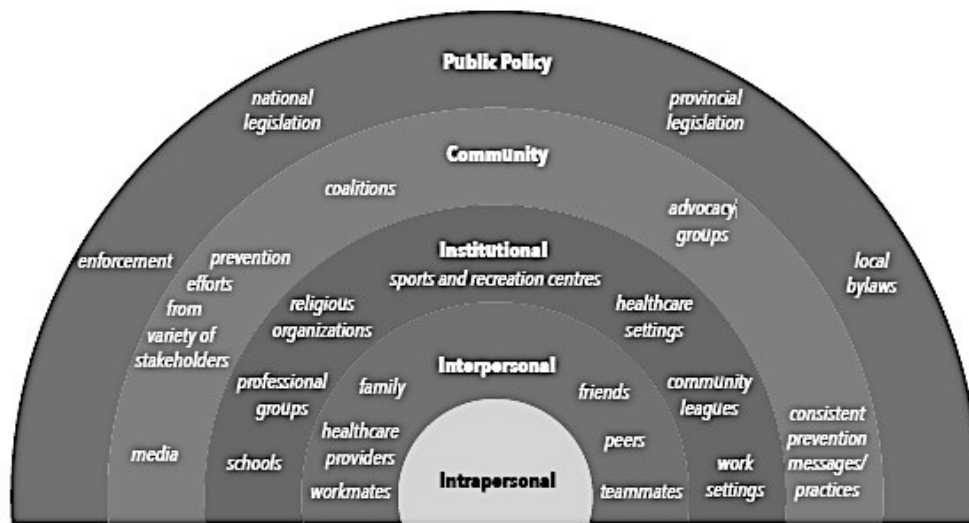


Figure 1: Ecological model for health promotion (Pike et al., 2015).

The *intrapersonal level* includes individual experiences, knowledge, attitudes, feelings or beliefs that are unique to the individual and their personal history (McLeroy et al., 1988), and can be barriers or facilitators to participation in services or resources. For example, internalized stigma may be a barrier that an individual experiences which might prevent them from disclosing their needs to others. Conversely, feeling comfortable with disclosing needs may help facilitate inclusion for an individual when they are able to ask for what they need.

The *interpersonal level* includes relationships among family, friends, neighbours, and peers (McLeroy et al., 1988). These relationships can also act as facilitators or barriers to participation in potentially health-promoting activities. For example, support from family and friends such as access to transportation may offer opportunities for participating in various activities. However, discrimination from peers at school may negatively impact participation in extracurricular activities.

The *organizational level* includes social institutions and structures, such as schools and transportation facilities, and their rules and norms (Bronfenbrenner, 1977; McLeroy et al., 1988). These structures can also be barriers or facilitators. For example, accessibility services at the University, an organizational level structure, may help to facilitate full participation in educational activities. Conversely, if there are costs associated with using organizational level structures, that is a potential barrier for students with mobility challenges.

The *community level* includes relationships between organizations, and the coordinating and sharing of resources (McLeroy et al., 1988). These relationships can also be barriers or facilitators to participation. For example, collaboration between the municipality and accessibility organizations may help to reduce barriers for individuals with physical disabilities by ensuring that new sidewalks have curb cuts. Although this level of the social environment is not the focus of this study because of the emphasis placed on environments at the organizational level (Dalhousie University), it is important because the postsecondary institution is located within the community and is therefore influenced by the community. For example, city buses travel to buildings on campus as well as throughout the community, and so it is important that these buses be accessible to students with physical disabilities so that they are able to travel around campus.

The *public policy level* includes laws and policies (McLeroy et al., 1988). Public policy can be both a barrier and a facilitator to full participation. For example, policies that aim to protect the rights of individuals with physical disabilities may help to facilitate full participation, but not having policies, or policies which are not meeting the needs of people with disabilities, may act as barriers. For example, the Building Access Act in

Nova Scotia dictates that in each building where bathrooms are provided for public use, there must be one designated for use by individuals with physical disabilities (Building Access Act, 1989), however, this is not always implemented in older buildings on the campus of a postsecondary institution, as many “accessible” bathrooms have narrow hallways or doors that do not have an activator. This level of the social environment is not the primary focus of the study but is relevant because of the potential need to make changes to public policy.

Research Design

Setting.

This research was conducted in Halifax, Nova Scotia at Dalhousie University, as it was the largest postsecondary institution in Halifax in terms of student population (Association of Atlantic Universities, 2018). Having a large student population from which to recruit meant that more students with mobility-related disabilities may have been impacted by the physical and social environments and would be able to speak to those experiences than at other post-secondary institutions in the area. Dalhousie University was founded in 1818 and is composed of three Halifax campuses, which are the Studley campus, the Carlton campus, and the downtown Sexton campus. Although Dalhousie University also has a campus in Truro and Saint John, this study is centered specifically on the Halifax campuses which have the largest student population (Dalhousie University, 2018a). The Halifax campuses run over two kilometers in length from end to end (Google, 2019). Most of the student services are located on the Studley campus (such as health services and accessibility services); however, facilities such as libraries and recreational facilities are spread out throughout the three campuses. Most

student residences are located on the Studley campus; however, a few are also located downtown on Sexton campus. Large events such as sporting and Orientation events are typically held on Studley campus. Although many renovations have occurred on the Dalhousie campuses over the years, there remains a mix of older and newer buildings throughout the campuses, and therefore a patchwork of accessible and inaccessible space (Dalhousie University, n.d.a).

Research sample and recruitment.

Study population and inclusion/exclusion criteria.

The study population for this study was students at Dalhousie University with mobility-related disabilities, as the focus of the study was on their experiences of the barriers and facilitators to educational and leisure activities on campus. Inclusion criteria for this study included students currently enrolled at Dalhousie University and who identified as living with a mobility-related physical disability. These participants must have completed at least one year of school at Dalhousie in order to ensure that they had experienced a full range of activities and contexts within the institution (e.g. examinations, weather, etc). Participants were not excluded based on age, program, or any other demographic reason, and were included based on self-identification as a student with a mobility-related disability.

Study size and recruitment.

For this project, it was decided that 8-10 participants would be the goal for recruitment. Patton (1990) explains that there are “no rules for sample size in qualitative inquiry” (p. 184) because generalization is not the goal. Patton (1990) argues that for purposeful sampling, 10-15 participants are reasonable. Given that this was an

exploratory study, and accounting for the time constraints for a Master's level project, approximately 8-10 students was viewed as adequate to allow patterns to emerge in the data. A total of nine participants were recruited over two semesters. Eight participants were interviewed between October and November of 2018, and the final participant was interviewed in January of 2019.

Recruitment involved multiple strategies including recruitment materials sent to representatives from each available Halifax faculty department/school/college, posted on bulletin boards, and sent to a representative at Student Accessibility Services. These methods were used with the goal of reaching students who did and did not have an accommodation plan, as both groups may have experienced unique barriers and facilitators to accessing educational and leisure activities on campus. Requests to send recruitment materials to students were sent to each available department/school/college, and of the 64 departments contacted, 39 were able to send recruitment materials to students through the department/college/school's ListSrvs or Facebook group in both PDF format and as plain text in the body of the email. Unfortunately, Student Accessibility Services was not able to send recruitment materials to students who use their services within the data collection timeframe.

Potential participants were asked to contact the lead researcher by e-mail if they were interested in participating. By asking questions over email, the researcher ensured that the participant met the inclusion criteria and confirmed the participant's gender pronouns. Participants also had the opportunity to ask questions, and they were provided with the consent form via email. If the student met the inclusion criteria, a mutually agreed upon time and place for the interview was chosen. Participants were sent a

reminder email on the day of the interview, or the night before (depending on the time of the interview).

Data Collection and Analysis

Qualitative semi-structured interviews.

The interviews were one-on-one, semi-structured interviews. The interview guide (see Appendix C) was developed in collaboration with my research supervisor and committee and was reviewed for clarity and relevance by the Director of Student Access and Academic Support at Dalhousie University. When appropriate, probes were utilized in order to obtain deeper understanding of their experiences through, for example, stories and examples. Participants had the option to have the interview audio-recorded, or to have notes taken. Of the nine participants, eight gave permission for their interview to be audio-recorded and for direct quotes to be used. One participant gave permission for their interview to be recorded through note-taking only, and for direct quotes to be used.

Data collection setting and process.

Interviews took place during the day on Dalhousie University campus, and in a room with a door that could be closed for privacy. Prior to asking the interview questions, the consent form was read to each participant, participants signed the consent form, and participants were given a \$20 gift card to Amazon.ca as thanks for participation. As per the ethics protocol, the gift card was given to the participant after consent was obtained and before questions were asked so there was no pressure to complete the interview in order to receive the gift card. The interviews took between 25-64 minutes, with most taking between 40-55 minutes.

Data storage and analysis.

As soon after the interview as possible, the recordings were stored on two encrypted, password protected external hard drives which were stored in a fire-proof safe in my home when not in use. The two external hard drives were encrypted using the current encrypting software recommended by Dalhousie Information Technology Services, which is an open-source software called VeraCrypt. Following this, interviews were transcribed verbatim, and any potentially personally identifying information was not transcribed. Participants were assigned a pseudonym, which were selected from the output of a random name generator. The specific name of the participants' condition/disability (if named), where the participant was from, the participant program, select University buildings (i.e. residence buildings, building names if the participant's program was housed there, or had all classes there), etc. were not recorded, in order to protect confidentiality. After checking the audio recordings against the transcripts for accuracy, the audio recordings were deleted, as voices can be recognizable.

The interview data were analyzed using grounded theory techniques. Grounded theorists begin with open coding, which is the process of collecting the data into major categories (Creswell & Poth, 2018), and involves the line-by-line breaking down of data, while closely examining, comparing, and interrogating the data (Strauss & Corbin, 1990). Grounded theory is often seen as a method of analysis that involves constant comparison, which allows the researcher to compare themes and variations in themes within and between participants (Strauss & Corbin, 1990) so that the categories become clear and illustrative of experiences. Next, focused coding allows for the creation of subcategories through observing contexts within the data (Strauss & Corbin, 1990). Memo-writing is also a key step in grounded theory research, as it helps to capture researcher thoughts

about comparisons and connections in the data and theoretical categories (Charmaz, 2006). Memos can contain ideas and stories that can later be fleshed out, and allows spontaneous comparisons between participants (Charmaz, 2006). Discussing key themes and sub-themes with my research supervisor also helped to solidify key themes.

Framework analysis was a tool used during data analysis and is a “flexible tool that can be adapted for use with many qualitative approaches that aim to generate themes” (Gale et al., 2013, p. 3). Framework analysis is an approach for thematic analysis that allows the researcher to analyze data by case (an individual participant) and by code (or theme) (Gale et al., 2013). For framework analysis, a table is generated, and each row represents a different theme/code, and each column represents a specific interview/case. The in-between cells held summaries of the data related to each code, and some key quotes in order to create an overall picture of the data within-case as well as across-cases (Gale et al., 2013). Framework analysis was used during the open coding stage in order to develop the initial codes. During this stage, all data were coded, and the summaries were placed in the matrix in order to see the overall themes in the data. During focused coding, separate Word documents were created to hold all data from each code in order to explore subthemes in the data.

Ethical Considerations

Confidentiality and anonymity.

Participants in this study were able to ask to have their data/transcript removed from data collection up to one week after the interview, which no participants requested. Participants were assigned a pseudonym, and as noted above, all potentially personally-identifying information was removed from transcripts (such as community names, agency

names, family/friend names, etc). Signed copies of consent forms (first and last name) were kept separately from the data, and were stored in my supervisor's office, in a locked cabinet, as soon as possible following the interviews. The forms will be stored for five years and then destroyed.

Informed consent.

Consent must be free, informed, and continuous (Government of Canada, 2010). When an interested participant volunteered to participate, they were sent the informed consent form via email to review before they participated in the interview process. They were able to ask any questions, by email, before they agreed to participate. Informed consent was discussed with each participant on the day of the interview. Participants were also reminded that they could refrain from answering any interview questions, stop the interview at any time, and could take breaks when they wished.

Potential harms and benefits to participation.

Each interview began with an icebreaker question about the decision to come to Dalhousie, which was aimed at helping to build rapport. Interviews were intended to be fairly informal to keep the atmosphere relaxed. A number of individuals were similar in age as me, which may have helped participants to feel more relaxed.

Potential risks associated with this study included discomfort, distress, mental fatigue, and the potential for "triggering" past experiences during the interview process. Allowing participants to skip over questions they preferred not to answer may have minimized these risks. Participants were offered a list of community resources at the end of each interview, including contact information for Dalhousie student health and

wellness, Avalon sexual assault center, etc. No participant requested these materials, and no participant wished to stop the interview.

Participation in this research study may not have directly benefitted the participants; however, there are some individuals who may have found it helpful to share experiences in a supportive space. Participants may also have felt some satisfaction knowing that sharing their experiences may help to identify barriers in the physical and social environment that should be addressed.

Participant vulnerability.

Although the questions asked of participants were low-risk, difficult topics occasionally arose. It was important to understand the participants' experiences, but it also was important to minimize risk by encouraging participants to skip questions during the interview and to request any additional support following the interview as needed.

Trustworthiness

Trustworthiness is concerned with identifying if the findings “are accurate from the standpoint of the researcher, the participant, or the readers of an account” (Creswell, 2014, p. 201). Trustworthiness involves four key criteria, which includes techniques to ensure credibility, transferability, dependability, and confirmability (Guba, 1990). In this study, strategies to ensure credibility, transferability, and confirmability were used.

Credibility.

Credibility involves establishing confidence in the truthfulness of the research findings in terms of how the data are interpreted, and how closely this interpretation reflects reality (Anney, 2014; Shenton, 2004). The main strategy adopted in this study for promoting the credibility of data interpretation was the use of peer debriefing, which

involves identifying an individual who “reviews and asks questions about the qualitative study so that the account will resonate with people other than the researcher” (Creswell, 2014, p. 202). Peer debriefing also allows for probing into the interpretations and ideas of the researcher in order to identify potential issues and new avenues for interpretation (Shenton, 2004). In this study, peer debriefing occurred with the research supervisor. The lead researcher met with the research supervisor on a regular basis during data collection and analysis to discuss interview data and themes, and the research supervisor also reviewed all drafts of the thesis, including the results and analysis of results.

Transferability.

Transferability is the extent to which the research findings can be applicable to other contexts (Anney, 2014; Shenton, 2004). The strategy for supporting transferability used in this study included thick description (Anney, 2014). Thick description involves describing the context of a research setting in order for others to be able to decide whether or not their own context is similar enough for reasonable comparison or applicability of the results (Anney, 2014; Guba, 1990; Shenton, 2004). Thick description also involves providing sufficient description of the process of the data collection (Guba, 1990). Extensive detail was provided on the context of the university in addition to the research process, which included information about the organization, the inclusion and exclusion criteria for participants, how many participants were involved, how data were collected, the length of the data collection sessions, and the time period of data collection (Shenton, 2004).

Confirmability.

Confirmability refers to whether or not other researchers could confirm the findings of this study to be grounded in the data (Lincoln & Guba, 1985). One strategy for supporting the confirmability of the results involves allowing the readers to assess whether or not the researcher's background influenced the data interpretation through reflexivity, and therefore it is important to know the researcher's background and position.

Reflexivity: Researcher position.

As Turnbull (1973) explains, "The reader is entitled to know something of the aims, expectations, hopes, and attitudes that the writer brought to the field [...] for these will surely influence not only how [the researcher] sees things but even what [the researcher] sees" (as cited in Bryman et al., 2012, p.15-16). As a qualitative researcher, my goal is to listen to the stories of the participants and to see them as experts in the subject of their experiences. At the time of writing, I did not experience challenges related to my physical mobility, although I acknowledge that this is subject to change. This means that I do not know what it is to live with a mobility-related physical disability, nor what it is to experience challenges in this regard at Dalhousie University. My interest in this topic emerged from both an interest in marginalized populations, and from observing some of the challenges faced by a close family member, who gave me permission to discuss his experiences here. I was raised in a small town in Ontario, Canada with a younger sibling with Achondroplasia, which is one form of dwarfism. Throughout his life, I have had the chance to observe some of the barriers my sibling experienced and continues to experience. In our family, we became aware of, and often frustrated by, how inaccessible both public and private spaces are, as they are many

elements that are inaccessible to people of short stature. When my brother was younger, we were often frustrated by sink heights, the large gaps under bathroom doors, heights of chairs and tables, heights of hospital beds, etc. As he grew older, frustration arose from frequent unwillingness of instructors to provide accommodations (even with required documentation), unwillingness of employers to provide accommodations, and lack of understanding by health professionals.

Common to this condition is bowing in the legs, for which he had to undergo several major surgeries which further limited his mobility for many months, and required the use of various mobility devices, which also had to be tailored to his height (crutches, wheelchairs, walkers). Supporting him through these surgeries, and other experiences in his life, provided me with some understanding of the barriers and facilitators in the physical and social environments, both anticipated and unexpected.

Summary

Chapter 3 provides an overview of the methodology and methods. This study uses the social constructivist paradigm, which views reality as varied and based on individual context, rather than singular and objective. This research study is an exploratory qualitative study, with the aim of richly exploring the social reality and experiences of the participants. A modified grounded theory methodology was used in order to produce a conceptual understanding of the experiences of students with physical disabilities. This study is also guided by critical disability theory, which views disability as socially constructed. Critical disability theory seeks to identify and eradicate oppression. The goal of critical disability theory is to demonstrate that disability can be opportunity and potential when the social and physical environments allow individuals to work with their

impairments, rather than seek to overcome them. Although individuals with physical disabilities have rights, they are often not enforced which can lead to oppression and discrimination.

Participants for this study were recruited through a postsecondary institution (Dalhousie University, Halifax, NS). Data were collected through semi-structured interviews. Data were analyzed using grounded theory data analysis techniques. Ethical approval was attained through the Dalhousie University Research and Ethics Board.

Chapter 4: Results

This chapter provides some socio-demographic information about the study participants and presents the key barriers and facilitators to access and inclusion in educational and leisure activities participants experienced at Dalhousie University. This chapter concludes with participants' suggestions for changes to the physical and social environments that may improve their inclusion in educational and leisure activities on campus.

Introduction to Participants: Participant Diversity

Nine students who were attending Dalhousie University and who self-identified as living with a mobility-related physical disability were recruited for this study. Of these nine students, six identified as female and three identified as male. Although no other socio-demographic information was intentionally sought, some participants did offer more information about themselves over the course of the interview. For instance, some participants mentioned that they experienced other health concerns in addition to mobility challenges such as mental health disorders, sleep disorders, skin conditions, and hearing impairments. These challenges sometimes contributed to additional barriers to participation for participants. Participants were a mix of graduate and undergraduate students.

In order to protect participants' identity, the name of specific mobility-related conditions/disabilities are not reported, but most participants described experiences of pain (often daily), stiffness, and fatigue that impacted their mobility. Some participants experienced pain due to a past injury, and others due to a long-term disability/condition. A few participants discussed their experiences on campus when they were recovering

from injuries that occurred during a school term which involved the use of various mobility aids such as crutches. One participant experienced weakness on one side of the 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. Due to the variety of mobility challenges, the physical and social spaces on campus were often experienced in different ways. Experiences also varied over time as many participants' experiences of pain, stiffness, and fatigue fluctuated depending on the day.

Participants identified themselves as students living with a mobility-related physical disability when volunteering to participate in the study, but most did not use the word "disabled" to identify themselves during the interview. Several participants discussed not feeling "that disabled", and the word was largely used when referring to the need for disclosure. A number of participants also expressed that they felt that, compared to some others, their mobility-related challenges were relatively minimal or less severe.

The Physical Environment

Barriers to access and inclusion in the physical environment.

Two key themes emerged from the data related to access within the physical environment. The first theme was that many spaces within the built and natural environment do not "work" for people with mobility-related disabilities for a variety of reasons, creating barriers or challenges to access. The second theme is that the infrastructure that is intended to promote inclusion sometimes falls short, also for a variety of reasons. Most of the barriers discussed were within the physical environment

on campus, however, there was at least one barrier in the community which impacted access to activities on campus.

Theme 1: Spaces that do not “work.”

The built environment.

An analysis of participants’ experiences indicates that many spaces on campus made inclusion challenging because they were not designed or maintained in such a way that they were able to meet the needs of people with mobility issues. Indeed, many spaces did not “work” for students with a mobility-related disability. That is, there were spaces where the lighting was poor, doors were challenging to open, there were limited elevators, distances between buildings which had to be navigated, cold spaces, and wet floors which impacted mobility. For example, the lighting of spaces on campus was a design issue faced by one participant, Kathleen, who experienced low vision and depended on light to see and move. Kathleen noted that many spaces on campus were poorly lit, and commented that:

“The [educational space] is extremely dark [...] it feels like you’re in a tavern when you’re in there [...] some parts are well-lit, but the stairwells, like, there’s barely any lighting and I- I can’t see very well on the- on the stairs [...] I’ve definitely... found it to be difficult in classrooms too, when, like, teachers insist on, like, turning all the lights down, um, my eyes [...] don’t really adjust because they don’t have the ability to perceive images in the darkness. So, my eyes rely on light to really even see. So, I guess the classroom would be the only other situation where I kinda notice, like, uh, “Wow, like, this is a really dark environment.” And, like, “How easy will it be for me to get up and move?””

Some participants also discussed issues they experienced with doors on campus as some doors had activator buttons but others did not. Eloise, who used a scooter and crutches while recovering from an injury, spoke about challenges for her with some doors:

“... the hardest thing I found in [a building on campus] was that some doors are accessible, and then there’s all kinds that aren’t. And, so, you can go through some of the hallways and as you keep going into the building, you come to doors that are like, “Okay, how am I supposed to [...] pull this door open, not be in the way, get through it?” [...] The first few doors are all accessible. If you go into the wings, they’re not.”

Liz emphasized that, in addition to the absence of door activators, there were other issues with the doors on campus that created challenges. She explained that doors were often very heavy and difficult to open, or opened the wrong way:

“Um, the doors are really heavy in some places I find. [...] there’s a lot of doors that don’t have that option of, like, having it open or, like, will open towards you instead of, like, away from you.”

Liz also found that doors were not consistently labeled with direction instructions, which made it difficult to know if you should push or pull the door, and Eloise discussed how some doorways had a step leading up to the door, which posed a challenge for her when she was using a scooter: “Um, and coming in that door [...] there’s a- a bump probably [1.5 inches] high, and that’s enough to make things really difficult.”

In some spaces in the built environment on campus there were no elevators, which excluded some from these spaces: “... as far as I know there’s no elevator- can’t get into

the [leisure space]” (Eloise). Having to use stairs caused pain for some, and for others, stairs were not an option when, for example, using a mobility aid such as a scooter. However, Chris spoke about having to use stairs in one instance when he was giving a lecture and had to take the stairs to get to the front of the class. He found this challenging, especially when he was using a knee brace:

“Uh, in the big [subject] room [...] with all the stairs going up, so, getting to the bottom- so those doors [at the front of the room] don’t open from the other side, um, on the bottom [...] so if you wanna get into the lecture hall you have to go from the top, take the stairs all the way down. Um, that was very frustrating when I was in my knee brace, and it was also, like, it’s still very frustrating to have to go [...] up and down those stairs, um, just to give a lecture” (Chris).

For many participants, walking long distances was difficult or painful and many had to walk slowly for their own pain management or injury prevention such that “short” distances could easily become longer distances depending on their pain level, or depending on such factors as the weather. The design of the campus, wherein buildings could be great distances apart was a challenge for some. Kalim discussed the challenge of travelling from one building on campus to another on time for class:

“I mean, it’s kind of a pain that there’s two campuses. And, you know, there’s [a] campus here, and then there’s [another] campus. And if you’re in [a certain program], then half your classes are on [one] campus and half your classes are on [another] campus. So there’s a lot of walking back and forth. [...] Um, but yeah, probably the biggest thing was, you know, 10 minutes between classes getting

from [one] campus to [another] campus is- it's tough even for people who walk and run well to get there in time.”

For some, distance also played a major role in whether or not they would participate in leisure activities. For example, Miriam explained that when activities were occurring far from campus and she had to rely on another person for transportation, she felt increased stress because if her pain got worse over the course of the activity, she would not be able to leave on her own accord. This posed a challenge when sanctioned activities occurred at a distance from campus: “... if I go out, and then suddenly I need to go home [...] how do I get home? [...] It does cause a little bit of stress if [...] we drive somewhere far away...”

Room temperature was another challenge that was discussed by a few participants, as cold spaces could make pain and stiffness worse. Miriam, for example, explained her difficulty with typing in class due to cold room temperatures: “Like, the temperature in those rooms are usually like, really bad. Like, they're usually freezing. Yeah, so [...] my joints just get really, really stiff when it's cold? So, like, typing is a struggle.” Chris also reflected on his time taking exams in a gymnasium, wherein he felt his pain was worsened due to the cold and damp in the space:

“I don't think exams should be held in the [gym]. I'm firmly against that; it's one of the most frustrating buildings to be in. It's cold, it's damp, and [...] I can always feel the pain in my knee in the wet [...] like it feels more painful in the winter.”

Wet floors inside buildings on campus were also an issue for some participants. Both Miriam and Naomi discussed issues with floors in buildings if there were no mats to

keep pathways dry, as wet and slippery floors could increase their risk of falling and injury:

“...occasionally I see, like, there’s no mats. And then if your feet are wet, and you’re coming into the wet, and, like [...] if my coordination is affected because of my condition [...] I’m a little more stiff, or more in pain or whatever, you have less energy to spend on coordination. Which means that [...] you’re more likely to slip. And if you slip, and you’re like me, and you get injured, you take more time to heal from that injury” (Miriam).

Naomi agreed on the importance of mats to prevent wet floors, saying: “If your crutches are wet at all and there’s no carpet, then you slip and slide everywhere.”

The natural environment.

Although most of the discussion about the physical environment centered on the built environment, a couple of participants spoke of challenges related to the natural environment including the weather and darkness. For example, weather and uneven terrain were an issue for Kathleen because of her low-vision, and in her case, rain and darkness caused her to have vision difficulty, making it challenging for her to be outside for University events during the evening and in the rain:

“... so, another symptom of my condition is [...] when it’s dark and raining, for example, lights reflect off everything and it makes things really difficult to see. It’s just like this crazy trip of, like, light and darkness and, like, not really being able to see super well.”

Kathleen often avoided participating in activities after dark: “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.”

Snow and ice on sidewalks off-campus was also a problem for some participants, as it made getting to campus difficult and dangerous:

“...There was this one winter [...] it was just icy and snowy everywhere and the University was actually really good, they had all their sidewalks plowed, but [...] getting [to campus] was- you know, you had to surmount snow drifts [...] and [...] sidewalks weren’t plowed so you were walking on top of snow, which is not stable...”

Another challenge in the natural environment was traveling on unpaved, naturally occurring terrain while using a mobility device. Specifically, Eloise discussed her challenge with travelling on uneven terrain during a field component of a course while she was using a scooter, which did not work for her because she could not go “off-roading”: “I’m in a cast, on a scooter and there’s just no way for me- like, I can’t go off-roading.”

For some participants there were challenges when activities occurred on campus at night because they had safety concerns. Several female participants discussed their concerns with safety on campus at night when there was reduced light. For some, this meant that they avoided being on campus at night, particularly when they felt they would not be able to defend themselves. Naomi also felt there were obstacles at night on campus, which increased the risk of collisions: “...with parties and drunk people [...]

there's the risk of collisions. [laughter] I don't have collision insurance so it's a really scary time [laughter].”

Theme 2: Spaces that fall short.

Although some spaces on campus as well as the weather and events at night created barriers or challenges to access, there were also spaces which had the potential to support inclusion but fell short due to various design elements. Participants discussed challenges with some ramps, door activators, elevators, seating and accessible parking. For example, ramps are often considered to be key facilitators of access, but ramps can be a barrier when they are slippery, narrow, long, or poorly placed. Naomi shared her experience using a ramp on campus that was steep and slippery, which made it difficult for her when she was using crutches:

“... at the back of [a residence hall] there's a ramp. [...] They'll put a bit of salt on it in the winter, but it's still slippery as hell. Um, it's steep as hell too, so if you're- if you're holding crutches you can't really hold onto the railing, it's mostly there for show [laughter]. So, you've got a nice railing to look at as you fall down the [laughter] the ramp.”

Another participant shared her experience using a ramp that was narrow and easily crowded, which caused her to fall when she was using a scooter:

“The ramp is really narrow. And students use it all the time. [...] So, the very first day I went, um, I was coming down the ramp, and students were coming up, and they just don't care at all. And it's barely wide enough for two people to pass walking. And I'm on this scooter. And I actually, like, fell” (Eloise).

Miriam, who experienced pain and stiffness, also discussed the difficulties she experienced when using ramps. She found that some ramps are quite long, which might be good for those using wheelchairs, but could be a challenge for her because it took longer to walk up a ramp than it did to use stairs, although stairs were more painful to use:

“I do like how many ramps there are, but, um, I think they’re great for people in, like, wheelchairs and stuff but if you’re- like, if you’re ambulatory [...] the stairs are not good but the ramps - also not good because [...] the ramps, a lot of them, are a long way. Like they swerve a lot, they go around a lot, so you either... you basically have to choose: am I gonna walk up the stairs and [...] it’s gonna hurt but it’s only gonna be [...] five steps. Or, I can go on a ramp, which is easier for me to go up on [...] but it takes so much longer.”

Liz also noted that some of the ramps on campus were poorly placed and could lead to collisions: “... the one [in a building on campus], like, it’s really long and it’s just, like, at a corner. So, like, if someone’s, like, coming down [...] I could see collisions happening.”

Door activators were another design element that had the potential to support access, but often fell short. For example, Liz discussed a unique issue with door activators, as she found they sometimes made a very disruptive noise, which in turn made her less likely to use it, especially in a space where one is expected to be quiet:

“... if you push the button, like, it just makes an insanely obnoxious noise. [...] I like to go to the [quiet area], and I’m never gonna hit that button, ‘cus you’re

gonna get so many, like, people just, like, giving you dirty looks. ‘Cus it’s, like, so loud.”

Elevators are a key potential facilitator of access, but participants identified issues they experienced when using some elevators including location, size, speed, and placement. Kalim mentioned not knowing where an elevator was in one University building, and Eloise explained that elevator size was often inconsistent. For her, this was an issue because some were so small it was difficult to turn around in while she was using a scooter:

“[In one building on campus] there’s a super big elevator. That one’s great. Lots of room, you can turn around and stuff. Then there’s the medium-sized elevator, which you can still turn around in, but if there’s people in it, you might not be able to turn around in it. And then there’s the one in [another building]. [laughter] That is the tiniest elevator ever.”

Several participants also spoke of the speed of the elevators, often explaining that they were very slow: “Way too slow... They’re, like, if you are trying to get somewhere in a rush and you can walk you’re not gonna take an elevator” (Chris). Naomi also discussed the issue of elevator placement. She described her experience in residence where she could not go to the upper floors because there were stairs leading to and away from the elevator:

“...there’s still stairs that you have to go up or down to get to the elevator. Or from the elevator onto the- any floor, really. So, yeah [laughter] I was thinking, “Oh boy, there is an elevator! Oh, but it leads to stairs.””

Participants also discussed the challenges they experienced with the seating available on campus. For many, having seating was important because it was painful to stand for long periods of time, but they found that the seating was sometimes uncomfortable and cramped (Liz), as well as inadequately placed. Since many participants experienced pain, they often found that sitting in uncomfortable chairs for extended periods of time made their pain worse, making it hard to focus in class. Miriam indicated that: “I find that the classrooms are just awful. The chairs are really uncomfortable. So sitting in them for more than, like- sometimes even more than, like, 20 minutes is- is a struggle for me.” Chris also explained that the uncomfortable and cramped seating often made him worry that he was doing more damage and limited his ability to reposition in order to reduce the pain. This made it very challenging for him to focus during his exams:

“... That was probably the most frustrating time of my life... just being in a room for three hours writing and then have your back kind of [...] just cramp up [...] it’s annoying when you have to be worried about something else during your exam [...] like the seat’s really messing up my back because it’s not a good seat and- or, this table, like, is too close to the person in front of me, so I can’t really move my legs anymore, or I can’t do anything that involves, like, me trying to get rid of the pain while I’m writing my exam.”

Eloise discussed her challenges with seating because in addition to her mobility-related disability, she had hearing challenges. Accessible seating was often at the back of class, where she could sit comfortably, but could not hear: “So, I know I could have gone [into

the lecture hall] through the top doors and sat in the back row. But that can be difficult for my hearing.”

Another potential opportunity for inclusion that fell short was the availability of accessible parking on campus. Several participants found that there was an insufficient number of accessible parking spaces and issues with the accessible parking spaces occasionally being blocked by snow or delivery vehicles. For example, Eloise found it was quite difficult to find parking, even when she had an accessible parking permit and a parking pass: “Um, I did have a temporary [accessible parking] permit. I also had a parking pass. But it’s virtually impossible to find parking.” Chris argued that one reason why there were so few parking spaces available is because of the number of unused reserved parking spaces. He felt that these parking spaces should have been changed to accessible parking spaces instead.

Both Eloise and Chris discussed the issue of accessible parking spaces sometimes being blocked. For example, Eloise observed an incident in which snow was piled into an accessible parking space: “I think they did [pause] pile snow in one of the [accessible parking] spots though [...] I remember thinking, “Why would they do that?”” Similarly, Chris discussed seeing accessible parking spaces blocked off during events and equipment deliveries, which he felt should have had its own designated spot.

Maintenance of spaces was also discussed as a factor that fell short; in particular the issue of clearing snow, salting pathways and keeping floors dry. Although some participants found that snow removal was better on campus compared to off-campus, other participants found that even a small amount of snow or ice on campus was enough to increase their chance of injury from falling. Some participants also found that wet

floors could also be an issue due to the increased risk of slipping. Miriam indicated that: “Like, off campus is worse, for sure, on campus is alright, yeah. I still think it’s pretty slippery...” Naomi agreed that even a small amount of snow or ice on sidewalks was enough to put her at risk of falling when she was using crutches: “...crutches are only like this small like, ping-pong ball size [...] the feet of the crutches. So any area that doesn’t have salt on it or where there’s even a little bit of snow, you risk falling over.”

Facilitators to access in the physical environment.

Although participants discussed the barriers or challenges to accessing spaces, there were also spaces on campus that presented opportunities for participation or inclusion. In some instances, this was because of intentional design elements, and in other instances unintentional design elements.

Theme 1: Access by design.

There were several spaces on campus that supported access because the spaces had been intentionally designed for inclusion. These design elements included ramps, elevators, seating, accessible washrooms, and maintenance of spaces. Some participants experienced challenges with ramps on campus, as noted above, but the presence of ramps was also discussed as supportive of access. For example, when Naomi was using her crutches, she found that long ramps with a small incline were helpful to her, as they made it easier for her to get into classrooms:

“The accessible entrances in [a building on campus, leading to an] auditorium are pretty great [...] it’s just a slow, small ramp incline all the way there. And you get in no problem, so that one was really nice. That’s [laughter] probably my favourite place to have a class in last year.”

Similarly, although there were issues with some elevators on campus, many participants found that the elevators helped them to access spaces. As participants noted, there are elevators in almost all campus buildings. Some spaces on campus had also been recently renovated to have more elevators, which Naomi felt was an improvement: "...in the new part...there's an elevator going up [...] so that makes me happy [laughter] to see that." Eloise also talked about a well-designed elevator that opened on both sides, meaning she did not have to turn around in it when she used her scooter:

"... it's pretty good if you are coming in the lower part because there's doors on either side [...] you go in [on one] side of the elevator, but every other floor that you're going on to, you're going out on [opposite side]. So you don't need to turn around. Which is kind of awesome."

Chris also discussed improvements he had seen in some buildings, where additional seating was added, which meant that he had more opportunities to sit comfortably when he needed to. Isaac also discussed how there were many accessible washrooms on campus, and Naomi mentioned that the washrooms in a newly renovated space were more accessible, as they were more spacious, leaving plenty of room for people to use the washroom with crutches and other mobility aids. Although the removal of snow and ice on campus was not effective enough for some participants, others did mention that snow and ice removal on campus was much better than snow and ice removal in the community: "You know, the whole city might be under snow, but once you get to the Dalhousie sidewalks, you're pretty much good" (Kalim).

Theme 2: Access by "accident."

Some space elements on campus were unintentional opportunities for access such as spacious seating during the writing of exams. For example, Liz discussed how students were often spaced out during exams to reduce cheating, and she found this beneficial for her because she had more space to reposition and be comfortable: "... not being able to sit by someone is nice. 'Cus then I have more room [laughter] during exams. That's more so for, like, cheating. But I like it 'cus I feel more comfortable."

Kalim also discussed how where he lived played a role in participation in leisure activities (e.g., going to the gym), and specifically when he lived on campus, he had much better access to intramurals because the gym "...was a 5-minute walk away." Miriam discussed how her classes all happened to be held in the same building which facilitated access. "... if I was going from building to building, that would be an issue for me [...] the only reason it's not an issue for me is because everything is in one building."

The Social Environment

Barriers to access and inclusion in the social environment.

The social environment, as conceptualized for this research, has intrapersonal, interpersonal, organizational, community, and public policy levels. When speaking about the social environment and barriers to participations, participants discussed all levels with the exception of public policy, with most of the discussion centering on the organizational level. The barriers experienced played a role in limiting participation in educational and leisure activities in a variety of ways.

Theme 1: Intrapersonal barriers.

A few participants discussed the connections between their physical mobility and their mental or emotional health, and specifically how their physical mobility challenges

and the barriers they experienced influenced their motivation to access and participate in various activities. For example, Eloise, who had a severe ankle injury, spoke about her lack of motivation to go on campus and try to physically “get around.”

“I found myself really just avoiding as much as I could and trying to stay at home to do stuff. Um, [pause] a little bit because... I was just kind of mentally and emotionally dealing with all of it anyway, but definitely a part of it was: it’s hard to get around, so I’m just not- I’m going to avoid that [laughter]. And there were days I wouldn’t go to school just because I didn’t want to deal with it today.”

Naomi also discussed how a physical injury took a toll on her motivation and made her feel like she wanted to drop out of school:

“You lack all motivation. When you’re not able to [do things you used to be able to do] [...] Yeah. Just like, ready to drop out honestly [laughter] [...] especially, like, if you’re somebody who’s always done well in school and you know that you’re capable of doing these things, but then there’s something that is preventing you from doing it, it’s so frustrating.”

A couple of participants also discussed being concerned about how others perceived them, and this appeared to impact their ability to engage in some activities because of the “worry” about how they might be perceived. Miriam for example discussed concerns about being seen as an “imposition” if she needed to ask to be driven home from an activity if her pain was severe.

Theme 2: Interpersonal barriers.

Participants discussed several barriers at the interpersonal level that affected access or made access difficult including the challenges of disclosure, and barriers related to the “visibility” of some disabilities.

Challenges of disclosure.

Accommodation plans were available to students to support access to educational activities, but such accommodations require that one disclose one’s “disability,” and for many participants such disclosure was fraught with challenges including unease, work, and stress. Although accommodations were supposed to be a facilitator to access, they require disclosure, and for a number of participants, disclosure was a challenge. Kathleen for example felt that her mobility experiences were very personal, and so it was difficult to have to continually disclose to multiple people. She also discussed how much work she had to do to constantly advocate for her specific accommodation needs, which became “tiring”:

“... I always had to really, like, advocate for myself in terms of, like, activities that happen at night, or in, like, low light. And really had to explain that, like, there are things that I cannot physically do and participate in because I cannot see or perceive anything [...] it gets tiring to be, like, a- advocating for your needs all the time...”

For a few participants there were fears associated with disclosure, so they did not do so at least in some situations. Kalim, for example, discussed how, in some cases, he preferred to deal with the pain himself rather than cause a “commotion,” by disclosing what he needed, and this was possible because his condition was “invisible.”

“I felt, at the time, dealing with the pain was easier than causing a commotion and getting special accessibility just for me. Um, ‘cus [...] with a thing like this that’s invisible, you know, I don’t have a cane or a walker or a- a wheelchair it’s kind of- I don’t know, I would’ve felt uncomfortable if I had maybe said, “Hey, I need a seat” and I being the only one who was sitting down, and it would’ve been like, “Why do you need that?” And, I don’t know. I felt- I would’ve felt that would be a bit awkward...”

Some participants felt that they might lose potential employment opportunities or receive poor references if they disclosed their mobility challenges and need for accommodations. Miriam, for example, felt obligated to stay in class, in pain, for fear that instructors would perceive her negatively and thus think less of her if she left:

“...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 [...] I wouldn’t feel comfortable asking someone who [...] questioned my ability based on... whatever they thought that I was lacking.”

Some participants also found it difficult to disclose because, as Miriam explained, because her disability was “invisible,” instructors did not always believe her when she explained that she needed an accommodation: “I think a lot of people don’t believe you when you’re like, “I’m not feeling well,” and they’re like, “Yeah, but you look healthy.”” Chris also discussed how chronic pain was not always considered a “disability,” and this

could be a barrier to gaining accommodations particularly if the pain is post-surgery, and so it is assumed the pain is gone.

Miriam, who is from outside of the province, discussed how she sometimes felt that she did not know the people around her well enough to ask for help: "...I feel like I don't know people well enough to be like, "Okay...I...need to go home.""

Feeling 'pitied' and feeling invisible.

Participants spoke about feeling a number of negative emotions because of the ways in which they were sometimes viewed and treated by able-bodied individuals on campus. A couple of participants discussed how some people seemed to pity them when they used mobility aids such as crutches or a scooter, and others rendered them "invisible." As one participant explained: "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. Or they'll just- there's either too much sympathy or none" (Naomi). Eloise also discussed her experience of being rendered "invisible" when other students on campus sometimes did not look at her, notice her, or move out of her way while she was using a scooter.

"They don't pay attention [...] I was coming down the ramp, and students were coming up, and they just don't care at all. [...] Um, and then people just getting in the way, or not letting me through, or [...] I'd be sitting at the front of class [...] and I'd lock the wheels on my scooter so I could put my foot up on it. Um, and people would just bump into it. Like, it's obvious, it's there!" (Eloise).

Theme 3: Organizational barriers.

Most of the barriers or challenges to access that participants discussed within the context of the social environment occurred at the organizational level. The first type

involved “inclusive” practices which fell short of their promise or in effect were themselves barriers because they made the process for access so difficult. The second type of barrier involved “ableist” norms which assume that there were certain practices that everyone should be able to accomplish, but which some people with disabilities cannot. The final type of barrier at the organizational level was the lack of inclusive policies to support inclusion.

Inclusive practices and their challenges.

Several participants indicated that a number of practices that were supposed to support inclusion often fell short of what individuals with disabilities needed. These practices that fell short included poor communication of inclusive supports, challenges associated with documentation and with effectiveness of supports “on the ground.”

Although there were “inclusive” supports on campus, communication of supports was at times a barrier for some participants. For example, Kathleen was sometimes asked to disclose her disability, but no follow-up occurred to discuss what supports she would need to ensure participation, let alone to ensure she received such supports. One participant, Chris, was unsure whether or not he would qualify for an accommodation plan because he was not sure if it was for people who experience pain. Eloise also discussed a lack of effective communication when it came to seeking out supports, indicating how she struggled to find the right person to speak to about such issues as getting reserved parking. This frustration with trying to get access appears to be a barrier for Eloise. ““Oh, talk to this person.” “Oh, no, talk to this person,” and it just- you’re everywhere and no one does anything.”

There were also challenges related to documentation, particularly related to documentation required for accommodation plans. Miriam, for example, indicated that the accommodation plan was just too much “work.”

“It’s a ridiculous amount of work [to get an accommodation plan] I had to go to, like, three different doctors appointments, like, get, like, a bunch of stuff signed, go to, like, have a phone call ‘cus I was [outside of Halifax], like, have another meeting, like, get everyone to sign stuff...”

For Kathleen, the documentation required was of concern because the forms asked for information that she “could never really prove.”

There were also indications that some supports do not work for students “on the ground.” For example Miriam, who had an accommodation plan in order to be able to record lectures, found that the plan was not a perfect fit because she needed to sit at the back of the classroom so she could stand or leave to relieve pain without disrupting other students, but because she was at the back the quality of her recordings were low. This meant that she could not always hear the recording after class and as such the actual accommodation fell short of what she needed. Naomi also discussed her frustrations when trying to reach supportive services on campus without success: “Like, I would call and [...] I wouldn’t get an answer. I’ve never used their services before because I just kinda gave up after not hearing from them.”

Ableist expectations and stereotypes.

Participants discussed how there were frequently ableist expectations placed on them that they could not always meet, and inclusion in activities seemed to depend on meeting these expectations and fitting in as if one does not have mobility issues. For

example, one participant indicated that they were expected to be in class and remain seated but that was not possible for them at least some of the time. Several participants needed to stand up or move around to reduce pain or stiffness and for Chris, not being able to move around during his exam made it difficult to focus: "... you can't really focus on your exam [...] you feel like you don't wanna do it anymore either, so you kind of just sit there, like, try an power through the pain kind of thing." Naomi also discussed how she was expected to be in class, but found it hard to focus in class because she had to take pain medication in order to be there: "... if you don't take them, then you can't go to class [laughter]."

The expectation that your body will always be the same each day, and that you can schedule events in advance was also raised by Miriam, who found it difficult to sign up for events when she did not know what her health might be like on the day of the event: "I also just feel stressed out whenever I need to sign up for anything [...] 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." Another participant also commented on the fact that she was expected to know in advance about accommodations she would need, but she did not because it was difficult to predict when mobility challenges might occur: "It's, like, hard to predict when something will be a mobility issue until it's, like, until it is an issue. On the ground" (Kathleen).

The expectation that students with mobility challenges are able to do activities that able-bodied people are able to do, such as driving a car, traveling over uneven terrain, and writing notes by hand were commented on by a few participants. For example, Eloise described an experience with an instructor where she was expected to

travel over uneven terrain to complete a field component of a course, while using her scooter. After telling the instructor that she could not do that, she was told to “find a way.” For Miriam, one instructor explained to their class that it is better to write notes by hand, which was something she would not be able to do for extended periods of time:

“... I’ve definitely also had profs be like “[...] there’s a few new studies that have come out [...] about, like, how writing by hand is, like, way more useful than writing on your computer.” And I always wanna be like, “Hey, if I write by hand I can last about 10 minutes and then my arm seizes up and I can’t write anymore, so...””

One participant pointed to stereotypical depictions of people with her disability presented in course content and how this negatively impacted her ability to stay in class. She indicated that one instructor stereotyped her condition, suggesting it is “an old person’s disease,” and showed images of extreme cases of her condition.

Economic costs related to access.

A few participants indicated that there were sometimes economic costs associated with having a disability, costs that if they did not have a disability they would not have to pay in order to participate in University activities. Participants were frequently expected to be responsible for costs related to their access or attempts to try and gain access to educational activities. For example, Eloise indicated that she had to pay for a course she could not complete due to the challenges she experienced after breaking her ankle. She discussed how, although there is the practice of giving out “ILL” grades rather than failing grades, she still had to pay to retake the course.

Naomi noted that although there were wheelchairs available to assist with mobility she was expected to pay the rental fee.

“... you have to- you run maybe two to three hundred dollars to rent a wheelchair for a set amount of time [...] I didn't end up getting one and I just, like, put myself on crutches for the rest of the time, 'cus I couldn't afford it.”

Theme 4: Community barrier.

There was one key community barrier that was discussed, and specifically challenges with public transportation, which made it difficult to get to and from the University. Many participants discussed the unreliability of public transit, and at least one participation indicated that public transportation (city buses) in Halifax exacerbated pain with the constant stop-and-go. Miriam explains that, if she was in pain, she avoided public transportation, and Chris and Talia also felt that the stop-and-go nature of some drivers of public transportation often caused pain. Naomi agreed that the motion of the buses was painful and dangerous for her injury.

Facilitators to access and inclusion in the social environment.

Although participants experienced barriers and challenges to access in the social environment, there were also factors in the social environment that created opportunities for access. Participants discussed opportunities mostly at the interpersonal level, although there were also some opportunities at the organizational level.

Theme 1: Interpersonal level.

Several aspects of the interpersonal level of the social environment acted as facilitators to accessing and participating in activities on campus including interpersonal supports and communication.

Interpersonal supports.

Participants often found that supportive relationships with others helped with their inclusion on campus. For example, several participants discussed the importance of family support, because their families usually had a solid understanding of the experiences and challenges faced by the participant, and often played a role in helping participants to participate in various activities. Several participants discussed how parents facilitated inclusion in educational and leisure activities because they played a major role in ensuring the participant had access to medication and other health care needs related to their mobility challenge.

Peer support was also important for participants, and often helped with access to and participation in various activities and space on campus. For example, Eloise describes how peers helped her by holding open doors, something that strangers were less likely to do. Miriam also found that peers were a support when she could no longer participate in an activity that she had committed to because her pain or stiffness was bad on that day, as her peers understood. Another participant, Naomi, discussed how important her friend was for helping her to get to class when she was on crutches. Her friend would often hold on to her to help prevent her from falling and would walk with her even if it meant they were late to class. Naomi also discussed how important it was for her to have a friend in residence who was understanding of her challenges and was willing to switch rooms with her so that she could be on a more accessible floor.

Teammates were another interpersonal support that helped to facilitate inclusion in sports when they understood participants' challenges. For example, Liz found that her teammates supported her decision to take breaks on "bad days," and Chris also found that

teammates facilitated his inclusion in intramural sports while he was using a knee brace, as they were happy to have him play as long as he covered up hinges that could cause injury to others. Kathleen felt uncomfortable going to low-lit places without her romantic partner, who understood her condition very well, and was therefore a support.

Some participants also felt that some faculty were very supportive of them and helped them to participate in educational activities by giving breaks in class, checking in on students, understanding about students coming in late, and supported students through humour. Eloise explained: “I find most professors are really understanding about it. Yeah. Most of my experiences with professors are very, very positive.” Chris, discussed how, since he often had to be late to class due to his mobility challenges, he felt supported by instructors who did not mind his lateness, and Naomi described feeling supported by an instructor who not only was understanding, but interacted with her using humour rather than concern or pity, which she found refreshing.

Various staff members on campus were also a form of social support for many participants. For example, Isaac and Eloise both found that staff on campus were willing to take the time to understand their mobility needs, and to come up with a solution to address their needs, such as trying to secure accessible residence rooms and reducing the amount of time standing in line at the bookstore.

One participant commented that it was easier to ask for what you need as a graduate student rather than an undergraduate student because there is greater opportunity for interpersonal support. For example, Kalim felt more comfortable getting what he needed as a graduate student because he knew people better, and felt he was not just “a number.”

Effective and meaningful communication.

Communication between participants and others was another key opportunity for inclusion. For example, Kathleen discussed how she appreciated when people who organized various activities communicated what the activity involved and the accessibility and lighting of the space. Participants also found that when communication was meaningful and genuine, there was greater opportunity for inclusion. Kathleen explained how she liked it when an instructor was in regular contact with students to check in on them, as she felt she was being “invited” to discuss her needs with someone who would be receptive:

“[The instructor] sends emails weekly to [their] students [...] to check in with you and see how you’re doing and, like, I personally really appreciate that and I felt like I was being invited to discuss sort of, like, anything that might be a challenge for me...”

Kalim also felt that instructors made him feel more comfortable when they are more casual when inviting students to ask for help, rather than pushy, condescending, or formal: “... if you’re too heavy handed [...] I kinda back off a little bit. But if you’re just [casual] I feel comfortable.”

Although it could be challenging for some participants to talk about their disability in some situations, it sometimes did help participants with access. For Talia, communicating her needs to those around her made participation in activities easier. Miriam also discussed how, although she preferred not to have to tell intimate details about her life to others, she had found that being more open benefitted her because others often became more understanding once they knew her “life story.”

Theme 2: Organizational level.

Participants identified several policies at the organizational level that supported inclusion such as accommodation, accessibility, and financial support policies for students with disabilities. Inclusive practices, and specifically online lectures were also discussed as supportive of inclusion.

Inclusive policies.

Policies on campus for developing accommodation plans were a key facilitator of inclusion particularly for Miriam, who found that having an accommodation plan meant that her mobility challenges were legitimized to instructors, and reduced challenges with faculty understanding. Isaac explained that while he participated in a student council, all planned activities had to be accessible to participants with all types of disabilities: "... our events need to actually be screened [...] If it doesn't meet the [accessibility criteria] we need to make adjustments to the event."

Policies on campus related to supports for students were also major facilitators. For example, Chris found that he felt supported by athletic trainers who were trained to help people with injuries to play safely. Miriam also discussed how health services helped her to get out of a lease for a space that was negatively impacting her health because it was below ground and damp. For Kalim, the bus pass for summer students was a great help to him because he found that it was difficult to travel to work on foot while he was employed during the summer without having a pass, and so when the bus passes were approved for summer students, it was a benefit for him. Lastly, Isaac discussed receiving additional funding to help support him as a person with a disability.

Inclusive practices.

A key inclusive practice discussed by participants was related to the availability of online lectures. Participants found this practice to be very important, as it allowed them to attend lectures without having to go onto campus, potentially in pain. For Miriam, this “saved her,” because it allowed her to attend lectures at home while she was sick:

“[...] educational talks [...] we have to go to, um, a certain amount per year [...] last year I was quite sick for a lot of them [...] but there was lots of online ones that I could, you know, listen to [...] having that as an option, like, I mean it saved me ‘cus like, we needed four last year and three out of the four, I think, were online for me.”

Personal Strategies for Inclusion

Participants used several strategies to keep themselves included in various activities. Some strategies were part of a participant’s regular routine such as repositioning their body, and some were larger events such as moving closer to campus.

Hidden work: Routine of inclusion.

Several routine strategies for inclusion in activities included repositioning the body, organizing social activities, communicating needs, going to the gym, using medication, and prioritizing certain activities.

Taking breaks in class and repositioning the body to relieve pain were important strategies for inclusion which several participants discussed doing on a regular basis. Naomi hosted her own leisure activities in her room in residence so she could continue to see her friends without having to go out and travel with difficulty in order to socialize with them and maintain those relationships. Participants also discussed how

communicating their needs was an important strategy for having their needs addressed. For example, Kalim discussed how he sometimes asked to sit down when meeting with an instructor, explaining he has “a bad knee.” Although it was not always an option for other participants, going to the gym was a key strategy for Liz, who found that going to the gym helped her to reduce her pain before class, and helped with her self-esteem and feeling she had some control over her condition. The use of medication was also important for some participants in order to facilitate their participation in a variety of activities.

Participants also responded to challenges by prioritizing certain activities and avoiding others. Most participants discussed how they often decided, based on their own self-knowledge, not to participate in some activities for their own safety, but also to enable them to have energy to continue to participate in prioritized activities. For example, Miriam explains that when her health was being impacted, she chose to focus her energy on activities that were more of a priority, such as educational activities: “...my education comes first. [...] I’ve got to have enough energy to do that. [...] which means that sometimes I just don’t go to things.” Chris also discussed how he sometimes avoided activities that increased his risk of injury.

Hidden work: Planning inclusion.

A few participants discussed how they had moved closer to campus in order to reduce the amount of distance and time they had to travel to get to campus: “...just getting from home to work is not as big of a deal because I factored that in to where I live now” (Kalim). Kathleen also discussed an experience wherein she paid for her romantic

partner to accompany her to a new city for a conference she wanted to attend so that she would have somebody she trusted who could help her navigate the new city.

Suggestions for Change: Organizational Strategies for Improving Inclusion

Participants provided suggestions for strategies to improve access and inclusion at Dalhousie University. Most suggestions were related to the campus environment, although there were some suggestions related to the community environment.

Strategies for improving the physical environment.

Theme 1: Making spaces “work.”

Participants discussed the need for improving accessible entrances to buildings, lighting of buildings, seating, and building temperature. Eloise discussed that every building should have an accessible entrance, including addressing any steps leading into buildings, even if they seem minor. Kathleen suggested making changes to spaces on campus in order to improve the lighting in order to ensure that no space on campus is poorly lit. Several participants discussed the need for improved seating, however, participants felt that this could be seen as “unreasonable.” Since several participants discussed the issue of the temperatures of spaces on campus, especially low temperatures, Miriam suggested that this should be addressed.

Suggestions were also made about two specific buildings on campus. Chris suggested that the Dalhousie University gym not used for exams, as he argued that the Dalhousie University gym is cold, far from students, and can be unsafe to get to because students have to cross a street to get to it. Naomi discussed her challenge living in residence with her knee injury and suggested the addition of a private space for people to use if they experience similar challenges associated with bathing in a cast.

Theme 2: Building on inclusion efforts.

Although there were many issues with the physical spaces on campus, participants demonstrated that there had been efforts to make the spaces more inclusive, even if these efforts did not live up to the full promise of accessibility. Participants suggested ways to build on those efforts such as the addition of more activator buttons on doors, additional elevators, improved parking options, more safety phones, more covered bus seats at bus stops in the community, and greater attention paid to keeping building floors dry and sidewalks clear.

Given the issues with doors on campus, especially with the lack of activator buttons, Eloise suggested taking steps to make doors accessible, possibly through the addition of more activators inside buildings. Kalim suggested the addition of more elevators on campus for those who prefer to use them, and Eloise suggested making changes to parking so that people with mobility challenges could get temporary reserved spaces. Liz suggested installing more security phones throughout campus as one strategy for improving feelings of safety on campus. Participants also identified the need for additional mats and boot sole cleaners indoors, and improved clearing of paths on campus during the winter. Naomi in particular highlighted the need for keeping sidewalks on campus cleared for those using crutches, and Liz discussed how it would help her if shortcuts on campus, and sidewalks nearby, were properly cleared.

One person suggested a change to the built environment in the community, specifically related to bus stops in the community. Kalim found that many bus stops did not have seats, or sheltered seats. Since there were some bus stops with sheltered seats, he suggested having more sheltered seats throughout the community.

Strategies for improving the social environment.

Participants provided several suggestions for improving the social environment at Dalhousie University, in order to improve their inclusion. Participants suggested improvements to various supports as well as improvements to attitudes and awareness, and changes to norms and practices.

Theme 1: Supports.

Participants identified a need for better formal supports in order to improve their inclusion on campus including peer and buddy supports, financial supports, transportation supports, and better communication about supports. For example, Kathleen argued that having a person who is able to be a support as a buddy at events would improve the accessibility of events for people with low vision or other mobility challenges: "... having someone, maybe, who is hired or is volunteering to be a buddy [...] available at events, for example, to accommodate you if you needed it." Additionally, a few participants suggested that peer support groups would be beneficial as they could help to improve inclusion on campus such as participation in sports. Chris discussed, for example, how having trained students who are aware of how to manage, in his case, a past injury during sports would be beneficial. Naomi discussed how having financial support would also be beneficial as it would have allowed her to afford, for example, a wheelchair if there was funding for students who found themselves experiencing mobility-related disabilities. Participants also discussed that having a reliable shuttle service on campus and improved public transportation in the community would be beneficial for students with mobility-related disabilities if they have difficulty travelling on campus or in the community.

Although there were efforts to make activities more accessible, there were often issues with communicating the accessibility of events. For example, Kathleen felt that communicating the accessibility of spaces and activities would have benefitted her, so that she would have known what was expected of her and her body in a given space and therefore whether or not she felt she could attend: "...they could [...] put more effort into, like, detailing [...] what it will physically look like and [...] what is expected of me in terms of my own body..."

Theme 2: Attitudes and awareness.

Participants also identified the need for addressing the lack of knowledge about students with disabilities on campus in order to support participation in various activities. For example, Miriam discussed the need for more awareness about invisible disabilities, which she felt would help with reducing stigma and helping her to feel more comfortable disclosing her needs. Eloise also discussed how there needs to be more awareness about the needs of people with mobility-related disabilities in order to improve inclusion. When she was using a scooter, she often needed more space and time which students did not always know she might need: "... maybe making people a little more aware that there are people on campus who might need a little more space, um, you might need to wait for people."

A few participants discussed, in particular, the importance of having faculty who have a deeper understanding of the challenges students may be facing. Miriam felt that some faculty did not have this understanding, and that having sensitivity training for faculty would be beneficial. She found that some faculty tended to be used to doing things one way, and were alarmed when students had, for instance, unique challenges due

to pain and fatigue. She went on to explain the need for faculty to change their assumptions about students in order to support students with mobility-related disabilities.

Theme 3: Norms and practices.

Participants also discussed the need for changes to norms and practices in order to support their inclusion, including the need for more breaks in class, and more use of technology to help with inclusion. Miriam, for example, found it difficult to sit for long periods of time, which seemed to be a norm during lectures, and explained that breaks would be helpful. Both Naomi and Miriam discussed the need for incorporating greater technology into courses because they found that pain or other barriers sometimes kept them from attending class in person, and so having the option to get class information another way would benefit them.

Miriam understood that some of her instructors wanted to encourage students to come to class, and felt that this may be one reason why they did not post lecture notes online in addition to presentation slides, but she felt that having the notes would not deter students from coming to class. She also felt that having access to lecture notes would mean she would not need an accommodation plan: "...if the prof put their notes online there would be no reason for me to get a note taker [...] I probably wouldn't even need an accommodation plan."

Chapter 5: Discussion

Participants in this study discussed the barriers and facilitators to access and inclusion in educational and leisure activities on Halifax campuses at Dalhousie University, as well as their suggestions for change. Although individual participants had variable experiences, what their collective experiences suggest is that there are elements within the physical and social environments that facilitate access, but the work of making Dalhousie University accessible is not complete. Participants indicated that some spaces have significant barriers to access and inclusion for students with mobility-related physical disabilities (or elements of the environment that did not work for them), and even when the University made efforts to support access and inclusion there were still some barriers to participation as many of the efforts fell short of what was needed. This chapter discusses the key research findings relative to the current literature, and outlines implications of the findings, including implications for changes in the physical and social environments. Some areas for future research are also suggested.

What Did Not Work, What Falls Short & What Worked

Elements of the physical and social environments that did not “work.”

Participants discussed several aspects of the physical space on campus that did not “work” for them, such as the temperature and lighting of spaces, distance to travel on campus, spaces without elevators, and so forth. These findings are consistent with the current literature insofar as others have also found these types of barriers to access (Agarwal & Kumar, 2017; Bishop & Rhind, 2011; Martin & Griffiths, 2016; Moswela & Mukhopadhyay, 2011; Reed & Curtis, 2012; Stumbo et al., 2010/2011). Some barriers which were not raised in the literature reviewed for this study but which were identified

by participants as important elements of the physical environment that did not work include barriers related to night time activities such as low light and safety, and wet and slippery floors in University buildings.

Participants not only spoke about elements within the physical environment that did not work or were barriers to inclusion, but also within the social environment. Several barriers are in line with what is identified in the literature including fear of others' perceptions (Agarwal & Kumar, 2017; Goode, 2007; Kreider, Bendixen, & Lutz, 2015; Lindsay, Cagliostro, & Carafa, 2018; Osborne, 2018; Ostrowski, 2016), feeling invisible (Goode, 2007), ableist norms (Agarwal & Kumar, 2017; Goode, 2007; Osborne, 2018; Thompson-Ebanks & Jarman, 2018), and experiencing pity (Firmin et al., 2011; MacDonald, 2018; Devlin & Pothier, 2006). However, some examples of elements of the social environment which did not work such as being expected to be able to drive, and the portrayal of some disabilities as associated with aging in lectures were not commented on in the literature reviewed for this thesis but were noted by study participants.

Another aspect of the social environment that did not work for some study participants, or acted as a barrier to inclusion, was the conceptualization of "disability" that appeared to prevail within the University. Some participants suggested that mobility-related disabilities seemed to be defined in terms of those which are visible or can be known when one sees, for example, a walker, a cane or a wheelchair. This conceptualization, however, impacted those with invisible disabilities in a variety of ways including that they sometimes had difficulty proving they had a disability. Wendell (2001) argues that there is a perception that those with "visible" disabilities represent the

experiences of all people with disabilities, but this is not the case. Another issue related to the conceptualization of mobility-related disabilities on campus was the perception that chronic pain, which several participants experienced, largely affects older adults. Yet as this study and others have noted, it is also a common disability among postsecondary students (Wendell, 2001).

The conceptualization of disabilities as static and unchanging also seemed to prevail within the social environment of the university, yet many participants noted 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. Conceptualizing disabilities as static or unchanging can act as a barrier or in other words does not work for all 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 consistent.

Elements of the physical and social environments that fall short.

Even though there have been efforts within the context of the university to support access and inclusion, many aspects of the physical and social environments were experienced by some participants as “falling short” of truly supporting participation, and these findings are consistent with what other researchers have found. Other researchers have also pointed, for example, to physical elements within the post-secondary institution such as steep and slippery ramps, small elevators, uncomfortable seating, and seating only available at the back of the room which provide only partial access (Agarwal & Kumar, 2017; Martin & Griffiths, 2016; Moswela & Mukhopadhyay, 2011; Stumbo et al., 2010/2011). There are also elements within the social environment at Dalhousie

University that “fall short” such as accommodation plans which require a significant amount of work to obtain and can sometimes be less than effective or not meet students’ complete needs. Accommodation plans that permitted students to 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 in order to stand up frequently to relieve her pain.

Disclosure is another element which fell short, although it was often considered an important facilitator of access because it could be the first step to receiving accommodations. However, some participants in this thesis study reported that they felt they could not ask for what they needed (disclose) because they might not be believed or understood given that they had an “invisible” disability, and this finding is consistent with the literature (Kreider et al., 2015; Osborne, 2018). Disclosure can also be a great deal of work, it can be uncomfortable, and it can be a very personal experience as noted by study participants as well as a number of researchers (Bishop & Rhind, 2011; Goode, 2007; Kreider et al., 2015; Lindsay et al., 2018; Thompson-Ebanks & Jarman, 2018). For these reasons, requiring disclosure in order to obtain accommodations falls short of ensuring inclusion.

Participants also suggested that there was a heavy focus on measuring, diagnosing, and labeling (MacDonald, 2008) their condition and experiences in order to verify or “prove” their need for accommodations. This accommodation model of addressing the needs of students with disabilities is based on the medical model of disability, wherein individuals are responsible for their own inclusion (Griful-Freixenet et al., 2017; Ostrowski, 2016; Simui et al., 2018), and participants in this study indicated,

that the process of “proving” their need for accommodation was a significant amount of work, and could be challenging to articulate. In the literature the process of obtaining a formal diagnosis, which is often the “proof” accommodation services require, has also been shown to take a great deal of time, even years (Osborne, 2018).

Communication problems identified in this study wherein students were uncertain about what supports were available, if they qualify, and where to go to get them, are in line with the literature, and fall short of what is needed for access (Bishop & Rhind, 2011; Goode, 2007; Kreider et al., 2015; Lindsay et al., 2018; Thompson-Ebanks & Jarman, 2018). The costs for renting wheelchairs, and the costs associated with re-enrolling in courses which students were unable to complete due to mobility challenges were not raised in the literature reviewed but are important elements within the social environment that fell short for a couple of participants. Although the wheelchairs and courses are available, the associated costs were barriers to access, and participants in this study also identified issues in the community of unreliable and challenging public transportation as falling short. Such issues were also not raised in the literature reviewed.

Elements of the physical and social environments that worked.

Participants discussed a number of aspects of the physical and social environment that helped or facilitated access and use of educational and leisure activities, or in other words that “worked.” Some facilitators were “intentional” insofar as renovations were made to University buildings to support inclusion (e.g. ramps) and some were “unintentional” in that they were not implemented specifically for students with disabilities but they did facilitate access (e.g. spacing of students in the desks they sit at during exams). In the literature, intentional facilitators which have been identified include

having accessible washrooms, comfortable and adjustable seating, and elevators (Agarwal & Kumar, 2017; Devine, 2016; Moswela & Mukhopadhyay, 2011; Schreuer & Sachs, 2014), however, facilitators not raised in the literature reviewed included elevators which open on both sides, having all classes in the same building, having more legroom during exams, and proximity to services when living on campus.

In the social environment, some facilitators were also “intentional” (e.g. accommodation plans) and other facilitators were “unintentional” (e.g. online seminars). Many of the intentional facilitators have been identified as key facilitators in the literature, such as social supports (family, friends, classmates, faculty, staff, romantic partners), meaningful communication, accommodations/accommodation plans, funding, and health services (Agarwal & Kumar, 2017; Bishop & Rhind, 2011; Kreider et al., 2015; Lindsay et al., 2018; Moswela & Mukhopadhyay, 2011; Ostrowski, 2016; Reed & Curtis, 2012; Schreuer & Sachs, 2014; Stumbo et al., 2010/2011; Thompson-Ebanks & Jarman, 2018). Not reported in the literature reviewed, however, were such factors as training for athletic trainers/coaches, and efforts to communicate the accessibility of an event/space. Communicating accessibility of spaces/activities is key because it can help students to identify beforehand whether or not they might be able to access and participate in a given activity.

A key unintentional facilitator identified by participants and the literature reviewed for this study was the availability of seminars online (Agarwal & Kumar, 2017; Lindsay et al., 2018; Osborne, 2018; Ostrowski, 2016; Schreuer & Sachs, 2014), but not reported in the literature was the availability of student bus passes during the summer months in addition to during the fall and winter terms, which was a relatively new

addition at Dalhousie University. This benefitted one research participant who was employed at the university over the summer, and who had difficulty walking to campus for work. Although this work-related facilitator goes beyond access to educational and leisure activities, if someone was enrolled in a summer course this might be an important facilitator.

It is important to note that, in addition to intentional and unintentional facilitators, there were also actions made by individuals with mobility-related disabilities themselves to intentionally facilitate access and inclusion. Some of these actions are well-documented in the literature, such as avoiding tiring activities (Agarwal & Kumar, 2017; Firmin et al., 2011; Kreider et al., 2015; Moswela & Mukhopadhyay, 2011) and repositioning the body (Firmin et al., 2011), however, participants in this study identified several additional decisions they made such as avoiding dangerous activities, going to the gym, hosting leisure activities in their own space, using medication, taking breaks, moving closer to campus, and paying for an accompaniment to a conference out of their own pocket. Although it is important to acknowledge the effort and “hidden work” of students with mobility-related disabilities, it is also important to “lessen the demand for individual resilience” (Ignagni et al., 2019) by addressing environmental barriers.

Implications for Inclusion

Participants in this study often had to spend their time, money, and energy in order to participate in various educational and leisure activities, thus confirming what others have found which is that the onus of ensuring access and inclusion is frequently placed on individual students (Kreider et al., 2015; Osborne, 2018; Ostrowski, 2016). Exploring issues of access through a critical disability theory lens, however, suggests that

changes should be made to the physical and social environments within the University in order to facilitate inclusion not require individuals to do so much of the work (Agarwal & Kumar, 2017; Moswela & Mukhopadhyay, 2011; Olkin, 2002; Ostrowski, 2016; Scott et al., 2003; Simui et al., 2018). Such environment changes will not only reduce the work required by individuals but also support access for those who are unable to or cannot advocate for themselves and do the work necessary to obtain access. Improved access will help to support the social, emotional, mental, and physical health of students with mobility-related disabilities, and also potentially improve retention. Improved retention can help to increase the educational attainment of students with mobility-related disabilities, and thus potentially employment security, income, and long-term health.

Changes to the environment that might best support inclusion are those based on the principles of Universal Design. Ronald Mace, who was an architect with a mobility-related disability, coined “Universal Design” in the 1970s. The goal of Universal Design is to design physical spaces which can be used by all individuals without additional adaptation (Dallas & Sprong, 2015; Scott, McGuire, & Shaw, 2003). Although Universal Design initially focused on the physical environment, it has been adapted for use within educational settings, often referred to as Universal Design for Learning (UDL), Universal Design in Education (UDE) or Universal Design for Instruction (UDI) (Dallas & Sprong, 2015). Universal Design intends to be proactive and includes such changes to the environment as providing online materials, using captioned videos, and flexible room/seating arrangements (Dallas & Sprong, 2015).

Universal Design is defined in the Disability Act 2005 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, p. 38). Universal Design differs from accommodations, which focus on the individual with the disability and commonly include such adaptations as interpreters, note-takers, and assistive technology. Universal Design aims to cut out the “middle man” by preventing the need for individual accommodations (Dallas & Sprong, 2015; Scott, McGuire, & Shaw, 2003). Within the university setting, Universal Design might include faculty providing digital textbooks and class notes (Scott et al., 2003), using transcription software, and so on. Evidence has shown that faculty and teaching assistants need to be targeted with education about Universal Design strategies and, among faculty, particularly faculty who are tenured or tenure-track and male, as it has been found that non-tenured, female faculty frequently show greater commitment to adopting Universal Design principles into their practices (Dallas & Sprong, 2015).

Universal Design is beneficial for all students, but also removes the amount of work required by students with disabilities to obtain documentation to “prove” their need for accommodations and the work required to seek out those accommodations (Scott, McGuire, & Shaw, 2003) in addition to removing the challenges associated with disclosure. Universal Design can also be applied to leisure activities, such as ensuring the inaccessible student pub on Dalhousie campus has a ramp and an elevator so that students with mobility-related disabilities can use that space.

Relevance for Dalhousie University’s strategic plan.

Under section 5.2 of Dalhousie University's strategic planning (2014-2018) entitled "Foster a collegial culture grounded in diversity and inclusiveness" is the pillar of "Student Access and Success" (Dalhousie University, 2018b) which identified a need for addressing accessibility at Dalhousie University. Within this plan, there had been some focus on improving the accessibility of environments at Dalhousie University, particularly in terms of addressing the physical inaccessibility of many buildings on campus, bathrooms on campus, and the accessibility of campus during winter, which had prompted an audit through facilities management (Dalhousie University, 2017). It had also been identified that environments at Dalhousie University have been informed by unquestioned ableist assumptions, although no examples were provided, and that Universal Design for learning was needed to improve accessibility (Dalhousie University, 2018c).

It is clear that some efforts towards inclusion at Dalhousie University are in development, but there are some key ideas that should be considered in order to support these inclusion efforts. For example, there are some elements of the physical environment such as room temperature which are often missing from accessibility audits (Brock University, 2012; National Disability Authority, 2005; Ontario Human Rights Commission, n.d.) and should be part of the Universal Design. Another key idea that was not represented in the strategic plan was the need to apply Universal Design outside of the classroom, and specifically in terms of leisure activities. Leisure activities are important for reducing social isolation, something that individuals with disabilities are at a higher risk of experiencing (MacDonald, 2008). Access and inclusion in leisure activities was identified as a challenge for participants particularly when they occur off

campus, when they occur at night, and when the accessibility of such activities is not effectively communicated. This suggests that efforts should be made to make these activities accessible using Universal Design principles, as leisure activities are an important part of university life. Such efforts might include holding activities on campus whenever possible or providing reliable and safe transportation when activities are off campus and ensuring that transportation is available for those who do not or cannot attend for the duration of the event. In section 5.2 of the Dalhousie strategic plan the need for support groups for students experiencing mental health challenges was identified (Dalhousie University, 2017). However, there was no mention of such supports for students experiencing mobility-related challenges on campus, which could be another element of Universal Design implemented on campus, wherein all students are provided with access to support groups including students with mobility-related disabilities or challenges.

Implications for policy in Canada.

As noted earlier in the thesis, the 1982 Canadian Charter of Rights and Freedoms enshrines the rights of all Canadians to equality and full participation, but it took several years of lobbying, demonstrations, litigation and legal challenges for Canada to include people with disabilities in the *Constitution* (Council of Canadians with Disabilities, 2004). Although this was a victorious moment, there continue to be challenges in practice including the fact that accommodations need only be provided if they are “reasonable.” This limits full inclusion, and sometimes leads to debates about whether or not accommodations are “reasonable” or whether they inflict “undue hardship” on those providing accommodations (Council of Canadians with Disabilities, 2004). As has been

identified in this thesis research, there are a variety of limitations or barriers to accommodation such as the need to provide ‘evidence’ of a disability. What is required to address the various barriers to access and inclusion are changes to the physical and social environments.

Currently, there is some interest in environmental changes as evidenced by Bill C-81 the Accessible Canada Act which received Royal Assent on June 21st, 2019. The purpose of the Act is to identify, remove and prevent environmental barriers to access. Environmental barriers are defined as any physical, architectural, technological or attitudinal barriers (*Bill C-81*, 2019, p. 3). The focus placed on the prevention and removal of environmental barriers is a promising next step, and it will be important to evaluate the effectiveness of this Act over the coming years.

Recommendations.

Based on the results of this thesis, various recommendations can be made to help improve access within the context of the University. These recommendations include changes to the physical environment and changes within the social environment at the organizational level. These recommendations intend to contribute to the long-term goal of Universal Design of Dalhousie University so that in the future no student will have to disclose any disability nor seek accommodations in order to be included on campus.

Recommended changes in the physical environment.

Changes to the built environment are clearly needed in order to have a barrier-free built and natural environment. Such changes have not only been suggested by this study, but also by the current accessibility audit which is based on design standards identified by the Canadian Standards Association (Reeder, 2018). Examples of recommended changes

to the physical environment include improving building temperature and lighting, improving availability of accessible parking, designing and implementing barrier-free entrance ways to bathrooms and other spaces which do not have doors that have to be opened and closed, improving snow and ice removal, improving access to underground paths, upgrading to larger elevators, and so on.

Recommended changes in the social environment.

A key recommendation for the University is to make use of current technology which allows greater participation individuals with disabilities. Examples of technology use which can increase access include textbooks which are available online in formats compatible with dictation software, devices which allow individuals with low vision to use microscopes, real-time open-captioning, and using available software which allows students to participate in lectures remotely (Ignagni et al., 2019; Rao, Edelen-Smith, & Wailehua, 2015; Scott et al., 2003).

It is also recommended that the University work towards a barrier-free environment so that in the future students will not have to disclose a disability or seek out accommodations because the environment is barrier-free and adaptable. In the meantime, increased flexibility is recommended when it comes to accommodation plans. As discussed previously, accommodation plans often require a diagnosis (Hutcheon & Wolbring, 2012), which can take years to secure, can be expensive, and may be challenging to document (Osborne, 2018; Wendell, 2001). It is therefore recommended that students with disabilities no longer be required to provide a formal diagnosis in order to obtain an accommodation plan, but rather to describe their specific needs in order to receive accommodations. This recommendation is based on the assumption that most

students will not ask for an accommodation unless it is needed. Currently, many students who do live with a disability often do not seek formal supports due in part to the stigma associated with using such supports. It is therefore unlikely that students would seek supportive services if they do not experience some kind of disability.

Greater awareness of invisible mobility-related disabilities is needed, and it is recommended that workshops, lectures and seminars be held for faculty, students and staff in order to increase awareness. Ongoing conversations about the experiences of students with invisible mobility-related disabilities may help to improve acceptance and understanding of invisible disabilities and may also reduce stigma associated with disabilities and the challenges and barriers that students with invisible disabilities experience.

This study also identified challenges with communicating supports available for students with disabilities, and therefore it is recommended that information regarding the various supports and resources available be made widely accessible. It is important that all staff, students, and faculty receive communications about supports as the University works towards a barrier-free environment.

Given that efforts to implement Universal Design may take time, peer navigators may help to support students with mobility-related disabilities in the short term. The value of peer workers, or those who support others by utilizing their comparable lived experience, has been identified for those individuals with mental illnesses (Gillard et al., 2013) as well as other chronic conditions such as addictions. Research indicates that peers (paid or volunteer), and those they support, often experience empowerment and social support (Gillard et al., 2013), and therefore having peers may be mutually

beneficial in terms of the health of both the peer and the person living with a disability. Participants in this thesis study suggested a need for peer workers in order to help with navigating University life and for improving accessibility on campus. It is recognized that peer support may not be necessary as Universal Design elements are implemented, but in the short-term peer support may be very helpful as one-on-one support for students with disabilities.

Information about Universal Design should also be available to all staff, students, and faculty in order to increase an understanding of how such a design helps to improve access for all by addressing environmental barriers. Extensive and ongoing discussions about Universal Design will be key to providing an understanding of this type of change.

Many recommended changes within the University may require up-front costs, such as changes to infrastructure which involve renovations to University buildings and sidewalks. Through partnerships and possibly through provincial and federal funding (given the current policy initiatives at both levels), such funding should be pursued to make changes to the physical environment in terms of technology and built environment changes. Additionally, it is recommended that in the short-term increased funding is made available so that students with disabilities have access to a source of funds to cover costs associated with participating in educational and leisure activities at University (e.g. transportation costs).

Another key recommendation is to continually evaluate the effectiveness of initiatives on campus. It is recommended that evaluations include the perspective of students with different types of disabilities order to ensure these initiatives are improving inclusion for all students with disabilities.

Theoretical framework: Critical disability theory.

This study has suggested that there is a need to incorporate Universal Design elements into changes in the physical and social environments in order to address barriers to access and inclusion for students with mobility-related disabilities. This study focused on a single post-secondary institution but applying Universal Design beyond the borders of the university to all places and space in the community would be a major transformation, and a vital step towards ensuring the rights of individuals with disabilities are met. As Devlin & Pothier (2006) point out, environments that exclude individuals with disabilities are demonstrating that these individuals are not valued as highly as those without disabilities, and placing the work of ensuring inclusion on individuals with disabilities also demonstrates that their time and effort is not as valuable as those without disabilities. By incorporating Universal Design into all decisions about change, this process of devaluing those with disabilities can be changed.

Critical disability theory draws from the social model of disability, which states that disability is the consequence of inaccessible environments rather than the consequence of impairment. Among critical disability researchers, some argue that the environment cannot address all challenges that individuals face (Wendell, 2001). For instance, changing the environment cannot take away an individual's pain or low vision. However, what this study suggests is that there *are* ways that the physical and social environments at Dalhousie University can be changed to reduce how they impact access. As Wendell (2001) argues, we can work to address ableism (in the form of barriers in the physical and social environments) even if we cannot work to address the impairment itself.

Relevance for health promoters.

Health promotion policy has a primary focus on collective prevention (Jansen, 2007), and in the context of this study, collective prevention involves addressing environmental barriers within the postsecondary institution. As Ostrowski (2016) and Simui et al. (2018) have noted, most postsecondary institutions subscribe to the medical model of disability when addressing inclusion of students with disabilities, and therefore subscribe to an accommodation-based policy. This means accommodation plans are largely the responsibility of individual students who must seek out and obtain the necessary accommodations by registering with accommodations services, showing their eligibility, and disclosing their disability in order to receive accommodations (Ostrowski, 2016). There needs to be a shift away from this medical model towards the social model of disability which identifies barriers in a given environment as the “problem” insofar as they limit participation in various activities. This study of students shows that accommodations are not enough to ensure access and inclusion for individuals with disabilities when the environments are inherently ableist. This focus on addressing the environment makes health promoters a logical “ally” of those working in the area of disabilities, and there is a need for greater collaboration between such natural allies to promote changes in the environment. Some work has been done at Dalhousie University to address the environments, which shows some movement away from the medical model, but there continue to be practices which focus on individual-level responsibility for inclusion and such individual practices need to be replaced with changes to the environment using Universal Design principles. This is a challenging issue but is necessary and important to address the oppression experienced by people with

disabilities. It will require long-term and continual evaluation, and health promoters are well-placed to assist with such tasks.

Areas for future research.

There are several future directions that are recommended based on this study. First, exploring the experiences of students who attend a postsecondary institution and have become injured should be explored further because there is a lack of literature in this area, and these students appear to have unique challenges with navigating accommodation services for a “new” and sometimes temporary disability. Another area of future research might be an in-depth examination of how individuals with disabilities are portrayed in course content, as a participant in this study pointed to stereotypical portrayals of disability in lecture materials.

Limitations

One limitation of this study is that only students who could meet on campus for an interview were recruited, meaning that those students who were too tired, lacked time to meet due to mobility or health challenges, or could not meet for a variety of other reasons, were not recruited. In the future, it would be useful to offer the option of conducting interviews over the phone or Internet in order to reach these students. Another limitation is that no demographic information was collected, and so no comment can be made about how contextual factors such as race, ethnicity, sexual orientation, income, or age impacted experiences of barriers or facilitators to access on campus for students with mobility-related disabilities. This information may have helped to explain the data, and to understand how students with mobility-related disabilities experience other forms of oppression. Additionally, the lack of probing on the question around suggestions for

change to see what students suggest as short term versus long-term change, as such probing might have encouraged participants to suggest change that went beyond what they felt was “reasonable” to request, and towards potential elements of Universal Design. A final limitation was that participants were not asked how they would like to be referred to in this study. In the future, it would be useful to ask participants at the onset how they would like to label themselves in terms of person-first or identity-first language in an effort to support their agency in self-naming.

Knowledge Translation

An important part of any research study is to ensure that the findings are shared widely. The findings of this study will be shared in a variety of ways, including via a summary report that will be sent to participants who requested one, and to community stakeholders such as the Halifax Regional Municipality, Dalhousie Student Accessibility Services, and key stakeholders involved in the strategic plan at Dalhousie. Presentations of the findings have been given at local conferences such as Crossroads Interdisciplinary Health Research Conference, and an article will be submitted for publication to a relevant peer-reviewed journal such as the Canadian Journal of Disability Studies.

Conclusion

This study has shown that there are a variety of barriers to access and use of educational and leisure activities at the university, and even aspects of the physical and social environment that are intended to support access (e.g. ramps and accommodation plans) do not necessarily meet the needs of some students, fall short of their needs or entail stress and work. There are some elements of the physical and social environments that students do indicate facilitate and support inclusion, but findings from this study

indicate that there is still work to be done by the university to address a number of different types of barriers in the physical and social environments. To properly address the various barriers to inclusion, the voices of students with disabilities on campus need to be valued, and efforts should be made to implement Universal Design.

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Do you have a mobility-related physical disability?

I am looking for Dalhousie students to participate in a research study by sharing their experiences of barriers and facilitators to accessing activities on campus related to leisure and educational activities



Are you:

- A Dalhousie student?
- Living with a mobility-related physical disability?
- In your second year or higher?
- Willing to participate in a face-to-face, 1.5hr interview?

Looking to talk to students of all gender identities (male, female, genderqueer, transgender, non-binary, gender non-conforming, etc.) to share their experiences at Dalhousie University

All participants will receive a \$20 gift card to Amazon.ca
If interested, please contact: Lauren.Moritz@dal.ca



CONSENT FORM

Submitted June 22nd, 2018. Amendments submitted August 22nd, 2018. Approved September 4th, 2018. Amendment submitted October 15th, 2018. Approved October 25th, 2018.

Project title: Students with a Mobility-related Physical Disability: An Exploration of the Barriers and Facilitators to Leisure & Educational Activities at Dalhousie University

Lead researcher: Lauren Moritz, Masters Candidate, Dalhousie University, lauren.moritz@dal.ca

Other researchers

Supervisor: Lois Jackson, Dalhousie University, lois.jackson@dal.ca

Introduction

We invite you to take part in a research study being conducted by Lauren Moritz, a student at Dalhousie University, as part of her Masters of Health Promotion degree program. Choosing whether or not to take part in this research is entirely your choice. There will be no impact on your studies or the services you receive if you decide not to participate in the research. The information below tells you about what is involved in the research, what you will be asked to do and about any benefits, risks, inconveniences or discomfort that you might experience.

You should discuss any questions you have about this study with Lauren Moritz. Please ask as many questions as you like. If you have questions later, please contact her as she is the lead researcher.

Purpose and Outline of the Research Study

The purpose of this study is to provide 8-10 Dalhousie University students who identify as living with a mobility-related physical disability an opportunity to share their experiences of barriers and facilitators to participation in leisure and educational activities at Dalhousie University. Barriers include infrastructure or stigma, and facilitators include accessible buildings or peer support. Leisure activities are social clubs, University-run events, etc. that occur on or off campus, as well as informal activities such as activities with peers that are sanctioned by Dalhousie University and occur on or off campus. Educational activities include attending lectures, labs, field trips, professional development activities, meetings with professors, etc. The study aims not only to gain an understanding of students' perspectives of barriers and facilitators, but also potential changes at Dalhousie to reduce barriers or improve facilitators.

Who Can Take Part in the Research Study

You may participate in this study if you have completed at least one year of study at Dalhousie University, if you identify as living with a mobility-related physical disability, and if you are able to meet on campus for a face-to-face interview during the day, or meet over the phone. Students of all gender identities are encouraged to participate.

What You Will Be Asked to Do

As a participant, you will be asked to meet with the lead researcher (Lauren Moritz) at a mutually agreed-upon time during the day, on campus. You also have the option to participate in a telephone interview. You will be asked to participate in one interview session, approximately 1.5 hours in length, during which you will be asked a series of questions about your experiences accessing leisure and educational activities at Dalhousie University. The interview will be audio-recorded, or if you do not want to be audiotaped, notes will be taken.

Possible Benefits, Risks and Discomforts

You may feel that sharing your experiences is beneficial. Also, participating in this study might not personally benefit you, but we may learn things that will benefit others.

Risks associated with this study include the possibility of emotional or psychological distress as a result of being interviewed. To minimize these risks, you may skip over questions you prefer not to answer, you may take breaks at any time, and you may stop the interview at any time. If you wish to stop the interview, the researcher will stop the interview. If you want to talk to someone after the interview, you will be encouraged to contact the Health and Wellness Centre at Dalhousie, or a service not at Dalhousie such as Nova Scotia Mental Health Crisis line, Avalon Sexual Assault Centre, Nova Scotia Telecare, and Nova Scotia 211. Contact information for such services will be provided, and there are no costs associated with using these services.

If you disclose any information about current child abuse or an adult in need of protection, we are required to contact the proper authorities and reveal your identity. The research supervisor will be contacted to discuss the situation before contacting the authorities. This is a risk to participating in this study.

All efforts will be made to keep your story anonymous. **However, it may not always be possible to ensure you will not be recognized by peers or others given your story.**

Only provide information you feel comfortable sharing.

Compensation / Reimbursement

As a thank you, you will be given a \$20 gift card to Amazon.ca, which will be provided at the beginning of the interview, after consent has been discussed. The gift card will be given to you before questions are asked, and you can keep the honorarium regardless of whether or not all questions are answered or the interview completed. In the case of a telephone interview, an eGift Card will be sent to you by email immediately following the interview.

How your information will be protected:

No personally identifying information will be used in any publication or presentations. Your name will NOT be used, but a pseudonym will be given to your interview. All consent forms and data will be stored securely. Consent forms will be locked in a filing cabinet in the supervisors' office on Dalhousie University campus as soon as possible after the interview. Electronic data will be stored on two password protected hard drives (one as back-up). Paper data will be locked in a fire-proof safe when not in use. Data will be securely stored for five years after the thesis has been defended, at which time all data will be wiped from the hard drives or physically destroyed.

If You Decide to Stop Participating

You are free to refrain from answering any interview questions, and to end the interview at any time. You will be given one week after participation in the interview to inform the lead researcher, over email, that you would like to withdraw your data. This period is provided because afterwards the interview will be transcribed.

How to Obtain Results

If you request, the lead researcher (L. Moritz) will provide you with a short description of group results when the study is finished. No individual results will be provided. If you wish to have a short description of the results sent to you, you will be asked to provide your name and email address. After sending the short description of the results, this information will be shredded.

Questions

The research team is happy to talk with you about any questions or concerns you may have about participation in this research study. Please contact Lauren Moritz (lauren.moritz@dal.ca) or Lois Jackson (lois.jackson@dal.ca) at any time with questions, comments, or concerns about the research study. The lead researcher (L. Moritz) will also tell you if any new information comes up that could affect your decision to participate.

If you have any ethical concerns about participation in this research, they may also contact Research Ethics, Dalhousie University at (902) 494-1462, or email: ethics@dal.ca (and reference REB file # 2018-4535).

Appendix C Interview Guide

Interview Guide: Questions for Participants

Research Project: Students with a Physical Disability: Exploring the Barriers and Facilitators to Leisure & Educational Activities at Dalhousie University

Researcher: Lauren Moritz

Institution: Dalhousie University

Supervisor: Lois Jackson

Preamble: My name is Lauren. This research project is being conducted as part of the requirements for my MA graduate degree in Health Promotion from Dalhousie University. I want to thank you for agreeing to participate! I am interested in hearing your experiences accessing leisure and educational activities at Dalhousie University. When I say leisure, I mean any activity that you choose to participate in that you find meaningful and enjoyable which occur on Dalhousie campus, or sanctioned by Dalhousie, but off-campus. These can be formal (organized by Dalhousie) or informal (occur alone or with friends). When I say educational activities, I mean any activity that may contribute to academic success, such as lectures, field trips, visiting libraries, professional development, etc.

During this interview, I will ask you a series of questions. You do not have to answer any question if you prefer not to, and you are free to stop the interview at any point if you do not want to continue. Before we begin, do you have any questions? You are free to ask questions throughout the interview.

Interview Questions:

1. First, can you tell me a little about why you decided to study here at Dalhousie University? What attracted you to Dalhousie? Also, can you tell me a little about your physical mobility challenges? Do you use a device (eg. wheelchair) regularly?

LEISURE:

2. Can you tell me about activities at Dalhousie that you choose to participate in that might be considered leisure activities?
 - a. Probes: Formal leisure activities such as activities organized by Dalhousie (e.g. Dal after dark, recreation, student associations, etc)? Informal leisure activities that you do with your friends?
3. Have you experienced any challenges or barriers to participating in these activities? Are there any social or physical barriers to participating?
 - a. Probes: social barriers such as peer attitudes, discrimination, stigma, safety? Were there any Dalhousie policies that created a challenge?
 - b. Probes: physical barriers such as transportation, time/distance, physical access, etc?
4. Was there anything that made participation easy/easier?
 - a. Probes: anything in the social environment that helped such as peer support, family support, Dalhousie policy, etc?
 - b. Probes: anything in the physical environment that helped such as transportation, time/distance, physical access, etc?
5. Can you tell me about any leisure activities at Dalhousie that you want to participate in but do not? Are there any social or physical barriers to participating?

- a. Probes: social barriers such as peer attitudes, discrimination, stigma, safety? Were there/are there any Dalhousie policies that created a challenge?
- b. Probes: physical barriers such as transportation, time/distance, physical access, etc?
- c. What could Dalhousie do to improve your access to these activities?

EDUCATION:

- 6. Can you tell me about the types of educational activities that you participate in at Dalhousie?
 - a. Does your program have labs/lectures/simulations? Do you participate in professional development activities? Do you use Dalhousie libraries? Meetings with other students to discuss joint projects?
- 7. Have you experienced any challenges or barriers to participating in these activities? Are there any social or physical barriers to participating?
 - a. Probes: social barriers such as peer attitudes, discrimination, stigma, safety? Were there any Dalhousie policies that created a challenge?
 - b. Probes: physical barriers such as transportation, time/distance, physical access, etc?
- 8. Was there anything that made participation easy/easier?
 - a. Probes: anything in the social environment that helped such as peer support, family support, Dalhousie policy, etc?
 - b. Probes: anything in the physical environment that helped such as transportation, time/distance, physical access, etc?
- 9. Can you tell me about any educational activities at Dalhousie that you want to participate in but do not? Are there any social or physical barriers to participating?
 - a. Probes: social barriers such as peer attitudes, discrimination, stigma, safety? Were there any Dalhousie policies that created a challenge?
 - b. Probes: physical barriers such as transportation, time/distance, physical access, etc?
 - c. Probes: what could Dalhousie do to improve your access to these activities?
- 10. Is there anything else you'd like to add about the social or physical environments that you think affect your access to or involvement in leisure and educational activities?

Signature Page – Telephone Interview

Project Title: Students with a Mobility-related Physical Disability: An Exploration of the Barriers and Facilitators to Leisure & Educational Activities at Dalhousie University

Lead Researcher: Lauren Moritz, Dalhousie University, lauren.moritz@dal.ca

I have read the explanation about this study. I have been given the opportunity to discuss it and my questions have been answered to my satisfaction. I agree to take part in this study. My participation is voluntary and I understand that I am free to withdraw from the study until one week after my interview is completed.

I agree that my interview may be audio-recorded Yes No

I agree to have notes taken if my interview is not audio-recorded Yes N/A

I agree that direct quotes from my interview may be used without personally identifying me and that a pseudonym can be used.

Yes No

I agree to participate in this study, and have given my verbal consent to the researcher

Yes No

Researcher Name

Signature

Date

Results Request Page

Project Title: Students with a Mobility-related Physical Disability: An Exploration of the Barriers and Facilitators to Leisure & Educational Activities at Dalhousie University

Lead Researcher: Lauren Moritz, Dalhousie University, lauren.moritz@dal.ca

I would like to receive a summary of the results from this study in approximately 10-12 months.

E-mail

Name

Appendix D Community Resource Sheet

Resource Sheet

Dalhousie University Resources:

Dal Security	902-494-4109
Student Health & Wellness Centre	1246 LeMarchant Street, 2 nd floor 902-494-2171 livewell@dal.ca

Halifax Resources:

NS Mental Health Crisis Line	Available 24 hours a day, 7 days a week Contact: 902-429-8167 or 1-888-429-8167 (toll free)
Avalon Sexual Assault Centre	Sexual Assault Nurse Examiner Program response line: 902-425-0122 1526 Dresden Row, Suite 401, Halifax, Nova Scotia B3J 3K3
Nova Scotia Telecare service	Registered nurse available 24/7 Call: 811
Other	www.ns.211.ca Call: 211 Toll free: 1-855-466-4994 Text: 211NS (21167) Email: Help@ns.211.ca

Appendix E Dalhousie REB Ethics Approval Letter



**Health Sciences Research Ethics Board
Letter of Approval**

September 04, 2018

Lauren Rebecca Moritz
Health\School of Health and Human Performance

Dear Lauren Rebecca,

REB #: 2018-4535
Project Title: Students with a Mobility-related Physical Disability: An Exploration of the Barriers and Facilitators to Leisure and Educational Activities at Dalhousie University

Effective Date: September 04, 2018
Expiry Date: September 04, 2019

The Health Sciences Research Ethics Board has reviewed your application for research involving humans and found the proposed research to be in accordance with the Tri-Council Policy Statement on *Ethical Conduct for Research Involving Humans*. This approval will be in effect for 12 months as indicated above. This approval is subject to the conditions listed below which constitute your on-going responsibilities with respect to the ethical conduct of this research.

Sincerely,

A black rectangular redaction box covering the signature of Dr. Tannis Jurgens.

Dr. Tannis Jurgens, Chair