Accessing ability: Mental-health-promoting communities of online learning

by

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Abstract

Twenty-four percent of first-year university students self-declare as having a disability. Among those, mental-health-related disabilities (MHRD) are the most common. Each year, more students with disabilities and with mental-health issues enroll in post-secondary institutions. Concurrently, more students in Canada are taking online courses. These increases pose issues for students and educators because common symptoms of MHRD can affect academic performance. Furthermore, instructional design and institutional accommodation and accessibility policies influence learning. Instructors play a critical role because their attitudes toward students directly affect student success. Student support professionals provide essential assistance to students in post-secondary and therefore, play a key part in health and resilience promoting strategies. Despite the increasing prevalence of students with MHRD in online courses and programs, limited Canadian research has examined factors affecting learning for this population. The purpose of this descriptive qualitative study was to examine experiences of post-secondary students with MHRD in online classes to understand the ways in which their learning is supported by the institution. Including student, instructor and support staff participants allowed for an exploration of the influences on learning and academic performance within an institutional context. The social model of disability and population health framework guided this study and findings were organized with the socio-ecological model for health promotion. Data from interviews with 14 university students, 15 instructors and seven student support staff members from one mid-sized university in Western Canada indicate several influences on learning at each of the first three levels of the model—individual, interpersonal, and institutional. Findings suggest that the accommodation model currently in place is problematic, potentially causing harmful and disabling effects. Everyone in Canada has an equal right to an education that meets their needs and postsecondary institutions have a legal responsibility to ensure that all students can access their programs and services. Adopting a universal accessibility model of inclusive education, with a mental-health-promotion orientation that also includes widespread adoption of Universal Design for Learning, has the potential to improve learning, prevent harm, and promote health for all students, particularly those who have mental-health-related challenges and who are studying online.

Keywords: mental health; online learning; disability; health promotion; Universal Design for Learning; accessibility

Dedication

This dissertation is dedicated to the participants of this study. In particular, to the students who shared their stories with me as a part of this project and in my role as their instructor. Your perseverance in the face of many unnecessary structural barriers is nothing short of inspiring.

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Table of Contents

List of Tables

List of Figures

List of Acronyms

ACHA	American College Health Association
ADHD	attention-deficit/hyperactivity disorder
APA	American Psychological Association
CHRC	Canadian Human Rights Commission
CMHA	Canadian Mental Health Association
DSM-5	Diagnostic and Statistical Manual of Mental Disorders
DSU	disability support unit
GPA	grade point average
LMS	learning management systems
MHCC	Mental Health Commission of Canada
MHRD	mental-health-related disabilities
NEADS	National Educational Association of Disabled Students
PHAC	Public Health Agency of Canada
SFU	Simon Fraser University
UDL	Universal Design for Learning
UN	United Nations
U of T	University of Toronto
WHO	World Health Organization

Chapter 1.

Introduction

In 2021, British Columbia (BC) adopted Bill 6, the *Accessible British Columbia Act*, to make government and organizations more accessible to and inclusive of people with disabilities. In the government's view, "accessibility" means that all people are able to participate in work, recreation, and other daily activities without barriers (Government of BC, 2021). The law gives the Lieutenant Governor in Council the authority to regulate or remove barriers in a variety of sectors, including education (*Accessible British Columbia Act*, 2021, Division 1, Section 13).

Accessible learning in the context of post-secondary education[1] has been defined as "the process of designing courses and developing an approach to teaching that leads to meeting essential requirements and that maximizes the learning outcomes to meet the needs of individuals from a variety of backgrounds, abilities, and learning styles"[2] (Canadian Standards Association, 2020, p. 12). Accessible education celebrates diversity among learners, does not compromise academic rigour, is proactive and inclusive, reduces the need for specialized adaptations and utilizes principles of Universal Design for Learning (UDL)[3] (Ontario Universities Accessible Campus, 2017). Accessible and inclusive educational environments are created and fostered, in part, by the instructors who teach infinitely diverse groups of students.

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1 In Canada, there are three types of post-secondary institutions: institutes, colleges, and universities (Government of Canada, 2022). Post-secondary is also referred to as tertiary or higher education (Sheffield & Creso, 2013).

2 The existence of innate "learning styles" has been contested and described as a pervasive myth or misconception about cognition. The learning style myth asserts that individuals learn better when they receive instruction that is tailored to the person's visual, auditory, or kinesthetic learning style (Nancekivell et al., 2020, p. 221). With evidence lacking to support assessing for and teaching to learning styles, the focus ought to be on building on pre-existing knowledge using diverse teaching methods for all learners (Pashler et al., 2009). The term "learning styles" will be used in this paper when taking direct quotes from the literature.

3 Universal Design for Learning (UDL) is an effective philosophy, framework, and set of principles for creating and delivering course materials to diverse students while improving the learning process for all students (Capp, 2017; Hall, Meyer, & Rose, 2012). There is evidence to support the effectiveness of UDL as a means of improving the learning process for all students (Al-Azawei, Serenelli, & Lundqvist, 2016). This framework will be discussed further in Chapter 2.

Post-secondary education plays an important role for individuals and the broader society. The human capital developed during post-secondary education programs fosters social and economic prosperity by developing the country's workforce (Canadian Information Centre for International Credentials, 2022). Attaining post-secondary education can affect quality of life, productivity, employment opportunities, and earning potential (National Educational Association of Disabled Students [NEADS], 2018; Public Health Agency of Canada [PHAC], 2019; World Health Organization, 2019). Completing a post-secondary degree contributes to increased lifetime earning potential for everybody but might be particularly beneficial for people with mental-health-related disabilities (MHRD) (Michalski et al., 2017; Murphy et al., 2019). While people with MHRD tend to work less and at lower rates of pay, education is associated with positive employment outcomes (Canadian Mental Health Association [CMHA], 2022a; Luciano & Meara, 2014). Further, for students with MHRD, success in post-secondary might offer advantages beyond completing a degree and securing future employment. Education may offer rehabilitation potential by providing the students with purpose and structure while helping them develop life skills (Knis-Matthews et al., 2007). Additionally, participation in post-secondary provides important opportunities to develop social capital,[4] which benefits physical and mental health (Umberson & Karas Montez, 2010). Thus, it is critical that students with MHRD have access to post-secondary education in formats that meet their needs. The concept of mental health will be described in Chapter 2.

Under federal law in Canada, service-providing organizations, including post-secondary institutions, have a duty to accommodate students with disabilities.[5] However, people with disabilities remain under-represented in universities (Canadian Human Rights Commission [CHRC], 2017; Michalski et al., 2017), and up to 14% of British Columbians with disabilities leave post-secondary institutions before obtaining their desired level of attainment due to barriers such as insufficient institutional support

[4] Social capital is a concept that describes how people interact with one another, the value of diverse social networks, and the norms of reciprocity (Dekker & Uslaner, 2001; Porter & Towell, 2017).

[5] In the post-secondary context, academic accommodations are adaptations aimed to reduce or eliminate barriers to participation so that students with disabilities have equal access to learning and services within the educational environment (Alberta Human Rights Commission, 2010; Queens University, 2016; Simon Fraser University, n.d.). Accommodations will be discussed further in Chapter 3.

(CHRC, 2017), long and complex academic accommodation processes, negative attitudes and stereotypes, ineffective accommodation dispute-resolution mechanisms, and lack of individualized support (Ontario Human Rights Commission, n.d.). For these reasons, among others, it is important to recognize that in Canada, having a disability can be a barrier to accessing and completing post-secondary education and, consequently, attaining gainful employment. According to the most recent findings from the Canadian Survey on Disability, only 59% of Canadians with disabilities aged 25 to 64 are employed compared to 80% of Canadians without disabilities (Statistics Canada, 2017a). About 15% of youth with milder disabilities and 31% with more severe disabilities are neither in school nor employed. Among these youth, 87% have an MHRD, a learning disability, or both (Statistics Canada, 2017a).

During the past five years, I have taught hundreds of post-secondary students in online courses and have seen first-hand the rise in mental-health-related challenges (or perhaps the rise in MHRD disclosures). I have seen, and tried to support, students trying to achieve their academic goals while navigating challenging systems and inflexible course designs. Numerous students have shared with me their frustration at trying to find their way through both health and education bureaucracies to access support and services. During the same time frame, I have heard numerous teaching colleagues share their enjoyment of *and* misgivings about online teaching, their successes *and* challenges in forming relationships with students online, and their challenges in providing support to students while working within their scope of work. While working with student support staff, I have seen burnout, provided moral support, listened to justifiable frustration over a lack of mental-health resources, and, perhaps most importantly, borne witness to their unwavering commitment to and empathy for all students seeking support. Combined, these experiences left me feeling that I needed to do something to be a part of the solution for the growing problem of insufficient understanding of facilitators of learning for students with MHRD who study online.

While the legal requirement for post-secondary institutions to provide reasonable accommodations gives some level of access for students, unless a broader, systems-level approach to accessibility is implemented, post-secondary institutions will not meet the needs of all students. In this dissertation, I argue that accommodation models of

accessibility,[6] which are commonplace in post-secondary institutions, may produce harm. If they are used as the only tool for accessibility, they will not meet the needs of all the students they are meant to serve. In contrast, adopting a universal accessibility model of inclusive education,[7] with a mental-health-promotion orientation[8] that also includes widespread adoption of UDL, has the potential to improve learning, prevent harm, and promote health for all students, particularly those who have mental-health-related challenges and who are studying online.

The purpose of this study was to examine the experiences of students with MHRD who were in online classes in order to understand the ways in which the institution is supportive and non-supportive of their learning. Data from interviews with 14 university students, 15 instructors, and seven student support staff members indicate that the accommodation model currently in place is problematic, causing harmful and disabling effects. For this study, the socio-ecological model for health promotion is used to organize the study findings,[9] and where possible, findings are described in relation to the principles of UDL.

[6] The accommodation model is a medical model of disability, "based primarily on a disclosure of needs framework, [that] forces students to 'legitimize' their accessibility requirements" (NEADS, 2018, p. 6). The medical and accommodation models will be discussed further in Chapter 2.

[8] Mental health promotion is an approach that fosters the enhancement of individual resilience and control and promotes the development of socially supportive environments (Eriksson et al., 2018; PHAC, 2014). This concept will be described in more detail in Chapter 2.

[9] A description of this model is provided in Chapter 2.

Background of the Problem

In this section I summarize the background of the problem at the focus of this study, beginning with a synopsis of conceptualizations of disability and a description of the specific conceptualization of disability chosen to guide this study. After a statement of the problem, I provide an overview of the study objectives, research questions, and significance. A brief overview of the models informing this study follows, and the chapter ends with a statement on my positionality in the field of learning sciences.

Conceptualizations of Disability

The ways in which disability is defined or conceptualized influence the creation of accessibility-related laws, policies, programs, and services, which in turn have a direct impact on who is included in and excluded from educational opportunities. Therefore, one must be aware of the diverse conceptualizations of disability in order to examine disability-related issues in post-secondary education. The concept of disability has been described and understood in a variety of ways over time, including medical and social orientations. Wolforth (2016) wrote that,

> Prior to the 1980s, disability was seen very much from the perspective of a medical or rehabilitation model, and people with disabilities were treated as having inherent defects and limitations that could not be fixed, as though they were lacking some measure of “normal” humanity. (p. 139)

Thus, the medical model or rehabilitation approach views disability as an issue inherent in the individual. Consequently, the focus is on curing, eliminating, managing, or minimizing the illness or disability (Goering, 2015). Scholar Beth Pickard (2019) notes one of the common critiques of this model is that it positions “disability as deficit in the disabled individual as opposed to misinformed assumptions in the non-disabled ‘viewer’” (p. 153). For example, many people who have been blind from birth view their blindness as a neutral way of being, rather than being a problem (Goering, 2015); however, others may assume their blindness is a deficit. Even as recently as 2019, the World Health Organization’s (WHO) definition of disability was medically oriented. It described disability as

> an umbrella term, covering impairments, activity limitations, and participation restrictions. An impairment is a problem in body function or

> structure; an activity limitation is a difficulty encountered by an individual in executing a task or action; while a participation restriction is a problem experienced by an individual in involvement in life situations.

The main critique of the medical model of disability is the misplaced focus on an individual's "impairments" (Crow, 2010). Problems or limitations resulting from a disability are seen as intrinsic to the individual (Wolforth, 2016), as opposed to resulting from structural or societal barriers imposed on the individual. Bioethics scholar Cristina Richie (2019) critiques the medicalization of disability and contends that, "for disability advocates, the medicalization of disability marginalizes individuals and denigrates the unique diversity of humankind" (p. 383). This model fails to consider the social, cultural, and environmental contexts in which individuals with disabilities live, work, and play. Sara Goering (2015) argues that the medical model causes harm. "One result of the common medical understanding of disability is that people with disabilities often report feeling excluded, undervalued, pressured to fit a questionable norm, and/or treated as if they were globally incapacitated" (p. 134). She goes on to suggest that in the medical model of disability, the focus of attention is misplaced:

> For many people with disabilities, the *main* disadvantage they experience does not stem directly from their bodies, but rather from their unwelcome reception in the world, in terms of how physical structures, institutional norms, and social attitudes exclude and/or denigrate them. (p. 134)

For example, people born with limb differences may learn to function as well with one arm as someone born with two. However, because of discrimination and social attitudes, they may wear a prosthetic limb to "pass" as able-bodied (Wright, 2019).[10] In this case, wearing the prosthetic is not to enhance function or to limit any presupposed "disability," but rather to fit in and avoid judgment, or to make other people comfortable. Educational systems subscribing to medical conceptualizations of disability focus on the limitations or deficits that students have, and consequently focus on altering learning design elements (e.g., assessments) through remedial accommodations, rather than building more broadly accessible learning environments (Dolmage, 2017; Richie,

[10] Disability passing refers to the ways people conceal social markers of impairment to avoid stigma and to pass as "normal" or the ways they exaggerate a condition to receive benefit. It also includes the ways others impose disability or non-disability identity on others. According to Brune and Wilson (2013), "The topic of disability passing reveals the dynamic nature of disability and identity and provides insight into what is at stake when it comes to disability and nondisability identification" (p. 1).

2019).[11] Inclusive post-secondary institutions cannot be created when policies are driven exclusively by the medical model and accommodations are understood to be the sole approach to achieving accessibility.

Critical disability studies emerged in response to the medicalization of disability, and the social model became a recognizable critical perspective that challenged the medical model of disability (Goodley, 2014). The field of disability studies is interdisciplinary, takes a critical approach to disability, prioritizes the experiences and perspectives of people with disabilities, and is grounded in disability rights (Dolmage, 2017). "Critical disability studies view disability as both a lived reality in which the experiences of people with disabilities are central to interpreting their place in the world, and as a social and political definition based on societal power relations" (Reaume, 2014, p. 1248). Feminist disability studies is allied to the broader field of critical disability studies and shares a similar orientation. Disabilities scholar Rosemarie Garland-Thomas (2005) writes about the complexity of the field of feminist disability studies and highlights key features that align with the earlier description of critical disability studies, such as dismantling existing stereotypes, situating the experience of disability within the context of rights and exclusions, defining disability from a socio-cultural viewpoint versus a medical one, and attending to the effect of power relations.

In the early 1980s, Mike Oliver, the first professor of disability studies and a world-renowned disability researcher-activist, developed the "social model of disability" (Oliver, 2013). Following the lead of the social determinants of health orientation, which focuses on socio-economic and structural influences on health as opposed to individual health-related behaviours, the social model of disability differs from the medical model by centralizing the impact of societal structures on people with disability. That is, it posits that people are marginalized, disadvantaged, and disabled *by society* (McSpadden, 2022). Disability is conceptualized as a manifestation of barriers within the environments in which the person lives, works, and studies (Wolforth, 2016); it is considered in the context of external factors, including social oppression, cultural processes, discrimination, exclusion, and social and environmental barriers (Crow, 2010;

[11] Dolmage (2017) notes the significant challenge of this orientation, suggesting that when "accommodations are intended to simply temporarily even the playing field … in a single class or activity, it is clear that these retrofits are not designed for people to live and thrive with a disability, but rather to temporarily make the disability go away" (p. 70).

Goering, 2015; Mulvany, 2000; Shakespeare, 2018). That is, in the social model of disability, disability relates to the impacts of inaccessible socially constructed environments on a person with an impairment,[12] rather than being something inherent *in* people with disabilities (Oliver et al., 2006). In this way, disability is conceptualized as a social, not a medical, problem (McSpadden, 2022). Over 10 years ago, disabled feminist scholar, Liz Crow, talked candidly about the personal impact of the social model of disability in *Including all of our lives: Renewing the social model of disability* (2010), where she says:

> For years now the social model of disability has enabled me to confront, survive and even surmount countless situations of exclusion and discrimination. It has been my mainstay, as it has been for the wider disabled people's movement. It has enabled a vision of ourselves free from the constraints of disability (oppression) and provided a direction for our commitment to social change. (p. 124)

Like Goodley (2014), Crow contends that the adoption of this model has saved and continues to save lives. She goes on to say, "The contribution of the social model of disability, now and in the future, to achieving equal rights for disabled people is incalculable" (p. 125).

Almost 20 years ago, the United Nations (UN) Convention on the Rights of Persons with Disability (UN, 2006) adopted the social model, signifying a global shift in paradigm away from the medical model.[13] This shift was concurrent with the movement in the field of public and population health away from the medical model and toward the model of population health and health promotion. Both the social model of disability and the model for population health and health promotion advocate for attention to be paid to the structural, societal, and environmental factors that influence people's health and experience with disability. This global shift continues, and evidence of more recent adoption comes from the WHO. That organization now centres social barriers instead of personal limitations and defines disability as

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[12] In the social model, impairment is viewed as the physical, cognitive, mental, or sensory deficit or limitation (e.g., paralysis, blindness, diminished executive function, memory loss, hypersensitivity to noise), and disability is the social oppression and exclusion (Shakespeare, 2018). "Impairment relates to an embodied difference in terms of the functioning of the body or brain" (Goodley, 2014, p. 7).

[13] Canada signed the Convention in March 2007 (UN Treaty Collection, 2011).

> the interaction between individuals with a health condition (e.g., cerebral palsy, Down Syndrome and depression) and personal and environmental factors (e.g., negative attitudes, inaccessible transportation and public buildings, and limited social supports). (WHO, 2022a)

Critics argue that the social model is too rigid and simplistic. Under this model, when disability and impairment are depicted as two distinct entities, there is a failure to recognize the relationship between impairment and disability (Owens, 2015; Shakespeare & Watson, 2010). Thus, the social model has the potential to ignore the impairments that are experienced by people with disabilities. Shakespeare and Watson (2010) posit that, "while environments and services can and should be adapted wherever possible, there remains disadvantage associated with having many impairments which no amount of environmental change could entirely eliminate" (p. 63). Crow (2010) and Goering (2015) suggest that some nuance is required when considering how disability is conceptualized. They acknowledge the need to consider the disabling effects of the impairment (e.g., inability to work due to episodic pain or depression) *and* the disabling effects of discrimination and inaccessibility. While the social model has been critiqued for ignoring the medical needs of people with disability, proponents of it do not deny the importance of having access to care and advice from medical professionals. Rather, the focus moves from medical needs and impairments to the way in which care and advice are provided. "What is different is the overall approach to treatment: it responds to the expectations of the patient, not those of the institution" (UN Human Rights, 2014, p. 10).

The social model of disability is central to critical disability studies, where disability scholarship is viewed as a socio-political phenomenon that includes examining relationships between the body, mind, and society (Burghardt et al., 2021). This model is well suited to critique the online educational context, where external factors such as course design, integration of UDL, and learning management systems (LMS) influence accessibility. For example, courses designed with only one type of media (e.g., text) or one type of assessment (e.g., written essay) are not compatible with UDL and will be inaccessible for some students. Additionally, because the social model considers disability from the perspective of social and structural contextual factors that enable or disable participation in all areas of a person's life, this approach is helpful for guiding research focused on identifying and minimizing barriers to student learning in post-secondary settings. In this model, the objective is to change disabling structures,

policies, and procedures in institutions (i.e., post-secondary) and broader society to make them more accessible, as opposed to trying to change people with disabilities so that they can fit in.[14] The social model of disability may be particularly well-suited to research focused on students with MHRD because of the attention given to the complex social factors these individuals face (Mulvany, 2000).

I adopted the social model of disability as a guiding framework for this study, while recognizing its limitations. I use the model to draw attention to factors in the university that are potential barriers and facilitators for students with MHRD. As critics of this model have asserted, it is important to also consider the impairments experienced by these students because of the symptomatology of their mental illness.

Statement of the Problem

Nearly a quarter (24%) of first-year university students in Canada self-declare as having a disability. Among those, MHRD are the most common (Canadian University Survey Consortium, 2019). Each year, more students with disabilities (Rao et al., 2015) and with mental health issues enroll in post-secondary institutions (American College Health Association [ACHA], 2019). These increases present serious issues for students and educators because common symptoms of MHRD (e.g., low motivation, fatigue, inability to concentrate) can affect academic performance (Andrews & Wilding, 2004; Eisenberg et al., 2009; St-Onge & Lemyre, 2018).[15] Furthermore, instructional design, incorporation of UDL, and institutional accessibility policies influence learning. Instructors play a critical role because their attitudes toward students with mental-health issues directly affect student success (St-Onge & Lemyre, 2018). Additionally, student support staff services professionals provide essential front-line supportive services to students in

[14] The social model aligns well with the population health framework, where attention is drawn to structural and social influences on health. Population health is a systems approach used in the discipline of public health that addresses the entire range of factors that contribute to health; these approaches are designed to affect the health of populations of people. The “built environment” is considered within this framework, which aligns with designing learning environments of ability—where action is focused on eliminating systemic barriers.

[15] Findings from large-scale quantitative studies (Andrews & Wilding, 2004; Eisenberg, Golberstein & Hunt, 2009) and qualitative studies (McManus et al., 2017) show that experiencing symptoms of mental illness can lead to lower grade point averages (GPAs) and inability to complete academic work.

post-secondary and, therefore, play an essential part in strategies promoting health and resilience (Aubrecht, 2019).

Concurrently in Canada, more students are taking online courses (Johnson, 2020; Ostrowski et al., 2017), particularly in response to the COVID-19 pandemic. Prior to the pandemic, nearly all post-secondary institutions offered online courses for credit, with one in five students taking at least one online course (Donovan et al., 2019). Students take online courses for a variety of reasons, including convenience (e.g., students with family and/or work responsibilities), access (e.g., students who live in rural areas without access to on-campus classes, students with health issues who are not able to attend on-campus classes), cost (e.g., reduced accommodation and transportation-related expenses), and availability (e.g., academic program is delivered online) (Lowenthal et al., 2020). For students with disabilities, including those with MHRD, online learning might be the best option to pursue post-secondary education. However, despite the increasing prevalence of students with MHRD in online courses and programs, there is little Canadian research that has examined factors affecting learning for this population (McManus et al., 2017). This study begins to fill this gap by exploring influences on learning for students with MHRD who are studying online.

Research Objective, Questions, and Significance

The primary objective of this study was to understand influences on, and experiences of, learning for post-secondary students with MHRD who are studying online. Given the convergence of increasing prevalence of mental-health challenges and online course registration in Canadian post-secondary institutions, and the paucity of research investigating the relationship between MHRD and online learning, this study is focused on this intersection. As the shift toward online teaching and learning continues, it is essential to understand the range of influences on learning for students with MHRD in order to provide equitable and accessible learning environments where all students can achieve their academic goals. To achieve this objective, the perspectives of students, instructors, and student support staff were included in the study. Limited research examines the experiences of students with MHRD and their instructors in the online context. This omission contributes to an incomplete picture of the influences on learning and academic performance for students studying online with MHRD.

The central research question for this study was:

- What are the influences on, and experiences of, learning and academic performance for students with mental-health-related disabilities in online courses?

Sub-questions included:

- What are instructors' experiences and beliefs about teaching students with MHRD in online courses?
- In what ways do instructors consider mental-health-related disabilities (or support for students with MHRD) in their course design and delivery?
- What are the experiences of support staff in supporting students with MHRD in online courses?

The purpose of this study is to contribute to the discourse about accessibility and inclusivity in post-secondary online learning environments, and to inform actions aimed at achieving accessibility and inclusivity. Thus, this study adds to the scholarship of teaching and learning, and to the development of post-secondary policies that ensure students with MHRD have equitable access to education.

Research like this study, that examines equity in education and helps facilitate success for all post-secondary students, is a wise investment for universities and Canadian society (CHRC, 2017). Successful completion of post-secondary education leads to better job opportunities, higher wages, and, because of improved socio-economic status, better health and more opportunities and privileges within society (PHAC, 2019). Having a diverse workforce that is reflective of the population can lead to increased productivity, cultural awareness, and organizational efficiency (Inegbedion et al., 2020; Mickahail & Andrews, 2017). The transition to post-secondary education can be challenging (Picton & Kahu, 2021), and students with disabilities might face additional challenges during the transition (Williamson et al., 2010). To summarize, this study is important because everyone in Canada has an equal right to an education that meets their needs (BC Human Rights Code, 1996; CHRC, 2017), and the study findings can be used to develop more inclusive and accessible post-secondary learning environments.

Overview of Models Guiding the Work

Theoretical perspectives from the multidisciplinary fields of public health and the learning sciences frame this study. Combining approaches from these fields is a rational choice given their interdisciplinary orientations; their combined attention to social, cultural, and environmental influences on learning and health; and their commitments to social justice and equity. I propose that integrating concepts and models from the discipline of public health will help move the field of learning sciences forward. I draw on the population health approach from the public health field, social constructivist theory from the learning sciences, and the ecological theory of human development from both disciplines. The accommodation model of accessibility and the UDL framework for inclusion are central to understanding the study findings. A summary is provided with a more complete discussion of the approaches in Chapter 2.

The population health approach is fundamental to public health.[16] Part of what I aim to demonstrate in this study is that a population health approach can be useful in guiding learning sciences research. This approach seeks to address the full range of individual and societal factors that determine health. Unsurprisingly, population health initiatives are designed to affect groups or populations (e.g., post-secondary students or post-secondary students with MHRD), as opposed to individuals.[17] Preventing harm (i.e., injury or illness), promoting health and well-being, and reducing health inequities are the overarching goals (Health Canada, 2001). Inherent in a population health approach is the understanding that the health of a population is impacted by many factors both within and external to the health care system (Cohen et al., 2014; Davidson, 2019). These factors are referred to as the social determinants of health, and the WHO (2017) describes them as:

> the conditions in which people are born, grow, live, work and age. These conditions are shaped by the distribution of money, power, and resources at global, national and local levels. The social determinants of health are

[16] Public health is the science and art of promoting health, preventing disease, prolonging life, and improving quality of life at a population level, through the organized efforts of society (Health Canada, 2003).

[17] An example is the “Healthy Campuses/Universities” approach, where the goal is to create learning environments and organizational cultures that promote health. This requires a systems approach, recognizing the connection among all elements of the university (Centre for Innovation in Campus Mental Health, n.d.).

> mostly responsible for health inequities—the unfair and avoidable differences in health status seen within and between countries. (para 1)

Within the social constructivist perspective on learning, the social context of learning is highlighted along with the understanding that knowledge is mutually constructed in social environments (Hill, 2012; Moore, 2011; Woolfolk, 2008). Constructivist perspectives require educators to be more student-centred by tailoring teaching to the individual needs of students (Edgar, 2012). Social constructivism draws attention to the interconnections among individuals within learning environments. This is of particular importance in research exploring facilitators of learning in online contexts where the social environment is more explicitly created by instructors than in in-person contexts.

The final theoretical framework used in this study originates from the disciplines of public health and education: Bronfenbrenner's ecological theory. This theory was developed by psychologist Urie Bronfenbrenner in 1976; Bronfenbrenner drew from Lev Vygostky's (1978) socio-cultural theory of learning, acknowledging the critical role that our environment (including environmental and social factors) has on both learning and development. Consistent with the population health approach, ecological theory is a systemic approach that encourages consideration of factors ranging from the individual to the institution to society more broadly. The socio-ecological model for health promotion is a modification of ecological theory that has been used to explore student stress in post-secondary institutions (Lisnyj et al., 2021) and guide institutional-level initiatives to promote mental health (Healthy Minds Healthy Campuses, 2022). Ecological theory also aligns with the systemic and ecological perspectives on learning that are fundamental to the learning sciences (Barab & Roth, 2006; Nathan & Alibali, 2010), and shares with critical disability studies an orientation to socio-cultural influences on human experience. This theory has practical utility and has been adopted as a framework by some universities to guide their work.[18] Mental health and learning are influenced by intersecting individual, societal, and social factors, so socio-ecological theory and the population health approach provide practical tools to frame my study and address my research question.

[18] For example, see Santa Clara University's Office of Multi-cultural Learning, https://www.scu.edu/oml/about-us/theoretical-framework/

The goal of inclusive education is to develop and design learning environments that meet the needs of all students in all modes of learning, including online. Inclusive education occurs when all students, "have the opportunity to be included in regular classroom environments while receiving the supports necessary to facilitate accessibility to both environment and information." (Shyman, 2015, p. 351). Organizations such as Inclusive Education Canada strive to advance inclusive education initiatives to ensure that students with intellectual disabilities are included in classrooms from kindergarten to post-secondary. Accessibility is a fundamental component of inclusive online learning environments and must be embedded into the systems of post-secondary to ensure that it is not an after-thought or add-on to existing, inaccessible learning environments (Dolmage, 2017). That is, accessibility must go beyond academic accommodations. Accessible and inclusive learning environments benefit all students (Collins et al., 2019) and multiple frameworks exist to help design for inclusion.

The predominant frameworks or models used in educational settings to promote inclusion include embedded instruction (EI), modification/adaptation, the “Think College” movement, differentiated instruction (DI), and Universal Design for Learning (UDL) or Universal Design for Education (UDE). Each framework or model varies in its reliance on individual-level adaptations and its focus on designing for universal diversity.

- EI is described as a naturalistic instructional approach, used largely in early childhood education, where instruction is embedded in everyday activities and routines for learners (Snyder et al., 2013). Evidence suggests that this approach supports maintenance and generalization of learned skills (Snyder et al., 2015).
- Adaptation/modification as an inclusion model involves individualized adaptations to curriculum, physical environments, teaching methods, and/or student assessments for school-aged children based on their individualized education plan (Janney & Snell, 2006).
- The Think College movement is dedicated to promoting inclusive post-secondary education for students with intellectual disabilities (Institute for Community Inclusion, 2022). An example of a Think College program based in BC is STEPS Forward.[19] This program was initiated in 2001 and is designed

[19] Think College programs typically modify or embed programs of study in traditional programs at the university level. Thus, they represent a scope of accessibility within post-secondary that is beyond the scope of this study. At the host university, students enrolled in the STEPS Forward program receive support from the university outside the centre for disability.

to support students with developmental disabilities who wish to access post-secondary education (Post-secondary BC, 2022).

- DI is based on the premise that students are diverse across multiple constructs, such as learning readiness, experience in educational systems, interests, and competencies. Therefore, teaching methods should cater to this diversity (Boelens et al., 2018). DI involves providing multiple avenues for learning based on individual needs. Although it has predominantly been adopted in elementary and secondary school settings, it can be applied to post-secondary settings. Limited human and fiscal resources, restrictive curriculum, and a focus on modifying to suit individual needs are noted as limitations of DI in the post-secondary context (DeNeve et al., 2015; Smit & Humpert, 2012). DI has been framed as a pedagogical, rather than an organizational, approach focused on adaptations to meet individual needs (Tomlinson et al., 2003).

- UDL considers the learning needs of *all* students and builds on concepts of equity and inclusivity. It was developed out of research focused on the nature of learning differences and the design of supportive learning environments (Hall et al, 2012). Fundamental to UDL, and in alignment with DI, is the belief that learners are inherently diverse and, further, that the goal of educators should be to modify the learning environment, not the learner, so that all students can succeed (CAST, 2018). In contrast to DI, UDL can be adopted at the classroom *and* organization level to achieve universal inclusion.

Of the frameworks, UDL is the most widely adopted for use in post-secondary, and its use is supported by both instructors and students (Cumming & Rose, 2021). It was chosen as a framework for this study because of its alignment with the principles of population health and the social model of disability. The models and frameworks described briefly above will be covered in more detail in Chapters 2 and 4.

Researcher Positionality in the Field of Learning Sciences

My own experience as a post-secondary instructor motivated me to conduct research that can contribute to making Canadian post-secondary institutions more accessible, particularly for students with mental-health-related challenges. A primary focus of learning sciences research has been to design and study complex teaching and learning environments so that people ultimately have opportunities for enhanced learning (Sawyer, 2014). The process of designing technology-mediated learning environments is never solely a technical matter (Bransford, 2000; Haythornthwaite et al., 2016). Rather, teaching and learning online take place in complex social environments mediated by students, their instructors, and institutional influences (i.e., culture, policies, programs, and support services). Like Selwyn (2010), I advocate for critical scholarship

that considers the socio-cultural and institutional contexts within which educational technology is used, while acknowledging individual barriers to and facilitators for effective use. For decades, research has shown the importance of context, community, and collaboration to enhance student learning. However, learning sciences researchers have not given sufficient attention to the diversity of learners and broad issues of accessibility in education. In the seminal and lengthy (776 pages and 36 chapters) text *The Cambridge Handbook of the Learning Sciences,* 2nd edition (2014), there is virtually no coverage of diverse learners, accessibility, disability, or ecological conceptualizations of learning.[20] In my view, inclusive and accessible learning environments are *created*; for effective learning design, it is critical that the perspectives of the students who occupy these spaces, and the instructors who are tasked with creating them, are given voice. My research will contribute to future technology-mediated "designed environments" that can more effectively facilitate learning and improve performance for all learners, particularly students with mental-health-related challenges.

We have an opportunity in learning sciences research to integrate what is known from the field of psychology regarding the bi-directional influences of mental health and learning, such as the impact of various symptoms on meta-cognition and self-regulated learning (Airaksinen et al., 2005; Castaneda et al., 2008; Diamond & Ling, 2016; Hammar & Årdal, 2009), with what we know from public health science (e.g., consideration of social, environmental, and cultural influences on health and well-being), and what we know about effective technology-mediated learning environments. This study will contribute to understanding that complexity and has the potential to inform the creation of mental-health-promoting post-secondary institutions that allow all students to achieve their academic goals.

Through my research exploring the experiences of post-secondary students with MHRD who are studying online, I hope to help move the learning sciences to where I argue they *ought to be*. My vision is a field that wholeheartedly embraces equity,

[20] The index of this text does not include the following words: "ecological"/"ecology," "atypical," "neurodiversity"/"neurodiverse," or "disability." The word "diversity" is mentioned four times in the text (e.g., "As a skill becomes well learned, it becomes increasingly important that tasks requiring a diversity of skills and strategies be introduced" [p. 115]) and in one table (in reference to using a variety of situations when designing cognitive apprenticeship environments), but nowhere is it discussed as a topic for consideration.

diversity, and inclusion in design, research, and teaching;[21] that actively considers mental health as a factor for learning and a product of education; that is driven by the needs of students and educators; that advocates for relational practice; that gives voice to learners whose perspectives remain under-researched and therefore under-represented, and whose voices are too often unheard; and that considers systems-level influences on learning.

Chapter Summaries and Conclusion

In Chapter 2, I describe relevant concepts from the disciplines of public health and the learning sciences, and discuss areas of alignment between them—drawing attention to the ways in which an interdisciplinary approach is well-suited to examining accessible post-secondary education for students with mental-health-related challenges who are studying online.

In Chapter 3, I provide a review of selected literature, including a summary and analysis of research on such key concepts as stigma and discrimination, the accommodation model, and barriers to academic performance. I pay attention to the ways in which the current body of literature influenced my study design, and how my study will begin to fill existing gaps in the literature.

Chapter 4 provides a summary of the methodological approach, an overview of the materials and methods, a summary of sample characteristics, considerations for technology-mediated interviewing and researcher positionality.

Chapter 5 presents the study findings framed within the socio-ecological model.

In Chapter 6, I discuss the findings in the context of relevant literature and in relation to community services, public policy, and teaching practices. The chapter will conclude with a summary of the strengths, limitations, and significance of this study.

In conclusion, my ability to make meaningful contributions to the field of educational technology and learning design is shaped by lived experience,

[21] I draw from Roski and his colleagues' (2021) definition of the term "inclusion" as an "appreciative and welcoming approach to diversity" (p. 1).

interdisciplinary academic training, involvement with disciplines that value both the art and science of professional practice, experience as an educator, and countless lessons learned about diversity, inclusion, and relationships from the thousands of students I have taught over the last 11 years. As a public health educator pursuing a research career in the learning sciences, I believe it is important that my work be relevant to both disciplines. Fortunately, there are many existing overlaps and areas for overlapping growth. These include consideration of the intersectionality of social, cultural, and historical factors on learning; application of critical perspectives to expose and explore issues related to power, equity, and social justice; evidence-informed practice; and multidisciplinary research focused on both theory and practice. Without such considerations, students may not reach their potential, the benefits of innovative technologies will not be fully realized, and educators will miss out on countless opportunities to engage, facilitate, and inspire. In the next chapter, I will describe relevant concepts from both disciplines and discuss areas of alignment, articulating how a combined approach provides a unique opportunity to examine accessible post-secondary education for students with mental-health-related challenges.

Chapter 2.

Overview of Relevant Concepts and Models

Under federal law, people in Canada have the legal right to access employment and education. For people with disabilities, exercising this right may involve having employers or school administrators provide adaptations, called accommodations, to ensure full participation. Accommodations are one tool available to make post-secondary institutions more accessible, but they are insufficient when used as the *only* tool. Accommodations are based on individual arrangements with students who have registered with university accessibility offices. Registration typically involves medical verification of a condition that is known to interfere with learning. Consequently, accommodations meet the needs of a narrow segment of the student population.

In this thesis, I argue that accommodation models of accessibility in post-secondary institutions may produce harm and may not meet the needs of the students they are meant to serve. I propose that adopting an accessibility model with a mental-health-promotion orientation that incorporates principles of Universal Design for Learning (UDL) has the potential to improve learning, prevent harm, and promote health for all students, particularly those with mental-health-related challenges who are studying online. This study is interdisciplinary in nature, as it draws on theoretical frameworks and approaches from the multidisciplinary fields of public health and education. In this chapter, I describe conceptualizations of health, the social determinants of health, intersectionality, healthy communities, population health, and mental health. Then, I provide an overview of online learning, UDL and Ecological Models of Human Development. Throughout the chapter, I articulate how an interdisciplinary approach provides a unique opportunity to examine accessible post-secondary education for students with mental-health-related challenges.

A Broadening View of Health

The concept of health is multifaceted, and its definition is influenced by socio-cultural beliefs; consequently, there is no single definition of “health.” The reductionist approach that has dominated Western medicine since the 18th century is based on

viewing health as a physical matter, where good health is defined as the mere absence of disease or infirmity (Davidson, 2019; Leonardi, 2018).[22] This narrow focus on the biological factors affecting health is known as the biomedical model. In its 1948 Constitution, the WHO defined health as "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity" (2006, p. 1). Critics of this definition note that achieving "complete" well-being in any, let alone all, of the categories of health is impossible (Huber et al., 2011; Jadad & O'Grady, 2008; Leonardi, 2018). Additionally, this definition assumes that people can choose lives free from socially imposed limitations on health such as poverty, discrimination, and inequity (Leonardi, 2018). Broader conceptualizations of health have been promoted in Indigenous and Western perspectives.

One example of an Indigenous perspective on health is the well-being model developed by the First Nations Health Authority (FNHA) in British Columbia. This organization developed a visual depiction of broad, culturally relevant, health and wellness perspectives with six concentric rings. The individual is in the central circle surrounded by diverse facets of wellness (i.e., spiritual, emotional, physical, and mental), values such as respect and relationships, and influences of community, family, and diverse determinants of health (i.e., cultural, economic, and social) (FNHA, 2022). From this perspective, health is holistic and dynamic and influenced by individual, community, and societal factors.

Fluidity is also central to how health is described in some Western perspectives, such as the *Ottawa Charter on Health Promotion* (WHO, 1986).[23] In the Charter, health is described as a resource, not an objective or static state, that gives people the ability to manage and change their life circumstances. In the Charter, the concepts of health and health promotion are broad and asset oriented. Multifactorial and intersectoral approaches are central to creating healthier social and physical environments through coordinated health policy (Davidson, 2019).

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[22] Under this definition, health professionals (namely physicians) determine if a person is healthy or not (Sartorius, 2006).

[23] The Charter was the product of an international health promotion conference held in Ottawa in 1986 (Davidson, 2019).

Consistent in these Western and Indigenous perspectives is the notion that health is a positive concept that is influenced by social, economic, and personal resources; community and culture; and environmental determinants of health. Within these broader conceptualizations of health, people can be "healthy" while living with chronic health challenges such as mental illness. And given the complexity of influences on individual and population health, these conceptualizations suggest that health promotion and illness/disease management are not solely the responsibility of the health sector.

The social determinants of health, introduced in Chapter 1, are the conditions in a society that influence and impact the health status of individuals and populations. The WHO (2022b) described them as:

> the conditions in which people are born, grow, work, live, and age, and the wider set of forces and systems shaping the conditions of daily life. These forces and systems include economic policies and systems, development agendas, social norms, social policies and political systems. (para 1)

The Public Health Agency of Canada (2011) lists the social determinants of health as: income and social status, social support networks, education and literacy, employment/working conditions, social environments, physical environments, personal health practices, coping skills, healthy child development, biology and genetic endowment, access to health services, gender, and culture. Additional determinants include disability, food and housing insecurity, colonization, and racism (Allan & Smylie, 2015; Loppie Reading & Wien, 2009; Mikkonen & Raphael, 2010).

The determinants of health do not exist in isolation from each other—it is their intersecting, and at times compounding, influences that determine health status and the experience of health inequities (PHAC, 2011).[24] For example, a person who is discriminated against due to race, ability, or gender will be further marginalized if they

[24] Health inequities are systemic differences in the incidence of disease, disability, and injury *and* the opportunities of sub-populations to achieve optimal health that arise from conditions that can be changed through public policies (Davidson, 2019; Edwards & DiRuggiero, 2011); health inequities are unjust and preventable (WHO, 2018) and must be considered alongside structural inequities. Structural inequities are the drivers of influence for the fair distribution of resources and opportunities (e.g., racism and ableism) (Weinstein et al., 2017).

also live in poverty. Health inequities rise with the number of intersecting discriminations and/or disadvantages.

The *intersectionality approach* has been used to analyze how determinants of health interact to influence health outcomes. Kimberlé Crenshaw coined this term in 1989, naming “the structural convergence among intersecting systems of power that created blind spots in antiracist and feminist activism” (Collins, 2019, p. 26). Intersectionality is a recognized form of critical inquiry and praxis that may guide practitioners and policy makers in their efforts to address structural forms of inequality (Collins, 2019; National Collaborating Center on Healthy Public Policy, 2015). Consequently, this approach is relevant to work done in the health *and* education sectors; more specifically, it is relevant when exploring issues related to disability, accessibility, and inclusion.

Intersectionality highlights the fact that useful research and effective policy require the involvement of a wide range of individuals and groups from all sectors and from all levels of politics. Intersectional analyses have illuminated critical social issues concerning education, health, poverty, and employment, in part because of their explicit focus on causes of inequity (Berger & Guidroz, 2009; Berghs & Dyson, 2020; Corus et al., 2016; Dill & Zambrana, 2009; Gandolfi et al., 2021). An intersectional approach does not consider disability in isolation from other categories such as age and income, and other identities such as race and gender. This allows for an examination of “dynamic and contradictory power dynamics” among the categories (Goethals et al., 2015, p. 78). An individual’s disability identity will vary in meaning and experience depending on social constructs such as race, gender, and sexuality (Brune & Wilson, 2013). Students with MHRD have diverse identities, multiple roles (i.e., student, caregiver, parent, and employee), and varied access to resources such as income, food security, social and academic supports, health care, and housing. In addition, the barriers faced by students with MHRD will vary depending on structural factors, such as the degree to which courses are designed with principles of UDL and the accessibility standards of the institution.

Since the creation of the Ottawa Charter, there has been a movement to "healthy communities"[25] and "healthy settings" approaches, in which diverse settings are sites of comprehensive health-promotion initiatives that consider the social determinants of health. The healthy-settings approach to health promotion has included post-secondary institutions for decades. The WHO produced a framework for "healthy universities" in 1998 (Tsouros et al., 1998), proposing that universities could improve the health of populations by

- promoting the health of students, staff, and faculty through policies and practices;
- increasing health-promotion initiatives through teaching and research; and
- creating health-promotion networks in the communities surrounding universities.

Given the complexity of factors influencing learning (Burridge, 2018; Hagenauer & Volet, 2014; National Academies of Sciences, Engineering and Medicine, 2018; Sawyer, 2014) and the importance of considering the context of students' lives (i.e., the conditions in which they live, work, and study), there is potential to build on, or extend, the social determinants of health to a social determinants of education framework. There has been limited work done to develop a social determinant orientation to education and educational systems.

Fortes, Latham, Vaughn, and Preston (2022), for example, proposed using a social determinants of education framework in their work investigating potential factors that influence completing professional nursing programs. The determinants included in their analysis were parental encouragement, disadvantaged status, ethnicity identification and under-represented minority status, social support, lifestyle, and emotional intelligence. Dubuc and colleagues (2017) investigated the relationship between diverse factors that affect student performance, including physical (i.e., blood pressure and body mass index), psychosocial (i.e., body esteem and quality of life), academic motivation, lifestyle factors (i.e., time spent watching television and using a computer), and socio-demographic characteristics (i.e., parents' income level). While

[25] The "healthy communities" movement focuses on ensuring that the environments in which people live are health-promoting—making it easier for people to live healthy lives by reducing the impact of the social determinants of health on individuals and communities (BC Healthy Communities, 2020).

these studies consider several contextual factors influencing academic performance, they fail to consider elements of the learning environment (i.e., pedagogy, accessibility of course materials, instructor attitudes, and course modality), the support services available for students (i.e., health, cultural, social, and academic supports), and the personal and academic challenges and coping skills of the students. This study seeks to address these limitations and build on the current body of research to include the perspectives of students, instructors, and support staff in considering the range of influences on learning for students with mental-health-related challenges in online courses and programs. Consideration of influences beyond characteristics of individual students with MHRD allows for exploration of structural barriers to learning and inclusion and aligns with population health, UDL, and critical disability perspectives.

As discussed in Chapter 1, an intersectional approach informed by UDL, population health, and critical disability theory is well-suited to understanding influences on and experiences of learning for students with MHRD. Rather than adapting inflexible courses to meet the needs of individual students, UDL-informed course and curriculum design proactively prevents barriers and promotes universal access to learning for all students. The social determinants of health orientation and critical disability theories both shift the focus away from the individual toward the societal, structural, and environmental influences on health and the experience of being disabled. In these approaches, health and disability are the shared responsibility of society (Fiorati & Elui, 2015). The broad determinants of health and disability benefit from consideration in a systems-level approach.

Population Mental Health: A Systems Approach

Population health is a systems approach used in the discipline of public health that addresses the entire range of factors that contribute to health.[26] According to Health Canada (2001), “The overarching goals of a population health approach are to maintain

[26] The field of systems analysis was founded by James Reason, a British psychologist who analyzed industrial accidents. His analyses of errors in fields such as aviation and nuclear power showed that errors are almost always the result of flawed systems, not individual error (Patient Safety Network, 2019). Systems approaches are used in a range of disciplines, including health (Clarkson et al., 2018; Patient Safety Network, 2019), aviation (Total European Aviation System Advisory Services, 2022), business administration (Gordon, 2021), and education (Mitroff et al., 2013; Williamson et al., 2010).

and improve the health status of the entire population and to reduce inequities in health status between population groups" (p. 2). Inherent in a population health approach is the understanding that the health of a population is impacted by many factors within and external to the health care system (Cohen et al., 2014). In recent years, the Canadian Public Health Association (CPHA) has focused on promoting a public health approach to population mental health and wellness (CPHA, 2021), including advocating for the federal government to develop a national strategy for population mental wellness. In addition, the CPHA encourages organizations to adopt a "health/mental health-in-all" approach to policy and program development across sectors. The association suggests focusing on populations including people with disability and youth, making post-secondary institutions ideal settings to integrate and prioritize population mental-health-promotion strategies.

Many population health frameworks exist, and Canada has been actively developing and operationalizing the population health approach for decades (Cohen et. al., 2014). Core themes of population health and mental health-specific perspectives include focusing on promoting the health of populations, embracing community engagement, addressing disparities in health equity, attending to the range of determinants of health, and embracing intersectoral action and partnerships (Cohen et al., 2014). Not surprisingly, the environment is central to population health approaches and can be considered in several ways: as an approach, as a determinant, and more narrowly as the "built environment."

The population, health, and environment (PHE) approach acknowledges that the health of individuals and communities is tied to the ecosystems in which they live, work, study, and play (Moreland & Paxton, 2015). Interventions directed by the PHE approach integrate elements of population, health, *and* environment and assume that there will be synergistic impacts from an integrated approach. Consideration of the environment as a determinant of health can include climate-related hazards (i.e., floods and forest fires) and access to necessary services and programs (including academic support and mental health care) (Pan American Health Association, 2022). The "healthy built environment" is a public health approach that refers to the human-made or modified physical surroundings in which people study, live, work, and play (BC Centre for Disease Control, 2022). This concept centres the linkages between design, planning, and health and is relevant in post-secondary institutions—where the environments in which

students live and learn are largely human-made.[27] Considering the influence of the environment for health and learning is important in post-secondary institutions and should include both the physical spaces on campus *and* the virtual spaces of online courses and programs.

Decades of work in the field of public health have shown us that focusing efforts on the individual, through a largely biomedical model, is not adequate and not reflective of what we know about human development (Davidson, 2019). That is, many influences on health lie outside the individual—the environment in which they live, the food and health care they have access to, and the personal coping skills they have developed. In the effort to make post-secondary institutions more accessible for students, there is an opportunity to integrate and build on knowledge gained from decades of public health praxis and research. In this study, using a population health orientation to explore issues around accessibility in post-secondary institutions encourages a shift in gaze from the individual (i.e., students with MHRD studying online) to a systems perspective (i.e., consideration of policies, procedures, and instructional design). This perspective aligns with critical disability studies, where disability is not narrowly defined based on an individual's impairments but is, rather, focused on the "complex inter-relationship between impairment, an individual's response to that impairment and the physical, institutional, and attitudinal (together, the 'social') environment" (Hosking, 2008, p.7). The population health orientation used in this study can guide the creation of an accessibility model with an emphasis on mental health promotion and a widespread adoption of UDL with the potential to improve learning, prevent harm, and promote health for all students.

There are Canadian examples of post-secondary institutions that have adopted systems-oriented approaches to student well-being. For example, the University of Toronto (U of T) has developed a Student Mental Health Strategy and Framework (2014) based on a systems approach that does not limit the focus to health and wellness services and programs. I concur with their assertion that "regards the entire University environment as necessarily involved in creating the conditions that allow its students to

[27] An exception to this would be courses delivered using Indigenous land-based pedagogies where multi-faceted learning is centred on land, language, culture (United Nations Educational, Scientific and Cultural Organization, 2021).

flourish. A systems approach is necessary if the University is to meet the diverse needs of its students" (U of T, 2014, p. 2). The U of T framework is depicted visually as a wheel with seven "spokes": inclusive curriculum and pedagogy, accessible mental health services, promote health-seeking behaviour, campus-wide mental health literacy, skills building, coping and resiliency, clear communication and creating policies through an equity and diversity lens. The Canadian Association of College and University Student Services and the CMHA (2013) developed a framework for post-secondary student mental health that includes consideration of institutional factors (i.e., policies), inclusive campus climate, mental health awareness and resources, coping skill development, and crisis management. Unlike the U of T framework, it does not explicitly centre the learning environment and is more aligned with a continuum model of health promotion (discussed later in this chapter), but like the U of T framework it does have a systems orientation.

Mental Health

The conceptualization of mental health has changed over time, influenced by the fields of public health and psychology (Bertolote, 2008). In the 18th century, mental illness was believed to be caused by moral or spiritual failing (US National Library of Medicine, 2015), and "treatment" included forcibly confining people in jail-like settings (Goodman, 2018). In the early 19th century, mental health was described in somewhat sanitary terms as "mental health hygiene."[28] While this movement included consideration of the social factors influencing mental health, the focus remained on pathology and treatment by psychiatrists. Efforts were concentrated on treating people who had severe and debilitating "mental disorders," often in institutions called "insane asylums."[29] "Treatments" were often barbaric and inhumane and included things such as ice baths,

[28] Clifford Beer is acknowledged as the founder of the mental health movement in North America. After being hospitalized himself for treatment of mental illness, he shared his experiences in a book called *A Mind That Found Itself* and later founded the National Committee for Mental Hygiene (which later became the Canadian Mental Health Association) (Goodman, 2018). The eugenics movement used the concept of "mental hygiene" to rationalize sterilization of people with mental illness (e.g., the Mitchener Centre in Alberta).

[29] A summary of the harmful practices carried out in these asylums is beyond the scope of this dissertation, but readers are directed to review legislation such as the BC and Alberta *Sexual Sterilization Acts* that authorized sterilization of people with "undesirable traits," including mental illness. Text of the laws is available at https://www.canlii.org/en/ab/laws/astat/sa-1928-c-37/latest/sa-1928-c-37.html
https://www.bclaws.gov.bc.ca/civix/document/id/hstats/hstats/1887728313)

straightjackets, electroshock therapy, and bloodletting. Just as the broader conceptualizations of health shifted away from a biomedical model, so too did the ways in which mental health was described. By the mid-20th century, public health and mental health were integrated, with a greater understanding of how social determinants impact all aspects of health.

While the terms “mental health” and “mental illness” are often used interchangeably, they differ. Positive mental health is the capacity of people to feel, think, and act in ways that enhance enjoyment of life and allow them to deal with personal, professional, and academic challenges (PHAC, 2014), whereas mental illness is associated with significant distress and impaired functioning due to alterations in thinking, mood, and/or behaviour (Government of Canada, 2020). Like physical health, everyone has a state of mental health that includes our emotions, thoughts, and feelings; everyone will experience challenges to their well-being at various points in their lives, but not everyone will develop a mental illness (CMHA, 2021).[30] Additionally, someone with poor mental health might not have a mental illness, and someone with a mental illness could have excellent mental health. Similarly, not all students with mental illnesses will experience disabilities while completing post-secondary education.

Mental illness refers collectively to all mental disorders. Mental illnesses are health conditions that affect the way people think, feel, and behave, often in combination; they can have a profound impact on a person’s life because the symptoms affect functioning in social, work, *and* educational activities (American Psychological Association [APA], 2020). Like other health issues, mental illnesses are the result of complex interactions of various economic, genetic, social, psychological, and biological factors (PHAC, 2016; 2020); consequently, initiatives promoting mental health need to consider this complexity (Province of Ontario, 2018). Mental illness is a major contributor of morbidity and mortality in youth. More than 28% of people aged 20 to 29 experience a mental illness in any given year (Mental Health Commission of Canada, 2016), and suicide is the second leading cause of death for people aged 15 to 34 in Canada (Government of Canada, 2020b). Mental illness can occur at any age, but approximately 70% of mental illnesses have their onset during childhood or adolescence (Government

[30] By age 40, approximately half of the population will have or will have had a mental illness (Government of Canada, 2020).

of Canada, 2006), and youth aged 15 to 24 are more likely to have a mental illness than any other age group (Pearson et al., 2013). Additionally, post-secondary students have a higher prevalence of mental illness when compared to non-students (Brown, 2016; Ribeiro et al., 2018; Tinklin et al., 2005; Winzer et al., 2018).

In 2016, one-quarter of post-secondary students in Canada reported having been diagnosed or treated for at least one mental health condition in the previous 12 months, with anxiety and depression being the most common (ACHA, Canadian Reference Group, 2016). This is trending upward, with data from the most recent ACHA Canadian Reference Group (2019) indicating that, in the previous year, 33% of students had been diagnosed with or sought treatment for at least one mental health condition, with anxiety and depression remaining the most common. Evidence suggests that students with disabilities are increasingly choosing to participate in online courses (Cavannaugh et al., 2013), although data on the prevalence is lacking.

There is no agreed-on definition of MHRD. Statistics Canada (2019) describes persons with MHRD as those individuals who experience limitations in activities of daily living due to difficulties with an emotional, psychological, or mental health condition. McManus and colleagues (2017)[31] describe mental-health-related disability as "having a diagnosed mental health condition that impedes effective learning and/or elicits unnecessary personal, social or environmental barriers that create actual or perceived disablement" (p. 337).[32] Over two million Canadians 15 years of age and older have a MHRD, representing approximately 7% of youth and adults (Statistics Canada, 2019).

As discussed in Chapter 1, the ways in which disability are defined will influence the types of laws, policies, programs, and services that will be created and administered—directly impacting who is, and who is not, included. This is true in post-secondary institutions as well. Students with academic challenges related to their mental

[31] The research done by McManus and colleagues (2017) was conducted in a post-secondary context and might have informed their definition. Offices of accessibility for post-secondary students often require a medical diagnosis to "prove" the need for support and services. This is the case at the university where I conducted my study.

[32] Refer to Chapter 1 for relevant discussion on conceptualizations of disability. While the definitions in McManus et al. focus on impairments/limitations (i.e., a medical orientation to describing disability), in this study I draw from the social model of disability that reorients the focus to structural and societal barriers that disable people.

health can seek registration with post-secondary disability support units (DSU). They will often need to provide medical documentation to confirm the rationale for reasonable academic accommodations, so not all students who experience MHRD will be registered with DSUs. Student participants in my study *were* registered with the university's DSU with an MHRD, with most having a diagnosed mental illness as defined by the Diagnostic and Statistical Manual (DSM-5) of the APA.[33] Sampling from this population allowed me to explore systems-level challenges experienced by these students (e.g., difficulties accessing and implementing DSU-approved academic accommodations). This population of students has asserted specific challenges requiring available and mandated accommodations within their learning environments. Given the prevalence of mental illness and mental-health-related challenges experienced in the demographic of students attending post-secondary institutions, it is critical that research be carried out to help us understand how to foster accessible, mental-health-promoting learning environments in which these students can thrive. Findings from this study will contribute to this understanding by drawing attention to both structural barriers (i.e., challenges of the accommodation model) and structural assets (i.e., benefits of institutional-level integration of UDL in courses and programs).

Overview of Mood and Anxiety Disorders

The sampling frame for this study included students diagnosed with at least one mental illness from the two most common categories: mood and anxiety disorders (ACHA, 2019; Castaneda et al., 2008; PHAC, 2016). Symptoms of mood and anxiety disorders vary by diagnosis, but the impacts are the same: lowered quality of life and reduced productivity (PHAC, 2015). Not surprisingly, the symptoms associated with mood and anxiety disorders impact the ability of students to thrive and achieve their academic goals (Andrews & Wilding, 2004; Eisenberg et al., 2009; St-Onge & Lemyre, 2018). Pharmacological treatments can also interfere with students' abilities to perform to their full potential.

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[33] The Diagnostic and Statistical Manual (DSM-5) is the authoritative volume that includes definitions and diagnostic criteria for more than 150 mental disorders to guide diagnosing, treatment planning, and research (APA, 2020). In Canada, diagnoses of mental illness are made by psychiatrists and psychologists using the DSM-5, although mental-health-related care is provided by a broader range of professionals, including family doctors, nurse practitioners, and counsellors (CMHA, 2016).

Mood disorders are characterized by elevated or depressed moods, resulting in alterations in the way a person thinks, feels, and behaves (Government of Canada, 2006; PHAC, 2016). In 2019, the prevalence of mood disorders among Canadians between the ages of 18 and 34 years was 11.7% (Zemen & Frenette, 2021). It is estimated that 12.6% of Canadians over the age of 14 will experience a mood disorder at some point during their life (Pearson et al., 2018). Major depressive disorder, bipolar disorder, dysthymic disorder, and perinatal depression are the four main types of mood disorders (PHAC, 2016).

Anxiety is a normal response to stress and can be helpful in certain situations (e.g., acute stress enhances performance). What differentiates anxiety disorders from anxiety or nervousness is the intensity and impact of feelings (Anxiety Canada, n.d.; Centre for Addictions and Mental Health, 2021a). Anxiety disorders are characterized by excessive and persistent feelings of apprehension, worry, and fear (PHAC, 2016). Having more than one type of anxiety disorder is common (Health Canada, 2009). Like mood disorders, anxiety disorders can affect behaviours, thoughts, emotions, and physical health. Individuals with anxiety disorders may avoid anxiety-provoking situations or develop rituals to reduce their symptoms. For people with anxiety disorders, the feelings of fear and distress are out of proportion to the actual threat or danger, interfering with normal functioning. Statistics from the WHO indicate a 12-month prevalence rate of 11.7% for anxiety disorders among college students and 14.7% among students who left college prior to completing their degree (Auerbach et al., 2016). The reported prevalence rates of mental illnesses are an underrepresentation of true prevalence rates due to issues such as insufficient mental health care services and public stigma (Parcesepe & Cabassa, 2013).

I have described mood and anxiety disorders separately, although they are often experienced concurrently (Health Canada, 2009). A more complete description of the impact of mood and anxiety disorders on academic performance is provided in Chapter 3.

Treatment for mental illness is diverse and can include medications, counselling, and development of coping skills. In addition to pharmacological and non-pharmacological treatments, the impacts of mood and anxiety disorders can be mitigated through initiatives promoting mental health.

Mental Health Promotion

Mental health promotion is an approach that fosters the enhancement of individual resilience and control and promotes the development of socially supportive environments (Eriksson et al., 2018; PHAC, 2014). By increasing self-esteem, coping skills, social support, and well-being, mental health promotion empowers people and communities to interact with their environments in ways that enhance overall well-being and enable optimal health (Jané-Llopis et al., 2011). In turn, this increases people's ability to cope with challenging situations in their lives (Eriksson et al., 2018; Centre for Addiction and Mental Health, 2008). This is of particular importance to students with and without diagnosed mental illnesses, who are juggling multiple priorities (i.e., academics, jobs, and family or community responsibilities), managing mental-health-related symptoms with varied levels of support, navigating university processes (e.g., course registration, academic advising, and disability supports), learning in varied modalities (i.e., face-to-face, online, or hybrid delivery), and in the past few years, living through a pandemic (Lisnyj et al., 2021).

On March 11, 2020, the World Health Organization declared COVID-19 a pandemic (WHO, 2020). The social restrictions that were implemented affected everyone, and in post-secondary institutions they resulted in a rapid transition from face-to-face to online learning. "Millions of postsecondary students and instructors found themselves forced, many for the first time, to mediate all of their interactions digitally." (O'Neill et al., 2021, p. 1). Research carried out during this time indicated the need for initiatives promoting mental health at post-secondary institutions (Dadaczyuski et al., 2021) to address the resulting effects on the mental health of students (Centre for Innovation in Campus Mental Health, 2021; Dadaczyuski et al., 2021; Nurunnabi et al., 2021; Soria et al., 2021; Stamatis et al., 2021) and instructors (Bourgeault et al., 2021; Tugend, 2021).

The Mental Health Commission of Canada (MHCC) created the mental health continuum model (Figure 1) to show the full spectrum of mental health and well-being. The model provides a clear representation of the range of mental wellness. The continuum allows individuals to identify indicators of declining or poor mental health in themselves and others, stresses that individuals can move along the continuum in both directions, and suggests appropriate actions at each point along the continuum (MHCC,

2018). The “actions” indicated along the continuum vary from those that are treatment focused (e.g., medical consultation and recommendations) to those that are health promotion focused (e.g., healthy coping strategies). In this model, “ill” refers to being very unwell, not necessarily having a diagnosed mental illness.

The mental health continuum model is one tool that can be used to foster health promotion in post-secondary institutions. The model can be useful for course designers, instructors, and students with or without a diagnosed mental disorder. The action items listed under the “healthy” and “reacting” points on the continuum are practical from the perspectives of both mental health promotion *and* learning design. For example, courses can be designed to break larger assignments and concepts into “chunks,” which aligns with what we know about scaffolding (Reiser & Tabak, 2014) *and* mental health promotion. More broadly, integration of flexible course designs characteristic of UDL fosters accessibility for students who will be experiencing MHRD at various points along the continuum.

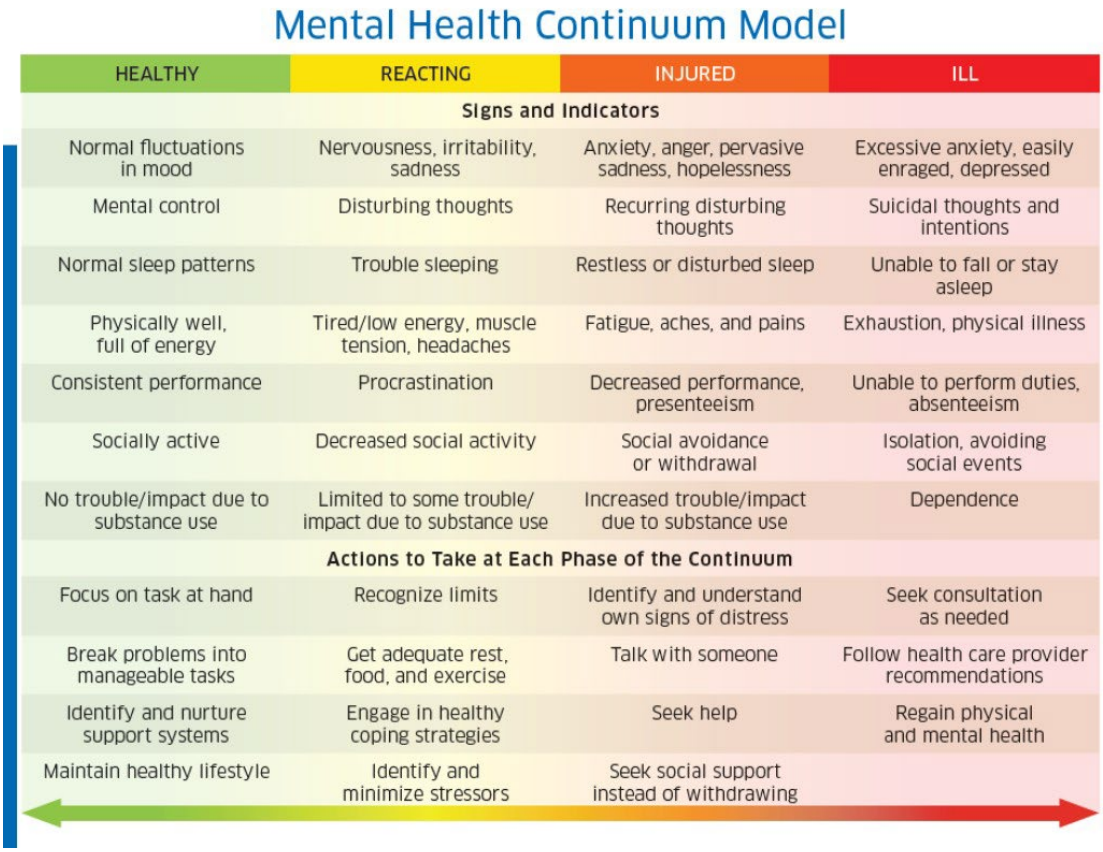

Figure 1: Mental Health Continuum Model
(MHCC, 2019). Reprinted with permission

Health-promoting universities and colleges take a "whole university" approach and infuse health into their daily operations and academic mandates (Okanagan Charter, 2015). As mentioned earlier, the "healthy universities" movement began on an international scale in the late 1990s (Tsouros et al., 1998) and continues nationally and internationally today. Examples include the Healthy Universities Network in the United Kingdom (Healthy Universities, 2022), the Healthy Campuses framework in the United States (ACHA, 2020), the Health Promoting Campuses network in Canada, and the Okanagan Charter (2015).[34] Acknowledged in the Okanagan Charter is the notion that all sectors must take an active role in favour of health, social justice, and equity for all and, further, that health ought to be considered in all aspects of core business in post-secondary institutions, including instructional design. As depicted in Figure 2, the healthy universities framework encompasses the five key principles of health promotion: individual, environmental, and community resource development in addition to health services and health policy development. One example of institutional leadership in this area comes from Simon Fraser University (SFU) in British Columbia. For 10 years, SFU has taken a systemic, campus-wide approach to enhance health and well-being through its Healthy Campus Community initiative.[35]

[34] The Okanagan Charter is an International Charter for Health Promoting Universities and Colleges. The Charter is the product of an international conference on health-promoting universities that was hosted by the University of British Columbia (UBC) in 2015 (UBC, n.d.). The Charter has two Calls to Action for higher education institutions: 1. Embed health into all aspects of campus culture, across the administration, operations, and academic mandates. 2. Lead health promotion action and collaboration locally and globally (Okanagan Charter, 2015). To date, 33 Canadian post-secondary institutions have adopted the Charter.

[35] See the Healthy Campus Community section on the SFU website, http://www.sfu.ca/healthycampuscommunity.html

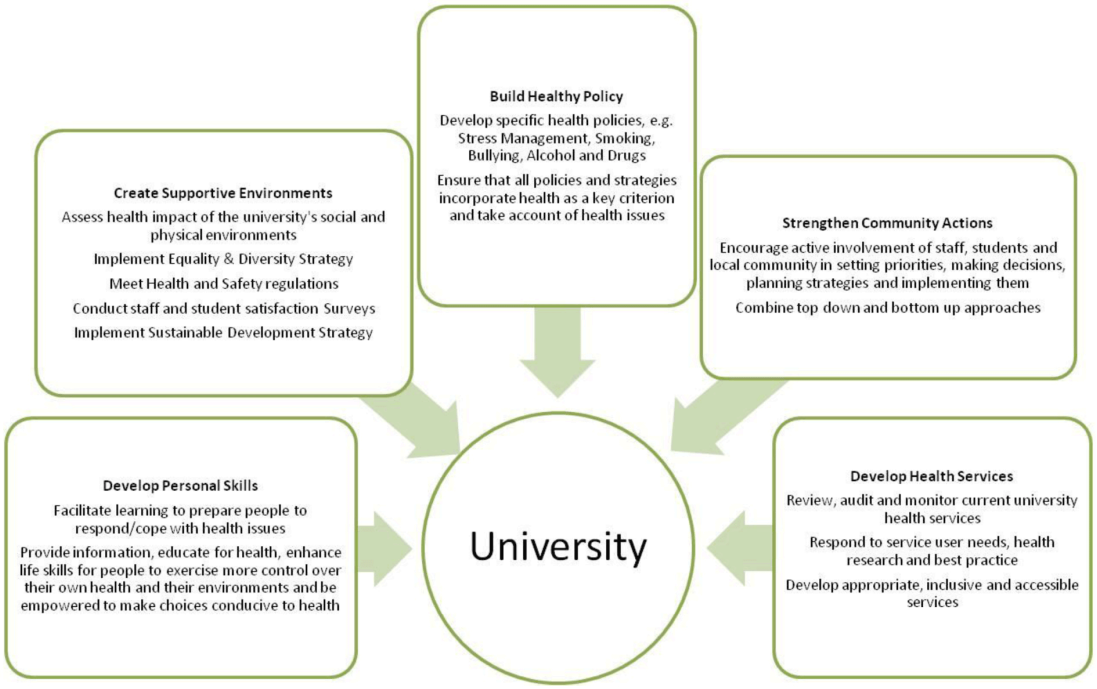

Figure 2: Healthy universities | healthy campuses approach
(Centre for Innovation in Campus Mental Health, n.d.)

While universities that adopt the healthy universities approach may consider learning environments as settings for health-promotion initiatives, the linkage to mental-health-promoting learning environments—particularly online learning environments—is not made explicit in the healthy universities/campuses approach.

Online Learning: An Overview

Over 20 years ago the federal government demonstrated its interest in and commitment to creating robust opportunities for online learning by creating the Advisory Committee for Online Learning, tasked with creating an action plan to expand online learning opportunities in Canadian post-secondary institutions.[36] The rationale was spelled out in the committee's report:

> In a global society based on expanding knowledge, Canada's health as a civil society and its economic competitiveness, as well as the success of

[36] The 19-member advisory committee was created in 2000 and composed of Canadian university presidents, college presidents, and senior business executives (Advisory Committee for Online Learning, 2001).

> individual Canadians, will hinge on having the best possible education and access to lifelong learning opportunities. Around the world, online learning—the use of digital networks to deliver and support learning opportunities—has emerged as a powerful and transformative means to meet these learning needs, as well as to extend and enrich traditional modes of instruction, at the post-secondary level. (Advisory Committee for Online Learning, 2001, p. ix)

The excitement for the future of online learning is evident in the predictions of "powerful" and "transformative" learning opportunities. Online learning (also referred to as e-learning) is a type of distance education that has existed for decades in Canadian secondary and post-secondary institutions (Ivus et al., 2021).[37] "Online learning" is not a homogenous modality in technology-mediated environments. Online learning is taken to include fully asynchronous (instructor and students engage with the course content at different times), fully synchronous (instructor and students engage with the course content at the same time), blended (includes synchronous and asynchronous components), and hybrid (includes some in-person and some online instruction) delivery. With the social-distancing requirements of the COVID-19 pandemic, the spotlight has been newly focused on this type of learning environment (Barbour et al., 2020; Ivus et al., 2021) as educational institutions quickly transitioned from in-person instruction to online platforms. This modality has been described as "emergency remote teaching" (Barbour et al., 2020) to distinguish it from instruction specifically designed for online delivery.[38] Further adding to the complexity, many in-person courses now have some online learning components (e.g., use of discussion forums on the host university's learning management system (LMS) such as Canvas or Moodle).[39] Due to the rise of distance education courses and programs (and related research) during the pandemic, it has become increasingly important for educators and researchers to categorize and describe modalities using consistent and clear definitions (Johnson, 2021). The

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[37] Distance education involves delivering courses or training programs with the student and instructor in different places. This includes a variety of delivery methods, including correspondence by mail, broadcasting course content via television, and internet-enabled distance learning. Beginning in 1889, McGill University offered distance degree programs to teachers in rural Québec (Ivus et al., 2021).

[38] The Canadian Digital Learning Research Association refers to this as "intentional online learning." In their view, emergency remote teaching and intentional online learning should be considered two different types of online learning (Johnson, 2021).

[39] LMS systems (or engines) are used to manage course-related content, communications, and administration tasks such as tracking and grading (Ivus et al., 2021). They have become the status quo in Canadian post-secondary institutions (Johnson, 2020).

Canadian Digital Learning Research Association has proposed the Modes of Learning Spectrum (see Figure 3) to provide a framework for common understanding of terminology (Johnson, 2021).

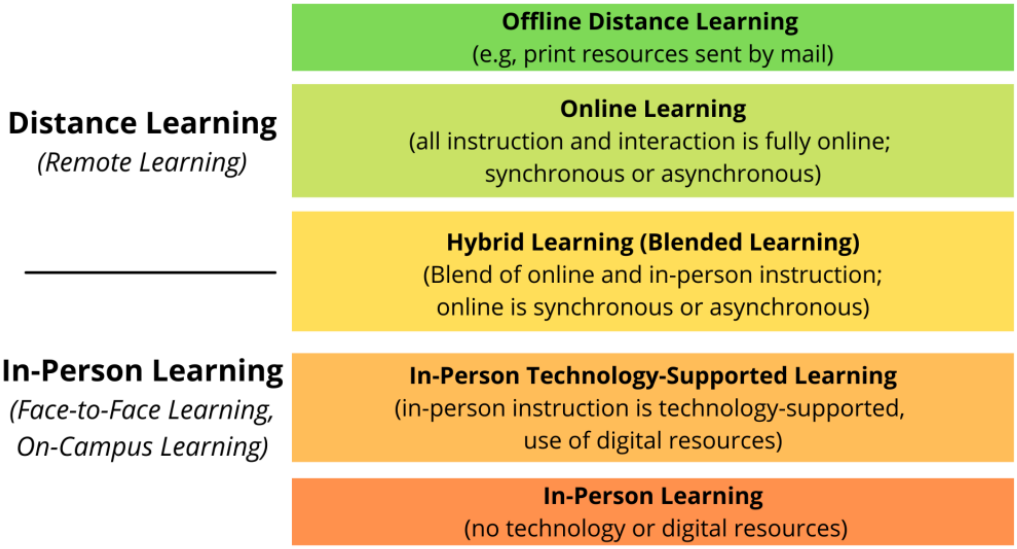

Figure 3: The Modes of Learning Spectrum for Categorizing Different Modes of Course and Program Delivery

There is growing understanding in the field of education of the need for online learning spaces to be customized to foster both individual, self-regulated learning *and* shared knowledge-building (Miyake & Kirschner, 2014). Contextualization of student learning is being reframed to be continuous, interactive, and facilitated by learner agency (Gebre & Polman, 2020). The population of students attending post-secondary is diverse, with wide variations in factors such as financial security, social connectedness, culture, gender, interests, academic abilities, and health status. This diversity among learners, coupled with a wide range of available educational technologies, requires educators to customize their online learning environments so that *all* learners can thrive. The breadth of educational technology tools and systems currently available provides educators with enormous choice for teaching methods within each mode of course delivery. Which tools are chosen may be imposed on educators (e.g., university adopts the LMS of its choice), they may be at the discretion of educators (e.g., instructor uses UDL for course design), or they may be a mix of the two. Choices made by instructors are driven by a variety of intersecting influences, such as personal teaching philosophy

and pedagogy, availability of educational technology tools, workload, competence with technology, and social and cultural influences (Bennett et al., 2016; Burridge, 2018).

On their own, individual tools and learning activities are insufficient to create inclusive and accessible learning communities. Rather, the ways in which the course designer/instructor integrates tools and activities with deliberate pedagogical choices are what ensure universal accessibility. For example, both a synchronous lecture (either in-person or using platforms such as Zoom®) and an asynchronous discussion forum can be designed to promote engagement and collaboration, develop a learning community, and allow for formative assessment—or they can both be designed as passive, one-way, content-delivery platforms. Cartwright and Fabian (2017) and O'Neill et al. (2021) illustrate how diversity in course delivery affects student perceptions and outcomes. Each modality, or perhaps the complement of learning design elements chosen within each modality, has strengths and drawbacks—affecting the instructors, the students, and the instructor-student dyad in a myriad of ways. More specifically, there may be advantages and disadvantages for students with MHRD. These will be discussed further in Chapter 3. Learning design elements are critical components of inclusive and accessible learning environments in post-secondary, and the UDL framework provides guidance for educators and instructional designers seeking to ensure accessibility for all students.

Universal Design for Learning

The roots of UDL are almost 30 years old and grew out of the architecture practice of Universal Design (UD) (e.g., ramps to access buildings, elevators, and curb cuts). In the 1990s, researchers based at the Center for Applied Special Technology (CAST) adopted concepts of UD and applied them to education (Rose, 1999).[40] They created the first Universal Design for Learning (UDL) guidelines in 2008 (CAST, 2008; 2018) to provide educators and instructional designers with an evidence- and learning-theory-informed framework for creating and delivering course materials to diverse students while improving the learning process for all students (Al-Azawei et al., 2016; Capp, 2017; Fovet, 2021; Hall et al., 2012). Black and Moore (2019) posit that UDL can

[40] The Centre for Applied Special Technology (CAST), a non-profit education research and development organization, has been a global leader in accessible education since the 1980s.

be used as a systems-level tool to do much more than provide inclusive learning environments. In their view, UDL can be used in higher education to better integrate adult learning principles, enhance recruitment and retention, assist in external accreditation processes, promote instructor skills, foster autonomy and control, facilitate achievement of institutional priorities, promote cultures of teaching and learning, and meet legal requirements.

The focus of UDL is to intentionally design "engaging, inclusive learning experiences to develop expert learners" (Black & Moore, 2019, p. 1), who are purposeful, motivated, knowledgeable, resourceful, strategic, and goal-directed (CAST, 2018). There are three main principles of UDL, broken down into nine guidelines. The three principles are based on the idea that there are multiple ways of representing information (e.g., text, video, and audio), assessing student learning (e.g., written, creative, and oral presentations), and engaging students (e.g., group work and peer facilitation) (Capp, 2017; Hall et al., 2012). The nine guidelines are described in three clusters of "action," "build," and "internalize."

- *Action guidelines* suggest ways to recruit interest and provide options for perception and physical action.
- *Build guidelines* propose ways to develop persistence and effort, language and symbols, and expression and communication.
- *Internalize guidelines* recommend ways to empower learners through self-regulation, comprehension, and executive function.

UDL can be integrated into all phases of curriculum design and delivery (Black & Moore, 2019). However, implementation of UDL requires institution-level investment, and instructors who are committed to and skilled in creating and delivering inclusive courses (Ostrowski et al., 2017). Further, UDL on its own does not address the underlying belief systems of instructors and post-secondary administrators (Gidden & Jones, 2021). Although there is a paucity of research focused specifically on the benefits of UDL for student mental health (Al-Azawei et al., 2016; Fovet, 2020), given the fluctuating and varied symptoms related to mental health, it is reasonable to expect that the flexibility embedded in UDL will be advantageous to students with MHRD, and some research supports this claim (Griful-Freixenet et al., 2017; Miller & Lang, 2016). Lister and colleagues (2021) identify multiple curriculum factors as barriers to student well-being, suggesting that approaches such as UDL can be implemented to foster student

well-being. Furthermore, integration of UDL minimizes the need for students to ask for individual accommodations (Black et al., 2015; Edyburn, 2010; Kettlerlin & Geller, 2018; Lightfoot et al., 2018). This benefits all students, but perhaps students with MHRD even more, as they face mental-health-related stigma in addition to the stigma associated with academic accommodations.

The UDL guidelines ensure accessibility of the learning environment to all learners by recognizing their diversities regarding ability, culture, gender, age, and other forms of human difference (Navarro et al., 2016). Advocates for UD and UDL value the broad action and asset orientation of designing for universal access. Jay Dolmage (2017) astutely notes that “Universal Design is not about buildings, it is about building—building community, building better pedagogy, building opportunities for agency.” (p. 118). Frederic Fovet (2021) concurs with the notion that inclusive learning environments are created through active design processes:

> Once an instructor shifts away from a deficit model perspective, it becomes obvious to them that all diverse learners tend to experience fairly similar barriers in their access to learning in the post-secondary classroom. The issue is not the exceptionality of the learner; it is the design of the learning experience. (p. 28)

UDL aligns with the social model of disability in that the focus is not centred on the impairments of individuals, but, rather, on disabling systems, structures, and processes. The Justice Institute of British Columbia describes how UDL allows instructors and instructional designers to critically examine the disabling features of curricula:

> An important perspective in UDL is understanding that the curriculum we designed is not perfect, and in fact it often fails at meeting the needs of the diverse body of our students. Rather than seeing students as incapable or disabled, we reframe the problem as curricular disability. (Takacs et al., 2020, p. 3)

Intentionally designing learning experiences that foster inclusivity through accessibility requires the designer to have both UDL knowledge and instructional design skills. This can be challenging for Canadian post-secondary educators, who do not receive mandatory teaching training and might not be supported to develop expertise in this area. In addition to having varying levels of expertise in curriculum development,

instructors must also manage multiple priorities, including teaching, research, committee work, mentoring, and community and/or industry connections (Black & Moore, 2019).

Regardless of the mode of learning, the UDL framework can be used at the program curriculum and course design level to ensure students have full access to course content. Embedding UDL into course content and program curriculum allows students to learn in accessible and flexible learning environments, limiting the need to access individual academic accommodations. So while UDL benefits every student, there are particular benefits to students with disabilities who might otherwise have to navigate additional accommodation-related processes to fully access their education. As such, there needs to be institutional level adoption of UDL *alongside* requisite resources for instructor professional development.

Ecological Models of Human Development and Health Promotion

In the mid-1970s, psychologist Urie Bronfenbrenner put forward a new theoretical perspective called the ecological model of human development (Bronfenbrenner, 1976). The novelty of this model rested on its “conception of the developing person, of the environment, and especially of the evolving interaction between the two” (p. 3). Like the population health approach, the ecological model for human development is a systems model that views human development and behaviour as being affected by, and affecting, the environment (McLeroy et al., 1998). Figure 4 shows Santa Clara University’s application of Bronfenbrenner’s theory, in which the ecological environment is depicted as a set of five nested systems with the individual in the middle. The system nearest the individual is the *microsystem*, which includes the objects (e.g., learning management system), people (i.e., peers, instructors, and support staff), and groups (i.e., clubs, teams, and university classes) that the person directly interacts with; interactions between all elements within the microsystem are considered important to human development. The system next to the microsystem is the *mesosystem*, described by Bronfenbrenner as a “system of microsystems” (p. 25); the mesosystem includes interactions and relationships between at least two settings that the individual actively participates with (e.g., relationships among university, home, work, and social groups). The *exosystem* lies next to the mesosystem and refers to settings that may influence the individual but which the individual is not directly a part of (e.g., the work of university

administration and courses and programs in faculties other than the one the student is a member of). The next system in this model is the *macrosystem*, which includes cultural and ideological belief systems that influence the individual, including economic (i.e., funding for post-secondary education) and legal systems (i.e., accommodation and accessibility laws) and socio-demographic factors (i.e., income, age, and gender). The *chronosystem* is the final and most distal system of influence on individuals in the ecological model. Life-course events form the foundation of this system including normative events (e.g., attending post-secondary and/or having a career) and non-normative ones (e.g., dropping out of post-secondary and/or being unemployed). Consideration is given to the cumulative effects of life-course events on the individual (APA, 2022).

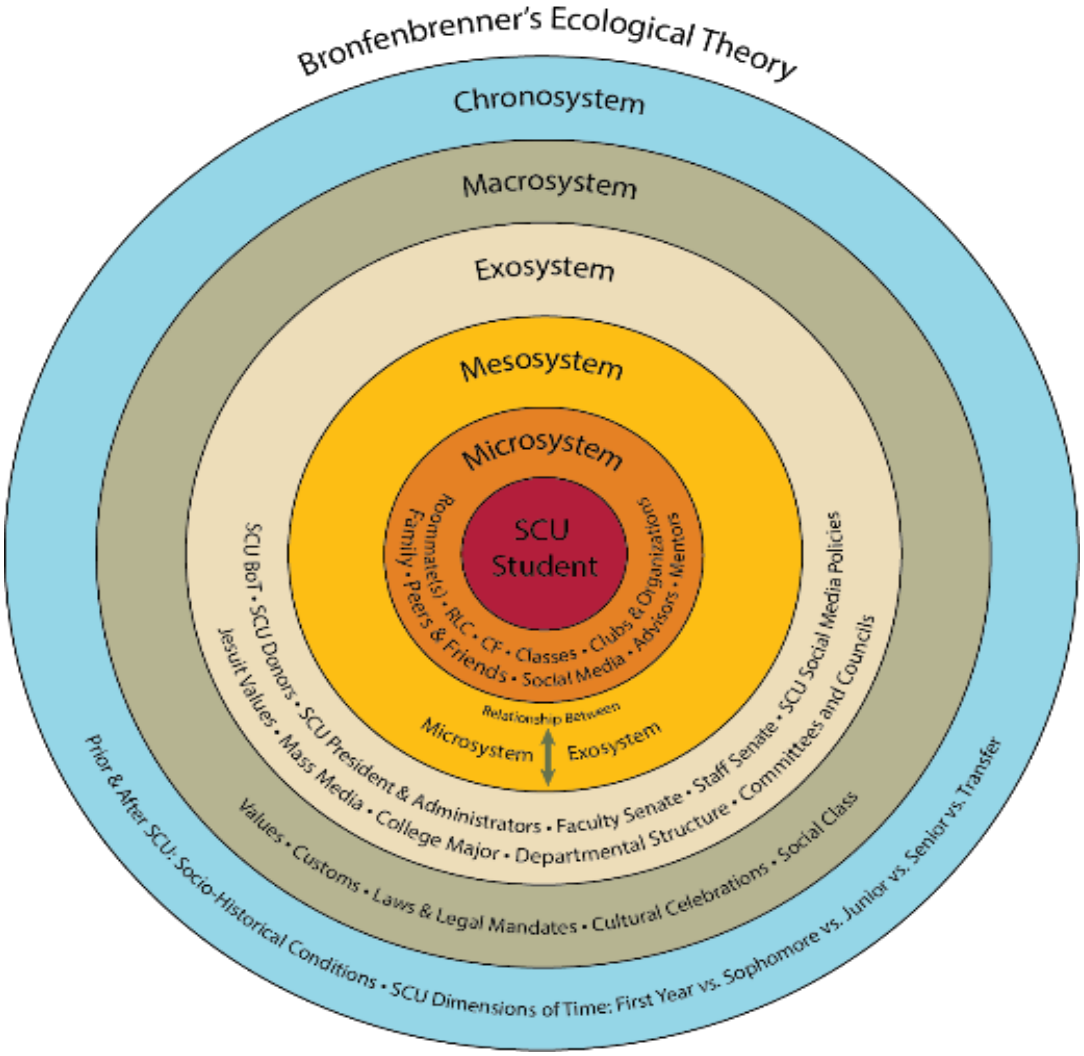

Figure 4: Santa Clara University's Application of Bronfenbrenner's Theory of Human Development in the Office of Multicultural Learning

Although the theory was developed to explain human development, it has been used widely in a range of disciplines including education (Espelage, 2014; Kitchen et al., 2019), social work (Fearnley, 2020), health professions (Hamwey et al., 2019), environmental public health (Buttazzoni et al., 2022), and mental health (Eriksson et al., 2018) to shape interventions, program evaluations, and research designs. Additionally, it has been proposed as a useful framework to implement UDL at a systems level (Fovet, 2021).

The socio-ecological model for health promotion is a modification of Bronfenbrenner's model that has been developed to guide campus-wide mental-health-promotion initiatives (Healthy Minds Healthy Campuses, 2022) and study influences on post-secondary student stress (Lisnyj et al., 2021). Both models acknowledge the reciprocity between individuals and their environments. The socio-ecological model posits five levels of influence on behaviour, including individual, interpersonal, institutional/organizational, community, and public policy (McLeroy et al., 1998), depicted as embedded concentric circles (see Figure 5).

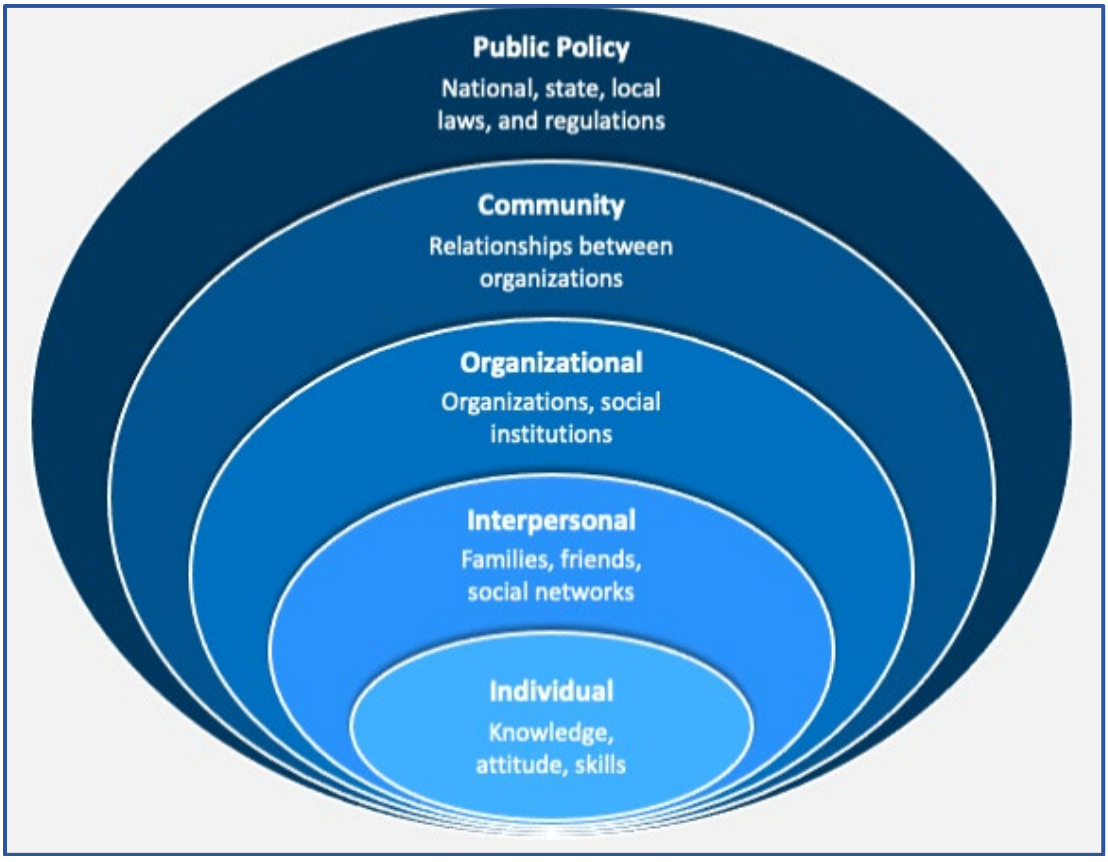

Figure 5: The Socio-Ecological Model of Health Promotion

Individual factors include characteristics of the individual, such as knowledge, self-concept, behaviours, and values. Interpersonal factors include formal and informal social support networks (e.g., family, friends, peers, instructors, and support staff). Institutional factors include organizational characteristics, such as explicit and implicit rules and regulations (e.g., process to obtain academic accommodations; commitments to equity, diversity, and inclusion). Community factors include relationships between key stakeholders within defined boundaries (e.g., members of post-secondary administration and the Ministry of Education). Lastly, public policy factors include the influence of local, national, and international laws and policies on behaviours (e.g., policy on academic accommodation, federal accessibility legislation). Mental health *and* learning are influenced by intersecting individual, societal, and social factors and, therefore, the socio-ecological model for health promotion provides a practical tool to frame my study findings.

Conclusion

The significance of this study rests in part on the interdisciplinary nature of its design. Drawing on theoretical frameworks and approaches from the fields of public health and education provides a unique opportunity to examine ways to make post-secondary education accessible for students with mental-health-related challenges. UDL, the population health approach, and ecological models of health and human development share important foundational elements—notably an orientation to prevention, systems-based analysis and solutions, and consideration of social, environmental, and cultural factors affecting the lived experiences of learners—that informed my investigation of the elements that influence learning for students with MHRD who are studying online.

Consideration of universities as settings for learning *and* population-level health promotion is not new. However, the widespread adoption of campus-wide initiatives and policies that explicitly promote health for students, instructors, and staff has not yet happened. The online learning environment is a critical component of 21st-century “campuses” and must therefore be considered as a potential health-promoting educational setting. In this study, I propose that adopting an accessibility model with a mental-health-promotion orientation and widespread integration of UDL has the potential to improve learning, prevent harm, and promote health for all students studying online,

particularly those with MHRD. In this chapter I described relevant concepts from both public health and education and discussed areas of alignment. In the next chapter the focus will shift to a review of literature centred on mental health and online learning.

Chapter 3.

Literature Review

The primary objective of this study is to understand influences on and experiences of learning for post-secondary students with mental-health-related disabilities (MHRD) who are studying online. The prevalence of learning challenges experienced by these students is not fully known (McManus et al., 2017), and without first-hand accounts from these students we are missing an important perspective on the issue. Educators recognize that identifying barriers to and opportunities for academic performance is essential to ensure that students with MHRD can achieve their academic goals. Once barriers to and facilitators for academic performance are identified, universities can examine and improve their approaches to accessibility, preventing and alleviating challenges faced by this population.

Findings reported in the literature over the last few decades indicate that there are internal and external factors influencing learning and academic performance for students with MHRD. However, there are limitations and gaps in this body of research; specifically, few studies have focused on the barriers to and facilitators for learning for students with MHRD who are studying online, and the existing studies have used variable disability-related terminology. For example, MHRD terminology includes “mental illness,” “mental problems,” “mental-health-related disability,” “mental health challenges,” “mental health disorders,” “mental ill health,” “mental health difficulty,” “psychiatric disability,” and “psychiatric illness.”

In this chapter I review a select body of literature related to the impairments and barriers experienced by students with MHRD, identify gaps in knowledge, and contribute to the accumulated knowledge on this topic.[41] The chapter begins with a description of inclusion and exclusion criteria. This is followed by a summary and analysis of selective research on stigma and discrimination, the accommodation model, and barriers to

[41] This review is consistent with Maxwell’s (2006) description of the dissertation literature review as one that describes selective research that will inform the dissertation and explains how the dissertation will advance the body of research. Maxwell advocates for conceptually organized dissertation literature reviews, which are a commonly used format in doctoral dissertations (Randolph, 2009).

academic performance, which are key concepts in this research. The review will highlight the ways in which the current body of literature influenced my study design regarding impairments and barriers experienced by students with MHRD. I conclude by explaining how this study will begin to fill existing gaps in the literature while also extending our understanding of influences on learning for students with MHRD who are studying online.

Inclusion and Exclusion Criteria

This literature review was limited to peer-reviewed journal articles published in English. Relevant legal documents and relevant grey literature (e.g., *Canada Human Rights Act*, reports focused on key concepts) were included to provide background. To be considered for inclusion in the review, the research focus had to be on higher education/post-secondary institutions. I looked for study participants who were students with disabilities or instructors or disability support staff, with attention paid to finding studies that combined participant role groups. Settings included on-campus and online for two reasons. First, there is not enough research published at this point that focuses exclusively on the online setting. Second, including on-campus research can help to identify future research areas for the online context, and some aspects of the learning environment are comparable across modalities (e.g., academic accommodation process). I did not impose a time limit on the search because I wanted to identify evolution of concepts over time.

I excluded from the review articles focusing on student participants with developmental disabilities (these students tend to participate in post-secondary with different supports than students with non-developmental disabilities) and articles focused on treatment interventions for mental illness.[42] Although I did not limit articles by country of origin, the articles that were included were from Canada, the United States, Australia, and the United Kingdom.

[42] For example, and as mentioned in Chapter 2, in British Columbia the STEPS Forward program provides inclusion support for students with developmental disabilities in post-secondary institutions. For more information, see: https://www.bc-ipse.org/

Stigma and Discrimination

As described in Chapter 2, conceptualizations of mental illness have changed over time. Once believed to be caused by moral or spiritual failing, it is now viewed to be a result of the complex interplay of social, environmental, and biological factors (US National Library of Medicine, 2015). Past beliefs about the causes of mental illness have contributed to people with mental illnesses being subject to negative judgment and stigmatization—more so than for any other type of illness (Rössler, 2016). While people with mental illness in North America are no longer tortured and killed,[43] they continue to endure the effects of both stigma and discrimination (CMHA, 2022b).

Stigma is defined as a socially constructed prejudice or stereotype that changes over time (Schomerus & Angermeyer, 2017), resulting in discrimination and exclusion (CMHA, 2022; Government of Western Australia, 2009). Common types or dimensions of stigma described in the literature include public stigma (Ahmedani, 2011; Corrigan & Rao, 2012; Rössler, 2016) and self-stigma (Corrigan & Rao, 2012; Rössler, 2016). Public or social stigma refers to the negative attitudes and beliefs that the public has toward people with mental illness, which are often based on misconceptions and prejudices (Ahmedani, 2011; Corrigan & Rao, 2012; Rössler, 2016). Self-stigma, or internalized stigma, is the negative attitudes a person has toward their own mental illness and is the result of people internalizing negative public attitudes (Ahmedani, 2011; Corrigan & Rao, 2012). The negative attitudes associated with public stigma result in discrimination, described as the unfair treatment of people due to the groups, classes, or categories to which they belong (e.g., race, gender, socio-economic status, educational level, disability, and health status) (CHRC, 2021). Combined, stigma and discrimination exclude people from activities, experiences, and opportunities that are open to other people—including full participation in post-secondary education (Centre for Addictions and Mental Health, 2022).

It is important to review literature focused on the impact of mental-health-related stigma in the general population, and more specifically for students in post-secondary, because of the influence that stigma has on self-concept and help-seeking behaviours

[43] Studies on the prevalence and impact of stigma are largely from Western industrialized countries, so the description and evolution of stigma in other cultures and non-industrialized countries is unknown (Schomerus & Angermeyer, 2017).

for students. Additionally, the prevalence of public stigma will be reflected in the attitudes and actions of support staff and instructors working in post-secondary institutions, potentially influencing learning and academic performance.

In the Broader Society

Researchers have been studying the prevalence and impact of mental health-related stigma in society *and* within post-secondary institutions for decades. Over 20 years ago, Link and colleagues (1999) explored public perceptions of mental illness in the United States and found a strong connection between mental illness and the perceived likelihood of committing violent acts. This perception was associated with "attitudinal social distance"[44]—the desire to socially distance oneself from people with mental illness. Twenty years later, a follow-up study was done by the same researchers to evaluate changes in mental illness stigma from 1996 through 2018 (Pescosolido et al., 2021). Analysis of data from face-to-face interviews, the US National Stigma Studies, and the 2018 General Social Survey indicated that, overall, there has been a reduction of societal stigma toward people with depression. However, results from a large systematic review and meta-analysis (33 reports on 16 studies focused on national trends published before March 2011) indicated that while mental health literacy and acceptance of help for mental-health-related issues have improved in the public, attitudes toward people with mental illness have not (Schomerus et al., 2012). The authors posited that this shift indicates that while society has become more accepting of the treatments associated with mental illness and more tolerant of people who have been treated for illness, this tolerance has not necessarily been extended toward people currently suffering from mental illness in the general population, including students. This is a significant consideration for research focused on post-secondary institutions, where at least one-quarter of students have mental illnesses (ACHA, 2019).

In Post-secondary Settings

Studies over the last quarter-century have shown that students with mental illness in post-secondary settings feel stigmatized, with numerous negative impacts on

[44]Attitudinal social distance is the established measure of social rejection and discrimination (Schomerus et al., 2012).

learning. Using explicit inclusion criteria, researchers Markoulakis and Kirsh (2013) synthesized the findings from 10 articles focused on the perspectives of university students with mental health problems to describe the difficulties they faced while attending post-secondary institutions. Articles included in the review were published between 1995 and 2010. Findings from their synthesis indicate that research over the last 25 years has shown stable prevalence of stigma on students with MHRD. Further, stigma was identified as *the most prominent* difficulty experienced by students (Markoulakis & Kirsh, 2013). The authors reported diverse impacts of stigma, including lowered self-esteem, avoiding social situations and help-seeking, and experiencing discrimination. Consequences included feeling unable to self-advocate for support and being unwilling to disclose mental health-related challenges to staff and instructors. The practical implications are that students do not receive the support they need and deserve from disability support services and their instructors. For some, this will result in taking longer to complete their desired credentials or dropping out prior to completion. Based on the findings of their review, Markoulakis and Kirsh (2012) highlighted the need for future research to consider the challenges experienced by students because of accommodation models—models based within the medical-model orientation to health.

My study has been designed with this consideration in mind. Students involved with the study were registered with the disability support unit (DSU) and, therefore, had received approval for academic accommodations. During the interviews, students had opportunities to talk about the barriers to and facilitators for learning in the online environment, in addition to their experiences accessing university-provided supports.

In a study that focused on students with MHRD studying online, McManus and colleagues (2017) described the impetus of their research being the identified gap in studies at the intersection of online learning *and* students with MHRD. Guided by a critical realistic framework,[45] in-depth, semi-structured interviews were conducted with 12 students with MHRD who were studying online to explore learning barriers. Inclusion criteria for participation included registration with the university DSU. Like the findings from Markoulakis and Kirsh (2012), self- and social stigma were raised as significant

[45] The critical realist framework allows for exploration of the interplay between intrinsic factors (e.g., the nature of mental-health-related disabilities) and extrinsic factors (e.g., instructor attitude, course design) on learning (Frauley & Pearce, 2007; McManus et al., 2017).

issues by the participants. Self-stigma was reflected by the participants questioning the validity of their accommodations and doubting their capacity to succeed academically. Social stigma was described as a barrier to seeking support and accessing accommodations. These researchers chose to focus solely on students as participants in their study. However, they acknowledged the extent to which the experiences of students, and specifically overcoming barriers in their learning environment, were related to interactions with the university DSU. Through the experiences shared by the students, the effectiveness of the unit was explored. My study builds on this by incorporating the perspectives of student support staff, some of whom worked in the DSU.

Instructors play a critical role in the experiences of students with MHRD in post-secondary education. For at least three decades there has been an understanding that the beliefs that teachers hold about their students, including prejudices and biases related to mental illness, impact academic performance. This phenomenon is called the Pygmalion effect (Rosenthal & Jacobson, 1992). Like the findings reported by Markoulakis and Kirsh (2012), a review of literature more specifically focused on the influence of instructors' stigmatizing attitudes regarding students shows a consistent trend over the last few decades. For example, two decades ago, renowned mental health scholar Marion Becker and her colleagues (2002) conducted a study using survey methodology to explore faculty (n = 315) and student (n = 1,901) attitudes and beliefs about students with mental illness at a US university. They reported stigmatizing discrimination and social distancing among half of the faculty participants, who indicated that they would not feel comfortable "dealing with" (p. 365) a student who exhibited signs of mental illness. In addition to describing discomfort and subsequent social distancing, 19% of faculty believed that students with mental illness would not succeed in their academic pursuits. More recent studies show similar results.

Canadian research by Epstein et al. (2021) focused on the experiences of clinical nursing instructors and nursing students who self-identified as having a disability. Results from their scoping review, based on the findings of 27 papers published between 1999 and 2018, indicated that nursing students with disabilities felt labelled, excluded, and judged by instructors because of their disability. The most startling and disheartening finding was related to the magnitude of stigma and discrimination experienced by the students. "Students experienced more problems with health care professional attitude than with managing their disabilities" (p. 113). Consequently,

students with invisible disabilities responded by masking their disabilities and choosing not to access their accommodations.[46] Their fear of discrimination limited or completely inhibited their ability to seek support. Although this scoping review is focused on the experiences of students during clinical nursing placements, the findings have broader relevance. Most Canadian post-secondary institutions offer professional certificates and degrees that include required field work/cooperative learning/clinical placements.

In a smaller study, Sniatecki and colleagues (2015) surveyed faculty (n = 123) at a US university to examine faculty attitudes toward and knowledge of students with disabilities, including those with MHRD. They reported that negative attitudes varied by disability type—faculty were more likely to hold negative attitudes about students with MHRD than those with physical disabilities. Regarding faculty belief in student success, the results are consistent with Becker et al. (2002), with 17.1% of faculty believing students with MHRD would not be successful in university. In comparison, only 3.3% of faculty believed students with physical disabilities would not succeed in their academic programs.

These studies influenced my research in several ways. Markoulakis and Kirsh (2012) described the omnipresence of stigma in the lives of students, reminding researchers in the field of student mental health not to take this for granted. Although support staff and instructor participants in my study were not explicitly asked about their attitudes toward students with MHRD, interview questions that provided them with opportunities to talk about their experiences supporting and teaching these students allowed them to share some of their beliefs and attitudes. Students in my study had chances to share their experiences of discrimination and stigma while attending post-secondary education.

Sniatecki et al. (2015) advocated future research focused on students with specific types of disability to determine if disability type influences instructor attitude. I took this into consideration in my study when establishing student inclusion criteria.

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[46] Invisible disabilities refer to ones that are not always, or ever, apparent to others (Kattari et al., 2018; Mullins & Preyde, 2013). People with invisible disabilities find that their bodies are policed (Kattari et al., 2018), and the onus is on them to *prove* their illness or disability (because people with disabilities have adapted to not look ill). However, the invisibility also allows them to *hide* their disability and pass as able-bodied, “escap[ing] the negative consequences of stereotyping and discrimination” (Nario-Redmond et al., 2019, p. 737).

While all students experience facilitators of and challenges to learning, choosing students with MHRD related to mood and anxiety disorders allowed me to hear the experiences of students who may have challenges both in common with and in addition to the general student population. A review of the literature also suggested seeking perspectives from diverse faculty members (e.g., diverse in both discipline and appointment classification). In my study, purposeful sampling allowed me to hear from a broad range of faculty.

Academic Accommodations in Post-Secondary Institutions

Given that stigma is ever-present for students with MHRD, and that the accommodation model remains the most common accessibility tool used in post-secondary, a review of the purpose and limitations of the accommodation model is warranted.

About Accommodations

The *Canadian Charter of Rights and Freedom* (1982) and the *Canadian Human Rights Act* (1985) are the primary pieces of legislation that protect people with disabilities from discrimination and promote inclusion within Canadian society (Government of Canada, 2018). Under the *British Columbia Human Rights Code* (1996), organizations have a "duty to accommodate," up to the point of undue hardship,[47] to ensure that people with disabilities can fully participate in all aspects of their lives (including education, employment, and leisure). In the post-secondary context, the duty to accommodate is often operationalized as academic accommodations, the purpose of which is to reduce or eliminate barriers to participation so that students with disabilities have equal access to learning and services in the educational environment (Alberta Human Rights Commission, 2010; Queens University, 2016; SFU, n.d.).

[47] Under Subsection 15(2) of the *Canadian Human Rights Act*, undue hardship can be claimed when "the duty to accommodate would cost too much or create risks to health or safety" (CHRC, 2010).

Accommodations are based on negotiated agreements with students, typically through university DSUs.[48] According to Strange and Cox (2016), "The Canadian human rights framework, in particular the anti-discrimination clauses of provincial human rights codes, have dictated a particular path of development of disability services [at post-secondary institutions]" (p. 136). This path has fostered a medical-model orientation to disability support services, as opposed to one that focuses on promoting accessibility through the removal of structural and systemic barriers—in other words, an orientation based on the social model of disability that includes widespread adoption of Universal Design for Learning (UDL). Like the treatment (versus prevention) orientation of the medical model, reactionary and often temporary solutions are fundamental to the accommodation model. In the book *Academic Ableism*, Dolmage (2017) uses the "retrofit" metaphor to describe this adaptive and reactive approach. The implication of this metaphor is that the goal of accommodation is to have students adapt to the "dominant logic of classroom pedagogy" (2017, p. 80), rather than adapting inflexible structures and course design to ensure universal access. Under the accommodation model, access is achieved when a successful retrofit is implemented, not when all students can gain access without special consideration. In Dolmage's (2017) view,

> when the accommodations that students with disabilities have access to, over and over again, are intended to simply temporarily even the playing field for them in a single class or activity, it is clear that these retrofits are not designed for people to live and thrive with a disability, but rather to temporarily make the disability go away. (p. 70)

Students are entitled to receive academic accommodations if they can provide evidence to the university DSU that their disability results in functional impairments that prevent or limit their ability to participate fully in their academic programs (Condra et al., 2015).[49] This registration process requires students to navigate medical systems *and* post-secondary bureaucratic processes. Obtaining required medical documentation may not be feasible due to insufficient availability of health care services and/or limited personal resources (CMHA, 2018; Contra et al., 2015; Moroz et al., 2020; Xiao et al., 2017). As well, students may encounter discrimination when accessing

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[48] In Canadian post-secondary institutions, these units were established in the mid-1980s (Cox & Klas, 1996).

[49] Each college and university will establish its own protocols for the medical documentation required to register with the DSU (Condra et al., 2015).

accommodations, and they may experience subsequent impacts on their self-esteem and self-concept. Although academic accommodations are available to students who meet the requirements, the accommodations may not be implemented by instructors, and students may choose not to access the accommodations for various reasons presented above (e.g., stigma and lengthy processes). I will describe key limitations of the accommodation model, based primarily on findings from a large meta-analysis and a systematic review focused on the challenges experienced by students seeking academic accommodations in post-secondary.[50]

Studies on Accommodation

Results from a large systematic review (n = 36 studies and 5,174 participants) (Lindsay et al., 2018) focused on the barriers to and facilitators of disclosure and accommodations in post-secondary institutions. The most common barriers were stigma and discrimination, which, as discussed previously, negatively influence a student's choice to seek support. Processes inherent in the accommodation model give space for stigma and discrimination. For example, instructors and disability support staff have gatekeeper functions, determining if accommodations will be approved and implemented. Accommodation-related decisions by instructors and DSU staff are based on knowledge of disability-related impairments and influenced by socially constructed attitudes and bias (NEADS, 2018).

Other barriers included students' lack of knowledge about disability support services, and the discretionary and inconsistent implementation of accommodations by instructors.

Factors that facilitated a student's choice to seek accommodation were strong relationships with disability support staff and instructors, online course delivery, positive experiences with accommodations, and strong coping and self-advocacy skills.

[50] Meta-analysis is a research method that takes an objective approach to systematically and quantitively synthesizing the results of studies within research domains (Paul & Barari, 2022). Systematic reviews are used to gather and synthesize the results of research findings within a research domain, often used to inform policy and practice. They may include a meta-analysis component (Uman, 2011).

Results from a qualitative study by Mullins and Preyde (2013) conducted at a Canadian university indicate similar challenges associated with the accommodation model. Mullins and Preyde conducted in-depth, semi-structured interviews with 10 students who were registered with the university's DSU with invisible disabilities. Students reported that academic accommodations were imperative for their success; however, accessing accommodations required additional effort, resulting in frustration and shame. Students reported feeling stigmatized by the education system. Having to ask for accommodations set them apart from their "normal" peers and brought up feelings of shame. Implementation of the accommodations was perceived to be "at the discretion" of professors, which led to inconsistencies and, consequently, student frustration. As a result, students sometimes chose not to access their accommodations, leaving them disabled by the educational system.

Findings from a study of online students with MHRD (McManus et al., 2017) are consistent with those from Mullins and Preyde (2013). Students reported difficulties both requesting and accessing accommodations. Reluctance to request their approved accommodations was related to fear of stigma. Students described inconsistencies in academic staff's implementation of their accommodations, and many felt their requests were unfairly disregarded. The authors did not speculate on why this might be the case, but given findings from other studies, public stigma and misinformation about the duty to provide accommodations may be contributing factors. These findings highlight the fact that access to accommodations is not on its own sufficient to ensure accessibility and inclusivity. Rather, the accommodation model itself can be disabling for students, and potentially more so for stigmatized students with lower self-esteem and invisible disabilities—all factors for students with MHRD. Additionally, the processes in place to acquire and administer academic accommodations require a significant investment in human resources by students, instructors, and disability support staff, making this an unresponsive model when resources are limited[51].

Challenges of the resource-intensive nature of the accommodation process were showcased during the COVID-19 pandemic. Researchers in Ontario sought to identify some of the challenges experienced by post-secondary students during the pandemic.

[51] Obtaining the medical documentation required for academic accommodations may also require financial resources (e.g., fees for medical documentation and privately administered assessments).

Pichette et al. (2020) surveyed students (n = 623, 200 of whom self-reported having a disability), disability support staff (n = 70), and stakeholders (n = 30). The rapid transition to remote learning left some students struggling to attain appropriate accommodations, with 18% of students reporting not being able to access accommodations from their instructors. This finding is not surprising given the challenging situations that instructors were working in, particularly at the beginning of the pandemic. Additionally, accessing accommodations for disabilities is a multi-step process, and students who developed an MHRD during the pandemic were not able to get the medical documentation required and/or register with a DSU.

A review of the literature highlights the significance of the accommodation model as a barrier for students with MHRD. This is ironic given that accommodation is meant to provide equal access to post-secondary education for students with disability. The literature suggests that although there are tools in place to promote accessibility (i.e., accommodations), there are challenges both in acquiring the approved accommodations from DSUs and in accessing them from individual instructors. Because instructors and support staff play such critical roles in the utility of accommodations, I wanted to include their perspectives in my study.

Accommodations and Online Learning

Flexible course design common to online modalities might mean that students with MHRD do not need to access accommodations and, therefore, will not have to disclose their disability (McManus et al., 2017). However, depending on course design elements, students in the online environment may still need academic accommodations, particularly if UDL is not embedded into all courses.

Although there are limited studies focused on the online environment, the study by McManus and colleagues (2017) indicates that online students are subject to the same limitations of the accommodation model (i.e., discretionary administration of accommodations, laborious process to acquire accommodations). These limitations informed my study design—in particular, the questions asked in phase two. Instructor participants were asked in phase two to describe how they came to know about students with MHRD in their classes and were asked to speak about their experiences with university-hosted supports for students with MHRD. Both questions created

opportunities for the instructors to talk about the accommodation process from their perspective, and 100% of the participants did. Student participants were asked in phase two about facilitators of and challenges to online learning and their experiences using student supports. As in the instructor interviews, these questions gave students opportunities to talk about their experiences with the accommodation process, and all of them did.

My study builds on the work of McManus et al (2017) in additional ways. In their study, students were asked to focus solely on barriers to learning, and the demographics of their student sample were atypical—the students were older (between 28 and 61 years of age, M= 43 years) and mostly part-time (83%). Adopting purposeful sampling for phase two of my study allowed me to hear from students with an age range and enrollment status more typical of post-secondary students.

Facilitators of and Barriers to Academic Performance

Online course delivery provides access to post-secondary education for students who might not otherwise have access due to factors such as geographic location, caregiving responsibilities, financial constraints, inflexible work schedules, and disability. Online course delivery has widely been regarded as having potential to provide equitable access to post-secondary education for students with disabilities (Kim-Rupnow et al., 2001; Erikson & Larwin, 2016; McManus et al., 2017; Mohammed, 2021), and students with disabilities are increasingly choosing to participate in online courses (Alamri & Tyler-Wood, 2017; Cavannaugh et al., 2013). However, despite the popularity of online learning, I would argue that challenges experienced by students with MHRD who are studying online are still not well understood (McManus et al., 2017; Murphy et al., 2019). This section of the literature review looks at research focused on facilitators of and barriers to learning and academic performance. As noted earlier in this chapter, because of the limited research focused on students with MHRD in the online learning environment, broader literature is considered (i.e., studies of students with a variety of disabilities studying online, and of students with MHRD studying on-campus). Relevant findings from the study by McManus and colleagues (2017) are highlighted, given their focus is on students with MHRD studying online.

Interaction of Barriers and Facilitators

Research conducted over the last few decades suggests students with MHRD encounter internal and external barriers that impact academic performance and persistence in post-secondary education. Internal and external barriers often intersect with one another, worsening the impacts on the student. From their critical interpretive synthesis of difficulties experienced by post-secondary students with MHRD, Markoulakis and Kirsh (2013) identified internal factors including physical, social, and psychological impairment, and external factors including stigma and difficulty accessing accommodations. That is, some barriers were related to the nature of their illness (e.g., fluctuating and unpredictable symptoms) and disability (e.g., intermittent difficulty completing work by deadlines), and others were related to structural difficulties imposed by the university (e.g., accommodation process). Importantly, these authors identified how factors interact to perpetuate and compound negative effects. For example, external factors, such as inaccessible course materials provided in courses designed without UDL integration, can exacerbate internal difficulties such as anxiety symptoms. With increased anxiety, some students face further challenges in completing their assigned work.

These findings are reflected in a large systematic review by Hartrey and colleagues (2017), who conducted a systematic review of 22 studies (nine quantitative, five qualitative, and five mixed methods) published between 1980 and 2016. The focus of the review was on identifying barriers and supports to participation in post-secondary for students with MHRD. They reported similar findings: that students are affected by both internal factors, such as mental-health-related symptoms, self-stigma, and coping skills, and external factors, such as attitudes of the college community, public stigma, and availability of relevant support services (e.g., counselling). Interestingly, elements of the learning environment (e.g., accessibility of course materials) were not described as a barrier for students. Importantly, the authors noted the complexity inherent in each barrier. For example, the symptoms of mental illness often fluctuate in both severity and predictability. This has multiple impacts on student's abilities to concentrate, complete work on time, attend class, and stay motivated. As stated above, barriers experienced by students with MHRD can make it difficult to complete a post-secondary course of study while staying mentally healthy.

In the report cited above, McManus and colleagues (2017) conducted a unique qualitative study investigating barriers to learning experienced by students with MHRD studying online (n = 12). They too found that students experienced internal and external barriers that at times, interacted with each other. Internal barriers included self-stigma and disability-related impairments such as symptom fluctuation and impaired executive functioning. External barriers included elements of the learning environment, such as inaccessible course content, and personal circumstances, such as family responsibilities and comorbidities.

In all studies described thus far, the interaction of factors is described. The findings indicate that internal factors can exacerbate external ones, and vice versa. For example, students described how an internal factor, like symptoms of their mental illness, interfered with their study schedule, thereby contributing to increased stress, which negatively affected their ability to complete academic requirements. Conversely, barriers in the learning environment, such as inflexible and inaccessible course design, added stress and triggered symptoms of their mental illness, which reduced their ability to cope with learning challenges. Driven by these findings, in phase two of my study, I ensured that participants from all three role groups were given a chance to talk about both facilitators of and challenges to learning in the online environment.

MHRD and Post-secondary Success

Rather than exploring factors influencing academic performance, Canadian researchers McEwan and Downie (2019) investigated patterns of success among college students with MHRD who were studying on-campus. Using institutional data (e.g., transcripts, registration information, and demographics), researchers compared five groups of students with MHRD (n= 300) to each other, to students with learning disabilities (n = 25), and to students without disabilities (n = 125).[52] Findings indicate that students with MHRD had less academic engagement, as evidenced by time from first to last enrollment, characteristics of the “time-outs” taken, and volatility in grade point average (GPA). Additionally, the students with MHRD had lower academic success,

[52] The students were divided into five groups based on their MHRD. The five groups were generalized anxiety disorder, major depression disorder, a psychosis and/or schizophrenia, bipolar disorder, and dual anxiety/depression disorder.

which was determined by graduation rate, GPA at graduation, and number of semesters to graduation.

Among the five participant groups with MHRD, results were mixed depending on the diagnosis. For example, students with anxiety or depression were more successful than students with both depression and anxiety, and students with schizophrenia. Students with anxiety earned *higher* GPAs than every other group of graduates. This might be related to prevailing cultural norms that reward high achievement, coupled with the internal pressure to succeed that is common with anxiety (Andrews & Wilding, 2004). Up to a certain point there is a positive relationship between cognitive performance and arousal. However, beyond this point, higher levels of arousal have a negative influence on performance[53] (Craig, Phil & Chamberlain, 2010 as cited in O'Toole et al., 2015).

The main limitation of the research by McEwan and Downie (2019) was the lack of consideration of the factors influencing patterns of success. However, given that completion is typically one of the main objectives of post-secondary education, future research can expand on these findings to explore potential internal and external influences on success for students with disabilities, and particularly students with MHRD.

Addressing Gaps in the Literature

Several gaps in the current body of literature have been identified. These are described below, followed by an explanation of how my study will address these gaps.

To begin, there remains a paucity of research focused on the lived experience of students with MHRD who are studying online. Without knowledge of their experiences, it is impossible to determine the best ways to support these students (Markoulakis & Kirsch, 2013). Most studies included student participants with a range of disabilities. This can be useful for exploring challenges of a diverse student body, but it makes it difficult to learn about challenges or benefits that might be specific to MHRD.

[53] This relationship was described over 100 years ago and is called the Yerkes-Dodson curve. The inverted U-shaped curve suggests that there is an optimal level of performance between the two extremes of under-arousal (i.e., sleep) and over-arousal (Colman, 2008).

For qualitative studies, although ranges of disabilities were often included, other differences were not. For example, in student-focused studies, participants did not include a range of enrollment and degree types (i.e., undergraduate and graduate level). Instructor-focused studies either did not include participants from a range of appointment classifications (e.g., contract, teaching- and research-stream, pre-tenure and tenured) or did not report on them. At Canadian universities, courses are taught by instructors with a range of experience, expertise, and rank, and instructors are hired under a variety of job classifications. Each classification varies according to title, compensation, job security, workload distribution, access to professional development resources, and evaluation requirements—all factors that can influence teaching expertise and pedagogy.

Post-secondary institutions are complex and the experiences that students with MHRD have with online learning will be influenced by elements of the learning environment (e.g., integration of UDL) and the services and supports they receive for their health and disability. There is a gap in research where the combined perspectives of instructors who have taught online, the students with MHRD who have taken online courses, and the staff that provide support to these students are missing. Perhaps not surprisingly, there are recruitment challenges for mental-health related studies, likely related to the stigma that persists.

My study addresses some of the current limitations in the literature. I was able to focus on the lived experience of students with MHRD who study online while also including perspectives of people from two other important role groups: instructors with online teaching experience and student support staff. Additionally, I was able to achieve diversity in the participant population (e.g., range of support staff roles, range of instructor appointment classifications and teaching experience, range of student enrollments and program types). Sampling of students from those registered with the university's DSU was done by McManus et al. (2017) and I used the same method. As mentioned by McManus and colleagues, this allows for exploration of barriers to and facilitators of learning that are related to the accommodation model that all students are necessarily a part of through their registration with the DSU.

Completion of post-secondary education affects productivity, employment opportunities, and earning potential (PHAC, 2019). Up to 10% of people with disabilities are leaving post-secondary institutions before obtaining their desired credentials (CHRC,

2017), at least in part due issues related to accessibility. Researchers acknowledge that although the rates of students with MHRD are increasing at universities, not enough research examines the demands and difficulties associated with university life from the student perspective (Kotera et al., 2019; Markoulakis & Kirsh, 2013; McEwan & Downie, 2019). Alamri and Tyler-Wood (2017) highlight the limited research investigating factors that affect students with specific disabilities and their ability to succeed in online learning environments. McManus et al. (2017) highlight the specific gap in research focused on "disability-related issues in online education, especially in regard to students with a mental health disability" (p. 338). My study begins to fill some of these gaps in research by including the perspectives of students with MHRD who are studying online.

Conclusion

In this chapter I summarized current published research looking at the influences on academic performance of post-secondary students with MHRD. The impacts of stigma and discrimination on this population were noted, followed by an overview and critique of the accommodation model of accessibility. Influences on academic performance were summarized, followed by a review of the gaps in the current body of research and a brief summation of how this study will address those gaps.

Findings from this literature review suggest that the academic performance of students with MHRD is affected by internal and external factors. Further research is needed to increase our understanding of the influences on academic performance for online students with MHRD, and my study will begin to extend knowledge of our current understanding of the range of influences on learning for students with MHRD who are studying online. Research findings can be used by educators and post-secondary administrators to facilitate the creation of more comprehensive, health-promoting, and accessible communities of online learning.

Chapter 4.

Methodology

Despite the increasing prevalence of students with mental-health-related disabilities (MHRD) in online courses and programs, Canadian research examining factors affecting learning for this population has been limited. The purpose of this descriptive qualitative study was to examine the experiences of post-secondary students with MHRD who were taking online classes in order to understand the ways in which the institution is supportive and non-supportive of their learning. In this chapter I will describe the methodological framework and research design for the study. The chapter includes a description of the methodological approach, an overview of the materials and methods, a summary of sample characteristics, considerations for technology-mediated interviewing and researcher positionality. Because researchers are considered "an instrument" in qualitative research, I will provide an overview of researcher positionality in relation to the research process. Consistent with the style of research reports written by qualitative researchers, and to acknowledge the influence that I have as an active participant in this study (Rubin & Rubin, 2012), where it is relevant I will write in the first person.

This research was conducted in compliance with the Tri-Council Policy Statement (TCPS2) at a mid-sized university in Western Canada, in partnership with the university's disability support unit (DSU).[54] The data sources for this study are questionnaires completed by students (n = 116), instructors (n = 40), and student support staff (n = 28) in phase one and 36 semi-structured interviews with students (n = 14), instructors (n = 15), and student support staff (n = 7) in phase two.

Methodological Approach

The practice of qualitative inquiry reflects our beliefs about what constitutes knowledge and how it can be produced (Hays & Singh, 2012). Consequently, developing

[54] This unit promotes accessibility for students with disabilities and chronic health conditions. Students must be registered with the DSU to receive services; registration involves providing medical documentation of educational barriers. The DSU helps students achieve their academic goals through accommodations.

a research study involves multiple elements or levels of consideration. Creswell and Plano-Clark (2018) suggest four elements: paradigmatic worldview (epistemology and ontology), theoretical lens (critical, feminist), methodological approach (ethnography, grounded theory), and data collection methods (interviews, questionnaires). Hays and Singh (2012) describe the foundations of qualitative inquiry in broader terms: philosophies of science (ontology, epistemology, rhetoric, methodology), research paradigms (positivism, post-positivism, social constructivism, feminism) and research tradition clusters (universal tradition, experience and theory formulation, research as a change agent). Each cluster contains related methodological approaches (for example, experience and theory formulation includes grounded theory, phenomenology, and heuristic inquiry). Leavy (2017) organizes the main elements of research into three general categories: philosophical (paradigm with ontological and epistemological considerations), praxis (methodology with methods, design, and theory elements), and ethics (values and reflexivity).

Although the elements can be described in a variety of ways, there are commonalities across descriptions. In essence, researchers must consider their beliefs about the social world and what “counts” as knowledge (i.e., paradigm or worldview) and enact research praxis (i.e., methodology, methods, and theory) in line with their consideration of ethics and researcher positionality.

Paradigmatic and Theoretical Foundations

Education research crosses many disciplines, making it inherently diverse. While the scholarship of teaching and learning may focus on a narrow field of education (e.g., research focused in elementary-school classrooms), it can also be much broader. Education researchers focus on systems-level topics (e.g., impact of federal funding on post-secondary institutions) and on disciplines (e.g., educational practices in professional training programs such as medicine or engineering). Consequently, education researchers draw on numerous paradigms or worldviews. According to Siegel (2006), education research “has always been pluralistic in that researchers bring different knowledge bases to their work, appeal to many types and sources of evidence, and use many legitimate approaches to gather, evaluate, and infer from that evidence.” (p. 10). In this study, integrating frameworks from the field of public health align with the diverse nature of education research.

Paradigms or worldviews help us make sense of the world and can be regarded as an organizing structure that reflects a philosophical position about the nature of social phenomena (Symbaluk, 2019). They are systems of beliefs and practices that influence how researchers define their research questions and design their studies (Doyle et al., 2019; Guba & Lincoln, 2005; Leavy, 2017). They include a set of assumptions about the nature of knowledge (epistemology), the nature of reality (ontology), and the method by which we solve problems and collect information (methodology) (Johannesson & Perjons, 2014).

There are multiple paradigms described in education literature, and categorizations vary. For example, Symbaluk (2019) includes positivist, interpretive, critical, and pragmatic in her classification; Creswell and Poth (2018) choose positivism, social constructivism (interpretivism), post-modernism, and transformation; Leavy (2017) includes post-positivism, interpretivism/constructivist, critical, transformative, pragmatic, and arts-based/aesthetic intersubjective; Rubin and Rubin (2012) maintain broad categories of positivism and naturalist/constructionist; and Butler (2006) cites Guba and Lincoln's (1994) classification that includes positivism, post-positivism, critical theory, and constructionism. This study is informed by the social constructivist paradigm, which is understood to be aligned with naturalism.

Social constructivism, also referred to as constructivism or the interpretive paradigm, arose as a critique of positivism and its failure to recognize the importance of subjectivity (Symbaluk, 2019).[55] In this paradigm, "reality is a construction—by and of the mind" (Haigh et al., 2019, p. 2). Ontologically, constructivism is relativist and focused on the nature of social reality. Multiple realities (i.e., perspectives, experiences) about a phenomenon exist and are context specific and co-constructed (Lincoln et al., 2018). Epistemologically, constructivism assumes a subjective stance on what is knowable; research findings are co-created by the researcher and subject under inquiry through interactions and transactions (Lincoln et al., 2018). Methodologically, a qualitative method (such as grounded theory, naturalistic, ethnography, or phenomenology) that

[55] Positivism assumes that a singular reality exists, independent of individuals. The goal in this paradigm is to discover universal laws or truths using empirical tests and objective observations, beginning with what is known about a topic (Hays & Singh, 2012; Symbaluk, 2019). Context is seen as irrelevant, and the researcher "observes facts" (Kivunga & Kuyini, 2017, p. 31); only verifiable observations are considered "genuine knowledge" (Hays & Singh, 2012, p. 39).

allows for immersion in the research environment, extended dialogue, and the use of open-ended questions is required to explore people's lived experiences (Kivunga & Kuyini, 2017).

The goal of research using the constructivist paradigm is to rely as much as possible on the participants' views of the situation to understand the subjective human experience (Creswell & Poth, 2018). Unlike the goal of objective observations in positivist research, subjective interpretations and meanings are sought, and contextual factors are valued. In this paradigm, what we know is always filtered through people's prior experience, knowledge, and expectations (Rubin & Rubin, 2012), and knowledge is "an understanding based on what we have been able to glean through observation and interpretation" (Webb & Welsh, 2019, p. 170). Unlike positivism, theory is not developed *a priori*, but, rather, is inductively generated as a part of the research process.

Because the focus is on understanding individuals' perceptions of reality, researchers seek to construct knowledge through social interactions with participants (Hays & Singh, 2012; Symaluk, 2019) from a more holistic perspective (Brundrett & Rhodes, 2013). Researchers seek to interpret how events and interactions have come to have meaning for participants while recognizing that their interpretations are influenced by their own social, cultural, and historical contexts (Creswell & Poth, 2018; Creswell & Plano-Clark, 2018). In this paradigm, learning is personally, not universally, defined (Land et al., 2012). There are no "universal truths" for human experience (Pilarska, 2021), and the interdependence between the learner and the environment is highlighted (Hill, 2012).

Given that the objective of this study was to understand influences on and experiences of learning for post-secondary students with MHRD who are studying online, a phenomenological approach within a social constructivist paradigm was well-suited to the research. Social constructivism considers the broader context (i.e., learning environment, instructor attitude, relationship between instructor and student), which is critical when considering the complexities of online learning environments and MHRD. Phenomenological research allowed for exploration of the phenomenon of interest from the perspectives of the three participant groups (students, instructors, and student support staff).

Research Methodology: Phenomenology

The founder of modern phenomenology is the German philosopher Edmund Husserl (Denzin & Lincoln, 2018; Kakkori, 2009). Phenomenology can be described as the study of lived experience;[56] it consists of a number of philosophical traditions including interpretive, transcendental, ontological, existential and ethical.[57] Through the disciplines of psychology and education, phenomenology became a commonly used qualitative research approach in practical and professional fields (van Manen & Adams, 2010) and a valuable methodology for use in research on higher education (Webb & Welsh, 2019) and public health (Fade, 2004; Hong Tang & Dos Santos, 2017).

Van Manen and Adams (2010) describe how phenomenological research in education allows for reflection on the lived experience of educational phenomena (e.g., pedagogy, teaching, and learning), going so far as to say that "Phenomenology can be adopted to explore the unique meanings of *any* [italics added] educational experience or phenomenon" (p. 449). They acknowledge that the meaning ascribed to lived experience is shaped by things such as culture, language, and social circumstance. Consequently, the descriptions or interpretations of meaning ascribed by the researcher will also be shaped by their worldview and life experience. In the view of van Manen and Adams, one of the practical goals of this kind of research is to "see or grasp a human phenomenon in a way that enriches our understanding of everyday life experience" (p. 449), with the possibility of shifting our practices. The approach requires researchers to view the phenomenon with a new perspective, as much as possible through the eyes of the participants (Hays & Singh, 2012). In phenomenology, the participants of research studies are considered the experts—their lived experience is expertise. Webb and Welsh (2019) describe how the depth of the data comes from participants' perspectives, situating them "at the heart of the research" (p. 177).

The primary objective of this study is to understand the lived experience of online learning for students with MHRD. Interpretive phenomenology allows researchers to gain insight into how people (in this case, students and instructors) in specific contexts (online

[56] The English "lived experience" derives from the German word *Erlebnis*.

[57] The reader is directed to van Manen and Adams (2010) for a succinct description of each of these traditions.

courses) make sense of phenomena (teaching and learning in the context of mental-health-related disabilities) (Crist & Tanner, 2003; Gill, 2014; Webb & Welsh, 2019). An interpretive phenomenological approach was well-suited for this study as I sought to understand the life-world of students while considering the larger context of their learning environment. The perspectives and experiences of subject-matter experts who have lived experience teaching and supporting these students are also included. Because meaning is made through the lenses of people's prior experience, participants for phase two were selected with diversity in mind.

Qualitative interviews are commonly used in phenomenological research, where researchers seek to understand processes and experiences from the perspectives of those who are most knowledgeable about the phenomena (Symbaluk, 2019). There are many types of interview processes, including structured, semi-structured, and unstructured. However, the most common types of in-depth qualitative interviews are semi-structured and unstructured. For this study, semi-structured interviews were conducted with participants. Semi-structured interviews offer the researcher some flexibility (Denzin & Lincoln, 2018; Hays & Singh, 2012; Miles et al., 2020). While questions are prepared in advance of the interviews (see Appendices D, E, and F for interview guides), the researcher has autonomy to clarify answers and ask follow-up or probing questions to better understand the interviewee's life-world (Rubin & Rubin, 2012). This flexibility was deemed essential to this study because of what Rubin and Rubin (2012) describe as the requirement for "responsive" interviewing—which emphasizes cooperation and respect. The researcher takes a facilitative role and accepts that "success" in interviewing rests on the establishment of trusting personal relationships with participants. This approach to interviewing aligns with my beliefs about and experiences with relational practice in education, nursing, and public health. Relational practice is used as a tool to help practitioners connect to patients and stakeholders while building on strengths (Doane & Varcoe, 2004).

Materials and Methods

Study Setting

This study took place at an English-speaking, public, mid-sized, comprehensive,[58] and research-intensive university in Western Canada. The total undergraduate and graduate student population is approximately 22,000. The university has been granting degrees for over 50 years and promotes itself as an institution that values health, social justice, inclusion, and diversity while being committed to high teaching standards. The university employs approximately 5,000 people, including 1,000 faculty members, and delivers courses in a variety of modalities, including face-to-face, blended, online with some face-to-face, fully online, and multi-access. In addition to faculty members, sessional (i.e., contract) instructors teach courses and labs at both the undergraduate and graduate levels. There are no available data of the number of sessional instructors employed by this university; however, in 2021, sessional instructors taught one-quarter of the courses delivered (M. P., personal communication, October 29, 2021).

The university provides a variety of supports and services for students including academic advising, multi-faith services, and primary care services (e.g., medical clinic) and counselling. Students with disabilities are eligible to register with the DSU.[59] In the 2021–2022 academic year, there were 2,216 students registered with the DSU,[60] 46% (n = 1,009) of whom had a mental-health-related diagnosis. Registration is reported in aggregated data, so students' comorbidities are not known. Therefore, it is not possible to determine how many students with MHRD are registered with additional disability

[58] Comprehensive universities have a significant amount of research activity and offer a wide range of undergraduate, graduate, and professional programs (Maclean's, 2021).

[59] Post-secondary institutions in Canada have a legal obligation to provide accommodations to students with disabilities. The administration of the accommodation-related processes is done through DSUs (under various names, such as accessibility centres, accessibility offices, and disability services) (Transition Resource Guide, 2022).

[60] Students registered with the STEPS Forward program were not included in this study because they are admitted to the university through different processes and do not access services through the DSU.

types (e.g., neurological, learning disability), although the majority (78.3%, n = 790) have “mental health” listed as their primary diagnosis.

Study Design

In order to address the main objective of this study—understanding influences on, and experiences of, learning for post-secondary students with MHRD who are studying online—I sought multiple perspectives. Three role groups were invited to participate in the research: students, instructors, and student support staff.

The study design was guided by consideration of the larger context in which students live and study. In the social constructivist/interpretive paradigm, and consistent with population health, intersectionality, and learning sciences frameworks, learning is understood to be influenced by environmental, individual, and social factors. Data collection decisions were made with this contextual complexity in mind. For example, recruitment from three different role groups allowed me to hear about the lived experiences from a range of perspectives while exploring multiple elements of the learning environment (i.e., instructor attitudes, student assets and challenges, and support staff experiences). Further, the different perspectives allowed me to explore the relationships between the three role groups. Questions on the surveys allowed me to gather socio-demographic information along with relevant contextual information (e.g., details of student support services). Data collection occurred in two phases (surveys and interviews) with three interrelated segments illustrated in Figure 6.

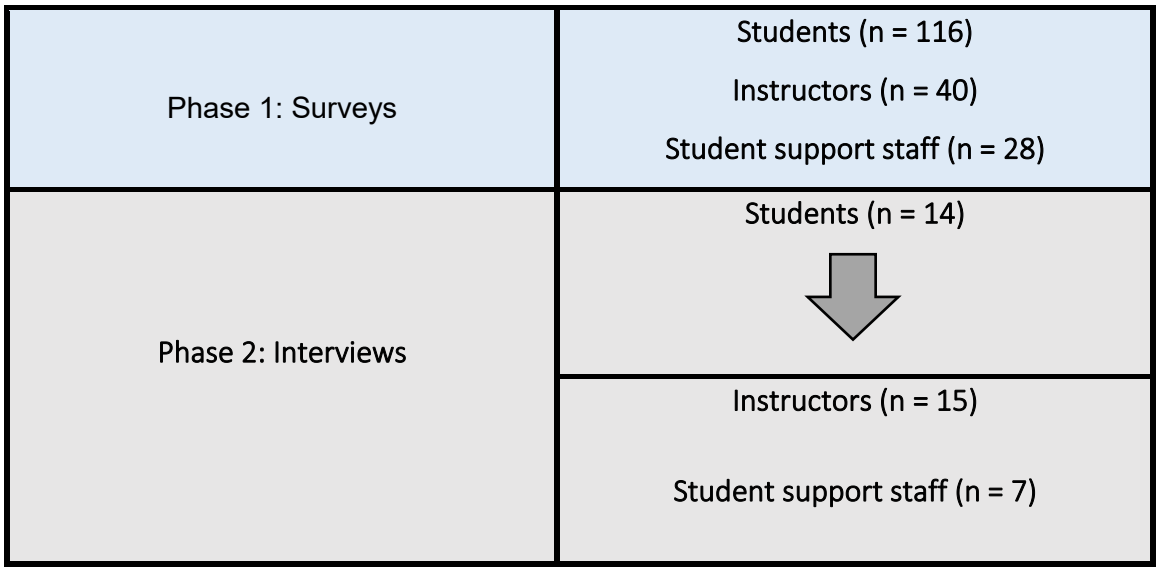

Figure 6: Overview of the data collection process

Inclusion Criteria

Inclusion criteria for study participants determine if individuals are eligible to participate in a study and are necessary for high-quality research (Patino & Ferreira, 2018). Inclusion criteria set out features of the chosen study population that are essential to answer the research question(s). They can include demographic, clinical, and socio-economic characteristics (Salkind, 2010), and their selection is guided by ethical principles to protect participants (Ross, 2012).

Students participating in this study had to meet the following inclusion criteria:

1) They were registered as a student at the university at the time of recruitment.

2) They were actively registered with the DSU, with at least one MHRD.

3) They had taken at least one course delivered online/remotely at the university.

4) They had been diagnosed with a mood disorder and/or an anxiety disorder.[61]

[61] Mood disorders include major depressive disorder, bipolar disorder, dysthymic disorder, and perinatal depression (also known as post-partum depression). Anxiety disorders include panic

While future research emerging from this study may include other significant mental illnesses experienced by the student population, such as personality disorders, and neurocognitive disorders, an exploration of these categories is beyond the scope of the present study. For this study, the sampling frame focused on students who were both registered with the DSU and diagnosed with a mental illness from the two most common categories: mood and anxiety disorders (Castaneda et al., 2008; PHAC, 2016). The rationale for this sampling frame was twofold. First, because the current accommodation model requires that students be registered with the DSU (with proof of a medical, DSM-5 diagnosis), sampling from DSU-registered students allowed me to learn about experiences with online learning from a group that was using services within the accommodation model. Second, this sampling strategy allowed me to narrow the scope of the study to a reasonable size for a dissertation project while still including students with a broad range of mental-health-related illnesses and disabilities.

Instructors constituted the second role group and were included because they play a critical role in student success. In addition to teaching-specific roles (e.g., designing and delivering course content, evaluating student work, etc.), their attitudes toward and beliefs about students with mental-health issues affect student success (St-Onge & Lemyre, 2018). Instructors participating in this study had to meet the following inclusion criteria:

1) They were employed by the host university in a teaching-related role (e.g., sessional instructor, teaching and research stream professors, laboratory instructors).

2) They had taught at least one online course at the host university in the previous three years.

Due to the variance in workload, compensation, job security, and opportunities for professional development that exist across instructor-appointment classifications, I sought to recruit instructors holding a variety of appointments across a range of faculties. Including instructors that had taught at least one online course in the previous three years allowed me to sample from a larger pool of instructors. Sessional instructors do not have guaranteed teaching assignments from year to year, so potential participants would be missed with a narrower inclusion time frame. Similarly, instructors in tenured or

disorder, generalized anxiety disorder, post-traumatic stress disorder, social anxiety disorder, specific phobias, obsessive-compulsive disorder, and agoraphobia.

tenure-track appointments are eligible for a variety of leaves (e.g., sabbatical) and course releases, which can result in multiple and consecutive non-teaching terms. A requirement that they had taught a course within the previous three years was deemed to be reasonable for adequate recall of teaching-related experiences. Instructors were not asked to recount experiences that would require historical accuracy but having the three-year time frame allowed me to hear about their experiences in the recent past. Because historical and social context play such a critical role in both teaching and learning (National Academies of Sciences, Engineering and Medicine, 2018), this time frame allowed the findings to be reflective of the current post-secondary context—making them more pertinent for possible policy recommendations. This is particularly relevant for this study, which was conducted during a global pandemic.

Student support staff participating in this study had to meet the following inclusion criteria:

1) They were employed by the host university in a role that provides student support.[62]

2) They had worked a minimum of 20 hours per week in the student support role.

3) They had worked in the student support role for at least six months.

Support staff were included in the study because they work closely with students in a variety of roles; thus, their perspectives on barriers and opportunities for students with mental health challenges were judged to be critical. The inclusion of support staff who worked in service provision (i.e., directly with students), program planning, and advocacy roles provided the opportunity to hear how students are given direct support and in what ways support is considered from programming perspectives. Student support roles are complex and often involve administrative work. Working approximately half-time and for at least six months provided some assurances that the participants would be familiar with their role and able to draw from a range of experience in supporting students.

[62] Student support roles include direct services (e.g., counselling, academic advising) or indirect services (e.g., program planning, advocacy).

Phase One: Instrument Development

The first phase of data collection involved surveying participants from each of the three role groups using questionnaires (see Appendices A, B, and C). Cross-sectional surveys like these capture "point-in-time" information from respondents (Ruel et al., 2016). The purpose of this phase was threefold. First, because of the limited available research on this topic, the questionnaire provided a means to collect descriptive data. Second, the questionnaires allowed for identification of variability in the sample, which was used to guide the purposeful sampling in phase two. Third, data from the questionnaire was used to better understand interview data in relation to things such as socio-demographic factors and knowledge of relevant university-based services and supports.

Each questionnaire started with an introduction section (Peterson, 2000) that included informed consent and screening questions. The BRUSO model (Peterson, 2000) was used to guide question development. The acronym stands for **b**rief, **r**elevant (to research question), **u**nambiguous, **s**pecific, and **o**bjective. To minimize respondent burden and fatigue,[63] questions were written in plain language; specialized terms with multiple interpretations (e.g., gender, race, online course modalities) were defined; questions focused on unidimensional concepts (i.e., reflecting one idea, attitude, or belief); and open-ended questions were minimized. Due to the negative relationship between survey length and completion rate (Liu & Wronski, 2018), the questionnaires were intentionally short (i.e., 15 minutes or less to complete).

The student questionnaire consisted of 30 questions and gathered data on program-specific information (e.g., year of study), experience with online learning, knowledge of university-provided student-supports, impacts of mental health on online learning, and demographics (e.g., age, gender, race, financial security). Twenty-eight of the questions were multiple choice (three used a rating-scale variant of multiple choice) and two were open ended.

The instructor questionnaire had 20 questions and gathered data on online teaching experience, confidence in supporting students with MHRD, knowledge of

[63] "Respondent burden" is the degree to which a survey is perceived to be stressful, complex, and time-consuming (Beimer & Lyberg, 2003).

student and instructor supports, knowledge of UDL, knowledge of common mental-health-related symptoms, and demographics (e.g., age, gender, race, faculty, and job-appointment classification). Nineteen of the questions were multiple choice (seven used a rating-scale variant of multiple choice) and one was open ended.

The student support staff questionnaire had 12 questions and gathered data on knowledge of student supports, beliefs about inclusivity, views on the adequacy of supports at the host university, and confidence in supporting students with MHRD. Eleven of the questions were multiple choice (seven used a rating-scale variant of multiple choice) and one was open ended.

Before I invited participants to complete the questionnaires, committee members provided feedback on the draft versions, and I carried out pre-testing (Ruel et al., 2016, p. 31) for the three surveys.[64] Pre-test participants were asked to give feedback on clarity of questions, language (e.g., was the questionnaire inclusive and free of jargon), and burden (e.g., difficulty of the questionnaire and how much time it took to complete). Feedback was provided to me via email and was integrated into the final versions of the surveys. The web-based questionnaires were self-administered and accessed through SurveyMonkey® using the host university's licence. SurveyMonkey® was chosen because it is design friendly, has built-in analysis tools, can be accessed from mobile and desktop platforms, and is approved for use by the host university and SFU.

Phase One: Sampling, Recruitment, and Data Collection

Convenience sampling was used for phase one of the study. Convenience sampling is a form of non-random sampling resulting in a non-representative sample of the target population (Ruel et al., 2016). Convenience samples are often used when the researcher has access to participants within a particular organization or group (Leavy,

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[64] The student questionnaire was tested by four students who identify as having an MHRD and have taken courses online, two staff members from the DSU, one person from the Students with Disability Society, and one graduate student with expertise in inclusive language.

The instructor questionnaire was tested by my dissertation committee, three instructors from the host university with online teaching experience, one instructor from an international university, one instructor with expertise in inclusive language, and one person from the Learning and Technology Unit at the host university.

The student support staff questionnaire was tested by three people in diverse student support roles at the host university and by my dissertation committee.

2017). I have relationships with relevant departmental contacts at the host university who facilitated access to potential study participants. While convenience sampling has been described as *haphazard* or *availability* sampling (Kalton, 1983), Symbaluk (2019) contends that the characteristics of the population of interest and/or the researcher's resource constraints may necessitate the use of a sample based on its availability. She further notes that availability "only means potential accessibility or obtainability, not an easy route to acquiring a sample" (p. 136).

Sampling error, where characteristics of the sample are not representative of the population of interest, is a limitation of convenience sampling (Frey, 2018). However, it is justified for this research design for two reasons. First, the purpose of the questionnaire was to gather descriptive data and to provide a means of purposively sampling for phase two, and second, because there are time and resource limitations associated with dissertation research. Convenience sampling is commonly used in this kind of exploratory qualitative study, where study findings are a starting point for learning more about the research topic (Symbaluk, 2019).

Recruitment for phase one of this study took place in July 2021 and continued until the first week of September 2021. The summer term was chosen so that potential participants might have more time to participate. Although some courses are offered in the summer term at the host university, the majority are offered during the terms starting in September and January.

Student recruitment was done in collaboration with the DSU. Undergraduate and graduate students who were actively registered with the unit with at least one mental-health-related diagnosis were provided with study information and were invited to participate. A neutral third party with legitimate access to contact information (i.e., a DSU administrator not involved in the research) contacted eligible students via their work email accounts with the Recruitment Letter and Recruitment Poster (see Appendix G). A DSU administrator also posted the Recruitment Poster and approved script on their social media platforms (Twitter, Instagram, Facebook). An administrator with the university's Students with Disability Society also shared study information (Recruitment Poster with social media script) on their communication channels (email listserv, Slack, Discord) and social media platforms. Interested participants could access the

questionnaire directly from the Recruitment Poster and/or Recruitment Letter, or they could contact the researcher for further information prior to completing the questionnaire.

Instructors were recruited by a variety of means. An administrator with the union for sessional instructors disseminated the instructor Recruitment Letter and Recruitment Poster (see Appendix H) to sessional instructors via social media platforms and their website. A request was made to the host university's faculty association (the union and certified bargaining agent for faculty and librarians) to disseminate the recruitment materials, but this request was denied due to the association's communications mandate and concerns around workload. This required a change in the recruitment plan, resulting in more diffuse recruitment communications. Using publicly accessible information from the university's website, the administrators (e.g., director's assistants, administrative officers) in each academic unit were contacted by the researcher via email. They were provided the Recruitment Letter and Poster and asked to share these with all instructors teaching in their academic unit. An administrator of the Students with Disability Society shared study information (Recruitment Poster with social media script) on their internal communication platform. As a member of a university-hosted Learning Management System (LMS) discussion group for teaching-stream faculty members, I was able to post the Recruitment Poster in this discussion group. I also shared it on the faculty association Facebook page, and through a QR code linked to the SurveyMonkey® questionnaire in my email signature (for internal university email only).

Student support staff were recruited in collaboration with the Office of Student Affairs, because most of these roles are filled within this office. A senior administrator with the office disseminated the Recruitment Letter and Recruitment Poster (see Appendix I) to staff in their student services departments (e.g., residence services, academic advising, student wellness) via email. Using publicly accessible contact information, I sent the Recruitment Letter and Poster to the directors of divisions providing student support services so they could disseminate the information to their staff via email. A QR code linked to the SurveyMonkey® questionnaire was included in my email signature (for internal email communication only).

Informed consent was obtained from all participants. Questionnaires were completed between July and September 2021. Using the analytics software included in SurveyMonkey®, descriptive statistics were summarized for each of the questionnaires.

Phase Two: Instrument Development

Interviews were in-depth and semi-structured for all three participant groups, which allowed for some flexibility in asking follow-up questions with interviewees. In developing the interview protocols, I drew from the three elements of responsive interviewing described by Rubin and Rubin (2012). These include main questions, probing questions, and follow-up questions. The main and probing questions were determined prior to the interview and included in the respective interview guides (see Appendices D, E, and F). The main questions were focused on helping to answer the research questions, and the probes were used to encourage interviewees to provide more detail or depth to their answers. Follow-up questions allow interviewees to elaborate on themes or concepts identified by themselves or the researcher. Open-ended questions provide opportunities for interviewees to describe their experiences, as opposed to answering in simple categories such as “yes” and “no” (Rubin & Rubin, 2012). To ensure the questions were understandable, they were written in plain language, free from academic jargon. For all three participant groups, interview questions progressed from less to more personal/opinion based. For example, instructors were first asked to describe their teaching role; only later were they asked about their experiences in supporting students with MHRD. Consistent with the asset orientation of health-promotion frameworks, students were asked to describe their strengths and supports that facilitated learning. Consistent with the social model of disability, students had the opportunity to talk about structural barriers that interfered with their learning.

Phase Two: Sampling, Recruitment, and Data Collection

Qualitative research uses non-probability sampling, where participants are intentionally *not* chosen at random. Rather, participants are *selectively* chosen to provide meaningful data that will best address the research question; the participants are the experts in relation to the phenomenon being investigated (Hays & Singh, 2012; Miles et al., 2020; Ross, 2012). For this study, purposive sampling, a type of convenience sample (Ruel et al., 2016), was used to strategically select interview participants. Not surprisingly, this type of sampling is referred to as “judgment” sampling because the researcher decides on the appropriateness of the sample (Hays & Singh, 2012; Lavrakas, 2008; Ross, 2012). Purposive sampling allows researchers to select

participants who have characteristics and/or expertise that is relevant to answering the research questions (Symbaluk, 2019). When participants are selected based on expertise, the research interviews may also be referred to as key informant interviews (Ruel et al., 2016).

Student participants were chosen to reflect a range of academic levels (e.g., graduate [master's and doctoral] and undergraduate), gender, race, age, and experience with online learning (e.g., modality types and number of courses taken). Students with more academic training and experience with online learning might have different learning strategies than students with less. Because of the likelihood that coping strategies, support networks, and ability to navigate multiple priorities and complex systems develops with age and life experience, students were selected from a large age range (e.g., 18 to 38 and older). International students might face unique challenges in the context of this study (e.g., being large geographic distances from established support networks), so both international and domestic students were recruited. Race and gender were included because of their influence on the construction of disability identity and disability passing (Brune & Wilson, 2013).

Sampling requires the researcher to include some and exclude others. In this study, students with other mental-health-related diagnoses (i.e., psychotic disorders), students with mental-health-related challenges who do not have a medical diagnosis, and students with MHRD who were not registered with the university DSU were not included. The voices of students who were unable to participate due to factors such as financial or housing insecurity and poor health, in addition to students who were not interested, were excluded from this study.

Within universities, instructors are hired into a variety of appointment classifications that vary in rank, compensation, job security, workload distribution, and access to professional development. Instructor participants for the study were selected to reflect a range of appointments (e.g., contract/sessional instructor; tenured; pre-tenured; research-; lab-; and teaching-focused) to ensure that diverse perspectives were included. Teaching experience and discipline-specific academic training may be reflected in teaching expertise and pedagogical choices, so instructors with a range of experience with online teaching (e.g., modality types and number of courses taught) and from a variety of disciplines were recruited.

Student support roles are diverse in the post-secondary setting, each providing a scope of services. These can include supporting students in managing the transition to university life (e.g., social and housing challenges), developing learning and time management strategies, accessing disability-specific supports, and assisting with course planning. So while the provision of support is common across roles, the ways in which this support is provided varies. To reflect this diversity, student support staff participants were chosen to reflect a range of roles (e.g., campus residence support, academic advising, disability-specific services).

The voices of instructors and student support staff who were not interested or unable to participate due to personal and professional resource challenges were excluded from this study.

Iannacci (2018) advocates for an asset orientation in disability studies, with respect, reciprocity, and relationship foregrounded for students with disabilities—and with students with disabilities positioned as possessing value and holding valuable knowledge (p. 109). This aligns with the asset orientation of health-promotion frameworks, critical disability studies, and anti-oppressive practice;[65] it is particularly important in the post-secondary context, where students hold little power (Forbes-Mewett & Nyland, 2013). Prioritizing the students' voices was foundational to this study design. When phase two began, students were interviewed first, before instructors and support staff. Each student participant was asked, "What advice would you give to university professors/instructors to facilitate inclusive and supportive learning environments for students with mental-health-related disabilities?" Answers to this question were summarized and shared with each of the instructor participants. This provided a unique opportunity for students to give direct feedback to instructors and, further, a chance for instructors to learn from students.

Participants for phase two were recruited from a pool of participants who completed surveys in phase one. Participants who were interested in being interviewed during the second phase of the study provided their email addresses on the questionnaire. Using purposeful sampling (discussed further below), a list of potential

[65] Anti-oppressive research involves committing to the people you are working with and fostering social justice through the research process. It begins with paying attention to power and shifting power differentials where possible (Potts & Brown, 2015).

interviewees was compiled for each of the three groups. These individuals were sent an email with an invitation to book an interview with me. My contact details were provided in the email, and a PDF version of the consent form was attached (see Appendices J, K and L). Potential interviewees who did not respond to the email invitation within two weeks were sent one reminder email. Participants who agreed to be interviewed were sent an MS Outlook calendar invitation for the interview. The invitation included the Zoom® meeting information and my contact information.[66] Before beginning each interview, participants were asked if they had questions about the consent form they had received, and once questions were answered, verbal consent was obtained. Participants in phase two were given pseudonyms and these were used for sharing excerpts from the interviews in Chapter 5.

Phase two data collection involved single, one-on-one, semi-structured interviews with 36 participants using Zoom® videoconferencing between September and November 2021. Due to the physical restrictions in place related to the COVID-19 pandemic, Zoom® was chosen instead of conducting the interviews in person. Interviews ranged in length from 45 to 70 minutes, with an average of 60 minutes. Participants had the option to have their cameras off during the interview, and one person chose this option. Participants were reminded at the beginning of the interview that they could exit the session at any time, and the interviewer verified that they knew how to do this. None of the participants left the interview before it ended.

Over three months, I completed 34 of the interviews using the Zoom® features of audio recording and auto-transcription. Within two days of completing each interview, I reviewed the auto-transcription and fixed errors as needed. I kept field notes throughout phase two. Two students were known to me, so another member of the research team conducted these interviews and followed the same protocol.

[66] Participants had the option to be interviewed by phone but all participants chose Zoom®.

Analysis of data from phase two included the following methods: field notes and jottings; 67 open coding (inductive approach);[68] constant comparative analysis;[69] axial and pattern coding;[70] and reflexivity.

Thematic analysis of the interview data was iterative and began during the data collection phase. This ongoing analysis throughout the interview project is described by Denzin and Lincoln (2018) as typical of interpreting the meanings of qualitative interviews. During the interviews, I took notes for things that stood out as particularly insightful and things that I was noticing across interviews. For example, after interviewing several students, I became aware of how consistently they spoke of the work involved in accessing accommodations. I used this observation in future interviews in probing or follow-up questions when students alluded to the work but did not explicitly call it "work."

Following each of the interviews, I wrote personal reflections to capture impressions, ideas requiring further follow-up, preliminary interpretations of data, and practical challenges of the interview process (e.g., realizing that doing more than three interviews per day was not realistic). Additionally, I began to write research memos prior to collecting data, and I continued this throughout the data analysis process. This process proved to be particularly useful throughout the constant comparison analysis and allowed me the opportunity to contemplate what I was "hearing" from the participants of the study in an unobstructed way, with "unreserved fervour" (Birks et al., 2008, p. 69).

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[67] Jottings are pieces of analytic writing that reflect the "researcher's fleeting and emergent reflections and commentary on issues that emerge during field work and especially data analysis" (Miles et al., 2020, p. 86).

[68] Codes are labels used to assign meaning to descriptive data such as interview transcripts. The codes are typically attached to "chunks" of data (e.g., words, phrases, or paragraphs) (Miles et al., 2018). Open coding is a type of "first level coding" (Miles et al., 2018) and is described by Hays and Singh (2012) as the initial step in summarizing data.

[69] Constant comparative analysis involves comparing and contrasting codes in a participant data set and comparing and contrasting across participant data sets (Hays & Singh, 2012).

[70] Axial or focused coding is a type of "second level coding" (Miles et al., 2018); it is a process of collapsing the list of open codes into broader categories or codes (Hays & Singh, 2012). Process or selective coding is used to refine axial codes—pulling material from first level coding into categories, concepts, or themes (Miles et al., 2018).

During the transcription process, I did preliminary open coding (inductive approach), highlighted insightful statements, and made jottings on the transcript (using the Microsoft Word "New Comment" feature). Once all interviews were completed, I uploaded all transcripts to NVivo® and conducted line-by-line open coding on each transcript. I used the annotation feature in NVivo® to write jottings, and I began writing a research journal on the first day of transcript analysis. I added to this journal during the analysis of each transcript. Once I had done open coding on a transcript, I reviewed the original transcript file that included my field notes and preliminary codes.[71] This proved useful as I was at times reminded of insights or ideas that I had made note of immediately after the interviews. To ensure that I included non-verbal communication in my analysis, I listened to each of the audio files (n = 36), paying particular attention to things such as tone of voice. The open coding process allowed me to gain a holistic impression of the experiences and perspectives of each interviewee while also enabling me to hear how the experiences across the three role groups were related to one another.

During second level coding, I sought to identify patterns in and across the three role groups. I created 26 axial codes by collapsing larger open codes together by similarity. The 26 codes were then used for focus coding and the identification of themes. Visual mapping was used throughout this second level coding process as a means of seeing connections in and across role group data. During this process, I kept a research journal; I regularly referred to earlier journal entries as the analysis progressed, which helped to understand the themes emerging from the findings.

Characteristics of the Sample

Student Participants

Student participants were registered with the host university's disability support unit (DSU) with a mental health-related disability.[72] A total of 118 students initiated

[71] One limitation of NVivo is that uploaded MS Word documents are stripped of any comments and/or highlighting. This limitation turned out to be a strength because I was "forced" to code the transcripts a second time, up to three months after conducting the interview.

[72] All participants were admitted to the university through typical admission systems and not through the STEPS Forward program.

participation in phase one of the study. Two of the participants started but did not complete the questionnaire, so their responses were not included in the analysis. Questionnaires were completed between July 15 and September 8, 2021, in an average of 10.5 minutes.

In terms of socio-demographic characteristics of students in phase one, the age range of participants was 18 to 38 years and older, with 84% (n = 91) between 18 and 29 years of age[73]. Eighty-nine percent of respondents (n = 99) were registered in undergraduate programs, 9% (n = 10) in graduate programs, 1% (n = 1) in diploma/certificate programs and 1% (n = 1) completing pre-requisites for graduate school. Eighty-four percent (n = 91) of participants identified their race as White European. The remaining participants were from a range of racial backgrounds including East/Southeast Asian, Indigenous, Middle Eastern, West Asian, and South Asian. The sample demographic is representative of the population of students at the host university, where 86% are undergraduate students and 14% are graduate students; 84.2% (n = 19,052) of students are between 18 and 29 years. Data are not available for the identified race of students at the host institution.[74] Males were underrepresented in the sample with only eight respondents (6.9%), and students identifying as non-binary were overrepresented (2.78%, n = 3). This underrepresentation of males is in line with non-response bias in other studies (National Survey of Student Engagement, 2003; Porter & Whitcomb, 2004). It is unclear why students identifying as non-binary were overrepresented.

Regarding mental health, 79% of respondents (n = 92) reported at least one mood disorder, 88% (n = 102) had at least one anxiety disorder, and almost three-quarters (72.4%, n = 84) had at least one mood *and* anxiety disorder. Generalized anxiety disorder (GAD) was the most common anxiety disorder reported (87.3%, n = 89), and major depressive disorder (MDD) was the most common mood disorder (66.3%, n = 61). These figures reflect epidemiologic data that indicates that GAD is the most common anxiety disorder (Mental Health UK, n.d.; Statistics Canada, 2015) and MDD is

[73] When reporting the statistics, skipped responses were not included in the calculations so the total number of responses varies.

[74] Canadian census data indicate that White European is the most prevalent “ethnic origin” (Statistics Canada, 2017). At the host institution, data on ethnicity are not collected as part of the registration process (R.L., Personal communication, June 6, 2022).

the most common mood disorder (Bains & Abdijadid, 2021). The concurrent diagnoses reflected in the data are consistent with what is known about mental illnesses—that they often occur in combination (Health Canada, 2009).

In terms of social conditions, most student participants were working (62.3%, n = 68), with almost a quarter of students (22.9%, n = 25) working more than 30 hours per week. This might indicate that studying online facilitates the ability to work more, potentially because less time is spent commuting to and from campus. The majority of students reported living off-campus with friends, family, or roommates (79.8%, n = 87). The rest were living in residence (10.1%, n = 11) or alone (10.1%, n = 11). Almost three-quarters (71.6%, n = 79) reported being financially secure, with the remainder being unsure (12.8%, n = 14) or very or completely unlikely to meet their monthly expenses (15.6%; n = 17). Eighty-three percent (n = 98) of respondents expressed interest in participating in phase two of the study.

A total of 15 students were recruited into phase two of the study. One person withdrew from the study due to personal circumstances, and 14 students participated in single, one-on-one, semi-structured interviews in September 2021 using Zoom® videoconferencing.[75] The age of participants in phase two ranged from 18 to over 38 years. Seventy-one percent (n = 10) identified as White European, with the remaining identifying as Indigenous, Latino, West Asian, and East/Southeast Asian. Most students were full-time (93%, n = 13), 57% (n = 8) were undergraduate, 43% (n = 6) were graduate students (in masters and doctoral programs), and 79% (n = 11) were Canadian citizens or permanent residents. Ninety-three percent (n = 13) of participants had at least one mood disorder, 79% (n = 11) had at least one anxiety disorder, 79% (n = 11) had at least two mental-health-related diagnoses, and 71% (n = 10) had both an anxiety and a mood disorder. In terms of social conditions, half of the students (n = 7) were employed, and most were living off-campus with friends, family, or roommates (93%, n = 13). One student was living in residence (7.1%, n = 1). The majority (85.7%, n = 12) reported being financially secure, with the remainder being unsure (14.3%, n = 2). Students had a

[75] The university adopted Zoom® for use by students, staff, and faculty. It is used to deliver course content and for non-teaching-related meetings and gatherings.

range of experience with taking remote online, asynchronous online, and synchronous online courses.

The samples in the two phases were comparable to one another with a few exceptions. Phase two participants were less able to work, had more equal representation in each age range, had fewer first- and third-year undergraduate students but more graduate students, and had more shared-living situations. Table M.1 (Appendix M) provides details regarding the socio-demographic characteristics of the student participants in both phases of the study.

Instructor Participants

Forty-four instructors initiated participation in phase one of the study. Four of the participants started but only completed the screening questions on the questionnaire; consequently, their responses were removed prior to analysis. Forty instructors completed the questionnaire between July 12 and September 14, 2021, in an average of five and a half minutes.

In summary, instructors in phase one varied in age from under 30 to 70 years, with the majority between the ages of 51 and 60 years (30%, n = 12). The respondents identified as White European (87%; n = 34), Indigenous (10%, n = 4), East/Southeast Asian (2.5%, n = 1), Baltic Romani (2.5%, n = 1), Latino (2.5%, n = 1), and Jewish (2.5%, n = 1). Most identified as female (71.8%, n = 28), with the remainder being male (25.6%, n = 10) and non-binary (2.5%, n = 1). Questionnaire respondents were experienced educators, with 62.5% (n = 25) of them having taught 16 or more courses (including online and in-person). Sixty percent (n = 24) were moderately to extremely familiar with the principles of Universal Design for Learning (UDL), while almost one-third (30%, n = 12) were not at all familiar with UDL.

Participants' online teaching experience was varied in phase one, with the most experience being in online asynchronous courses. Only one-quarter (n = 10) had no experience in this teaching modality, over half (n = 22) had taught 1 to 10 courses and 20% (n = 8) had taught 11 or more courses asynchronously. Experience of online synchronous course teaching was the least common, with 57.5% (n = 23) having no experience. Interestingly, despite these data being collected during the COVID-19

pandemic, only 57.5% (n = 23) of instructors had taught at least one remote synchronous course (the most common modality during the pandemic). For instructors new to online teaching, the lack of participation in this study may reflect their reluctance to discuss their experiences teaching in a modality they were not familiar with.

Phase one instructor participants represented a range of faculties from multiple appointment classifications, including sessional instructors (30%, n = 12), research-stream professors (30%, n = 12), teaching-stream professors (35%, n = 14), and lab instructors (2.5%, n = 1). Of these, 40% (n = 16) were employed in tenured or permanent positions, and 60% (n = 24) were in contract or pre-tenure positions. Compared to the student participants in phase one, there was less interest among the instructors to participate in phase two (52%, n = 22). This might be indicative of excessive workload and burnout related to the pandemic.

A total of 15 instructors were recruited for and completed phase two of this study, representing a range of age, online-teaching experience, and appointment classifications. Single, one-on-one, semi-structured interviews were conducted with participants on completion of the student interviews. All interviews took place between September and November 2021, using Zoom® videoconferencing. Regarding the socio-demographic characteristics of the instructor participants, the age of participants ranged from less than 30 up to 70 years of age. The respondents identified as White European (66.7%, n = 10), Indigenous (13.3%, n = 2), Latino (6.7%, n = 1) and other (13.3%, n = 2). Most identified as female (80%, n = 12), with the remainder being male (6.7%, n = 1), non-binary (6.7%, n = 1), and gender diverse (6.7%, n = 1). Like phase one participants, instructors were experienced educators, with 66.7% (n = 10) of them having taught 16 or more courses (including online and in-person), with the most experience being in online asynchronous courses (73.3%, n = 11). About half (53%, n = 8) had taught some remote online and online synchronous courses, and 87% (n = 13) had taught at least six online courses (combined modalities). Participants represented a range of faculties from multiple appointment classifications, including sessional instructors (33.3%, n = 5), research-stream professors (20%, n = 3), and teaching-stream professors (46.6%, n = 7). Of these, 46.7% (n = 7) were employed in tenured/permanent positions and 60% (n = 9) were in contract or pre-tenure positions. The samples in the two phases were comparable to one another. Table N.2 (Appendix N) provides details regarding the

socio-demographic characteristics of the instructor participants in both phases of the study.

Support Staff Participants

Thirty-one student support staff initiated participation in phase one of the study. Three participants started but only completed the screening questions on the questionnaire, so their responses were removed prior to analysis. Twenty-eight participants completed the questionnaire between July 12 and September 13, 2021, in an average time of four and a half minutes. The questionnaire for support staff was used solely for recruitment, so no demographic data were collected.

Most participants were working in roles where they provide one-on-one support to students (82.1%, n = 23), with the remainder in programming roles. Participants provided a range of supports, with the majority providing academic advising (64.3%, n = 18). Other roles included online learning support (n = 6), international student support (n = 6), student awards (n = 3), cultural support (n = 2), financial support (n = 2), health services (n = 1), counselling (n = 1), disability-related support (n = 4), career coaching (n = 1), residence support (n = 3) and general student life support (n = 4). As with the instructor group, there was less interest in participating in phase two (50%, n = 14) than among the student survey respondents, and similarly, this might be indicative of pandemic-related burnout and excessive workload.

A total of seven support staff were recruited for and completed phase two of the study. Following the same protocol for the other two participant groups, single, one-on-one, semi-structured interviews were conducted with participants between October and November 2021, using Zoom® videoconferencing. Participants represented a range of student support roles including academic advising (n = 3), online learning support (n = 1), disability-related support (n = 5), identity-based support (n = 1), residence support (n = 1), and career coaching (n = 1).

Technology-mediated Interview Considerations

The interview process was trauma informed and mental health promoting because of attention to safety, trust, and collaboration, with an emphasis on flexibility

and participant control. Participants were provided with the study consent form as a part of the invitation to participate in an interview, which gave them time to review it at their convenience. They chose an interview time that was convenient for them, and after verbal consent was obtained, participants were reminded of how to exit the Zoom room. The interviewing approach was responsive—based on trusting, respectful, and reciprocal participant-researcher relationships (Rubin & Rubin, 2012). To demonstrate reciprocity, I shared my personal interest in the research topic and, further, my desire to use this study to make post-secondary institutions more inclusive for students facing mental-health-related challenges. Evidence that trusting and respectful relationships developed include the ease with which participants shared their experiences with me, and the explicit gratitude that was offered to me for focusing on this research topic.

Data collection for this study took place amidst the COVID-19 pandemic, so particular considerations were made for technology-mediated interviewing. Due to social-distancing protocols and limits to on-campus activities, participants were given the choice to participate via telephone or with Zoom® videoconferencing software; all interviews were completed via Zoom®. The use of technology-mediated communication tools is now commonplace, and Zoom® has been used for research purposes for several years (Archibald et al., 2019; Daniels et al., 2019). Online interviewing mimics traditional methods, such as the well-established face-to-face interview (Lobe et al., 2020; Weller, 2017). Given that the participants had taken or taught courses and/or attended virtual meetings during the pandemic, they all had adequate digital skills and competencies. Zoom® is easily accessible from virtually any device (e.g., phone, smartphone, tablet, desktop, or laptop). Accessibility features include screen reading and closed captioning. Psychological safety is promoted with Zoom® through participant control (i.e., ability to turn off their video and/or exit the session at any time). However, the use of known technology for new purposes, such as participating in an interview, may cause anxiety.

Anticipatory anxiety is described as fear experienced before events such as interviews, games, or performances (Anxiety Canada, n.d.) and is related to feelings of uncertainty and unpredictability (Grupe & Nitschke, 2013). To minimize anticipatory anxiety over the technical aspect of the interview, participants were provided with information regarding how to access the interview session and requested to minimize disrupting factors such as noise and social-media notifications (Lobe et al., 2020). Prior

to commencing the interviews, I made sure that participants knew where the "end session" tab was in case they decided to leave the session prematurely, and participants were reminded that they could keep their video feature turned off during the interview.[76]

Given that participants shared personal experiences during the interviews, privacy and rapport were essential for safe and high-quality interviews. Using Zoom® through the host university's licence ensured that best practices for privacy and security were utilized. Privacy was managed by the researcher during and after the interview. Participants were invited to a password-protected session and were admitted from the "waiting room." This ensured that the sessions were not "Zoom-bombed."[77] During the interviews, I controlled the audio recording and auto-transcription, which were securely saved to my password-protected computer and then moved to SFU Vault.

Although technology can interfere with a sense of social connectedness (Seitz, 2015), research suggests that online interviews may be perceived as being *more* inviting, flexible, and conducive to fostering rapport (Fielding et al., 2017; Weller, 2017). At the start of each session, but before beginning the interview, I spent approximately five minutes engaging in "supportive interchanges" and "interpersonal rituals" (Weller, 2016, p. 616), such as greetings and "small-talk." Weller (2016) found that initial impressions and informal conversation were important elements of building rapport in both face-to-face and technology-mediated communication. Building time into the interview schedule for informal, social conversations helped to protect this time for the relationship-building work. During the research interview, I used the "talking heads" orientation (camera positioned so that the participant saw my face and shoulders). This orientation most closely replicates the eye-to-eye contact achieved in face-to-face interactions (Licoppe & Morel, 2012). I was cognizant of the impression I wished to give participants by conducting interviews with my computer set up in a quiet place with the camera facing a neutral, unassuming background. I agree with Weller's (2017) musing that this might help to "mitigate inequalities in power relations between us" (p. 619).

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[76] None of the participants left the interview prior to the end and one participant kept the video turned off during the entire interview.

[77] "Zoom-bombing" is a phenomenon where uninvited participants enter non-password-protected Zoom sessions. See J. Duffy "How to prevent Zoom-bombing," on the PCMag website, https://www.pcmag.com/how-to/how-to-prevent-zoom-bombing

With strong interviewing skills and attention to the strengths and limitations of the technology, I would argue that, rather than creating a sense of social dis-connectedness, this approach may have facilitated *greater* emotional connection and more open sharing from participants. This could be of notable benefit for participants with mental-health-related symptoms such as social anxiety, and for participants who have experienced trauma. As Hanna (2012) has argued, the virtual interview can provide a safe space for participants, as they are able to maintain control of their environment without another person encroaching into their personal, physical space. See Appendix O for further discussion of ethical considerations involved in the research process.

Researcher Positionality

In qualitative research, it is important for the researcher to consider how their positionality might influence the research process.[78]

Qualitative researchers are described as "being the instrument" for their work, which often involves field work, participant observations, interviews, and focus groups (Hays & Singh, 2012). This work is not value-free and is inextricably linked to the views of the researcher (Given, 2008).

> Since it is through interpretive data analysis that researchers make sense of their observations, it is important for researchers to recognize their unique perspectives and acknowledge how such perspectives come to bear upon the research process and the meanings that result from it. (Symbaluk, 2019, p. 284)

Denzin and Lincoln (2018) note that "we can no longer think of ourselves as neutral spectators of the social world" (p. 758); knowledge construction is influenced by researcher-participant relationships. Because researchers are active participants in the research process, it is important to reflect on and be cognizant of how their biases might influence their work (Rubin & Rubin, 2012). Maxwell (2005) suggests being explicit about

[78] Positionality describes the worldview of the researcher and how it influences their beliefs about the areas they study, the nature of reality and what is knowable, and the nature of knowledge. These perspectives can bias the researchers' observations and interpretations in research studies (Holmes, 2020).

one's research identity, which includes reflections on goals, biases, and assumptions.[79] In this section I will share some aspects of my positionality that influence my analysis of the research data.

During this research project, I was cognizant that my attitudes, beliefs, biases, and expectations might affect how I conceptualized the research topic, the connections between topics, and the participants. The beliefs and attitudes of the researcher are described as *experiential knowledge* (Hays & Singh, 2012), *researcher bias* (Maxwell, 2005; Patton, 2002), and *reflexivity* (Corbin & Strauss, 2008). Symbaluk (2019) suggests that because qualitative data on its own has no meaning, "all qualitative research requires some degree of reflexivity" (p. 284). Researcher reflexivity involves ongoing self-reflection during the research process, which facilitates understanding the researcher's subjective influences on data collection and interpretation (Birks et al., 2008; Hammersley & Atkinson, 2007). Hays and Singh (2012) describe this as "reversing the gaze" (p. 137). I balanced reflexivity and subjectivity throughout the research process with critical self-reflection (i.e., journaling and memo-writing), use of multiple data sources to triangulate data, peer-debriefing, and participant feedback. Such reflective practices enhance the quality of data collection, analysis, and interpretation, *and* contribute to building relationships with participants (Hays & Singh, 2012; Rubin & Rubin, 2012).

It is my lived experience that has inspired me to pursue this area of research. In some ways, my experience gives me credibility; in other ways, it might lead to prejudgments or biases that influence my research. I am a registered public health nurse who has always been passionate about and committed to integrating mental health promotion into my work. I have been a caregiver for someone with a chronic mental illness and have seen the profoundly negative impact of societal and interpersonal stigma. My personal and professional worldview was shaped by my seeing the suffering that results from inaccessible systems and insufficient mental health services, at the same time as I was being exposed to the concepts of health promotion during my Health

[79] In its more extreme form, this process is called "bracketing." Hays and Singh (2012) describe bracketing as a process by which the researcher "sets aside preconceived beliefs, values, and assumptions about the research topic and proposed research design" (p. 417). In my view, this is an unachievable task. While it is critical that researchers are aware of their beliefs, values, and assumptions, given that these are informed by many things, such as diverse life experience, culture, and academic training, they truly are a part of the researcher and cannot be "set aside."

Science undergraduate degree. I know first-hand how initiatives promoting mental health can quite literally change lives. With knowledge of mental health and health promotion, and a commitment to accessibility in post-secondary education, everyone working in post-secondary can foster learning communities that promote mental health. With this personal and academic background, I might be critical of instructors and staff who do not prioritize health-promoting teaching and/or support and might overestimate the level of health literacy and knowledge of inclusive teaching practices such as UDL among instructors.

I have experience in online learning as both a student and instructor, having completed my master's degree online, and having taught over 70 online courses in the last 10 years. In the last five years I have seen a growing number of students trying to achieve their academic goals while facing mental health challenges, including influences on learning, access, and mental health caused by the COVID-19 pandemic. By prioritizing engagement, considering mental health, and integrating learning design elements consistent with UDL, I have seen first-hand how relatively small changes in course design can positively influence students' experience and outcomes. I am a strong advocate for students with respect to their mental health and the impacts of inaccessible environments on learning. Because of my beliefs, my lived experience, and my expertise, I might be judgmental of, or unsympathetic toward, instructors who have not prioritized accessibility in their course designs.

As someone who has, to date, not been disabled by a mental-health-related illness, I am cognizant that my lived experience and positionality might have influenced how I undertook this research and interpreted the data. My assumption was that the students would not have had many opportunities to share their perspectives about learning online, so I strove to centre the student voice in this study. Further, I wanted to shift the orientation away from deficits and impairments and showcase the assets and strengths of this population of students. As a part of my research protocol, student participants were asked about their challenges *and* successes with online learning, and instructors were asked about the ways in which they facilitated learning for students with mental-health-related challenges. Additionally, as stated earlier, it was important that the students' perspectives were prioritized, and this is reflected in the sequencing of interviews in phase two of the study. Students were interviewed first so that their

perspectives on, and ideas about, accessible online learning could be shared with the instructor participants.

Practical experience and skills put me in a position of being able to quickly establish trust and safety in the participant interviews. Through clinical mental-health training and diverse nursing experience, I have developed strong interpersonal communication skills that have been an asset for engaging with study participants. Having experienced the ease with which people share pieces of their healing journeys with me, I was cognizant that student participants might feel comfortable enough to share with me their experiences with mental illness. Because the focus of this study was on experiences of learning online, I took care to focus the interviews on the latter. Student participants were aware that I am an instructor, which might have influenced how much they chose to share about their experiences. Being an "insider" with the instructor participant group might have given me some credibility with those participants and may have helped to establish trust more quickly during the interview process; however, being perceived as a colleague or peer might have given the perception of judgment and may have caused them to limit what they shared with me. I was also a partial "insider" with the students. While I do not have a mental illness or live with a disability, I shared "student status" (particularly with the PhD students who participated) and a desire to have more inclusive online learning spaces. Several student participants explicitly thanked me for doing this research study. This gratitude might indicate positive feelings and trust toward me (as the researcher), which could have influenced their willingness to share their experiences with me during the interviews. Because of my teaching experience, I had contextual knowledge (i.e., understanding of the resources available to students, knowledge of the LMS used by the host university) that I expect gave me some credibility with all participants.

Conclusion

In Canadian post-secondary institutions, there is a convergence of increased registration in online course delivery and increased prevalence of students with mental-health-related challenges. It is essential that post-secondary leadership understands the range of influences on learning for students with MHRD to ensure the provision of equitable, inclusive, and accessible education. The primary objective of this descriptive qualitative study was to understand influences on and experiences of learning for post-

secondary students with MHRD who are studying online. The perspectives of students, instructors, and student support staff were included to achieve this objective. In this chapter, the methodological framework and research design for this study were described, including an overview of the methodological approach, paradigmatic and theoretical perspectives and the research setting. The chapter concluded with a summary of how my positionality potentially influenced the research process. In Chapter 5, I will present the major findings of the study.

Chapter 5.

Presentation of Findings

The purpose of this study was to examine experiences of post-secondary students with mental-health-related disabilities (MHRD) in online classes. The goal was to understand the ways in which the institution is supportive and non-supportive of their learning. Including participants from three role groups (students, instructors, and support staff) allowed for an exploration of the influences on learning and academic performance for these students in an institutional context. Data from interviews with 14 university students, 15 instructors, and seven student support staff members indicate that the accommodation model currently in place is problematic, potentially causing harmful and disabling effects. Adopting an accessibility model with a mental-health-promotion orientation and widespread implementation of Universal Design for Learning (UDL) has the potential to improve learning, prevent harm, and promote health for all students, particularly those with mental-health-related challenges who are studying online.

The socio-ecological model for health promotion is used to organize the study findings.[80] Participants in the study identified several influences on learning at each of the first three levels of the model—individual, interpersonal, and institutional (see Table 3)—for students with MHRD who are studying online. Each level will be described in its own section. Findings regarding influences at the other two levels of the model—community and public policy—are discussed as future recommendations in Chapter 6. While the findings of the study are organized into discrete levels of influence, the reality is that there is overlap across the levels. Because of the importance of UDL in the study findings, and in the larger context of accessible education, it will be discussed as an influence at multiple levels.

It is important to remind the reader that this study was conducted during a pandemic that affected every person, support network, community, and country. So while the pandemic is not listed as an influence on learning, it is the one contextual factor that affects *all* influences discussed below. Because the pandemic caused an

[80] A description of this model is provided in Chapter 2.

immediate shift to online learning, there were participants in the study who would not otherwise have met the eligibility criteria for the study. This meant that the sampling frame was larger and, further, that some of the participants might not have *chosen* to take/teach courses online. It is feasible that being forced into online teaching and learning might have influenced the views and experiences of participants. Some student and instructor participants had taken/delivered online courses pre-pandemic and others had not.

Table 1: Influences on learning online for post-secondary students with MHRD

Socio-ecological model level	Influence on learning
Individual level	Mental health status
	Disability-related issues
	Skills and strategies
	Socio-demographic characteristics
Interpersonal level	Relationships and social connections
	Mental health literacy and knowledge of MHRD
Institutional level	University programs, services, & resources
	Institutional priorities
	Navigating the accommodation model
	Online learning environment
	Inclusive teaching practices

Section One: Individual-level Influences on Learning

In this section, the individual-level influences on learning for students with MHRD will be summarized. These influences relate to mental health status, disability-related issues, student skills and strategies, and socio-demographic characteristics.

Mental Health Status

As discussed in Chapter 3, the mental health status of students influences learning, and this was reflected in data from both phases of the study. In phase one,

between 71% and 77% of students reported that their mental-health-related symptoms influenced their ability to engage with peers, instructors, course content (e.g., course readings), and course activities (e.g., group work and synchronous or asynchronous discussions). As with any illness, people living with mental illnesses will experience varied symptoms and, consequently, have fluctuations in well-being or ill-health.[81] Ironically, the consistency in the data was the unpredictability of symptoms and experiences of well-being. Consistent with what is known about common symptoms of mood and anxiety disorders, students in phase two described experiencing varied, intermittent, unpredictable, and diverse symptoms, at times alongside comorbidities. Students described experiencing a range of symptoms, including excessive worry, fatigue, low motivation, and chronic pain. Without knowing when they would feel well and be able to complete work, planning and completing schoolwork was challenging at times. One student articulated the challenge she faced for timed exams during periods of symptom exacerbation:

> These exams were harder when I was more unstable because I couldn't necessarily guarantee I was going to be doing well *at that moment*. [Nicky, student]

Other students shared their experiences with unpredictable symptoms. Their frustration came through as they described being challenged to meet course requirements while they manage symptoms that are beyond their control:

> I don't know how I'm going to be feeling and when, so it's not like I can be like, "Oh, I'm going to be unavailable [at a particular time] because I'm having extreme anxiety and panic attacks in *this* week." [Luis, student]

Another student echoed the challenges inherent in trying to manage and mitigate the effects of symptoms that may fluctuate from hour to hour:

> It's kind of difficult to map out what symptoms I'm going to have in the day. Like, if I wake up and I'm like "Oh, this isn't good," then I know. But then I don't know how long it's going to last for. It'll be a fine morning, everything's chill, and then, all of a sudden, it's not. It's really not something that you can predict. [River, student]

One student described the considerable fluctuations in her health and the impact this has on her ability to reach her own and institutional expectations. When in good health,

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[81] The mental health continuum model is described in Chapter 2.

she was high-achieving and able to be particularly productive. Without debilitating symptoms, she was able to work ahead so that she could complete her coursework before the birth of her child:

> I had all my schoolwork for both courses basically done by October 30 [six weeks prior to the end of term]. I only had to spend one day finishing an essay after he was born. So, if things are going well, I can fly through. [Zara, student]

Zara's ability to work ahead in coursework was reliant on her health status *and* on flexible course design provided by her instructors. That is, to complete work in advance of due dates, the instructor must provide the students with access to all required course materials at the beginning of the course. At times however, flexible course design is not enough to mitigate the challenges related to worsening symptoms. The frustration was apparent in Zara's voice as she went on to describe how experiencing symptom exacerbation affects her ability to complete coursework:

> It's really frustrating that I go from being so brilliant to being unable to put together an assignment…not being able to even make lame online discussion posts. [Zara, student]

Similarly, another student described how academic performance is associated with fluctuations in mental health status:

> When you feel like you're on top of your game, you get through your classes…everything's good. But when you hit that wall, it's like even sending an email is hard. [Libby, student]

The challenge described by Libby points to the benefit of integrating UDL into courses and programs so that students dealing with ill-health or other unforeseen extenuating life circumstances might not need extensions or modifications. The impacts of inflexible course design and insufficient instructor support include lowered grades and course dropouts. Libby described how the degree to which their mental illness affects academic performance depends on flexible instructional design:

> I wasn't doing well during the semester. I needed to take a week off because I was not mentally competent…I guess that's not quite the word…I was not well enough to maintain the level of studies that I needed to. And for classes that I *could* reschedule stuff, instructors were super understanding. For other ones, where I couldn't reschedule, my marks definitely did go down a bit, and I had to put in *a lot* more effort to catch up. [Libby, student]

Support staff recognized the impacts of unpredictable symptom fluctuation and understood how situations change quickly:

> Sometimes students don‘t access their accommodations, or maybe once or twice in their term, if they’re stable. They don’t seem like they need anything, and maybe they don’t, but then all of a sudden their medication changes. It could be as simple as that. And then, *boom*, they’re going to need a whole bunch of things. [Sarah, student support staff]

Additionally, support staff were empathetic to the challenges of living with mental illnesses that can affect motivation and energy levels. Consistent with insights shared by students and instructors, support staff acknowledged that the people needing support are often unable to ask for it:

> The problem, in my eyes, is that when someone is struggling with their well-being or with their mental health, anything can be exhausting. Just calling a person for help or going to an appointment…whatever it is, it’s exhausting. [Merv, student support staff]

The comments of support staff Sarah and Merv highlight how programs, services, and learning environments need to be easily accessible so that seeking help does not have the paradoxical effect of making students’ situations worse. Embedding principles of UDL and health promotion into both course design and program/service delivery can help to prevent students needing to access additional supports by providing flexible access; fostering development of problem-solving, coping, and time-management skills; and offering opportunities to build support networks. Examples of integration of UDL into administrative components of service delivery and course design include ensuring program information and course materials are provided in multiple formats (e.g., text and video) and ensuring students can engage with support staff and instructors in multiple ways (e.g., email, phone, virtual, and/or in-person).

Executive functioning can be impacted by mental-health-related symptoms, which interferes with academic performance. Instructors also saw evidence of executive-functioning challenges in their classes during the pandemic. An experienced instructor realized that additional stressors were intersecting with pre-existing mental illnesses and affecting executive functioning for students. With empathy and creativity, she modified her assessment criteria:

> During COVID, I had some students having a really difficult time with writing and thinking. There were quite a few that were just feeling very, very

> stressed out and understandably so. One of the things I would say is, "Hey, I'm feeling this way too." There was one student who said to me, "I just can't write right now." She was a social worker who was just so stressed out, you know, dealing with her workload [during the pandemic]. And so what I ended up doing was having a weekly chat with her about the course materials. I would rather help somebody like that than just say, "No, you have to be a part of the written discussion." [Maggie, instructor]

Maggie demonstrated commitment to student success and flexible, inclusive teaching practices. Modifying the assessment criteria provided this student with the opportunity to succeed. However, this approach is limited because of the additional workload for the instructor. The proactive nature of UDL would help to prevent needing to adapt the assignment. For example, integrating the principles of *representation* (i.e., providing course information in multiple formats) and *action and engagement* (i.e., facilitating information management and allowing students to demonstrate understanding using a variety of formats such as audio, video, and/or text) might have enabled this student to complete their work independently.

Students described how symptom exacerbation affected their ability to synthesize information and organize their thoughts. Students with mood and/or anxiety disorders *and* attention deficit disorders (ADHD) face particular challenges with executive function. One student summarized both the impact of and ensuing frustration with impaired executive function:

> With ADHD, it is working memory issues. Your short-term memory is impaired—severely impaired, compared to neuro-typical people. So I would have friends or acquaintances that would say, "Oh yeah, I read the material this morning for this midterm, and I got an A-, so I'm really happy." And I'm like, "*Excuse me*, what? Forget it! *Once* this morning?" I've been studying for 14 hours with hundreds of flashcards, doing *every* practice problem and redoing everything again and again so that it gets past working memory into long-term memory…so that I can actually recall it when I need it. [Jacob, student]

Mental-health-related symptoms do not have categorically negative impacts on learning and performance (McEwan & Downie, 2019). On the contrary, features of some anxiety disorders contribute to *higher* academic performance, and this was reflected in the study findings:

> The academic outcome for me related to my anxiety is neutral, if not positive, because being anxious about my grades and being anxious about succeeding drives me to study *more*. [Abby, student]

A few students in this study described how anxiety fuelled their motivation to achieve academically, and how features of their diagnosis contributed to developing useful academic strategies, such as meticulous planning. However, for some students, the vigilance to succeed academically came at the cost of overworking themselves. Additionally, the ensuing academic success can be misunderstood, even by disability-specific support staff, as a sign of overall functioning and wellness. This misunderstanding can suggest to students with MHRD that they do not deserve or do not have valid reasons for academic accommodations:

> One of the first things that the [disability support] advisor said was, "You know, we don't normally have people with your kind of grades coming in here." And that was a confirmation of everything that I had been like telling myself…that if I'm getting good grades, I'm clearly doing okay…I'm succeeding in life. Even though good grades totally downplays whether I'm feeling okay and have social connections…all those things that are equally, if not more, important to existing as a human in this world. [Abby, student]

Frustrated that she had to explain this to her advisor, Abby went on to say,

> You can be getting great grades and feeling awful, and those two don't nullify each other. It's not like the fact that you're succeeding academically cancels out the fact that you're feeling awful. [Abby, student]

Another student described her sense that some people might not understand the ways in which characteristics of mental illnesses can contribute to academic performance:

> There is a stereotype that when you have mental illness or mental health struggles that you are going to be more apathetic or withdrawn or less motivated to do school. But mental illness is a huge spectrum. My diagnoses are actually *really conducive* to school when my symptoms are managed…some factors can also be super big strengths because I write extensive schedules, I plan everything very far in advance, and I am very meticulous about reading through every aspect of the syllabus. So, for academics, some diagnoses capture brain processes and propensities and temperaments that actually *help* with school. [Evelyn, student]

In this section, I have described the influences of mental health status on academic performance and learning experienced by my students. Evidence suggests that the degree of influence can be minimized or exacerbated by course design and by the actions and attitudes of instructors and support staff. Flexible course designs that integrate UDL guidelines help students succeed, particularly during times of worsening health and/or when dealing with unforeseen circumstances that affect the ability to perform academically. Study findings suggest that some instructors are developing and

delivering flexible courses and others are making concerted efforts to modify existing courses to meet fluctuating student needs. While the support staff that participated in this study demonstrated care, compassion, and understanding regarding challenges faced by students with MHRD, there is evidence that among them knowledge about the effects of mental-health-related symptoms on learning and academic performance is mixed.

Disability-related Issues

Disability-related issues are the second individual-level influence on learning and academic performance for students with MHRD. While all students must decide under what conditions they ask for assistance, and what they divulge as their rationale for needing help, students with MHRD face an additional challenge of stigma (Markoulakis & Kirsh, 2013; McManus et al., 2017). For many students, experiencing mental-health-related stigma contributed to their questioning the "realness" of their health condition *and* the validity of their accommodations. This student described how he chooses language that he perceives will be more readily accepted by his instructors when asking for accommodations:

> I'm not gonna lie to you…I've done this…I've emailed a prof saying that I'm sick. In reality, I'm just super anxious and I just need to take a breather. [Ivan, student]

When I pointed out the discrepancy in "being sick" not being the same as "being super anxious," he said:

> I'll be honest with you. I do feel stigma behind it. I'm much more reluctant to say, "I'm anxious." I would say "sick" instead…especially because I care a lot about how I'm perceived. So if I was interacting with a professor, I'd want to display my best self. If I had an opportunity to volunteer in their lab…I wouldn't want them to think that I would just call in and be like, "I'm too anxious to come in today." It is putting a face on a lot of the time, which is unfortunate, but it's a reality. [Ivan, student]

The experience of self-stigma and the resultant self-doubt is apparent in the following insights shared by three students:

> When I'm talking to professors, I have this feeling that maybe I am taking advantage of them. I *am* struggling but what if I'm just lazy? What if I don't have anything [disability]? I mean, I know I have *something*, but how much

> of this is really about needing help and how much of it is, if I get the extra help, I think I cheated the system? Then you tend to understate what you really need because you don't want people over-helping. How much is reasonable for me to overcome with willpower? [Jamie, student]

> I second-guess it [disability] sometimes…unless I'm having a *really* serious situation where I feel I'm really desperate mentally. In that case, I'm going to be seeking higher levels of support, and *then* I might take myself seriously…that I have a problem. At other times, sometimes I think, "Am I just making this up? Am I just giving excuses for myself?" I know this is difficult for everyone. [Alex, student]

> Every time I ask for an extension, I'm like…I hope they say yes because I *really* need it. But I definitely sit in that space of like, "Why am I like this? Why do I need this again? Why am I still asking for an extension? Yada yada yada." [River, student]

Support staff are aware of the impacts of self-stigma and students' reluctance to ask for help and/or request modifications due to illness. This disability support staff member described how she gives anticipatory guidance to students with MHRD and reminds them of the validity of their requests by comparing their symptoms to common physical-health issues:

> With students, I always encourage them to reconsider writing their assessment if they've had a panic attack. I tell them, "You wouldn't write your assessment if you had a flu and you were throwing up." [Sarah, support staff]

Several students questioned how much, and in what circumstances, they needed and deserved academic accommodations. For example, one student (Abby) with a high GPA chose not to disclose her disability status for things such as applying for scholarships, because she did not want to be perceived as having an unfair advantage. However, she often disclosed her disability to access the academic accommodations she needed to complete work in alternative ways.

Multiple students perceived that the validity of their requests for support was on a continuum based on the diagnosis. Students described internal negotiations they undertook *with themselves*, trying to determine which diagnosis to share with instructors and support staff to obtain resources and support:

> I'll usually go with major depressive disorder over anxiety because anxiety doesn't sound like it's that bad, even though it's absolutely debilitating at times, and it's taken away years of my life. Major depressive disorder just sounds better for accessing support. It feels like I'm less likely to be

> challenged on it and I'm more likely to get the right reaction…that is more beneficial or helpful. Because when people think "depressed or depression," they think the worst-case scenario. It's like having a hand of cards and only showing one or two. [Libby, student]

Many students have internalized this continuum of validity and described how they would refrain from using mental-health-related services if they perceived their issues to be less than those affecting other students. They wanted students with the most serious issues to have access. This student shared how he is grateful for a particular diagnosis, one that he believes is perceived to justify accommodations:

> I feel like I have an easier time asking for help because my diagnosis is bipolar. I have a lot of friends who suffer from anxiety and depression, and it is really sad how they talk about it…like it's like a common cold that, you know, shouldn't really be bugging them. So there's definitely a huge stigma to that. [Ivan, student]

Conversely, the following student described how, in her experience, the services provided to students with MHRD are less than those for disabilities that are considered more severe or more "legitimate":

> If you have a severe or enduring mental illness, you have to go to disability supports to have recognition that your experiences are within the realm of disability and illness—rather than someone that is just struggling with lack of sleep or exam stress. *But*, when you go to the disability supports, it is improving, but there is still a hierarchy of legitimacy. [With MHRD] you are still at the bottom, and you're not taken as seriously as if you were in a wheelchair. [Evelyn, student]

One instructor (Aura) alluded to a diagnosis-dependent continuum of validity in her description of handling academic accommodation requests from students. This instructor wanted to know the diagnosis of each student eligible for an accommodation so that she could judge the validity of the request. Rather than implementing each student's accommodations, as per the legal requirement to do so, this instructor provided various types/levels of support depending on the diagnosis:

> One thing I don't love is that the disability support unit doesn't tell me what the diagnosis is. As an instructor, I need to know what I'm dealing with. For example, when a student with ADHD comes to me and needs extra time, I'm like "Do you *need* extra time, or do you just feel overwhelmed right now?" But, when a student with bipolar disorder comes to me and says, "I'm feeling overwhelmed right now," I'm like, "Okay sure, what's been going on in your personal life? How are we mitigating this?" [Aura, instructor]

Even though Aura's comments are outliers in this study, it is possible that instructors in this study differ from the wider instructor population regarding their interest in student mental health and their knowledge of inclusive teaching practices—making it possible that the wider instructor population shares views similar to Aura's. Interestingly, earlier in the interview, Aura shared examples of her inclusive teaching practices, including flexible deadlines and diverse assessments, indicating some understanding of and commitment to inclusive teaching practices. However, her comments in response to the quotation above point to several knowledge gaps that might exist among other post-secondary instructors.

First, using discretion when implementing accommodations indicates that there is a knowledge gap about the legal requirement to accommodate. Second, waiting for student requests for accommodations and then tailoring responses based on their diagnosis suggests that there is a knowledge gap and misunderstanding regarding what inclusive teaching entails. Third, offering support based on the student's diagnosis indicates that unfair conditions exist when determining when and if students receive support. So, even instructors like Aura, who are integrating elements of UDL into their course design might not be cognizant of the ways in which other practices are disabling to students. These potential knowledge gaps also suggest institutional shortcomings regarding instructor support (e.g., varied professional development for inclusive teaching practices), inadequate adoption of inclusive teaching frameworks such as UDL for all courses offered by the university, and over-reliance on a medical model of disability at the institutional level. If UDL or a similar framework was the standard for all courses, and if the university adopted a social model of disability in which barriers to learning were identified and eliminated, fewer students would need to ask for adaptations and accommodations.

In addition to the effects of stigma, the invisible nature of MHRD results in challenges in accessing support. Students described how the invisibility of their impairments impact how they identify as being "disabled," how much they believe they *deserve* to have accommodations, and how much they feel they should disclose to be believed:

> In my experience, having an invisible disability, it's hard because it's like an imposter syndrome of "Do I *really* have a disability?" You know what I mean? It definitely comes up a lot for me…I've had a lot of profs

> understand…like when I disclose information about my mental health, but I really don't think that's necessary. I feel quite vulnerable and it's draining. It's not necessary to disclose information to get an accommodation that you need, but a lot of the time it feels like it is. [River, student]

The experiences of student support staff align with the students' perception of needing to prove they are disabled because of the invisible nature of their disabilities. One participant working in a disability-specific role shared their frustration with instructors who believe they can decide whether or how to implement academic accommodations at their own discretion:

> We don't like hearing things like this, but the instructor said, "Oh, I got this notice that the student needs a note taker. But I saw them [the student], and they write fine, so they're good." So we have a conversation about this and tell them that 95% of the DSU-registered students have barriers that are invisible, blah blah blah. And…it's [providing accommodations] not an option—I think where some people are mistaken…no, this is your *duty*. You *have to* accommodate to a certain point, it's not an option. [Sarah, student support staff]

While some students described needing to "prove" their disability and their need for support and/or academic accommodation, other students described the ways in which the invisibility of MHRD allowed them to "hide" the disability, giving them more control over when and *if* they disclose. Students described the effort involved in trying to "pass" as non-disabled or to "appear normal" to avoid judgment. This can be particularly relevant in online learning communities, where instructors may never actually see their students:

> I am a very private person about my illness, and I don't tell a lot of people. I think there are maybe two other students who know in my whole [online] program. If I had to be in-person, it would be *very* obvious if I couldn't walk into or sit through the class. I like that I can excel on an academic and personal level without having that extra judgment or the extra…I don't want to say the negative parts, but…the *harder* side of existing on display for everyone. [Zara, student]

This student went on to describe the potential benefits of asking for extensions in online courses, at least in part because of the partial anonymity that comes with this modality. The perceived benefit was related to her previous experiences when she was challenged on her need for accommodations based simply on what the instructor could see or not see:

> It is easier to ask for extensions when you're not doing face-to-face classes. In class, even if I'm very sick, that can be very difficult for the prof to want to grant me an extension, because they're like, "Whoa, you're coming to class, you have kids, you're talking to me, this doesn't really coincide with someone who's too sick to write a paper." [Zara, student]

The experience described by Zara suggests that some instructors lack knowledge or understanding of the range of factors that might interfere with the ability of students to complete work. When institutions rely on academic accommodations without investing in widespread adoption of UDL, students must continually ask for adaptations from instructors. This creates extra work for students without any guarantee of support. Additionally, there is extra mental work involved in deciding if, when, and how they should approach each instructor.

Students referred to the disclosure process as a catch-22 or double-edged sword. That is, there is an internal decision-making process they use to decide if, when, and how support is sought. Students described needing to appear sick enough to be believed, but not so sick they risk discrimination. They worry that if instructors know they are struggling, they might not recommend the student for job or volunteer opportunities. Consequently, students must decide "which cards they want to play." For example, the following student shared how they make decisions based on their perceptions of their instructors:

> If it's someone who I think is going to start talking to me in small words because of the diagnosis, I'll usually go with, "Yes I'm just an emotional F---up." But it depends. It depends on what I need. If I'm going to be working with them in the future, or if they'll teach me multiple times, I am not going to disclose…like I certainly haven't disclosed to my job. [Saje, student]

Similarly, multiple students described how even asking for an approved accommodation to be implemented can result in discrimination and harm. Because of previous experience, this student assumed she would be treated differently if she disclosed her mood disorder diagnosis or asked for accommodations. Consequently, if she chooses to ask for support, she risks experiencing discrimination:

> Some instructors will read out the syllabus, and it becomes pretty obvious that if you ask for support, you're othering yourself. You know you are going to be labelled as "one of the DSU students asking for your accommodations." So for sure I'm not going to go ask those instructors. Deciding to disclose is definitely something I think about. And it really depends on which negative perceptions I want to be dealing with from this

> person. Because I'm assuming that disclosing is going to result in them treating me differently afterwards. Just by asking for the accommodations. [Jamie, student]

This fourth-year student shared experiences similar to Jamie's and described how she believes she cannot have good health, adequate support, *and* a strong reputation. Rather, she must decide which of these to sacrifice:

> It feels like I always have to justify my illness if I'm asking for an extension. And I also feel like I have to justify it *to myself*. And there's that whole component of like, "I can do this. I probably could push through and do this, but it wouldn't be healthy." And so, making that judgment of "What's more important: my education that I love and my reputation of getting things done, or being healthy and taking care of myself and making sure that I can make it through the rest of the semester?" Something as simple as an extension shouldn't be a trade-off between those things. [Zara, student]

Like Jamie, Saje, and Zara, the following student described how asking for an accommodation is not straightforward or free from mental work. They described how they prepare to ask for an extension to ensure that their requests are respected and considered valid:

> Let me present myself in a way so that you [instructor] take me seriously. So that you don't take pity on me…It's like there's some weird bureaucratic nonsense that goes on…It's also having to read the room, but also not really having an understanding *of the* room. I don't know how to present myself in a way that you're going to just respect me as a person. [River, student]

Students can experience harm when they must choose their reputation instead of seeking accommodations. With the sound of resignation in her voice, this student talked about the ongoing harm that ensues under the current accommodation model, where she must share details of her health experience with numerous people, at multiple points in time:

> Every time you go through your mental health or medical condition narrative, there's a hurt every time. It's not painful, it's not traumatizing, but it's still one more person who knows that there's something wrong with me. [Libby, student]

The variability that students experience from instructors in the accommodation-seeking process suggests that there is variation in how instructors experience these requests. There are several potential reasons for this, including insufficient professional development, misunderstandings about both mental illness and academic

accommodations, and workload issues. Unlike the required professional development provided to K–12 teachers during regular instructional days, post-secondary instructors opt in to professional development opportunities that generally occur outside of/in addition to their workload. Currently, instructors need to seek out information regarding mental health literacy, inclusive teaching practices, and the academic accommodation processes, typically without additional resources. To reduce the incidences of students needing accommodations, an institutional-level investment supporting integration of UDL into all courses and programs is required. Such integration would take the onus off of individual instructors to learn about and then embed UDL into their courses and as stated previously, the flexibility that typifies UDL would limit the need for students to ask for accommodations or adaptations (e.g., extensions).

Students' Skills and Strategies

Students' personal and academic skills and strategies are another individual-level influence on learning and academic performance for students with MHRD. Across the board, students involved in this study described having an incredible work ethic and perseverance—at times in the face of adverse conditions. Students shared strategies for achieving their academic goals while navigating fluctuating symptoms and ill-health, institutional bureaucracies, and diverse instructional design elements (including inflexible designs). Students referred to many effective strategies and skills—some of which are relevant to all post-secondary students (e.g., planning, time management, managing stress, and reading course syllabi) and others specific to navigating inflexible course designs and the accommodation model (e.g., understanding the university's accommodation policy and procedures, knowing how to use the services at the DSU). Additionally, multiple students described how they plan for the unpredictability of their health status and the fluctuating nature of their symptoms, often working ahead in coursework to give themselves some "buffer" time for periods of poor health:

> I ended up finishing the course at the beginning of April. I made sure to get everything done…I had a period of about a week where I was just non-functioning. But it didn't matter at all because I had already prepped my work to be done. That's what I try to do now because I can sort of predict. I generally have at least one bad period during the winter, and one during spring. So I know that I'm definitely going to need to have work done beforehand. [Luis, student]

Students applied the skills they had developed in therapy to their university experience. For example, mindful meditation and journaling helped to reduce stress, and cognitive reframing helped to change negative thought and behaviour patterns in both academic and personal situations. Flexible course designs, which are integral to UDL and are more typical in online modalities, reduce the need for students to develop additional skills to navigate inflexible structures. Student participant Ivan described how the flexibility embedded in asynchronous courses contributed to his positive academic performance by allowing him time to integrate self-care into his daily routine:

> I have a little timer and I'll set it to 30 minutes, and I'll watch a recorded lecture for 30 minutes and then I'll go for a walk with my girlfriend, or I'll pet my cat for 10 minutes. Then I'll come back to the lecture. I just know it's a good reset. It's a really good reset. [Ivan, student]

The personal and academic skills and strategies of the students are described here as individual-level influences on learning. However, the degree to which some of them are used is related to elements of the learning environment. For example, if UDL is not embedded into course design, students may need to develop negotiation skills to seek academic accommodations with individual instructors. Students used their lived experience, coping skills, and self-awareness to navigate post-secondary education and, specifically, challenging elements of the accommodation model:

> Because I'm so used to breaking down a little bit mentally, I know how to talk to people…to my profs, saying, "I genuinely just can't do it. I need an extension." So I've been able to figure out how to do that, and most of the time I think my profs are pretty accommodating. But probably because I say, "It's not an ask, it's a need." Like, you can't say "no," like you really can't, like what am I going to do? I mean, I've been having difficulties in school, not grade-wise but just being able to show up, since I was in high school. So I guess I've been just working on it for a long time. [River, student]

> I have had to get really good at knowing how my brain works and how I function. Also, learning to navigate systems because I had to navigate a ton of systems when I started this program. [Evelyn, student]

> Thankfully by the time I reached out to the DSU, I had quite a lot of treatment, so I've mostly been handling this [accessing disability supports] myself. Because of the structure I had set up at my previous university, I can just point out those accommodations and be like "This is what I had." For the most part, they've been very cool. [Libby, student]

Participants shared feelings of frustration due to incorrect assumptions about their motivation and work ethic. Specifically, they felt as though at times their requests for academic accommodations were interpreted as meaning that they were unmotivated, uncaring, and apathetic. Students expressed occasionally feeling the need to explain to and/or educate their instructors:

> Sometimes I feel like I want to share a lot [with instructors] because I want them to know that it's not that I don't care, it's that I actually care *too much*…and so then I feel like I want to tell them, "I'm taking this seriously, I'm working really hard at this." I think sometimes professors don't have a trauma-informed perspective and they assume that students are just slacking off, they're just partying or whatever, assuming they don't care. [Alex, student]

Many instructor participants did not doubt the work ethic of their students or assume accommodation requests were the result of apathy or poor time-management skills. To the contrary, many described their commitment to student wellness and described the ways in which they build relationships with students to ensure students feel supported. The actions of these instructors indicate that for some, inclusive teaching practices extend beyond academic accommodations *and* beyond course designs that integrate UDL. That is, truly inclusive teaching methods attend to designing for universal inclusion (i.e., UDL), prioritize connection to/relationship with students, *and* provide academic accommodations when needed.

Socio-demographic characteristics

Socio-demographic factors are the fourth individual-level influence on learning and academic performance for students with MHRD. The importance of considering the contexts in which students live and learn was highlighted during the COVID-19 pandemic—people from all three role groups had the lines between their personal, professional, and academic lives blurred. Students described financial security and adequate access to financial support as assets to their learning. Most students who participated in this study reported being "very likely" to be completely able to meet their monthly expenses (phase 1: 72%, n = 78; phase 2: 80%, n = 11). Three students (2.75%) from phase 1 and no students (0.0%) from phase 2 were completely unable to meet their monthly expenses. For some, financial security was achieved through living at home with parents or being supported by a spouse/partner. Additionally, many students

were employed (59% from phase 1 and 50% from phase 2). Prevailing stigma about mental illness can influence achieving financial security for students with MHRD. For example, this student described how she was advised against seeking disability-related funding sources:

> I was eligible to get money from student aid but when I was considering it, my mom was adamant that I didn't do it. She said, "You have to declare you have a condition with no hope of it improving for the rest of your life, so you're going to be permanently viewed as having a deficit." [Evelyn, student]

Support staff and instructors are aware of the financial strain that students face, and whenever and however they could they tried to support students through referrals to relevant supports. Particularly during the pandemic, online learning provided financial advantages for some students. Having course materials provided in electronic formats reduced the costs associated with purchasing textbooks. Travel and accommodation costs were reduced or eliminated for students who moved back in with family and/or no longer commuted to campus to attend lectures and labs. Students described having more energy when studying online, which contributed to their ability to work while in school:

> Don't get me wrong—I don't want COVID to keep going, but the accessibility has been amazing…I had much more energy when online. I was able to hold a full-time job for two terms, as a full-time student, while I was online. I was exhausted, but I did it. I'm going to class in-person now, and I am struggling just with the schoolwork. I just stopped working for this term because I just can't handle it. I go home after school, and I'm done. [Saje, student]

The ability to take courses online might have benefits for students who have periods of severe illness. A student who had been enrolled in an online program prior to the pandemic shared how the online modality allowed her to complete coursework and earn a prestigious scholarship:

> I did one course solely from my bed for two and a half months. And I still got the president scholarship because of my high grades. Because courses have been online, I've had scholarships throughout my program at this university. I wouldn't have been able to get those if I had had to commute to class *and* organize childcare. [Zara, student]

Students enrolled with the DSU can take a reduced course load without giving up full-time status, thereby maintaining eligibility for financial aid and academic scholarships. This has financial and mental-health-related benefits:

> The DSU allows me to take a lighter course load and still receive funding. With a lighter course load, it keeps the stress levels *way* down. [Luis, student]

Secure and adequate housing is a determinant of health *and* influences the ability of students to study and learn, particularly online. Challenges with housing were particularly evident during the pandemic, when students were not able to access their typical learning spaces (e.g., university libraries and cafes) and were required to study at home, regardless of the adequacy of their living spaces (Barrot et al., 2021). While studying exclusively at home was advantageous for students with adequate study space, for others, being at home proved challenging. Students who were more productive in busier spaces or, at minimum, needed one other person "in the room" also found it difficult to study effectively at home:

> At home, there are a lot of distractions…I guess I find it way harder to do the work when I'm completely alone, versus when my partner is here. He doesn't need to be helping me actively, but the fact that he's here helps. And this is common with ADHD…it's very hard to control your own behaviour…because your ability to reinforce yourself is very small. So, having someone else there…is huge for me. [Jamie, student]

The challenges of studying online were echoed by another student:

> I think it's less motivating to just be at home and do everything from home and not get to see people, especially with mental health stuff that contributes to low motivation. [Charlie, student]

Additionally, the accommodations that were in place pre-pandemic did not always translate to at-home study environments. For example, students could not access "distraction free" test-writing accommodations when these quiet testing rooms were closed at the university.

The importance of access to varied sources and types of support for students was articulated by participants in all three role groups. Students described how family and friends provided emotional support that was an asset to their mental health. For students who were living with family or spouses/partners while studying online, they were able to seek support from family members and pets. The rapid adoption of virtual

communication platforms (e.g., Zoom®) and the shift to telehealth services (e.g., counselling) provided students with opportunities to stay connected to supports outside the university community, participate in virtual social events, and receive varied mental health services from wherever they lived. In some ways, there was *more* access to social and academic supports for students during the pandemic:

> Socialization has also been really easy. I'm not physically sitting next to people in class, but as soon as I'm done class, I have four Discord servers with friends who are also sitting at their computers. If I have a question about class, I can just shout into the void, and somebody will answer. I'm also part of a couple of clubs because clubs went online. So I have been able to go to some of the game nights, which is nice. It's really low pressure. If I can get my stuff together, I just push a button and I can play one of those games like "You don't know jack" or the mystery games, and so that's been kind of nice. [Saje, student]

Support staff described with empathy their commitment to being a point of connection for students. They understand that university students with MHRD face multiple challenges including financial insecurity, academic difficulties, being away from their home communities and supports, and navigating educational and health care bureaucracies. They were acutely aware that supporting students, and being able to connect with them over time, is critical to students' ability to thrive while completing post-secondary. They described how, no matter what their role (e.g., academic, career, or disability-specific advising), they believed their connection to students is beneficial to their mental health. Further, they saw their diverse roles as directly contributing to student well-being. For example, career counsellors support student mental health by helping students identify their strengths, develop practical skills, and "navigate the uncertainty" (Jake, student support staff) of education and career exploration.

Gender inclusivity and cultural sensitivity were identified as influences on learning across the three role groups. Instructors described being cognizant of the influence and intersectionality of mental-health-related challenges, gender, and culture. Some made concerted efforts to create cultural and gender-inclusive learning environments, in part because students had confided about experiences of discrimination or exclusion. This instructor applied her understanding of intersectionality to inclusive instructional design:

> Mental health goes beyond the diagnosis of depression or anxiety. It's just so much bigger. I think my eyes have been opened quite a bit during the

> pandemic. Now, I'm really trying hard in the courses I'm teaching to be culturally aware and gender inclusive with my language. Those two things are part of the experience of mental health and vice versa. It's not *just* about being depressed or anxious. [Leslie, instructor]

Other instructors integrated the UDL guideline of *engagement* into their course designs through the examination of gender discrimination and racism, at times using diverse methods such as Indigenous storytelling. A biology instructor described how integrating issues regarding gender supports student mental health by facilitating engagement and connection with students in ways that feel personal—even in classes of 200 students. Seeing elements of one's identity reflected in course materials fosters a sense of belonging and inclusion. This might be particularly beneficial to students with MHRD because they may have experienced exclusion due to mental-health-related stigma.

Student support staff expressed similar sentiments about the influences of gender and racial identity on student wellness and academic performance, noting the importance of providing services and supports that reflect the diverse student population. Indigenous and multi-faith services provided students with emotional support and social opportunities that fostered mental wellness, although the restrictions that ensued because of the pandemic limited participation in these programs. Students talked about the harm they experienced when learning environments were not gender inclusive:

> One big thing that happened to me that was not good for my mental health was being misgendered in classes and nobody correcting it. And then the anxiety of reaching out to the teachers after…because it's on you [the student]. There were three trans people in the class, and all of us got misgendered at every single possibility. Not good. [Charlie, student]

For this student, and perhaps others not reflected in this study, ramifications extended beyond impacting their mental health. Due to discrimination and issues related to equity, diversity, and inclusion in their academic unit, they considered leaving their graduate program.

In this section, individual influences on learning and academic performance were discussed, including mental health status, disability-related influences, personal skills and strategies, and socio-demographic factors. Inclusive teaching practices and learning environments can help to mitigate the impact of these influences on students. For example, attending to the *engagement* principle by integrating peer-to-peer and peer-to-instructor collaboration and community building also fosters the development of social

networks—which promote learning and mental health. Similarly, facilitating the development of self-regulation skills promotes *engagement* in course materials and also promotes mental health. The influence of relationships and social connections will be discussed next.

Section Two: Interpersonal-level Influences on Learning

In this section of the research findings, the interpersonal-level influences on learning for students with MHRD will be described. These influences relate to relationships with and connections to peers, support staff and instructors, and to the knowledge instructors and support staff have about mental health literacy and MHRD.

Relationships and Social Connections

Interpersonal relationships, including relationships with instructors and peers, will have an influence on learning for students with MHRD studying online. Participants from all three role groups in this study raised the importance of students feeling connected to peers, support staff, and instructors in the university community. The degree to which students felt a part of the community varied, as did their desire to connect with others. Some students wanted more opportunities for on-campus activities and traditional "university life" experiences. For others, the broader concept of university life was not as important—studying online provided the opportunity to obtain their education while they did other things, such as work or raise a family. Without opportunities for informal socializing with peers and instructors that typically happens before and after on-campus lectures, students studying online appreciated when instructors were able to connect with them and foster a sense of community in the virtual spaces of their courses.

Students appreciated instructors who integrated UDL into course design and delivery. For example, students described the importance of the first principle of *active engagement*, which attends to the affective network of learning and fosters engagement and motivation to learn (CAST, 2018). Through relationship and community building with students, instructors were able to recruit the interest of students and sustain effort and persistence. Ongoing instructor participation in course delivery (e.g., by facilitating synchronous and asynchronous discussions) promoted interest and engagement in the material. Relationships with instructors and peers were motivating for students and fostered feelings of inclusion and belonging—making impersonal virtual spaces more personal. Students described with fervor the importance of being treated with care and respect and, further, being treated as people with agency and expertise. This student described how engagement fosters motivation through a sense of belonging:

> Yeah, I think it would be good for instructors to find ways to make people feel more engaged. There could be options like having ways to vote on things in class so that you feel like you're a part of the class. It's feeling a part of the community that then feeds into feeling more engaged and motivated. [Charlie, student]

Instructors use a variety of tools to enact the *active engagement* principle, some focused on fostering community and collaboration in the online learning environment. Instructors described how they deliberately connect with students and build community, with varied intentions and outcomes. Some successfully used virtual office hours to answer course-related questions and to provide students a place to check in and "have a laugh" (Maggie, instructor), sometimes providing stress relief for the instructor as well. Others intentionally tried to reduce the feelings of loneliness for students and, despite teaching classes of 200 students, created online spaces where students would "feel comfortable and feel that they're spoken to in some indirect way" (Max, instructor). Students had mixed findings regarding the ability of instructors to connect to and develop relationships with students in virtual, versus in-person, learning environments. However, most instructors involved in this study described the ways in which online platforms provided, at minimum, additional opportunities for engagement—likely related to the breadth of user-friendly educational technology and virtual communication tools they had available to them. One instructor with experience in both online and in-person modalities described the ease with which they develop relationships with students online:

> Unlike the classroom, online you really get to know the individual students. You get much more one-on-one contact with them. And that's a big advantage in terms of an issue like mental health. You could say that online courses are more benevolent than in-class teaching as far as addressing diversity within the classroom. Online, you get lots of personal emails, and the engagement level with the course material is much higher compared to in the classroom. [Rose, instructor]

Conversely, one instructor described how supporting student mental health was easier in person because she was able to physically see the students—giving her more confidence that they were doing well. Without visual cues, she felt students might "fall through the cracks." However, she noticed that virtual communication tools made it easier for students to reach out to her for support:

> It's interesting though…I find that for in-person classes, students might not engage with you around what's going on with their mental health. I don't

> think I've ever had a student in an in-person class ask me for an extension on a paper, it's always in an email. [Alison, instructor]

Other instructors provided support to students through relationship-building in the online environment, in some cases referring students on to other services as needed. For this instructor, making individual and personal connections with each student was a priority:

> During the last year with online teaching, I explicitly referred to the Wellness Centre a few times in class because I realized that some people were struggling. I also set up one-to-one meetings with all students, which was not entirely about mental health, but it was to check in with all of them…because after the few first weeks, several students were telling me, "Okay, I'm struggling, it's overwhelming." I would have a short talk with everyone to at least check in and say, "Okay, how are you *actually* doing?" [Nicky, instructor]

For this instructor, being flexible with course design *and* demonstrating care are integral to inclusive teaching practices:

> I work with students as closely as I can, and I tell them "Deadlines are important because of accountability, but your mental health is *much more* important to me. So just talk to me." I try to immediately make an open line of communication, and what I usually see is a handful of students who need that extra help. The bare minimum you can do is be flexible with deadlines and be kind and compassionate. It does a world of joy for students. In some cases it's gone a little bit further than extensions being helpful, and that's when we have conversations about things like student wellness and counselling services. [Tatum, instructor]

This instructor described how, through relationship-building, she creates space for students to ask for the help they need:

> In the very first week, I ask them to share with everyone what they bring to the course—a lot of times they'll talk about experiences, what they need from other people in order to show up, what they need from the instructor in terms of support, or in terms of their learning needs. They email their answers to me so sometimes I'll get a message, "I'm glad you asked because…," and that's when students will disclose [their challenges]. [Tamara, instructor]

Like Tamara, this instructor builds relationships with students to ensure they feel comfortable asking for support. Additionally, relationship-building is used to integrate inclusive teaching practices and attend to the power differential between instructors and students:

> I think that the relationality piece is super important. Students are not going to feel comfortable to share if they don't know you. I feel a responsibility to create spaces where students feel like they can approach me by mitigating authority. How do I have more formative assessments where they're getting credit and there's not high stakes? How can I use assessments to have students do the work meaningfully? So, thinking about the ways that we can mitigate our power over students, so they feel more comfortable to share in their diverse ways. [Julia, instructor]

The quality of the relationship between students and their instructor influences learning and academics in a particular way—through seeking support. In some cases, having a good relationship with instructors facilitates *more* disclosure and the ability to ask for help or accommodations. In other cases, a good relationship has the opposite effect, where students are *less* likely to ask for modifications. For example, these students described how they will only ask for an accommodation if the instructor has indicated that they will be receptive to the request:

> With some profs, you just get the vibe that they don't want to give you extensions, or you hear from someone that doesn't have accommodations that they were refused an extension. And you're like, "Oh, my week doesn't sound as tough as theirs, maybe I shouldn't ask." [Alex, student]

> With the profs that don't care, you don't reach out to them at all. It is obvious, the difference between instructors who care and don't care. If you have anxiety or if you already have weirdness, something that requires extra understanding [from the prof], you become very good at detecting who is not gonna bother understanding. [Jamie, student]

Conversely, this student described how having a strong relationship with an instructor *inhibits* their ability to ask for help because they fear asking will change the instructor's opinion about them due to stigma:

> There's a double-edged sword. If you like the professor, and you feel like you're failing, it actually causes more anxiety to tell them you need help. If you want approval from the prof, you won't want to ask them for support. But if you just want a practical thing, you don't care as much. [Lena, student]

In addition to students' relationships with instructors, peer connections are also important to mental health and learning (CMHA, 2017). Relationships with peers can provide stress relief and a sense of being grounded. Connecting with people who understand the stresses and challenges of being in post-secondary allows for normalization of challenging experiences and reduces feelings of isolation. In the online context, these personal connections and social interactions are equally important. One

student described how, in an online academic community, finding at least one student colleague/friend/peer can help to foster a sense of connection and well-being:

> Being in an online program, I like to find an academic community around a real person first. I have a friend from the program who has been really helpful. We stay in touch and say, “Hey, how’s it going?” I’ve done this in whatever program I have been in—online or not—because I find that if you have those personal connections, it really roots you to what you’re doing. And that’s really important to have that grounding. [Zara, student]

UDL guidelines suggest that instructors foster collaborative learning environments to help sustain student effort (CAST, 2018). Students shared their experiences regarding feeling connected across different online modalities:

> I think synchronous helps you feel a bit more connected. I think it’s easiest to form a community in a synchronous environment. And that obviously helps with mental health in general…feeling connected to people you can reach out to. But asynchronous also has its advantages because you can pace yourself to your health and your schedule a lot more. [Jordon, student]

Some instructors fostered the development of inclusive learning spaces by promoting peer connections using synchronous Zoom® sessions:

> By the time I got to September 2020, we did mainly discussions. I was realizing that what the students needed most at that time was to connect with each other…feel a part of something, and not just alone in their bedrooms. [Hazel, instructor]

> Students said that my Zoom® classrooms were the most open and safe places they had…where they actually felt comfortable to talk in breakout rooms. They felt they made friends and connections in this class. [Max, instructor]

However, not all students found peer engagement to be easy online, which could be at least partially related to the opportunities for connection that were integrated into course designs. This student described how being online was good from a health perspective, but not from a peer-engagement perspective:

> As much as the online learning is helpful for my diagnosis, I just feel like there’s a lot missing out. During those pandemic online courses, it definitely just felt like putting in the work. There just wasn’t a lot of camaraderie going on and so I ended up missing that. Then on top of that, there was also the part of my illness…It’s part of my therapy to try and get out and go places, to expand my borders. So going to class in-person helps for sure. [Luis, student]

In summary, the relationships with and support from instructors and peers influence learning and academic performance. For students with MHRD learning online, relationships and a sense of belonging can foster inclusion and motivation—aligning with the UDL guideline of active engagement. However, because of mental-health-related stigma, some students are less likely to seek help and support from instructors with whom they feel connected. Consequently, courses ought to be universally designed, flexible, and accessible so that students will not have to ask for accommodations or modifications.

Knowledge About Mental Health and Mental-Health-Related Disabilities

The knowledge instructors and support staff have about common features of mental illnesses and about the potential challenges and opportunities for students with MHRD is an asset to students. Knowledge in these areas allows for appropriate referrals to academic and mental-health supports and integration of mental-health-promoting and inclusive learning design. In phase 1, instructors reported being moderately to extremely knowledgeable about common symptoms of mood disorders (n = 28, 78%) and anxiety disorders (n = 31, 77.5%), academic accommodations (n = 40, 100%), and mental-health-specific accommodations (n = 32, 80%).

Insights shared by students in this study suggest that instructor and support staff knowledge of mental health and MHRD influences learning and academic performance in multiple ways. Students described a range of experiences with both instructors and support staff regarding their knowledge of the relationships between mental health and learning. In their view, more knowledge tended to mean more understanding. The reverse was also true: lack of knowledge led to incorrect assumptions and, at times, influenced the student's ability to access their accommodations. The frustration was apparent as these students recounted experiences where their mental-health-related challenges, and the ways in which elements of their illness influenced academic performance, were misunderstood by instructors and support staff:

> I remember trying to explain to one of the [disability support] people, who was supposed to help me with the accommodations, that I couldn't leave my room because of anxiety. They just didn't understand and said, "Well, you just should just go out." I was like, "I can't leave." Their reply was, "I don't know what you mean. I have people coming here who have genuine

> problems doing things." So I was "Okay so what does that mean for me? What do I do? What do I do?" So then I was like "F--- that, I'll just do what I need to do and now I know this isn't a good resource if I need help." [River, student]

> Some profs were really good…they were super helpful and happy to help. And then other profs weren't. With the accommodations, I heard, "You have a seven point something GPA, you don't need these accommodations. You're clearly fine." So, I didn't want to use them. And I think that's just societal stigma. I'm very glad that I had them [accommodations], because with the transition to online, I think I would have dropped my GPA instead of building up to the 8.12 that it is right now, which I'm super proud of. [Jacob, student]

> I was trying to explain to an instructor that my anxiety had gotten so severe…to the point at which I couldn't read…I would try to read a sentence, but it wouldn't go into my head. He said, "Oh no, I understand, when I was preparing for my wedding, I was very anxious." Oh, man. Are you comparing a *completely normal* nervous reaction to a stressful situation to being in a desperate situation for weeks? So, you're trying to relate, but you're showing me how you feel about it. So honestly, I appreciated the gesture…he tried to try…but I didn't talk to him anymore. [Jamie, student]

These students described the challenges of having to explain themselves to access support and suggested that professional development for instructors and support staff might be one means of addressing this challenge:

> I think that maybe some teachers need to get some kind of training about mental health, because I definitely see this attitude by some professors that students just don't care, or they're just entitled. And I feel like it affects the way they treat the students, even if they don't realize it. [Alex, student]

> I want instructors to understand that it's not controllable. I can do everything right…I can take my meds at the right time in the morning, go for that 30-minute walk, and be feeling great. And then all it takes is one text message from a friend or a parent, and it can just derail everything. In my experience, there's no controlling that. It just happens and I can't stop it. I can do everything right and then one thing can just tank it. [Jacob, student]

This student described the challenges of having to educate her instructors about her diagnoses, the validity of academic accommodations, and the repercussions of having accommodations ignored:

> I wish I wouldn't have to explain myself sometimes…If there could be a baseline knowledge that your functioning is off and on [with MHRD]. You don't want to go in there and be asked to teach them about your diagnosis—because I've had that before for sure. I had a professor ask me to explain to them about my diagnosis and say, "Well, if I give you more

> time for this assignment, aren't I giving you an advantage over everybody else? Why should I do this because I'm being unfair to other students? So, I won't do this for you." And then you're like, that's illegal, it's not at your discretion, you *have to* accommodate. So I could tell the profs, "You have to accommodate," but what can I do about it if they don't? So then it's like, "I guess I'll drop the course." [Libby, student]

The experiences shared by students and support staff indicate that in addition to the knowledge gap described earlier regarding inclusive teaching practices, there are gaps in understanding the ways in which mental-health-related symptoms influence learning, and how elements of service delivery and course design can be disabling to students. Findings suggest the need for increased institutional-level support for instructors and support staff to ensure they have the skills and knowledge to create safer, more inclusive, and mental-health-promoting learning environments and support services. Additionally, the comments by students like Libby suggest that the services of the university Ombudsperson need to be advertised and easily accessible[82].

[82] The Office of the Ombudsperson provides impartial and confidential advice for prospective, current and former students regarding student rights and responsibilities, and university policies, procedures and resources.

Section Three: Institutional-level Influences on Learning

In this section, the institutional-level influences on learning for students with MHRD will be described. These include the adequacy of university programs, services, and resources; institutional priorities; navigating the accommodation model; elements of the online learning environment; and inclusive teaching practices.

University Programs, Services, & Resources

The adequacy of university-delivered programs, services, and resources will have an influence on learning and academic performance for students with MHRD. The host university provides a range of programs, services, and resources for students, and participants across all three role groups expressed gratitude for the supports that were available. However, a common theme in phase two data was the insufficiency of the services (e.g., there were long wait times for counselling and disability support advising) and the consequent negative impacts. For example, while the counselling department is highly respected, participants from all three role groups described how it is insufficiently resourced to meet the needs of students. Many students seeking counselling experienced long wait times, with two noteworthy exceptions. First, one of the 13 counsellors on staff exclusively sees law students. Second, Indigenous students can book appointments with any of the 13 counsellors or can book with one of two counsellors who see exclusively Indigenous students. So while these specialized counsellors reduce the wait times for a segment of the student population, most students wait to see counsellors. Students who have more timely access are left feeling guilty about having quicker access than other students in need:

> The first time I went to [university-provided] counselling in September, they said they were booking for November for intake. They suggested I use the crisis line. But I wasn't there in a crisis, so I didn't want to do that…because then other people who *are* in crisis will be needing those emergency spots. And then, I felt terrible, but I had to bring up the fact that I was Indigenous, and I found out that there are specific counsellors for us. I went back and showed my status card, and they were able to get me in the next week. If I didn't have those additional aids helping me, my outcomes could have been significantly worse. [Saje, student]

The wait times experienced by students accessing university-provided services are not unique to the host university. Post-secondary students can wait up to three months to see a counsellor where they attend school (Davidson et al., 2020), suggesting greater investment is needed at Canadian post-secondary institutions and/or for community-based resources.

Instructors and support staff were aware of how challenging it can be for students to seek support. Further, they understood that some students would either not be able to access care, or would receive care that did not meet their needs. Both instructors and support staff work hard to support students while trying to work within their respective roles. Providing adequate support often included making referrals to university-based programs and services such as counselling and the disability support unit (DSU); these referrals rely on the instructors' or support staff's knowledge of existing services and the referral process, and uptake relies on how adequately they are resourced. With insufficient resources available to students, instructors and support staff were reluctant to refer students to services known to have long waitlists. Additionally, they preferred to refer to programs (and people) that they were familiar with. The ongoing investment by instructors and support staff in student well-being has come at personal costs as they try to support student wellness in the absence of sufficient services. This might have been particularly true during the pandemic, when human resources in all departments were stretched thin. Almost in tears, one support staff member shared how she emotionally invests in students and, consequently, has been personally affected by resource constraints:

> I will often work additional hours because I want to be there to support the students as much as possible. I worry about them and want to make sure that they're okay. So to turn off my computer and walk away at the end of the day if there's student issues looming, I can't do that. So absolutely, my mental health completely suffers. I feel stressed because I can't offer all the support that I want to each student because I don't have the time. Something has to give. [Adrienne, student support staff]

In addition to advocating for improved institution-wide communication (e.g., up-to-date service websites), several instructors and support staff spoke of the potential value of having counselling services "closer to home" (i.e., within academic units and in student residence). This instructor described the challenges of insufficient services and

expressed interest in having additional counselling services offered outside of the Wellness Centre:

> I'd like to see more support for students. There are limited services and I'm not a counsellor. So all that I can really do is show my students that I'm here as a support. I really love this idea where you have counseling in the school…I'd feel better about it as an instructor. I am uneasy referring to a service that I'm not familiar with. Being able to refer to someone either in my school or at the faculty level, that would be amazing. [Julia, instructor]

The experiences of instructors and support staff described by some of the participants suggests that the burden of mental health service is spread out beyond core mental health services. This indicates an institutional assumption that staff or instructors will be compassionate and find their own solutions for students.

During phase one, instructors and students reported on their familiarity with student supports offered by the university. The majority of students and instructors were *moderately to extremely familiar* with disability-specific supports and health services. For all other supports except residence services, students were *less* informed than instructors. Many students were not at all familiar with learning support services such as academic communication (59%, n = 65), technology-integrated learning services (71%, n = 79), and learning-strategists (48%, n = 53). Utilizing learning supports contributes to improved grades and higher retention (Dawson et al., 2014), so it is critical that students are aware of existing services.

Regarding mental health supports, the majority of instructors were knowledgeable about counselling services (n = 35; 87.5%) available at the university; however, less than two-thirds of students (n = 64; 57.7%) were aware of them, and only 20% of instructors (n = 8) and 7% of students (n = 8) were aware of a no-cost, 24-hour/day virtual mental health support service available to students, staff, and faculty. These findings raise multiple concerns. First, without awareness of mental health supports, students will not access them, and instructors will not refer students to them. Second, there are already extended wait times to access counselling services, so, theoretically, if more students become aware of these services, they will be in even higher demand.

Regarding informal supports such as clubs, associations, and societies, phase one data suggest that there are gaps in knowledge among students and instructors.

Less than one quarter of students (n = 16; 14.4%) and instructors (n = 9; 22.5%) were aware of student peer support services, and while almost half of the instructors (n = 17; 42.5%) were aware of the Students with Disability Society, only 18.9% (n = 21) of students were aware. Because informal supports can promote mental health (Heerde & Hemphill, 2018), promoting available university supports to students might help to reduce the demand on formal supports.

The lack of knowledge about learning, informal, and mental-health-specific supports raises questions about the resource capacity of existing services, the effectiveness of information dissemination to students, and the ability of students to independently find information about student support services available to them. Institutions have a responsibility to provide students with easily accessible and useful information about the services provided to them through their enrollment in the university, and students have a responsibility to learn about the services and programs available to them.

Institutional-level Influence: Institutional Priorities

Perceived institutional priorities and the influence of academic unit norms will affect learning and academic performance for students with MHRD. Equity, diversity, and inclusion are articulated as core values in the host university's strategic framework, and like other mid-sized universities, the host university provides a range of informal and formal supports and services for students. Formal supports (e.g., counselling, academic advising) are provided through the university's operating budget.[83] Although the host university has not yet signed on to the Okanagan Charter for Health Promoting Universities and does not include the health and/or well-being of its campus community as a strategic priority, student mental health is noted as a "key area of focus" in the budget framework for 2022–2025. At the host university there are 13 counsellors, one of whom sees exclusively law students and three of whom see exclusively Indigenous students. As described in Chapter 2, the prevalence of mental illness among the Canadian population is approximately 20%. At the host university, that would represent

[83] At the host university, about half of the operating revenue comes from provincial government funding and the other half from a combination of student tuition and fees, departmental grants and revenues, and investment revenues. The publicly accessible budget framework does not include details of spending on student supports such as mental-health-related services.

approximately 4,500 students, all of whom might seek counselling services at the university. As a comparison, SFU staffs 17 counsellors for a similar-sized student population.

Insufficient student resources were discussed by students, instructors, and support staff in phase two, and participants consistently equated the level of service with a perceived lack of institutional commitment to student mental health. According to one support staff member, the evidence lies in what is seen, not said. That is, "actions speak louder than words":

> Unfortunately, it gives me the impression that we want to look like we're making a difference. I don't know if that's a judgment or an unfair comment, but from what I've observed and even from my department, it's like we want to look like we're going through the motions, but we don't actually care about the wellness impact because if we did, things would look very different. [Vanessa, student support staff]

Like Vanessa, another experienced instructor witnessed the impacts of insufficient student mental health support and questioned the desire of the institution to adequately invest in supports:

> My niece is a student here. She was in a mental health crisis so went to counselling [on-campus] and they gave her an appointment *six weeks* down the road. They need to dramatically increase the number of mental health counsellors or therapists on campus. They know that there's an increase of students having this experience, but they don't actually address it. They don't have the right number of counsellors available—because of budget. And mental health just isn't as great a priority as other budget items. I mean, it's popular, it's in the media, in the public face. But when it comes to putting the money into hiring qualified people, that's where the interest stops. [Rose, instructor]

This is concerning because, as participants pointed out, there are potential harms that result from insufficient resourcing—for students, instructors, and support staff:

> I wish I could do more for students. If I could just stress that in general, it never feels like enough. When you're in a helping profession, you just want to help until everybody is succeeding and thriving and living their best lives. But for me, there's always that sense of worry. Unfortunately, over my career at this institution and at other ones, there's been a handful of student suicides in residence, and that hits close to home…I know that not all suicides are preventable but, I don't know…I just wish we could do more. I wish there were no suicides, which I know is a little fanciful but yeah…I worry for our students. [Vanessa, student support staff]

A sense of urgency was expressed by participants across the three role groups as they described, with frustration, the institution's perceived failure to prioritize mental health. Support staff and instructors, showing signs of burnout,[84] described what they saw as a critical situation of growing mental-health-related challenges and limited resources. They described a perception that if something, or many things, do not change, students will endure more harm:

> I see it almost as a crisis in the university these days just because so many students are suffering from some type of anxiety, depression, or other mental health challenge. As an instructor, it's been challenging as well because we're not really equipped to deal with these issues. [Maggie, instructor]

One student support staff participant described a pattern observed over the last five years at the university. Frustration and urgency were evident in their voice as they shared observations about how the university supports student mental health:

> It's crisis management…there's a lot of responding to crisis situations. And I don't want to foretell this, and I'm knocking on wood, but as the student body has more mental health crises and perhaps even deaths, then that's when something's done. Then it's like, "okay we need to do something about this." [Nicholas, student support staff]

As described in the host university's Planning Budget Framework (2022/23–2024/25), 78% of general operating expenditures ($361.6 million) goes to salaries and benefits, and the remaining 22% ($101.0 million) goes to operating expenses. Of the latter figure, 12% ($12.1 million) is dedicated to "student awards and services."[85] The framework does not specify the amount spent on student support services, and this information was not available on publicly accessible materials. However, according to the university website, $12 million per year was reportedly given out as student scholarships and student aid.

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[84] "Burnout" is described as emotional exhaustion, depersonalization, and reduced personal accomplishment. People experiencing burnout feel unhappy with themselves and dissatisfied with their work accomplishments, in part because they are not able to give of themselves to their clients (Maslach, Jackson & Leiter, 1997).

[85] Peer universities budget similar amounts for student aid and services: SFU (16%), Queen's (11%), and Waterloo (15%) (Planning Budget Framework, 2022/23–2024/25).

Institutional-level Influence: Navigating the Accommodation Model

Bureaucratic processes and reliance on student self-advocacy are additional institutional-level influences on learning and academic performance for students with MHRD. As discussed in Chapter 3, the accommodation model is centred on the legal "duty to accommodate." Qualifying for accommodation is a bureaucratic process requiring navigation through medical *and* university systems. For some, this process was made even more difficult during the pandemic when health care and administrative services were reduced. Students and support staff acknowledged that the accommodation process can be cumbersome, impersonal, slow, and costly:

> I've definitely been "a number in a system" and have had to fight with programs like this [disability services] more often than them coming easily to me…and because of my anxiety, I wasn't capable of doing it [self-advocacy] for a very long time. People weren't always the most understanding of that…of me…they were either frustrated with me or frustrated that I wasn't standing up for myself. Even just getting the diagnosis is kind of hell…it's very expensive. Sometimes you can get financial aid but sometimes you have to cover the costs and that's about $2000 for private assessments. [Libby, student]

> I am on the bureaucracy side of things now. I get it…paperwork, delays in processing. We're busting our butts constantly to try and get through things for students, but it's still slow and that sucks. If you're a student who has a mental health diagnosis, and you're floundering in your class, and it takes you a week or a month to get your registration appointment with disability services, and then there's some back and forth because you didn't understand the paperwork…all of that has become slower [during the pandemic]. [Benjamin, student support staff]

The navigation process does not stop once students have met the requirements and been granted academic accommodations. Rather, they must then access the accommodations, which may require negotiations with individual instructors. There were mixed findings regarding access to accommodations, which indicates that although the institution has a legal obligation to accommodate, how the accommodations are implemented depends on instructors:

> The reactions of instructors receiving letters of accommodation has been all over the place. I've had ones that just ignored them, even when I sent an email saying, "Hey, what about these accommodations?" and nothing, no response. I ended up dropping one of those classes because I just don't

> have any spoons to deal with that right now.[86] And others [instructors] have been absolutely wonderful. [Saje, student]

Students had practical advice for instructors and described feeling frustration and anxiety as they waited for answers in response to accommodation requests:

> First and foremost, reach out to anyone that releases their accommodation letter to you. Just do it. It is so helpful. And just reiterate [to students] that if anything goes wrong, that you will sort it out. Because there's nothing more anxiety inducing than not knowing that you have that extra time, or that you can get an extension. With some profs, I was hesitant to even ask because I thought they might not get back to me in a timely way. And that makes it difficult. [Alex, student]

Some instructors were well aware of the challenges inherent in the accommodation-seeking process, where stigma can interfere with the student's ability to ask for help. Further, they acknowledged the limitations of relying on accommodations to ensure learning environments are inclusive and accessible:

> You're really relying on the student to come forward to tell you what's going on, and a lot of students aren't going to do that because of all the stigma and them not wanting for their professors to find out about their personal lives. So I feel like there's a huge gap when it comes to knowing what's going on with students and their mental health. [Alison, instructor]

The following comment from an experienced student support staff member highlights the harm that results when flexibility is not a feature of the course design and when accommodations are ignored:

> You hear horror stories about how profs and TAs [teaching assistants] treat their students…lack of accommodations and burdened by course load. Sometimes bringing the students to tears because of the lack of support. I have heard from students about the lack of safety even when they ask for accommodations from their professors. I've heard many stories over the couple of years here and at other schools about students going to instructors, asking either for extensions or perhaps they miss a midterm because they had an anxiety attack and couldn't get out of bed or something, and being met with "too bad so sad, that sucks." [Vanessa, student support staff]

[86] The spoon theory uses the concept of spoons as energy units to demonstrate how a person may have a limited amount of energy to complete tasks such as activities of daily living or completing academic requirements (Miserandino, 2003).

When courses were designed to be flexible, accommodations were not relied on as the only tool used to achieve accessibility. Integrating UDL eliminated the need for some students to use their academic accommodations, while also enhancing academic performance and improving mental health for all students. That is, inclusive online course delivery benefited academic performance and student well-being:

> I've actually found a huge difference online. I didn't need my accommodations at all. The books were all open access…online or PDF, and all the tests were open-book. A lot of profs said, "Here's the week to do the exam, and then hand it in." That has been crazy, just amazing for my mental health and grades. [Libby, student]

One instructor participant shared a view that was markedly different from the other 14 participants. This perspective is important because it might be more representative of instructors who *did not* participate in this study and might indicate an area for future exploration. Her insights suggest that some instructors may question the validity of the accommodation process, which might impact how they handle accommodation requests:

> In our department we are starting to fight these new trends [rising prevalence of MHRD] that are emerging which aren't even legitimate. For example, in relation to adult-onset ADHD, it's not a thing. The disability support unit accepts those diagnoses because doctors will go ahead and say, "Oh he's got adult-onset ADHD." But show me where that's legitimate…but we have to accept it and then it's like, this is not right. There are profs I work with who are jaded and say, "I want the disability support unit to tell me what to do…I can't fight it…so tell me you get extra time and I'm done. I'm not giving you anything more unless the disability support unit tells me to do it." [Aura, instructor]

Aura's comment suggests the presence of stigma about mental illness, perhaps particularly about students with ADHD. (ADHD is a neurodevelopmental disorder that is more commonly diagnosed in childhood than adulthood.) As discussed in Chapter 3, there is variance in the acceptance of mental-health-related illnesses overall and with regard to specific diagnoses. While it is an under-researched topic, evidence does suggest the presence of stigma toward people with adult ADHD (Lebowitz, 2016; Masuch et al., 2019). Research suggests that instructors benefit from receiving education about mental health, particularly MHRD, alongside institutional strategies to combat stigma (Corrigan et al., 2012).

Aura's comments also indicate a misunderstanding about inclusive teaching practices, which was supported by the experiences of DSU staff:

> Instructors, as I'm sure you're aware, get concerned about the students meeting the essential learning outcomes of the courses, and how the parameters of those accommodations will relate to their course. Some instructors are new…and they're not sure about accommodation processes. Most of the instructors are great and know how everything works. But sometimes there's conversations that need to happen because of communication breakdowns. Or instructors might connect with me and ask, "Can I actually do this [agree to extension request from a student]?" and I say, "You don't have to ask for permission to do it, *just do it*." Something that I've noticed with instructors is that it's really hard for them to balance what they *want* to do, what they *need* to do, or what they *should* do. [Sarah, student support staff]

The findings suggest that providing instructors with education (and the resources to access education) about how to handle accommodations, integrate inclusive teaching practices, and address stigma will foster the creation of more accessible learning spaces for all students, and in particular students with MHRD.

Institutional-level Influence: Online Learning Environment

The COVID-19 pandemic took the world by surprise, and post-secondary institutions were greatly affected. Overnight, students, instructors, support staff, and administrators were forced to study, teach, support, and lead in new ways using virtual technology. This seismic shift and disruption to the status quo caused stress and uncertainty, but also created enormous opportunities for individuals and organizations. Post-secondary institutions quickly invested in better virtual communication platforms for students, staff, and instructors (e.g., Zoom®); resources for instructors who were new to teaching online; and stronger infrastructure for online learning environments (e.g., diverse educational technology tools). Under time constraints and pandemic-related uncertainty, instructors quickly transitioned to online teaching, and in the process they tried new tools and strategies. Support staff adopted alternative ways to provide ongoing support to students, and for students who were in online programs pre-COVID, this shift to online access for support was a welcomed change. Although everyone experienced challenges and additional stressors because of the pandemic, some opportunities that arose were embraced by participants in all three role groups. Every student who participated in phase two of this study described some benefits of learning online.

Given the rapid shift to online learning at the beginning of the pandemic, it is unlikely that many courses were modified with the UDL guidelines. However, the flexibility that was integrated into online course delivery (e.g., recorded lectures) and the opportunity to learn using virtual tools such as Zoom® were beneficial to some students. When asked about how their mental health affected their experiences with online learning, several students shared experiences of improved mental health *and* academic performance:

> Yeah, so the first thing that comes to mind is that I found like my anxiety was lower. [Charlie, student]

When asked about how online learning affected their mental health, these students replied:

> I honestly think it was great. I feel almost guilty saying this, but I think that the whole going online situation really helped me get past a very dark episode of depression and anxiety, and it helped me get better. It was one of those situations in which you are completely overwhelmed like…"World, please stop!" and then it stopped for two years. When you're at a point in which you just cannot pull yourself out of the house or go to class, having a recorded class that you can go over is extremely helpful. [Jamie, student]

> I was not doing well in-person before COVID. To be honest, I was really struggling with my schoolwork, and then COVID happened, and, like, my grade point average went up so much…Online learning has been wonderful for my mental health. It has allowed me to work around periods of time that I have had major mood issues. If I'm feeling really down one day, since things are recorded, I can just go back when I'm feeling better and actually attend the class. So if I'm not feeling well, I also don't start beating myself up for not going to class. [Saje, student]

Support staff also saw benefits to online learning for students and described advantages in terms of integration of the UDL principles of *engagement* (i.e., optimizing autonomy and individual choice) and *representation* (i.e., offering multiple ways to access course material):

> During COVID, a lot of students really appreciated the online components. They said…"I'm not feeling well. Normally, I wouldn't go to class. But now I could just go onto my computer and join [the lecture] from my bed." So attendance improved significantly. And then, of course, students saying things like, "I feel so good, I don't have to leave my room. Taking assessments in my house has been so much better. My grades are better, everything's better." [Sarah, student support staff]

As discussed in Chapter 2, symptoms common to mental illnesses can be episodic and vary in severity. For some students, the symptoms they experience fluctuate hourly or from day to day. Instructional design and course modality may mitigate or enhance some of the challenges inherent in living with fluctuating symptoms. For example, students described how exhaustion interfered with their ability to attend and participate in synchronous sessions, and concentration difficulties made it challenging to complete work on time. Planning for this unpredictability was easier when students did not have to be functioning at a particular time of the day. Asynchronous courses gave the most flexibility in this regard, but having access to recorded lectures from synchronous classes provided similar flexibility:

> With the symptoms that I experience, there's a lot of times during the day that I function extremely optimally. The asynchronous helps me because when they record the lectures, I can time my day around when I know I can concentrate and focus. And I can still watch the lecture and can cater it to how my mood swings and energy levels are—because it's kind of hard to control sometimes. [Luis, student]

Another student had similar sentiments, and described the advantages of flexible online course delivery:

> Personally, I found online learning to be a bit easier. Especially when it came to asynchronous content. I could regulate what work I was doing, and when, versus being boxed into areas that needed attention. I did a lot of my work late at night just because I tend to be a bit more of a night owl. For synchronous stuff, it was almost as nice because I could have something open in another browser and just listen [to the lecture], rather than just being stuck in a lecture and kind of being forced to fidget and trying to seem like you're "with it" when you are "out of it," you know? [Libby, student]

Students who were involved in this study described multiple benefits from instructors adopting flexible use of Zoom® features that aligned with UDL. For example, allowing students to keep their videos off (i.e., providing multiple ways of engagement) for parts of synchronous lessons facilitated access, gave a sense of autonomy, and recruited interest. When students were not feeling well or were "not able to face other people," having the option to listen to the lecture and participate in discussions using the "chat" feature was game-changing. Instructors were commended for providing this flexibility, and some heard positive first-hand feedback in their student evaluations:

> When students participated in the discussion using the chat, many felt that it was less threatening. I got that feedback from several people…that

> participating through the chat was less stressful than speaking up. [Esther, instructor]

Within the instructor group, some described opportunities for personal and professional development that were a direct consequence of the pandemic and the rapid switch to online course delivery. With post-secondary institutions around the world having to change the way courses were delivered, there was an influx of infrastructure improvements (e.g., new or enhanced learning management systems) and professional development for instructors (e.g., online teaching toolkits). While this transition added a substantial amount of unforeseen work for instructors, some took it as a personal challenge to apply their critical thinking and curiosity to learn about and implement new educational technology tools. For instructors who had strong peer networks of teaching colleagues, this might have been easier. For example, three instructors described being part of a multidisciplinary community of practice for teaching. One of them summarized conversations in that group that took place early in the pandemic:

> There is this instructor working group, which is full of brilliant teaching profs. They aren't research profs like me, they're teaching profs. I've learned so much from them…it's a great community. That's really been excellent [being a part of this group], especially during COVID…They were super reliable…people in the working group, we're going, "Okay, this is a good chance to do something totally different. Let's try and make it work." We actually saw student marks improve. [Max, instructor]

The rapid and required shift to online course delivery brought challenges for some instructors who had to find ways to teach practical lab skills using virtual teaching tools. One instructor described the ways in which she modified courses to augment limited lab time with pre-recorded training videos, explaining the extra work that was involved in implementing these changes *and* the unexpected benefits for students. In her view, now that she has invested in this work, she can continue to offer students hybrid training opportunities:

> Personally, it was a lot more work to set it up, but at the end of the day I figured it all out. I think the pre-recorded lectures are really useful and now that I've got the majority of those set up and I know how they work, it's easy enough for me to either use what I have or just do a quick change on some. These videos are things that we have posted for students to watch *before they come in* so that they are actually prepared. It really helped. [Clare, instructor]

For other instructors, teaching online has provided them with opportunities to reflect on their teaching practices, particularly regarding inclusive teaching. Some instructors have come to realize that although they believed in UDL and were committed to providing accessibility in their courses, they were giving students mixed messages. That is, they were open to engaging with students and willing to offer accommodations and extensions, but these offers were not explicit in course syllabi. This put the onus on the students to ask the instructor to modify the existing course. As one instructor astutely noted:

> It was like a hidden curriculum. In other words, "If I ask him [instructor], he will give me a break." But the students have to ask…so it was hidden. And students that are shy or actually have mental health issues, they won't ever cross that barrier to ask you for a favor. I'm a senior professor and I guess I carry some authority. So they're reluctant to cross that line. So I thought, well the way to do this is to offer flexibility in the front end of the course…to make it completely, I would say, kind. [Max, instructor]

Other instructors realized that what they stated in the syllabus (e.g., strict penalties for late submissions) did not align with what their practices were (e.g., willingness to give extensions when asked) for varied reasons:

> I try to be flexible as much as possible with extensions and deadlines. Super flexible for some students. But they don't know I am flexible until they ask me. I do it that way because I'm always taken advantage of. So I have to be a bit stern in my syllabus because if I'm not, I find that students will walk all over me. [Esther, instructor]

Another instructor was giving mixed messages to students because she believed there were institutional limits on flexibility:

> I didn't think that I would be allowed to embed flexibility into the syllabus. All of these very colonial and paternalistic words that I would write in the syllabus…you know these strict deadlines. But then I would verbally say, "You know, if you need any support, if you need extra time, I'm here for you." I'm getting more confidence to put my approach in writing. [Julia, instructor]

Given the diversity of learners in post-secondary, the range of pandemic-related challenges people were facing, and the assorted instructional design elements implemented by instructors, many students with MHRD described how online learning had mixed effects on their mental health. For this student, learning online both helped and hindered her mental health:

> My experience with online learning was very mixed overall…especially in the context of my mental health. There are ways in which it helped and there are ways that it made it more difficult. As someone with anxiety that sometimes expresses itself as social anxiety, not having an influx of social cues in class [in-person], really brought down the anxiety. In terms of the negatives, I would say that, over time, the fact that I wasn't getting any breaks in my day affected me. In a classroom setting, the 10 minutes between classes when you're walking and interacting with people…I realized those breaks really bring down my anxiety. [Abby, student]

For some students, the shift to online learning meant that pre-established study strategies were instantly unavailable, making it difficult to complete coursework. This student described some of the challenges they faced during the rapid transition to online/remote learning early in the pandemic:

> I had a really nice group of students that I would get support from. We would do our statistics work together in a group. So as we were doing the problems, we could talk to each other and help each other. My anxiety would be better when I was working around other people who were also working. When I was alone on my computer, telling myself, "Okay, you have to do this," it was extra hard. I couldn't go to a coffee shop or *anywhere* outside of my house to do work. [Alex, student]

For some, the transition back to on-campus classes challenged their mental health. For example, this student described how, early in the pandemic, taking courses online helped reduce anxiety-related symptoms, but how the return to on-campus classes later in the pandemic exacerbated those symptoms:

> Online learning helped my anxiety in the short term but compromised it in the long term…just because you're not having to constantly work that social muscle in online classes. I found that it was kind of jarring to be back in an actual classroom because I hadn't been in a classroom in so long, and with all these people around, it's quite overwhelming. But short-term, I *really* liked it…to be able to type my question in the chat instead of sticking my hand up and everybody turning and looking at me. It's quite nice…I liked it a lot actually. [Ivan, student]

Institutional-level Influence: Inclusive Teaching Practices

The instructors who participated in this study are dedicated and skilled professionals. There were many examples provided by students and instructors demonstrating inclusive teaching practices, such as integrating principles of UDL including providing multiple avenues for engagement, representation, and action and expression:

> I understand that people learn in many, many different ways, and I want to make sure I explicitly design the courses so that students can choose their own path through it. [Max, instructor]

> What I try to do for students who have any kind of challenge—because of course there's mental health challenges, but there's others: people have kids, people have three jobs while going to university—I try to be very, very flexible with all the timelines. And if I see they aren't keeping up, I send them an email and say, "Hey what's going on? Do you have any questions?" [Nicky, instructor]

> An obvious thing that often happens is extension requests for assignments. So I started setting things up so that it's flexible *for everyone*. I always set due dates on Fridays, but I let them know that if things happen during the week and they need to hand it in on the Monday, that's always fine, just let me know…If students ask for extensions on assignments, I mean really, I can never see why not to say yes. [Hazel, instructor]

Adopting flexible teaching practices, such as the integration of UDL, does not mean unlimited flexibility. Instructors limit the degree to which they are flexible in their course designs for varied reasons. For some instructors, the degree of flexibility was connected to trust, suggesting a relational component to accessibility practices:

> I have always operated on "trusted until proven otherwise." But I have been caught out with exams. To give flexibility to complete a short quiz, I left it open for 12 hours, and I found out from a student that students were sharing answers on WhatsApp. You try to be flexible, but when you get burned…I am not sure I want to repeat that again. [Lilly, instructor]

> I always explain in the beginning of the course that this is a mutual trust situation. So that means if I can trust them to do their part and do the work, I will be very flexible and grant extensions. But of course, if I feel like they exploit this trust, I won't be as flexible. [Nicky, instructor]

For many instructors, there are practical limitations that must be considered when providing flexibility for their students. Grade submission deadlines, contract end-dates, and workload management all factor into how much extra time an instructor might be able to give for extensions:

> I always say, "I have these dates to enter marks, and so as long as you submit your work within this time, it's okay." But then there's also, "What's best for you as a student?" Having everything [assignments] lumped at the end of the course is probably not good for you and not going to help your mental health…especially in that moment with a lot of stress. So I feel like there *are* limits to flexibility. [Hazel, instructor]

Limits on flexibility in course design can also be tied to pedagogical choices, such as meeting learning outcomes and/or ensuring equity in the classroom:

> I'll have weekly [online] posts where I ask people to post reflections. I might say, "I'd like you to have them done by Sunday, but that deadline is actually flexible. If you miss that deadline, I'm not going to take marks away. But, for an assignment where there's group discussions, the deadlines are actually firm. If you are unable to make that deadline, you need to reach out to your group and you need to let me know. We can try and support you with the work, but there may be a penalty because it's not just you in this instance. You're in a group that needs you and is relying on you." So, I weave in practices, like flexible deadlines, so that there is some space to have periods of wellness. [Tamara, instructor]

Some instructors are aware of the relationship between mental health and learning, and through inclusive teaching practices they promote mental health and facilitate learning in diverse online classrooms:

> For some students, interactive online sessions are really helpful. For others, being online where they have to turn their camera on and talk to a bunch of people, that's really not their thing. So while I encourage students to turn their camera on so we can see each other, they are very welcome to turn their camera off if that's just too stimulating or too much and interferes with their learning. [Leslie, instructor]

> Over the years I've come to this place where I'm really foregrounding relationality. "You're [students] in a relationship with me, we're all in this together, we're a community." I consider how we will work together and get all the work finished in a good way. At the same time, I'm creating assignments that can speak to different learning needs. For some folks who struggle with mental health, always having to write may be difficult. Requiring public speaking might have a disabling effect for students in terms of anxiety and perhaps depression…so having other ways in which a student can complete the work is important. [Tamara, instructor]

> Give them options, options, options. This is a front-end choice of the instructor—creating courses with materials that appeal to diverse kinds of students. By giving them different ways of learning, they feel that you're actually talking *to them*. And surprisingly, this works in huge classes as well. [Max, instructor]

In addition to promoting accessibility through inclusive teaching practices, some instructors extend the reach of UDL by embedding reconciliation and decolonizing practices into their course designs. That is, some instructors described how they enacted UDL as a decolonizing teaching practice, sometimes drawing on Indigenous ways of knowing and doing:

> I had a racialized student who said, "I'm going to submit my final paper by the end of the month," but I said, "No, I'm giving you an additional *four or five months*. You have to take the pressure off of yourself because you are not only dealing with school as a teenager or early 20-year-old, but you're also dealing with colonization and racism." [Alison, instructor]
>
> I centre circle work in my teaching. And so maybe that's something like universal design. It's not that I'm not aware of universal design. I'm just coming at course design from my foundation of using Indigenous pedagogy and circle work. [Julia, instructor]

As described in Chapter 4, students in phase two were asked to share experiences with things that facilitated learning and barriers to learning and, further, were asked to share their advice for instructors. Across the board, students appreciated having elements of UDL in their courses (e.g., varied assessments and multiple ways of presenting materials), and their consistent advice to instructors was to consider accessibility for the benefit of all students:

> I would tell instructors to set up their courses with Universal Design for Learning in mind…and try to make their courses as flexible and accessible as possible. Because there *is* community stigma around mental health issues. Having them [instructors] set up courses to be accessible and equitable *beforehand*, so that people don't have to necessarily reach out to instructors with issues…It's a really good thing because it means that students with mental health issues will be more able to be successful in the classroom, without feeling the stigma around saying, "You know, my depression has been really bad these past few weeks." Just have it set up so that *anyone* with a learning difference can have accessible and equitable education. [Jordon, student]
>
> Make things more accessible and inclusive *for everyone*. Not having it be contingent on a diagnosis or an accommodation letter. Where you can recognize that *everyone* will have stuff that comes up and they can't make it to a Zoom session, or they need an extension. Because when that happens [everyone is given flexibility], it also means that it won't feel like such a concession when you make an accommodation for someone with a mental-health-related disability. [Evelyn, student]
>
> I would like instructors to offer everybody more time so it's not only the students that are really struggling that have to ask. Because the kind of people that need the most help are the ones that have the most difficult time asking for it because we don't feel great about the position that we're in. At least for myself personally, I don't want to feel like I'm being judged. So I want to act like I can perform like everybody else and not have to ask for help. [Alex, student]

Another element of institutional influence on student learning and academic performance relates to discipline-specific knowledge and norms and their influence on

pedagogical choices affecting accessibility and inclusiveness of courses and programs. For example, instructors from a health professions department described how their academic unit has committed to decolonization and anti-oppressive practice. They shared some of the ways in which this facilitates more inclusive and accessible course design. Their focus on equity alongside a desire to "practice what they preach" has opened dialogue to identify and correct exclusionary teaching practices that harm students. Additionally, the holistic approach that typifies current patient care practices (i.e., consideration of mental, emotional, spiritual, and emotional health) is integrated into their pedagogy. For example, one instructor described how she integrates the collaboration and community-building elements of UDL by enhancing mental health content in mandatory courses *and* ensuring language is gender-inclusive and culturally sensitive. Similarly, another instructor described how their academic unit operationalizes its commitment to student support and mental health:

> I hope that our program is set up so that students can approach us. Each student meets with their faculty advisor at the very beginning of the program, and they're strongly encouraged to communicate with us. At the beginning of every course, all of us instructors strongly recommend communicating with us. Like, "Don't be at home suffering and struggling alone…talk with us and tell us what you're comfortable letting us know." [Leslie, instructor]

Although for some the link between mental-health-promoting learning design and economics might not be readily apparent, one professor in the School of Economics made it explicit. He reminds students to take care of themselves and encourages them to learn to "be okay with less than 100% because it's not good economics to burn yourself out" (Max, instructor). While teaching a graphic literature course, an English instructor used relevant course content to demonstrate accessibility and inclusivity in course design. Rather than forcing students to keep their video on during synchronous sessions, she encouraged them to create a relevant avatar from the graphic novel they were critiquing to represent themselves as a profile picture. This aligns with the UDL guideline of providing multiple options for student *action and expression*.

In some programs, it can be challenging for instructors to find the balance between providing flexible and accessible courses, while preparing the students to work in less flexible professional settings. For example, professional programs such as medicine, nursing, social work, and law require students to graduate with requisite skills

and knowledge so they can pass provincial or national licensing exams. Additionally, professional standards in these practice-based fields often include statements regarding "fitness to practice,"[87] which stipulate how competence in practice cannot be hindered by physical, emotional, or psychological conditions. Supporting students whose mental health *is* interfering with their ability to succeed in their academic programs, while also preparing them to work in a field where mental health challenges *cannot* interfere with their practice can be difficult. This tension was described by instructors in different academic units:

> We [academic unit] realize that the classroom has been exclusionary for some students, so we are seeking out ways to mitigate that. But it's trying to balance professionalism while at the same time being inclusionary. There's kind of this bouncing in between those two pieces…there's always a tension there. [Tamara, instructor]

Like Tamara, an instructor from a different professional school had experienced the tension that arises from balancing accessibility and professionalism:

> We [instructors] just met earlier this week for a curriculum retreat. We are trying to revamp the whole program so that it's more conducive to student learning and instructor capacity, but also ensuring students are going to hit that competency level. It's a hard balance to be flexible *and* make sure they are prepared for practice. [Leslie, instructor]

For instructors preparing students for clinical practice, their pedagogy aligns with workplace demands and expectations but may not align with all principles of UDL:

> The assignments *are* high stakes because students are going to be diagnosing people and prescribing medication. The standard has to be high enough…we have to be comfortable they are out there working with the university stamp on their back. [Lilly, instructor]

Inclusive teaching practices are varied and can be as simple as recording lectures for future review and as complex as integrating UDL into every element of the course design. Students in this study shared their appreciation of flexible course design, and their insights suggest that inclusive learning environments enhance both academic performance and mental health. Instructors have varied levels of support to invest in

[87] For example, see nursing professional standards at https://www.bccnm.ca/Documents/standards_practice/rn/RN_NP_Professional_Standards.pdf

ensuring universal design for their courses, and the degree to which they can be flexible is influenced by workload, pedagogy, and discipline-specific standards.

Conclusion

In this chapter, the main findings of the study were summarized based on data from interviews with 14 university students, 15 instructors, and seven student support staff members. The socio-ecological model for health promotion was used to organize the study findings—highlighting individual-, interpersonal-, and institutional-level influences on learning for students with MHRD who are studying online. Insights shared by participants in the three role groups allowed for an examination of the experiences of post-secondary students with MHRD in online classes, alongside an exploration of the ways in which the institution is supportive and non-supportive of their learning. Students valued access to a range of formal and informal disability-specific, academic, social, and cultural support-services alongside, relationships with peers and instructors, and inclusive learning environments.

Insufficient prioritization of campus-wide mental health initiatives, inadequate mental health-related resources, and inconsistent integration of UDL in course design are barriers to learning. This study was conducted during the COVID-19 pandemic, which affected every person, community, and country, and thus is a contextual factor that affected all influences. Study findings indicate that the accommodation model, coupled with insufficient adoption of principles of UDL, is potentially causing harmful and disabling effects. Being approved for and then seeking accommodations places the work of accessibility on the student, instead of on the instructors and the institution more broadly. Adopting an accessibility model with a mental-health-promotion orientation and widespread implementation of UDL reduces the reliance on accommodations and has the potential to *improve learning*, *prevent harm*, and *promote health* for all students, particularly those with mental-health-related challenges studying online.

In the next chapter, the main findings of the study will be summarized in relation to the current body of literature, post-secondary teaching practices, and policy implications. The significance, strengths, and limitations of the study will be outlined, along with suggestions for future research.

Chapter 6.

Discussion and Conclusions

The purpose of this exploratory study was to understand influences on and experiences of learning for post-secondary students with mental-health-related-disabilities (MHRD) who are studying online, by drawing on the perspectives of students, instructors, and student support staff at a mid-sized university in Western Canada. The study design was informed by theoretical perspectives from the multidisciplinary fields of public health and the learning sciences. Through 36 in-depth interviews with students (n = 14), instructors (n = 15), and student support staff (n = 7), a range of influences on learning and academic performance for students with MHRD were identified. The socio-ecological model for health promotion was useful in categorizing the findings to show the complexity of influences from the individual, interpersonal, and institutional levels.

Individual-level influences identified include student mental health status, disability-related influences, personal skills and strategies, and socio-demographic characteristics. Interpersonal-level influences include relationships and connections, and knowledge about mental health and MHRD. Institutional-level influences include university programs, services and resources; institutional priorities; the challenges of navigating the accommodation model; and elements of the online learning environment. While there are influences at each level of the socio-ecological model, the data suggest that there are connections across levels and that influences at the "higher" organizational, community, and policy levels impact those at the "lower" individual and interpersonal levels. For example, online learning environments that are designed with principles of Universal Design for Learning (UDL) foster accessibility and inclusivity, contributing to academic performance *and* reducing the instances in which students need to ask for accommodations. Similarly, inadequate student support resources contribute to support staff burnout; inadequate supports also leave students without necessary assistance. The trickle-down effect is that staff leave their jobs and students may experience worsening health and academic performance.

The findings of this study align with what has been known about the value of health promotion for centuries. The adage "An ounce of prevention is worth a pound of

cure" has held relevance since it was stated by Benjamin Franklin in 1736 with regard to fire awareness and prevention. The data suggest that the current accommodation model used in post-secondary institutions is not meeting the needs of the students it is meant to serve. Based on these findings, I argue that adopting an accessibility model, including widespread adoption of UDL, with a mental-health-promotion orientation has the potential to improve learning, prevent harm, and promote health for all students, particularly those with mental-health-related challenges studying online. In this chapter, I will summarize the main findings of the study in relation to the current body of literature, and discuss implications for policy and post-secondary teaching practices. After noting the significance, strengths, and limitations of this study, I will provide suggestions for future research.

Discussion in Relation to Current Literature

Previous research has shown that stigma and discrimination influence learning for students with MHRD (Hartrey, 2017; Henderson et al., 2013; Markoulakis & Kirsh, 2013; McManus et al., 2017; Mullins & Preyde, 2013), and the findings of this study add further support to this claim. The findings indicate that the current accommodation model, in which UDL is not widely integrated, might be creating situations that contribute to students being stigmatized or experiencing the effects of self-stigma. Students with MHRD may be approved to receive academic accommodations if they can provide adequate medical documentation. As a legal requirement in Canada, accommodations are considered a human right, used to ensure that students have access to educational systems that meet their needs. While students in this study acknowledge multiple benefits to accommodations, such as the ability to take reduced course loads while still qualifying for student loans and the ability to take assessments in spaces that better meet their needs (e.g., noise distraction), they also highlight the limitations of this model. At the host university, students often must personally approach their instructors to implement their accommodations (e.g., asking for an extension or asking for the extended time to write tests).

Stigma and discrimination toward people with mental illness have existed for centuries and have been documented as a barrier to success in post-secondary for decades (Markoulakis & Kirsh, 2013; McManus et al., 2017; Tinklin et al., 2005; Weiner & Weiner, 1996). The pervasiveness of stigma, and its impacts on students with MHRD,

was evident in the disability-related influences described by students. Fearing the judgment of others (i.e., instructors) and questioning the validity of their own disability are two examples of how participants in this study experienced the impacts of stigma. Due to stigma and the challenges of invisible disabilities, many students were reluctant to ask for assistance and/or their approved accommodations. They negotiate self-doubt, shame, and fear of judgment, while also feeling the need to justify accessing support. They describe having to make difficult decisions because of stigma: choosing to disclose and risking discrimination, or choosing not to disclose and, consequently, not having access to legitimate accommodations *and* potentially experiencing worsening mental health—all of this to simply have access to the education they have paid for and are legally entitled to. These findings align with research done by Hartrey (2017), in which students described choosing accommodations *or* potential discrimination, and by Markoulakis and Kirsh (2013), who reported that stigma was the most prominent difficulty experienced by students with MHRD.

Universal Design for Learning is an established learning-theory-informed framework for creating and delivering course materials to diverse students while improving the learning process for all students (Al-Azawei et al., 2016; Capp, 2017; Fovet, 2021; Hall et al., 2012). Students in this study described how integration of flexible course designs consistent with UDL benefited their learning and their mental health. Even when UDL was not widely integrated into courses, the basic flexibility that was embedded in online courses (e.g., recorded lectures) was described by all student participants as having a positive influence on their ability to perform academically while taking care of their mental health. However, all students described mixed experiences in online courses about accessibility and inclusivity, which indicates that inclusive learning environments are not yet the standard or norm.

The instructors who participated in this study described how they integrate *elements of* UDL into course designs to achieve multiple objectives. For example, some create flexible courses to align with kindness and Indigenous pedagogies. Others foster inclusivity and accessibility as a means of demonstrating relational and anti-oppressive teaching practices. In many cases, the integration of UDL principles into course design provides the flexibility needed for students to achieve their academic goals without having to seek accommodations from their instructors. Importantly, this eliminates the need to disclose details of their illness, their challenges, or their need for support *and*

supports the diverse learning needs of all students in the class. At the host university, the integration of inclusive teaching frameworks such as UDL is not an institutional standard but, rather, done at the discretion of the instructor. Not surprisingly, this leads to inconsistencies in course design regarding accessibility and inclusivity, places undue responsibility on individual instructors instead of the institution, and relies on academic accommodations to be the prevailing (yet inadequate) accessibility tool. The experiences and effects of inconsistent adoption of inclusive course design were described by all students in this study. Experiencing variations in quality of communication, inclusive course design, and ability to access academic accommodations created unnecessary stress for students.

In phase two, instructors were asked to describe the ways in which they create and facilitate inclusive online learning environments for students with MHRD. Asking about inclusive teaching practices, not UDL specifically, gave instructors a chance to talk about practices that are inclusive but not guided by UDL (e.g., integrating Indigenous pedagogy). While almost all instructors who participated in this study demonstrated a commitment to and understanding of student mental health, inclusive teaching practices (including integration of UDL), the comments of one instructor (Aura), and the experiences shared by all students point to misunderstandings of these concepts and frameworks in the wider instructor population. This is not surprising given that instructors receive no formal teaching training and are not necessarily supported to pursue professional development focused on inclusive pedagogies and/or mental health literacy. Without knowledge of inclusive teaching practices *and* institutional-level commitment to integration of UDL in all courses, instructors may mistakenly equate the provision of academic accommodations with adequate inclusive teaching.

What this study adds to the current literature is the perspectives of student support staff and instructors. Their insights suggest that there are opportunities to enhance accessibility across the institution. While many instructors are integrating elements of UDL and accessibility features into their courses, due to things such as workload, knowledge of accessibility and MHRD, and departmental and/or discipline-specific norms and cultures, students cannot yet expect to participate in inclusive learning environments throughout their studies. Additionally, findings from this study suggest that additional resources need to be invested in student supports. Students expressed gratitude for existing services and programming but described barriers,

including long wait times for counselling and academic advising and the need to explain to disability support staff how common features of mental illnesses affect academic performance. Support staff and instructors echoed these concerns about resources as they described burnout and reticence to refer students to services that were overtaxed/under-resourced.[88] Interviewing students, support staff, and instructors allowed me to hear about facilitators of and barriers to learning from three critical role groups. Post-secondary institutions ought to move toward an accessibility model, where frameworks such as UDL are integrated in all courses, programs, *and* services. Designing for universal inclusion with a health-promotion orientation will foster inclusion and accessibility for all students.

Participants from all role groups talked about the importance of relationships. Strong relationships between students and instructors create spaces for students to be engaged in the course materials while also able to reach out for support if they need it. The importance of the student's relationships with instructors has been described in earlier studies (Alamri & Tyler-Wood, 2017; Cook et al., 2009; Hartrey, 2017). Instructors described the benefits of seeing the positive impacts of their intentional, relational teaching practices. Students benefit from strong relationships with staff in student services/support roles but had mixed views on how relationships with instructors influence their ability to achieve their academic goals. For some students, having a good relationship with instructors facilitated *more* disclosure and the ability to ask for help or accommodations, but for others, a good relationship *inhibited* their desire to ask for help. The student and support staff participants described the potential value of having support services being offered "closer to home" (i.e., within academic units), and there are some examples of this in place in particular academic units.[89] Given the importance of trust and respect in effective relationships, it is not a surprise that students felt more comfortable reaching out to instructors and staff who were non-judgmental, willing to engage, and trustworthy. During my research, I encountered evidence that given the

[88] At the time I was writing this thesis, two of the seven support staff participants were on stress-related leave from their positions.

[89] In one faculty, students can access counselling, academic, and spiritual support from a team that works exclusively with students registered in that faculty.

insufficient resources available to students, the people working in these support roles are burning out.

Findings of this study indicated mixed awareness of available student support services, including virtual mental health services, and informal and academic supports. Although instructors in this study were more aware of such services than students were, there is an opportunity to educate instructors and ensure that they are sharing this information with students in each course (e.g., in course syllabi). Additionally, support staff also described being unaware of existing services and/or the process involved in referring students to the services. These findings suggest that there are opportunities to enhance awareness of the available formal and informal resources among students, support staff, and instructors. This could be done in a variety of ways, using a range of communication channels. Given that more than one third of students registered with the disability support unit (DSU) with an MHRD are *not* aware of counselling services, and therefore not trying to access appointments, the counselling department might be more under-resourced than is reflected by study findings.

Implications in Relation to Community Services and Public Policy

Overarching goals in the population health approach include preventing harm (i.e., injury or illness), promoting health and well-being, and reducing health inequities (Health Canada, 2001). Inherent in this approach is the understanding that the health of a population is impacted by many factors both within and external to the health care system, making multifactorial and intersectoral approaches central to creating healthier social and physical environments through coordinated health policy (Davidson, 2019). Sampling from students, support staff, and instructors who varied in a range of categories, including age, job classification, and experience with online learning and teaching, provided an opportunity to hear from people from multiple sectors. Additionally, asking participants in all role groups to share their ideas about both facilitators of and challenges to learning for students with MHRD studying online allowed for an exploration of mental-health-promoting influences that can be enhanced across the institution.

Findings from this study suggest that there are insufficient university-provided mental-health-related resources for students. This study did not include an exploration of

the sufficiency of community-based (i.e., not university-provided) student supports, but future work in this area would be beneficial to determine efficiencies in service provision both on and off campus.

"Public policy has the power to affect the well-being and development of human beings by determining the conditions of their lives" (Bronfenbrenner, 1976, xii). This is true in the context of post-secondary education, where institutional policies dictate what services are available, to whom, and in what ways. As discussed in Chapter 5, the COVID-19 pandemic caught the world by surprise and forced individuals, communities, and organizations to function in different ways. Although many post-secondary institutions offered online or blended courses pre-pandemic, in March 2020 all of them had to move from on-campus to online course delivery. Consequently, there were prompt and significant investments in professional development for instructors, infrastructure (learning management systems and educational technology tools), and academic supports for students (Ivus et al., 2021). Additionally, some supports that had been exclusively offered face-to-face, such as counselling, career and academic advising, and social programming, were now offered online, improving access for some students. Participants from all three role groups noticed and appreciated the new ability to virtually access services, and this was noted to be particularly advantageous to students who were studying online pre-pandemic without access to student services by distance. Raaper and Brown (2020) proposed that the COVID-19 pandemic provided opportunities to "critically reimagine educational practices and interactions" (p. 344), and the findings from this study concur with their assertion. The rapid shift to online course modalities during the COVID-19 pandemic drew attention to the strengths and challenges of online education for students, support staff, and instructors. While the increase in workload for both instructors and support staff was significant in the early months of the pandemic, instructors reported their plans to keep some of the added accessibility features in their courses because they saw first-hand how they benefited students. Students described having mixed experiences with online learning, but every participant felt that the shift to online brought increased flexibility and accessibility, and, for many, contributed to their mental health. Each modality has strengths and drawbacks. Future work focused on consideration of the ways in which accessibility, inclusion, and mental health can be fostered in all modalities would help to ensure all students in Canada have access to learning that meets their needs.

In Canada, higher education falls under the jurisdiction of the provincial and territorial governments, although funding comes from both the federal and provincial governments. In 2015/16, about $10.6 billion of government funding for education came from the provinces, and an additional $2.5 billion came from the federal government (Statistics Canada, 2017b). Provincial funding is allocated to operating costs and capital spending, whereas federal funding is predominantly allocated to research and grants (Statistics Canada, 2017b). While British Columbia (BC) has expressed a commitment to "Making B.C. the most progressive province in Canada for people with disabilities by 2024" (Government of BC, 2014), the province's proposed action plan fails to include education as one of the 12 identified "building blocks." Given that the provincial government funds post-secondary institutions, it has influence over university priorities. Considering education-related factors such as integration of UDL *and* student mental health during implementation of the action plan would demonstrate provincial commitment to inclusive education while also persuading institutions to build accessible learning environments. This is of particular importance now, when post-secondary institutions are delivering more online courses and programs than ever before under increasing fiscal constraints.[90] Post-secondary institutions continually adapt to changing internal and governmental priorities and must negotiate providing adequate student support *and* adopting inclusive teaching frameworks with finite resources. Adequate funding for institutional-level adoption of inclusive teaching frameworks such as UDL and holistic student supports (e.g., counselling, academic advising, and disability supports) is required to ensure that all students have access to inclusive and health-promoting post-secondary experiences.

Implications in Relation to Teaching Practices: Promoting Inclusive Education

Findings from this study build on previous research that suggests one critical element required to promote inclusive post-secondary education is provision of, and support for, professional development for instructors in all employment categories. In the

[90] In March 2022, the BC government announced a post-secondary funding review. It articulated three main aims to the review: fair distribution of funds across institutions, alignment with BC labour market needs, and student support through high-quality, affordable education. Accessibility is not named as a priority, nor mentioned in the four-page information bulletin (BC Government News, 2022).

hierarchical university setting, instructors are in positions of power and may act as gatekeepers to the learning environment. Given that instructors have direct contact with students, and may have leadership roles in their universities, it is important that they actively create inclusive learning environments (Cook et al., 2009; McManus et al., 2017). In Canada, there are no national standards or requirements for university instructors to complete mandatory teacher training, nor specific training in inclusive education. Offering opportunities and support for continuing education throughout their career remains the best way to improve instructors' attitudes (St-Onge & Lemyre, 2018). While instructors do not need to have in-depth knowledge of all disabilities, understanding the effects of disabilities on academic performance might lead to more supportive teaching practices (St-Onge & Lemyre, 2018). Both student and instructor participants in this study described a desire for more widespread understanding of common mental illnesses and the potential impacts on learning. They believed that if instructors and support staff had more knowledge, they would be able to integrate teaching methods and deliver programs that centre flexibility and autonomy while potentially reducing unconscious biases and discrimination. Additionally, developing instructor knowledge and ability to integrate UDL into new and existing courses, coupled with an understanding of mental health promotion, will benefit all students. This was reflected in instructor and student comments.

Over 15 years ago, Becker and colleagues (2002) articulated the importance of providing instructors with training to support students with MHRD in post-secondary environments. Focusing on a range of disabilities, Lombardi and colleagues (2013) compared teaching faculty from two American universities to determine the impact of disability training on attitudes and accommodating teaching practices. Their findings suggest that training can play a significant role in influencing instructor attitudes and behaviours toward students with disabilities. In a meta-analysis of outcome studies, Corrigan and colleagues (2012) determined that while educating instructors about mental health and mental illness is important, combating stigma among adults is achieved through face-to-face contact with people with mental illness. Hearing from students and colleagues with MHRD who have experience studying and/or teaching online would be valuable for instructors. Participants from the three role groups in this study brought forward ideas for instructor professional development based on their lived experience. In addition to advocating for reflective practices on teaching, topics included

UDL, common mental illnesses, the impacts of MHRD on learning and academic performance, the legal requirements of academic accommodation, and practical strategies to promote accessibility for all students in online learning communities:

> Teachers recognize the diversity of the students they teach. But teachers must also recognize their roles within institutions, disciplines, and perhaps even personal pedagogical agendas, in which they may seek to avoid and disavow the very idea of disability—to give it no place. (Dolmage, p. 62)

People with mood and/or anxiety disorders experience a wide range of symptoms and impairment depending on illness severity, symptomatology, individual differences (Castaneda et al., 2008; Zaninotto et al., 2016), and intersecting influences of the determinants of health (Compton & Shim, 2015). Impairments can be acute or chronic, and for many, both the severity of symptoms and degree of impairments will fluctuate (Hammar & Årdal, 2009). The fluctuating and unpredictable symptoms, coupled with subsequent impaired executive functioning,[91] are particularly relevant in the context of learning environments. Brain function, in particular executive function, is affected by symptoms associated with mood and anxiety disorders (e.g., depressed mood, anxiety, poor sleep quality, loneliness, fatigue, irritability, and poor physical health) (Airaksinen et al., 2005; Castaneda et al., 2008; Diamond & Ling, 2016; Hammar & Årdal, 2009) and can result in dysfunction in processing speed, short- and long-term memory, and attention (Murphy et al., 2019). Overwhelmingly, students involved in this study appreciated the flexibility that was embedded in online course delivery, in large part because of the benefits flexibility offered in managing workload and fluctuating mental-health-related symptoms. This is not surprising given what is known about the value of integrating UDL into post-secondary courses and programs.

The instructors who participated in this study shared a variety of strategies and approaches that demonstrated commitment to accessible and equitable learning environments. Instructors such as this are an asset to the university and to the students learning alongside them. Creative strategies should be used to tap into their expertise without adding a burdensome workload. Participation in professional development for

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[91] Executive functioning is a concept that encompasses specific cognitive processes inclusive of three inter-related skills: working memory, inhibitory control, and cognitive flexibility (Diamond & Ling, 2016). From these, other executive functions are built, such as problem-solving, controlled attention, fluency, abstract thinking, reasoning, meta-cognition, self-regulation, planning, and sequencing complex actions (Chan et al., 2008; Diamond & Ling, 2016; Hammar & Årdal, 2009).

instructors will be voluntary—and for instructors hired in contract positions, it is done on their own time. This brings challenges in uptake and, consequently, will require diverse and creative solutions. As a number of students and instructors suggested in this study, institutions might consider mandatory training that is embedded in institution-wide commitments to accessible education, while also providing relevant resources to instructors such as *Incorporating Universal Design in Disciplinary Contexts in Higher Education* (Abegglen et al., 2021) and *Universal Design for Learning in Higher Education* (La et al., 2018). Additionally, while professional development for instructors is necessary, attention must also be directed upstream. Post-secondary leaders and senior administrators must also be knowledgeable about UDL so that accessibility standards can be developed at an institutional level, and implemented in all courses and programs.

Institutional-Level Policy Implications

The accommodation model is based on biomedical models of health and medical models of disability that focus on the functional limitations *of students*. As described in Chapter 1, in this model, disability is perceived to originate as a mental or physical condition that is *intrinsic to the individual student*, rather than focusing on the disabling structures that limit participation in or access to education. This model promotes a negative, disempowered image of students with disabilities and ignores the barriers imposed on them by the post-secondary institutions they attend; disability is framed as a deficit *in the student*. Consequently, the onus is placed on the students to advocate for themselves to receive equity in their education, as opposed to the onus being placed on the institution to ensure universal access. The limitations of accommodations as the central focus of providing accessible education have been noted in the literature for decades (Markoulakis & Kirsh, 2013; Tinklin et al., 2005), highlighting the importance of shifting the orientation to a social model of disability, where the structural barriers for students are identified and alleviated. Data from this study suggest that while there are pockets of this in place, as evidenced by instructors integrating UDL into courses, there is room for expansion.

Ensuring access goes above and beyond accommodations and must consider institutional influences such as adequate access to support, clear organizational commitments to accessible education, and a welcoming environment for students, staff, and instructors (Michalski et al., 2017). System-wide cultural changes must be

implemented to support students with increasingly diverse needs. Data from this study indicate multiple institutional-level influences (assets and challenges) on learning and academic performance for students with MHRD. Further, the influences at the institutional level impact those at the interpersonal and individual levels. These findings are an important addition to this body of literature, which largely considers individual and interpersonal barriers for students (McManus et al., 2017; Alamri & Tyler-Wood, 2017). The findings of this study suggest that influences are complex and extend beyond individual to systemic and structural barriers.

Acknowledging the breadth and depth of influences on learning and academic performance provides an opportunity to explore the ways in which post-secondary institutions can be more accessible for students and more health promoting for students, support staff, and instructors. Recent multi-sector initiatives, such as the Canadian standard for *Mental health and well-being for post-secondary students* (Canadian Standards Association, 2020), are tools that ought to be adopted by post-secondary institutions to protect, promote, and continually improve the mental health and well-being of students (MHCC, 2021). The standard is built on a socio-ecological framework for health promotion and acknowledges the complexity of factors contributing to student wellness, including the need for inclusive and accessible learning environments. Of course, the work of ensuring students in Canada receive mental-health-promoting, inclusive, and accessible post-secondary education requires the commitment and investment of the provincial governments that fund higher education and the federal government that provides national funding for mental-health-focused policy, research, and care (Max & Waters, 2018).

Canadian researchers McEwan and Downie (2019) explored barriers to academic success (e.g., graduation rate and semesters to graduation) for students with psychiatric disabilities by analyzing institutional progression data. The authors highlight the limitations of the accommodation model (referred to as a self-advocacy model), and they argue for centralizing counselling and disability support services while expanding the services offered. Based on the findings of this study, I am arguing for broader, systemic/institutional-level changes that include ensuring adequate student mental health supports *and* the implementation of institution-wide accessibility and inclusivity standards (e.g., investment in the integration of UDL across the university *with* relevant instructor supports). Given the complexity of influences, post-secondary institutions

ought to consider thorough and ongoing engagement through intersectoral collaboration with diverse stakeholders. The findings of this study show that there is great potential to build on the diverse knowledge and skill base of relevant collaborators, such as students with lived experience studying online with mental-health-related challenges, instructors, student support staff, and university leadership. Findings of this study also point to existing assets that can be built upon to make post-secondary institutions more accessible. For example, students described extensive lived experience navigating complex health and educational systems while living with episodic, and at times severe, chronic mental health issues. The students who participated in this study described their desire to have their experiences and challenges be heard, respected, and addressed. They ought to be provided with opportunities to contribute to making the institutions they attend more inclusive, accessible, and health promoting. So while ensuring accessibility is necessary, through engagement with stakeholders, including students with MHRD, instructors, support staff, university leadership, mental health professionals, and leaders in inclusive education, post-secondary institutions will be able to provide much more than accessible education—they will provide education that is inclusive and health promoting.

Foundational to public and population health is the notion of building on existing assets. There are many opportunities to do this to make post-secondary institutions more accessible, inclusive, and health promoting. For example, the Healthy Campuses initiative embeds health promotion into all aspects of campus life and has been adopted by Canadian post-secondary institutions such as SFU. Some Canadian universities have committed to comprehensive mental wellness plans to promote mental health across campuses,[92] and others have focused on issue-specific initiatives such as suicide prevention. “A Healthy University aspires to create a learning environment and organizational culture that enhances the health, wellbeing and sustainability of its community, and enables people to achieve their full potential” (Centre for Innovation in Campus Mental Health, n.d.). The approach is centred on five key elements of health promotion—building healthy public policy, creating supportive environments, strengthening community action, developing health services, and developing personal skills—and provides a solid foundation from which considerations for accessibility and

[92] For example, see University of Calgary’s Campus Mental Health Strategy, https://www.ucalgary.ca/mentalhealth.

inclusivity could be added. Healthy Campus projects were funded by the BC government a decade ago under small “Campus Capacity Grants” ($3,000 per project). Projects were required to integrate the socio-ecological framework for mental health promotion. This “stimulus funding” provided opportunities to shift campus culture regarding mental health and to innovate mental health promotion across the institution. However, ongoing and significant financial investment is required to create inclusive and mental-health-promoting institutions. The BC government could follow the lead of provinces such as Saskatchewan, which are continuing to invest in Healthy Campus initiatives (Government of Saskatchewan, 2022).

In 2020, a national standard for mental health and well-being for post-secondary students was published (Canadian Standards Association, 2020). In the standard, the socio-ecological health model is recommended as a guiding framework for promoting mental health in post-secondary institutions in Canada. The standard is an impressive compilation of recommendations that post-secondary administrators can use to guide the implementation of mental health and well-being strategies at their institutions. It aligns well with the Healthy Campus initiatives in its orientation to health promotion and comprehensive, multi-sectoral, and multidisciplinary approaches. Although the standard does address accessibility, it is narrowly defined around the current accommodation model. This is an area that could be expanded on to include broader accessibility strategies that align with the socio-ecological model for health promotion.

Study Significance, Strengths, and Limitations

The provision of academic and mental-health-related support in accessible post-secondary institutions is critical to ensuring students develop life skills while achieving their academic goals. With support, students with MHRD can be successful in post-secondary education (Megivern et al., 2003), and can realize potential advantages if taking online courses. As the shift toward online teaching and learning continues, post-secondary institutions have an opportunity to expand on existing accommodation models by creating comprehensive, system-oriented accessibility strategies. To date, limited research examines the experiences of students *and* instructors *and* support staff in the online context. This exploratory study begins to fill this gap. The participants in this study shared insights into the strengths and limitations of the current accommodation model and, importantly, provided a base from which further research can expand. Continued

examination of opportunities to develop more accessible education helps facilitate success for all post-secondary students (CHRC, 2017).

The strengths of this study centre on the research design, which is not characteristic of earlier research done in this area. A review of the literature suggests there are no other studies that include the perspectives of students with MHRD *and* the instructors who teach these students *and* the staff that support them. Hearing the perspectives of these three groups provided the opportunity to triangulate data focused on structural/institutional influences and allowed for a more inclusive picture of the experiences, challenges, and successes of learning online. The purposeful sampling that was used for phase two of the study allowed me to interview a diverse group of individuals in each of the three role groups. For example, student participants ranged in educational level (undergraduate through to doctoral students), diagnosis (multiple types of mood and anxiety disorders), enrollment status (part-time, full-time, and full-time on reduced course load due to disability), and experience with online learning. Instructors varied in age (less than 30 to 70 years), rank (assistant professor to full professor), appointment classification (lab instructor, sessional instructor, and teaching- and research-stream professors), job security (tenure and pre-tenure), and online teaching experience (fewer than six courses to more than 16). Support staff participants worked with students in a variety of roles (student advisor, career counsellor, accessibility support), providing a range of supports (academic advising, assistive technology support, counselling). Additionally, in other research in this area, students with MHRD are often grouped with other subpopulations of students with disabilities (Hong, 2015; Lindsay et al., 2018; Terras et al., 2015). The design of this study allowed for focused attention on the facilitators of and challenges to learning for students with MHRD.

The sequencing of interviews, coupled with the questions asked, provided unique opportunities for students and instructors. Students were asked, “What advice would you give to your professors/instructors (teaching online courses) to facilitate inclusive and supportive learning environments for students with MHRD?” Students expressed appreciation for being in the role of “expert” and were grateful that their ideas would be

delivered to university instructors.[93] Instructors not only listened intently to the suggestions, but they also took it as an opportunity to do a mental inventory of how many of the ideas they were already doing, and noting ones that they could, and would, implement. Some instructors expressed gratitude for being given the opportunity to learn practical ideas for teaching through participation in this study.

> You know, I'm just so grateful to you for creating a space for these voices to be heard. I appreciate that this is very action-oriented research that you're doing. Where you're letting us, as instructors, know in real time during this research process, to have feedback…feedback that can then validate some of the things I'm doing or inform the ways that I can change. I'm always in a process of learning to best support students. [Julia, instructor]

This study has several limitations. Data collection took place approximately one and a half years into the COVID-19 pandemic. At this time in history, people's lives were disrupted in multiple and complex ways. Overnight, people lost their jobs or were forced to work and study differently (i.e., at home, wearing personal protective equipment, using virtual communication platforms); due to social distancing requirements, previously used support systems were limited or completely unavailable. As a result of the COVID-19 pandemic, educational institutions quickly transitioned from face-to-face instruction to online platforms, described as "emergency remote teaching" (Barbour et al., 2020). The pandemic impacted everyone, including each person involved in this study. Instructors and students were unprepared to quickly transition to online teaching and learning, and support staff were challenged to find ways to connect to students remotely. People faced logistical challenges (e.g., how to work/study at home), they endured being sick and/or taking care of family and friends who were ill, and some faced financial challenges. The latter was particularly true for people working in the tourism and service industry—jobs common to post-secondary students.

The effects of the pandemic could have influenced my study in several ways. First, the additional stresses, and consequent fatigue and burnout, might have impacted people's ability or desire to participate in the study. Thus, it is possible that the views of students, instructors, and support staff who were most affected by the pandemic are not

[93] This happened in two ways. First, student suggestions were shared with each of the 15 instructor participants. Second, their suggestions are being compiled into an infographic that will be disseminated at the host university and shared widely on various social media platforms.

reflected in my study participants. Second, the impact of the pandemic on people's mental health might have impacted their ability to teach, learn, and support students, which potentially is reflected in the experiences shared by the participants.

Participation in this study was voluntary, and given the qualitative design, the sample size (N = 36) is not large enough to draw generalizable claims. However, while the perspectives of participants might not reflect the broader populations from which they were sampled, the purpose of this exploratory qualitative study was to describe the lived experiences of students with MHRD, the instructors who teach these students, and the staff who support them. My intention is not to make claims about the general population of university instructors, student support staff, and students with MHRD studying online. Further, due to the resource limitations that I faced as a doctoral student, I was not able to interview a fourth group of participants that would have been beneficial—members of university leadership.

This study was conducted at a mid-sized, research-intensive, comprehensive university in Western Canada. This institution was chosen because I had access to study participants through relationships I have with relevant people and departments (e.g., a senior administrator at the DSU). This university might differ from other Canadian universities in terms of breadth and accessibility of resources for mental health and academic support. Additionally, this university might differ from other post-secondary institutions, such as technical colleges and non-comprehensive universities.

To be eligible to participate in the study, students had to be registered with the host university's DSU with at least one diagnosed mood and/or anxiety disorder. This criterion excluded students with other mental-health-related diagnoses (e.g., psychotic disorders such as schizophrenia), students who do not have a diagnosed mental illness yet live with mental-health-related challenges, and students with diagnosed mental illnesses who are not registered with the DSU. Given the complexity of factors influencing both mental health *and* learning, the varying degrees of well-being or ill-health among students with MHRD, and the high prevalence of comorbidities in this population, it is not possible to claim with certainty that symptoms specific to mood and anxiety disorders are the sole influences on students' experiences with online learning. The scope and design of this study also precluded determinations of causation between symptoms and influences on learning. While I was able to identify commonalities from

participant experiences, it is not possible to know how other/all aspects of their lives might influence how they feel about and describe influences on their learning. Additionally, students facing financial, health and/or personal challenges might not have had the ability to participate in this voluntary study. Consequently, the data might not reflect the perspectives of students living in particularly challenging situations.

Instructors who participated in this study demonstrated unanimous commitment to teaching *and* student well-being. Instructors who are less invested in teaching, particularly online teaching, and those who are less focused on issues related to student mental health, are less likely to have participated in this study. Therefore, the findings described in this thesis ought to be interpreted with some caution. The perspectives of instructors for whom supporting students with MHRD is not "on their radar," or who are resisting change for reasons such as workload constraints, stigma, and limited awareness of this topic, are not reflected in this study. The invitation to participate in this study was extended to all faculties, and I had instructors from all but two participate.

Although the participants in this study do not reflect all experiences and the full range of students, support staff, and instructors, I would argue that they are the ideal people to lead us forward and to push us all to do better. Data collection took place amid a pandemic—a time during which their personal and professional resources were stretched to the limit. The students describe challenges in their mental health, the barriers they face, the exhaustion they feel, and yet they made the time to participate in this study because they feel so passionately about making change. Instructors and support staff participated despite burnout, exhaustion, and work overload—because they care. Participants from all three role groups remain hopeful that by sharing their experiences and insights, things can change—that together, we can make our post-secondary institutions more inclusive and health promoting. The participants of this study are the leaders, advocates, and champions of mental-health-promoting communities of learning. I intend to use my position of privilege to ensure their perspectives and ideas are shared widely. In the words of Dr. Seuss, "Unless someone like you cares a whole awful lot, nothing is going to get better. It's not."

Suggestions for Future Research

This study provides insights in terms of the range of individual, interpersonal, and institutional influences on learning and academic performance for students studying online who have MHRD. The data from this study suggest that to foster inclusive online learning environments, useful tools such as accommodation policies and pedagogical frameworks such as UDL need to be embedded in a more systems-oriented accessibility framework. These insights could be examined further across contexts such as technical colleges, non-research intensive universities, and pan-Canadian and international post-secondary institutions. This study adopted a novel design by including the perspectives of students, instructors, and student support staff. This allowed for a more comprehensive exploration of the range of factors that influence learning and academic performance for students with MHRD. Future research can build on the insights from these three participant groups by including the perspectives of university administrators. These individuals play a critical role in setting organizational priorities and allocating resources for programs and services. Students who participated in this study had a range of mood and anxiety disorder diagnoses, providing useful insights into their experiences with online learning in post-secondary. Future research could expand on these insights by including students with a broader range of mental illness diagnoses (e.g., psychotic and neurodevelopmental disorders). While inclusive pedagogies such as UDL reduce the reliance on designing courses and programs based on the needs of individuals or populations, understanding the influences on learning and academic performance for people who identify as neurodivergent can provide opportunities to foster inclusive learning environments.

Findings suggest mixed understanding among instructors about inclusive teaching practices such as the integration of UDL. For some instructors, solely providing academic accommodations *is* inclusive teaching. Most of the instructors in this study demonstrate a commitment to student wellness and consistent and widespread adoption of inclusive teaching methods (e.g., flexible deadlines). However, these instructors might not be reflective of the wider population of instructors, as indicated by the varied accounts from students, who described a range of experiences from inflexible course design to very flexible design. For many in this study, the pandemic was a positive impetus for integrating more flexibility, and thereby inclusivity, into course designs. Even

instructors who are integrating elements of UDL into their course design (e.g., instructor participant Aura described flexible deadlines and grading) might not be cognizant of the ways in which other practices are disabling to students (e.g., Aura described handling accommodation requests differently depending on the diagnosis). Future research is needed to better understand support staff, leadership, and instructor understanding of and beliefs about "inclusive teaching."

While there is increased awareness of mental health in Canada, persons with mental health problems and illnesses are still facing many barriers to accessing education, including lack of services and adequate accommodation due to insufficient funding, as well as stigma and discrimination (CHRC, 2017, p. 4). The findings from this research study can contribute to removing existing barriers in post-secondary, providing more accessible learning opportunities for all students, particularly those with MHRD. More broadly, the findings of this study can help to move the field of learning sciences toward where it *ought to be*—wholeheartedly embracing equity, diversity, and inclusion in design, research, and teaching; considering mental health as a factor for learning and a product of education; driven by the needs of students and educators; advocating for relational practice; giving voice to learners whose perspectives remain under-researched and therefore under-represented, and whose voices are too often unheard; and considering issues of power, oppression, and privilege.

Conclusion

"It's not about what it is, it's about what it can become." —Dr. Seuss, *The Lorax*

It is understood that some of the objectives of graduate studies include developing research skills, generating "new knowledge," describing phenomena in new or innovative ways, and maybe even contributing to social justice. In my experience, completing doctoral studies achieved much more than this. I began this research as an experienced post-secondary educator, passionate about mental health promotion and student success, and worried about the practical utility of doctoral work. I am finishing this degree with an even stronger desire to use my voice as an "insider" of post-secondary in Canada, to rock the boat and challenge the status quo. I am so grateful that the participants trusted me enough to share so candidly their successes and

challenges. I am committed to ensuring that their perspectives will be shared with post-secondary leadership.

This study brought forward some insights around “what is,” and my hope is that it can also contribute to “what it can become.” In this final chapter of the dissertation, I summarized the main arguments/findings of the study and then discussed the implications of these findings on the current body of literature and on educational practices. Study strengths and limitations were summarized, followed by considerations for future work in this area. If you are reading this thesis, you have some investment in post-secondary education. I invite you to take this quote by Eldridge Cleaver to heart and use whatever power and privilege you have in order to make post-secondary institutions more inclusive: “There is no more neutrality in the world. You either have to be part of the solution, or you’re going to be part of the problem.”

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Appendix A. Student Questionnaire

Dear student,

Thank you for your interest in this PhD research study called “Accessing ability: Mental health and online post-secondary learning environments”. This study is being completed by Natalie Frandsen as a part of the Educational Technology and Learning Design PhD program at Simon Fraser University. The research is funded by the Social Sciences and Humanities Research Council (SSHRC).

The purpose of this research project is to build understanding of the influences on student learning for online students with mental-health-related challenges. One key element of this research is hearing from students. The findings of this study will be used to advocate for more inclusive online learning communities at the university. Your participation is greatly appreciated.

The questionnaire should take no longer than 15 minutes to complete. At the end, you will be invited to participate in an online Zoom interview or phone call, to be scheduled at a time that is convenient for you.

Section One: Screening questions

1. Are you a student registered with the Disability Support Unit at the university?

2. [If participants click “yes”, they will proceed to Q2. If they click “no”, participants will be advised that they are not eligible to participate and will be thanked for their time]

3. For this study, the two most prevalent categories of mental illness are being included. Have you been diagnosed with a mood disorder and/or an anxiety disorder?

4. [A list of mood and anxiety disorder types will be provided. Mood disorders: major depressive disorder, bipolar disorder, dysthymic disorder, perinatal depression (also known as post-partum depression). Anxiety disorders: generalized anxiety disorder, panic disorder, post-traumatic stress disorder, social anxiety disorder, specific phobias, obsessive compulsive disorder, and agoraphobia.

   [If participants click “yes”, they will proceed to the rest of the questionnaire. If they answer “no”, students will be advised that they are not eligible to participate and will be thanked for their time]

Section Two: Education @ this university

5. **What type of program are you officially registered in at the university?**

- Undergraduate degree (e.g., BA, BSc, BFA, BSN, BEd, JD/law)
- Diploma or Certificate (e.g., Public Relations Diploma, Business Administration Diploma)
- Graduate: Master's degree
- Graduate: Doctoral degree (PhD or Doctorate)
- Other. Please specify (open text)

6. **What is your enrollment status?**

- Full-time undergraduate student [Undergraduate "full-time" means 8 courses/12 units over the Fall (September) and Spring (January) terms **OR** 4 courses/6 units in the Summer term]
- Full-time undergraduate student on reduced course load due to disability [enrolled in at least 60% of full course load]
- Part-time undergraduate student [Undergraduate "part-time" means anything less than 8 courses/12 units over the Fall (September) and Spring (January) terms **OR** less than 4 courses/6 units in the Summer term]
- Full-time graduate student [Graduate "full-time" means 3 units of courses in any term—Fall (September), Spring (January) or Summer Session (May) **OR** enrolled in a Candidacy Exam (693), dissertation (699), thesis (599), project (598 and some 596), Approved Exchange (GS 502), Jointly Supervised Doctoral Program (GS 601) or co-operative education work term (800+)]
- Full-time graduate student on reduced course load due to disability [enrolled in at least 60% of full course load]
- Part-time graduate student [Graduate "part-time" means less than 3 units of courses in any term: Fall (September), Spring (January) or Summer Session (May)
- Other. Please specify (open text)

7. **In what faculty are you registered? (select all that apply—for example, Fine Arts major, Business minor)**

- Business
- Division of Continuing Studies
- Education
- Engineering
- Fine Arts

- Human and Social Development
- Humanities
- Law
- Science
- Social Science
- Other. Please specify (open text)

8. **Which of the following best describes your year of study:**

DIPLOMA/CERTFICATE

- 1st year of a 1-year diploma or certificate
- 1st year of a 2 year diploma or certificate
- 2nd year of a 2-year diploma or certificate

UNDERGRADUATE (including professional degrees such as law)

- Year 1 (Completed 1-10 courses)
- Year 2 (Completed 11-20 courses)
- Year 3 (Completed 21-30 courses)
- Year 4 (Completed 31 or more courses)
- **GRADUATE**
- 1st year of a 1-year Master's degree
- 1st year of a 2-year Master's degree
- 2nd year of a 2-year Master's degree
- 1st year of a PhD or Doctorate program
- 2nd year of a PhD or Doctorate program
- 3rd year of a PhD or Doctorate program
- 4th year of a PhD or Doctorate program
- 5th year or more of a PhD or Doctorate program

9. **The population of students at the university is diverse. Are you a:**

- Canadian citizen or Permanent Resident
- International student (completing entire degree at the university)
- International student (at the university) on a student exchange)

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PAGE BREAK

"Online" courses are delivered in a variety of ways. Common online delivery options are described below.

REMOTE SYNCHRONOUS: most common during the COVID-19 pandemic and also referred to as "emergency remote". Courses that were designed to be taught on-campus are delivered remotely (e.g., using technology such as Zoom or

Microsoft Teams, students attend required weekly, synchronous/live lectures 1-3 X per week)

ONLINE ASYNCHRONOUS: courses that were designed to be delivered online and asynchronously (e.g., no required live sessions and/or lectures *but* ongoing participation in discussion forums is required)

ONLINE SYNCHRONOUS: courses that were designed to be delivered online and synchronously (e.g., **required** live sessions and/or lectures weekly or bi-weekly)

For following 3 questions, definitions will hover as in screening question.

10. At this university, how many *remote synchronous* courses have you taken?

- 0 remote synchronous courses
- 1-3 remote synchronous courses
- 4-10 remote synchronous courses
- 11 or more remote synchronous courses

11. At this university, how many *online asynchronous* courses have you taken?

- 0 online asynchronous courses
- 1-3 online asynchronous courses
- 4-10 online asynchronous courses
- 11 or more online asynchronous courses

12. At this university, how many *online synchronous* courses have you taken?

- 0 online synchronous courses
- 1-3 online synchronous courses
- 4-10 online synchronous courses
- 11 or more online synchronous courses

PAGE BREAK

13. How familiar are you with the following services/programs at the university:

	Extremely familiar	Moderately familiar	Slightly familiar	Not at all familiar
Learning and Teaching Support & Innovation (LTSI) Learning Experience Designers				
LTSI Learning Strategists				
Technology Integrated Learning (TIL) (e.g., "Learn Anywhere")				
Disability Support Unit (including Learning Assistance Program)				

Counselling @ Student Wellness Centre				
Health Services @Student Wellness				
Multi-faith or spiritual services @ Student Wellness				
International Student Services				
SupportConnect				
Student Support Coordination through the Office of Student Life				
Centre for Indigenous Led Research and Community Engagement (CIRCLE)				
First People's House				
Student Peer Support Services				
Society for Students with Disability				
Pride				
Residence Community Leaders				
Centre for Academic Communication				

Section Three: Mental Health and Learning

14. Mood and anxiety disorders are the most common categories of mental illnesses. Each category includes several different mental illnesses. Please select the one(s) that reflect your diagnosis/diagnoses (select all that apply).

Mood Disorders

- Major depressive disorder
- Bipolar disorder
- Dysthymic disorder
- Perinatal depression (also known as post-partum depression)
- Other mood disorder (please write the diagnosis. (open text)

Anxiety Disorders

- Panic disorder
- Generalized anxiety disorder
- Post-traumatic stress disorder (PTSD)
- Social anxiety disorder
- Agoraphobia
- Specific phobias (e.g., to spiders, flying, etc.)
- Obsessive-compulsive disorder (OCD)
- Panic disorder
- Other anxiety disorder (please write the diagnosis). (open text)

15. How much do you agree with the statements?

	Strongly Agree	Agree	Neutral/ Not Sure	Disagree	Strongly Disagree
My learning in online courses has been disrupted by mental-health related symptoms.					
Compared to face-to-face courses, my ability to learn is enhanced in online courses.					
Mental-health-related symptoms influence my ability to engage with peers in online courses.					
Mental-health-related symptoms influence my ability to engage with instructors in online courses.					
Mental-health-related symptoms influence my ability to engage with course content (e.g., course readings) in online courses.					
Mental-health-related symptoms influence my ability to engage with course activities (e.g., discussions, group work) in online courses.					
Compared to face-to-face courses, policies and procedures (e.g., seeking financial aid, asking for accommodations) have a greater influence on my ability to learn in online courses.					
Compared to face-to-face courses, social factors (e.g., social support, stigma) have a greater influence on my ability to learn in online courses.					
Compared to face-to-face courses, assessment types (e.g., written assignment, exam) have a greater influence my ability to achieve my academic goals in online courses.					
Compared to face-to-face courses, the relationship I have with my instructor has a greater influence on my ability to learn in online courses					
Brightspace online learning platform creates opportunities/benefits related to my ability to learn in online courses.					
Brightspace online learning platform interferes with/is an obstacle to my ability to learn in online courses.					
I have a mental-health-related disability.					
I believe I have access to the mental health care that I need.					
I am aware of university-provided, mental health supports (e.g., counselling) that are accessible to students in online courses and/or programs.					

16. **A learning community can be described as a culture of learning in which everyone is involved in the collective and individual effort to understand. How much do you agree with the statement, "The learning community influences my ability to learn in online courses."?**

- Strongly agree
- Agree
- Neutral/Not sure
- Disagree
- Strongly disagree

17. **During the previous academic year (September 2020-April 2021), of the courses you registered for, how many courses did you complete? (e.g., 10/10, 2/4)**

18. ***Open text***

19. **During the previous academic year (September 2020-April 2021), how many courses did you drop because of challenges related to your mental health?**

- 0 courses
- 1 course
- 2 courses
- 3 courses
- 4 or more courses

20. **During the previous academic year (September 2020-April 2021), how many courses did you defer because of challenges related to your** mental health?

- 0 courses
- 1 course
- 2 courses
- 3 courses
- 4 or more courses

Section Four: Demographics

21. **What is your age?**

- Under 18
- 18 to 21 years old
- 22 to 25 years old
- 26-29 years old

- 30-33 years old
- 34-40 years old
- over 40 years old

22. The Canadian Institute for Health Research (CIHR) defines sex **as a set of biological attributes in humans and animals. It is primarily associated with physical and physiological features including chromosomes, gene expression, hormone levels and function, and reproductive/sexual anatomy. Sex is usually categorized as female or male but there is variation in the biological attributes that comprise sex and how those attributes are expressed. What is your sex?**

- Female
- Male
- Intersex
- Other
- Prefer not to answer

23. CIHR defines gender as the socially constructed roles, behaviours, expressions and identities of girls, women, boys, men, and gender diverse people. It influences how people perceive themselves and each other, how they act and interact, and the distribution of power and resources in society. Gender is usually conceptualized as a binary (girl/woman and boy/man) yet there is considerable diversity in how individuals and groups understand, experience, and express it. What is your gender?

- Female (“woman” or “girl”)
- Male (“man” or “boy”)
- Transgender
- Gender diverse
- Other
- Prefer not to answer

24. **CIHR describes race as a social construct that is politically, historically and socially informed. We know that people of different races do not have significantly different genetics. But our race still has important consequences, including how we are treated by different individuals and institutions. Which race category best describes you? Check all that apply:**

- Black (e.g., African, Afro-Caribbean, African Canadian descent)
- East/Southeast Asian (e.g., Chinese, Korean, Japanese, Taiwanese descent or Filipino, Vietnamese, Cambodian, Thai, Indonesian, other Southeast Asian descent)

- Indigenous (e.g., First Nations, Métis, Inuk/Inuit)
- Latino (e.g., Latin American, Hispanic descent)
- Middle Eastern (e.g., Arab, Persian)
- West Asian (e.g., Afghan, Egyptian, Iranian, Lebanese, Turkish, Kurdish)
- South Asian (e.g., East Indian, Pakistani, Bangladeshi, Sri Lankan, Indo-Caribbean)
- White European
- Do not know
- Prefer not to answer
- Other (open text)

25. Which of the following categories best describes your employment status?

- Employed, working 1-9 hours per week
- Employed, working 10-19 hours per week
- Employed, working 20-29 hours per week
- Employed, working >30 hours per week
- Not employed but looking for work
- Not employed by choice
- Not able to work
- Other. Please specify. (open text)

26. Which of the following best describes your living situation during the previous academic year? If you split your time between two or more of the choices, select the one where you spent most of your time.

- University residence
- With my parents / family
- With my spouse or partner
- With roommates
- Alone
- Other (please specify) (open text)

27. How well does the following statement describe your financial situation? "In any given month, I am able to meet my expenses"

- Completely (e.g., certain that I will meet expenses)
- Very well (e.g., there is a minimal chance that I won't meet expenses)
- Neutral/not sure
- Very little (e.g., there is a good chance that I will not meet my expenses)

- Not at all (e.g., I am certain that I will not meet my expenses)

Thank you for taking the time to complete this questionnaire. If you would be interested in participating in a follow-up, 60-75 minute interview (via Zoom or phone) to further discuss your experiences in online courses, please include your email address here: _____. If you are a student of the researcher (Natalie Frandsen), you will be interviewed by someone else on the research team (Christina Van Wingerden) and Natalie will not be present at the interview. Participants selected for interviews will receive a $25 Amazon or Starbucks gift card as a token of appreciation for their time. Given resource constraints, it may not be possible to interview everyone who is interested.

Appendix B. Instructor Questionnaire

Hello Instructors,

Thank you for your interest in this PhD research study called “Accessing ability: Mental health and online post-secondary learning environments”. This study is being completed by Natalie Frandsen as a part of the Educational Technology and Learning Design PhD program at Simon Fraser University. The research is funded by the Social Sciences and Humanities Research Council (SSHRC).

The purpose of this research project is to build understanding of the influences on student learning for online students with mental-health-related challenges. One key element of this research is hearing from instructors so that they can contribute to making the university more inclusive. The findings of this study will be used to advocate for more inclusive online learning communities at the university. Your participation is greatly appreciated.

The questionnaire should take no longer than 15 minutes to complete. At the end, you will be invited to participate in an online Zoom interview or phone call, to be scheduled at a time that is convenient for you.

“Online” courses are delivered in a variety of ways. Common online delivery options are described below.

REMOTE SYNCHRONOUS: most common during the COVID-19 pandemic and also referred to as “emergency remote”. Courses that were designed to be taught on-campus are delivered remotely (e.g., using technology such as Zoom or Microsoft Teams, students attend required weekly, synchronous/live lectures 1-3 X per week)

ONLINE ASYNCHRONOUS: courses that were designed to be delivered online and asynchronously (e.g., no required live sessions and/or lectures *but* ongoing participation in discussion forums is required)

ONLINE SYNCHRONOUS: courses that were designed to be delivered online and synchronously (e.g., **required** live sessions and/or lectures weekly or bi-weekly)

Section One: Screening

1. **Have you taught at least one “online” course at this university?**
   [If participants click “yes”, they will proceed to Q2. If they click “no”, participants will be advised that they are not eligible to participate and will be thanked for their time.]

Section Two: Teaching Experience

2. **What is your current appointment classification?**
    - Sessional Instructor
    - Research: tenured
    - Research: tenure track
    - Research: limited term
    - Teaching: tenured/continuing
    - Teaching: tenured/continuing track
    - Teaching: limited term
    - Other: (open text)
3. **What faculty do you teach in? (Select all that apply)**
    - Business
    - Division of Continuing Studies
    - Division of Medical Science (Island Medical Program)
    - Education
    - Engineering
    - Fine Arts
    - Human and Social Development
    - Humanities
    - Law
    - Science
    - Social Science
4. **How many courses have you taught at this university—*including face-to-face and online courses*?**
    - 1-5 courses
    - 6-10 courses
    - 11-15 courses
    - 16 or more courses
    - For following 3 questions, definitions will hover as in screening question.
5. **At this university, how many *remote synchronous* courses have you taught?**
    - No remote synchronous courses
    - 1-5 remote synchronous courses
    - 6-10 remote synchronous courses
    - 11-15 remote synchronous courses
    - 16 or more remote synchronous courses
6. **At this university how many *online asynchronous* courses have you taught?**
    - No online asynchronous courses
    - 1-5 online asynchronous courses

- 6-10 online asynchronous courses
- 11-15 online asynchronous courses
- 16 or more online asynchronous courses

7. At this university, how many *remote synchronous* courses have you taught?

- No remote synchronous courses
- 1-5 remote synchronous courses
- 6-10 remote synchronous courses
- 11-15 remote synchronous courses
- 16 or more remote synchronous courses

8. In your teaching role, how confident are you in your ability to provide support for students with mental-health-related challenges?

- Completely confident
- Fairly confident
- Slightly confident
- Not at all confident
- Not applicable to my role
- Other (open text):

9. In your teaching role, how confident are you in your ability to refer students with mental-health-related challenges to other services (either at this university or external to this university)?

- Completely confident
- Fairly confident
- Slightly confident
- Not at all confident
- Not applicable to my role
- Other (open text):

10. In your teaching role, how confident are you in your ability to identify if students are having mental-health-related challenges?

- Completely confident
- Fairly confident
- Slightly confident
- Not at all confident
- Not applicable to my role
- Other (open text):

11. How much do you agree with the following statement: "In my current role, I would like to be able to do more for students with mental-health-related challenges"?

- Strongly agree
- Agree
- Neutral/Not sure

- Disagree
- Strongly disagree
- Other (open text):

12. How familiar are you with the following:

	Extremely familiar	Moderately familiar	Slightly familiar	Not at all familiar
Learning and Teaching Support & Innovation (LTSI) Learning Experience Designers				
LTSI Learning Strategists				
LTSI professional development for instructors (e.g., teaching focused workshops and consultations)				
Technology Integrated Learning (TIL) (e.g., “Teach Anywhere”)				
Disability Support Unit (including Learning Assistance Program)				
Counselling @ Student Wellness Centre				
Health Services @ Student Wellness				
Multi-faith or spiritual services @ Student Wellness				
International Student Services				
SupportConnect				
Student Support Coordination through the Office of Student Life				
Centre for Indigenous Led Research and Community Engagement (CIRCLE)				
First People’s House				
Student Peer Support Services				
Society for Students with Disability				
Pride				
Residence Community Leaders				

Disability Support Unit				
Principles of Universal Design for Learning				
Common symptoms of mood disorders such as depression and bipolar disorder				
Common symptoms of anxiety disorders such as generalized anxiety disorder				
General academic accommodations available for students registered with the Centre for Accessible Learning				
Mental-health-specific academic accommodations for students registered with the Centre for Accessible Learning				

Section Three: Demographics

13. What is your age?

- under 25 years old
- 26-30 years old
- 31-40 years old
- 41-50 years old
- 51-60 years old
- 61-70 years old
- over 70 years old

14. The Canadian Institute for Health Research (CIHR) defines sex as a set of biological attributes in humans and animals. It is primarily associated with physical and physiological features including chromosomes, gene expression, hormone levels and function, and reproductive/sexual anatomy. Sex is usually categorized as female or male but there is variation in the biological attributes that comprise sex and how those attributes are expressed. What is your sex?

- Female
- Male
- Intersex
- Other
- Prefer not to answer

15. CIHR defines gender as the socially constructed roles, behaviours, expressions and identities of girls, women, boys, men, and gender diverse people. It influences how people perceive themselves and each other, how they act and interact, and the distribution of power and resources in society. Gender is usually conceptualized as a binary (girl/woman and boy/man) yet there is considerable diversity in how individuals and groups understand, experience, and express it. What is your gender?

- Female (“woman” or “girl”)
- Male (“man” or “boy”)
- Transgender
- Gender diverse
- Other
- Prefer not to answer

16. CIHR describes race as a social construct that is politically, historically and socially informed. We know that people of different races do not have significantly different genetics. But our race still has important consequences, including how we are treated by different individuals and institutions. Which race category best describes you? Check all that apply:

- Black (e.g., African, Afro-Caribbean, African Canadian descent)
- East/Southeast Asian (e.g., Chinese, Korean, Japanese, Taiwanese descent or Filipino, Vietnamese, Cambodian, Thai, Indonesian, other Southeast Asian descent)
- Indigenous (e.g., First Nations, Métis, Inuk/Inuit)
- Latino (e.g., Latin American, Hispanic descent)
- Middle Eastern (e.g., Arab, Persian)
- West Asian (e.g., Afghan, Egyptian, Iranian, Lebanese, Turkish, Kurdish)
- South Asian (e.g., East Indian, Pakistani, Bangladeshi, Sri Lankan, Indo-Caribbean)
- White European
- Do not know
- Prefer not to answer
- Other (open text)

Thank you for taking the time to complete this questionnaire. If you would be interested in participating in a follow-up, 60-75 minute interview (via Zoom or phone) to further discuss your experiences with teaching online courses, please include your email address here: _____. Participants selected for interviews will receive a $25 Amazon or Starbucks gift card as a token of appreciation for their time. Given resource constraints, it may not be possible to interview everyone who is interested.

Appendix C. Support Staff Questionnaire

Hello,

Thank you for your interest in this PhD research study called “Accessing ability: Mental health and online post-secondary learning environments”. This study is being completed by Natalie Frandsen as a part of the Educational Technology and Learning Design PhD program at Simon Fraser University. The research is funded by the Social Sciences and Humanities Research Council (SSHRC).

The purpose of this research project is to build understanding of the influences on student learning for online students with mental-health-related challenges. One key element of this research is hearing from the university staff that work in student support roles so that they can contribute to making the university more inclusive. The findings of this study will be used to advocate for more inclusive online learning communities at the university. Your participation is greatly appreciated.

The questionnaire should take no longer than 15 minutes to complete. At the end, you will be invited to participate in an online Zoom interview or phone call, to be scheduled at a time that is convenient for you.

Section One: Screening Question

1. **Have you worked at the university for at least the last 6 months (minimum 20 hours per week) in a student support role? Student support roles include direct services (e.g., counselling, academic advising) or program planning and advocacy roles. The primary objective in these roles is to promote student growth and development during student’s academic experience.**
   [If participants click “yes”, they will proceed to the rest of the questionnaire. If they answer “no”, they will be advised that they are not eligible to participate and will be thanked for their time]

Section Two: Student Support

2. **In your current student support role, do you provide direct support to students (e.g., provide 1:1 or small group advice, counselling etc.)?**
   Yes/No
   If you answered “no” to number 3, please describe the type of work you do to support students (e.g., oversee a particular program, program planning)
   Open text

3. In your current student support role, what types of support do you provide students? (select all that apply)

- Academic (e.g., advising, learning support)
- Health services (e.g., medical assessments, sexual health)
- Counselling services
- Student awards, bursaries, scholarships
- Financial aid (e.g., student loans)
- Residence support
- Cultural support
- Faith-based or spiritual support
- International student support
- Online learning support (e.g., Brightspace support)
- Other (please list) – open text

4. In your current student support role, how confident are you in your ability to provide support for students with mental-health-related challenges?

- Completely confident
- Fairly confident
- Slightly confident
- Not at all confident
- Not applicable to my role

5. **In your current student support role, how confident are you in your ability to refer students with mental-health-related challenges to other services (either at this university or external to this university)?**
    - Completely confident
    - Fairly confident
    - Slightly confident
    - Not at all confident
    - Not applicable to my role
6. **In your current student support role, how confident are you in your ability to identify if students are having mental-health-related challenges?**
    - Completely confident
    - Fairly confident
    - Slightly confident
    - Not at all confident
    - Not applicable to my role

7. How much do you agree with the following statement: "In my current role, I would like to be able to do more for students with mental health related challenges"?

- Strongly agree
- Agree
- Neutral/Not sure
- Disagree
- Strongly disagree

8. How much do you agree with the following statement: "I believe that the current services offered at this university adequately address the needs of students with mental health related challenges"?

- Strongly agree
- Agree
- Neutral/Not sure
- Disagree
- Strongly disagree

  *If respondents answer "disagree" or "strongly disagree", they will be prompted to answer "What are the areas that need to be addressed?"

9. How much do you agree with the following statement: "I believe that this university provides an inclusive environment to students with mental health related challenges"?

- Strongly agree
- Agree
- Neutral/Not sure
- Disagree
- Strongly disagree

10. How familiar are you with the following student support services/programs at this university:

	Extremely familiar	Moderately familiar	Slightly familiar	Not at all familiar
Learning and Teaching Support & Innovation (LTSI) Learning Experience Designers				
LTSI Learning Strategists				
Technology Integrated Learning (TIL)				
Disability Support Unit (including Learning Assistance Program)				
Counselling Services @ Student Wellness Centre				
Health Services @Student Wellness				

Multi-faith or spiritual services @ Student Wellness				
SupportConnect				
Student Support Coordination through the Office of Student Life				
International Student Services				
Centre for Indigenous Led Research and Community Engagement (CIRCLE)				
First People's House				
Peer Support Services				
Society for Students with Disability				
Pride				
Residence Community Leaders				
Centre for Academic Communication				

Thank you for taking the time to complete this questionnaire. If you would be interested in participating in a follow-up, 60-75 minute interview (via Zoom or phone) to further discuss your experiences supporting students with mental health related challenges, please include your email address here: _____. Participants selected for interviews will receive a $25 Amazon or Starbucks gift card as a token of appreciation for their time. Given resource constraints, it may not be possible to interview everyone who is interested.

Appendix D. Student Interview Guide

Interview Format

At least two weeks prior to the scheduled interview, participants will receive detailed study information, interview details (e.g., Zoom invitation), a list of no-cost mental health supports and a PDF version of the consent form to review prior to the interview. Participants will give oral consent before the interview begins. Interviews will be conducted using ZOOM® or by phone (participant choice). Participants will have the option to be interviewed without video (i.e., audio-only). Interviews will follow a 'semi-structured' format (i.e., the sequence and pace of questions can be altered and new questions can be added to cater to the interviewees experience).

Interview Script

I will review the consent form and then the interview recording will begin with: "Do you consent to participating in this interview? Do you consent to me recording the audio portion of this interview and using the Zoom ® "auto transcription" software?" [Oral consent will be recorded in the researcher's field notes].

Each year, more students take online classes and increasingly, students have mental-health-related disabilities. Disability is considered within the context of external, social and contextual factors and it relates to the impacts of inaccessible socially constructed environments *on* a person with an impairment rather than something inherent *in* people with disabilities. So while we want to consider the effects of mental-health-related symptoms on academic performance and learning, we also want to consider the contextual factors that might affect these things. Of course, instructors play critical roles in academic performance and learning. The purpose of this interview is to hear your perspectives about and experiences with *learning in online environments*. The study findings will be summarized and recommendations will be presented to university leadership to make the university more inclusive. Let's get started with the interview.

Interview Questions

1. What program and year are you in?
2. Can you please describe your experience with online learning and how your mental health affects your experience (s) of learning online? [modality types—online asynchronous, remote synchronous]
3. *Probe*: If it helps, you can discuss this in the context of a specific course you have taken.
4. What has contributed to or facilitated your learning in online courses (this can be individual strengths, supports or any combination)?

   Probes: What teaching methods have been helpful? What skills or attributes do you have that have facilitated learning and academic performance?

5. What challenges or obstacles have you faced with regard to your learning or academic performance in online courses (because of mental-health-related challenges)?
   Probe: What teaching and/or assessment methods were most challenging with respect to your mental health (e.g., group work, participation in discussion)? How does this relate to your experience taking in-person classes?

6. What has your experience been with regard to accessing support (e.g., extensions, accommodations) from your instructors/professors?
7. What has been your experience with regard to accessing support from other university resources (e.g., Disability Support Unit, First People's House, Centre for Academic Communication)?
8. Given your experience, can you describe course design elements that might eliminate the need to ask for extensions? (How material is presented, how you are assessed etc.)
9. What advice would you give to university professors/instructors (teaching online courses) to facilitate inclusive and supportive learning environments for students with mental-health-related disabilities? [answers to this question will be summarized and shared with the instructors that participate in this study]
10. Is there anything else you want to share with me that might help me with this study?

Thank you so much for participating in this interview.

Appendix E. Instructor Interview Guide

Interview Format

At least two weeks prior to the scheduled interview, participants will receive detailed study information, interview details (e.g., Zoom invitation) and a PDF version of the consent form to review prior to the interview. Participants will give oral consent before the interview begins. Interviews will be conducted using ZOOM® or by phone (participant choice). Participants will have the option to be interviewed without video (i.e., audio-only). Interviews will follow a 'semi-structured' format (i.e., the sequence and pace of questions can be altered and new questions can be added to cater to the interviewees experience).

Interview Script

I will review the consent form and then the interview recording will begin with: "Do you consent to participating in this interview? Do you consent to me recording the audio portion of this interview and using the Zoom ® "auto transcription" software?" [Oral consent will be recorded in the researcher's field notes]

Each year, more students take online classes and increasingly, students have mental-health-related disabilities. Disability is considered within the context of external, social and contextual factors and it relates to the impacts of inaccessible socially constructed environments *on* a person with an impairment rather than something inherent *in* people with disabilities. So while we want to consider the effects of mental-health-related symptoms on academic performance and learning, we also want to consider the contextual factors that might affect these things. Of course, instructors play critical roles in academic performance and learning. The purpose of this interview is to hear your perspectives about and experiences with *teaching in online environments*—specifically with regard to teaching and/or supporting students who have mental-health-related disabilities or perhaps academic performance and learning challenges related to their mental health. Let's get started with the interview.

Interview questions

1. Please describe your current teaching role at this university.

2. Please describe your post-secondary teaching experience (how much, course modality).

   Probe: Did you teach online courses prior to the COVID-19 pandemic? How often/how many?

3. Mental health disability can be defined as, "…having a diagnosed mental health condition that impedes effective learning and/or elicits unnecessary personal, social or environmental barriers that create actual or perceived disablement" (McManus et al., 2017, p. 337). The number of students with mental illness and mental-health-related disabilities (MHRD) in universities are rising. In your experience, how do you come to know about students in your classes who have MHRDs? Please tell me about your experience teaching and/or providing support for students with mental health related disabilities.
4. *Probe:* Please describe an experience teaching an online class in which you had to support or accommodate a student with an MHRD [a student having academic challenges related to their mental health].
5. Please describe what you believe to be facilitators to learning online for these students (and/or things that you tried that did not work)?
6. Probe: Please describe any particular challenges you have encountered.
7. From an instructor perspective, in what ways do you think about creating and facilitating inclusive online learning environments for students with MHRD? You are welcome to give examples from specific courses you teach.

   Probe: [For instructors who have not considered this, probe with "What role(s) do you see the instructor playing in creating inclusive learning environments?"

   Probe: Mental health promotion is an approach that fosters the enhancement of individual resilience and control and promotes the development of socially supportive environments. In what ways could mental health promotion be integrated into online course delivery?

8. Can you describe university supports or resources that either have been or would be helpful to you in supporting students with MHRD?
9. I have interviewed X# of students with MHRD. When asked what they wanted instructors to know, this is what they said: [*this will be a summary from the*

student interviews]. How does that resonate with you? What might you do with this information?

10. Is there anything else you want to share with me on this topic?

Thank you so much for participating in this interview.

Appendix F. Support Staff Interview Guide

Interview Format

At least two weeks prior to the scheduled interview, participants will receive detailed study information, interview details (e.g., Zoom invitation), a list of no-cost mental health supports and a PDF version of the consent form to review prior to the interview. Participants will give oral consent before the interview begins. Interviews will be conducted using ZOOM® or by phone (participant choice). Participants will have the option to be interviewed without video (i.e., audio-only). Interviews will follow a 'semi-structured' format (i.e., the sequence and pace of questions can be altered and new questions can be added to cater to the interviewees experience).

Interview Script

I will review the consent form and then the interview recording will begin with: "Do you consent to participating in this interview? Do you consent to me recording the audio portion of this interview and using the Zoom ® "auto transcription" software?" [Oral consent will be recorded in the researcher's field notes].

Each year, more students take online classes and increasingly, students have mental-health-related disabilities. Disability is considered within the context of external, social and contextual factors and it relates to the impacts of inaccessible socially constructed environments *on* a person with an impairment rather than something inherent *in* people with disabilities. So while we want to consider the effects of mental-health-related symptoms on academic performance and learning, we also want to consider the contextual factors that might affect these things. Of course, instructors play critical roles in academic performance and learning. The purpose of this interview is to hear your perspectives about and experiences with supporting students who have mental-health-related disabilities. The study findings will be summarized and recommendations will be presented to university leadership to make the university more inclusive. Let's get started with the interview.

Interview Questions

1. Please describe your current role at this university.

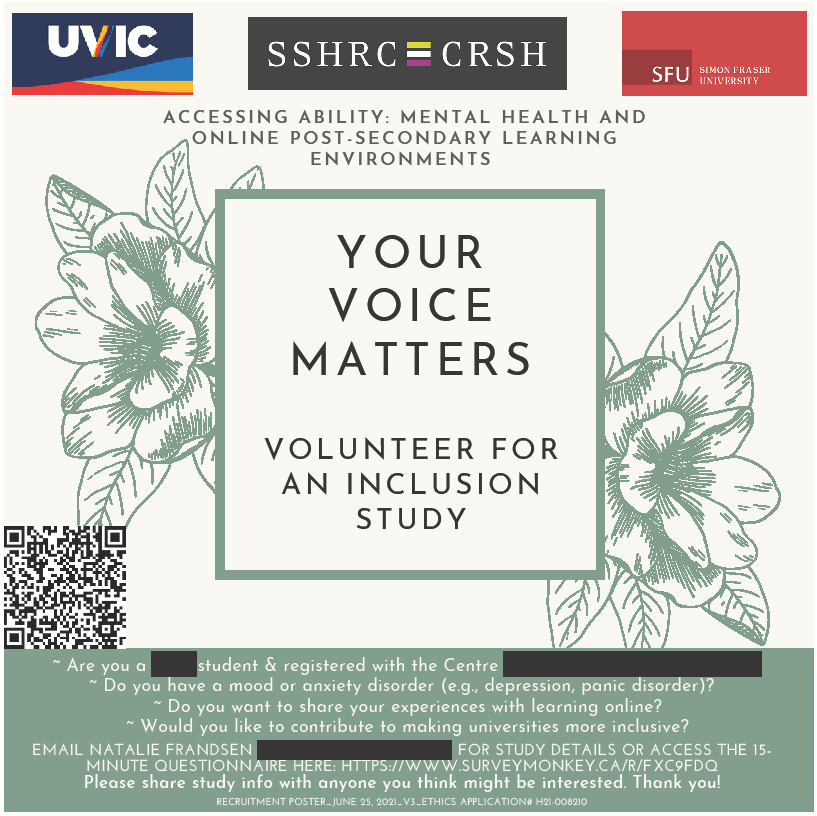
2. Mental health disability can be defined as, "…having a diagnosed mental health condition that impedes effective learning and/or elicits unnecessary personal, social or environmental barriers that create actual or perceived disablement" (McManus et al., 2017, p. 337). The number of students with mental illness and mental-health-related disabilities (MHRD) in universities are rising. Please describe your experience supporting these students at this university.

   Probe: Has the type of support you provide to students changed because of the COVID-19 pandemic? How so? In what ways have student needs changed?

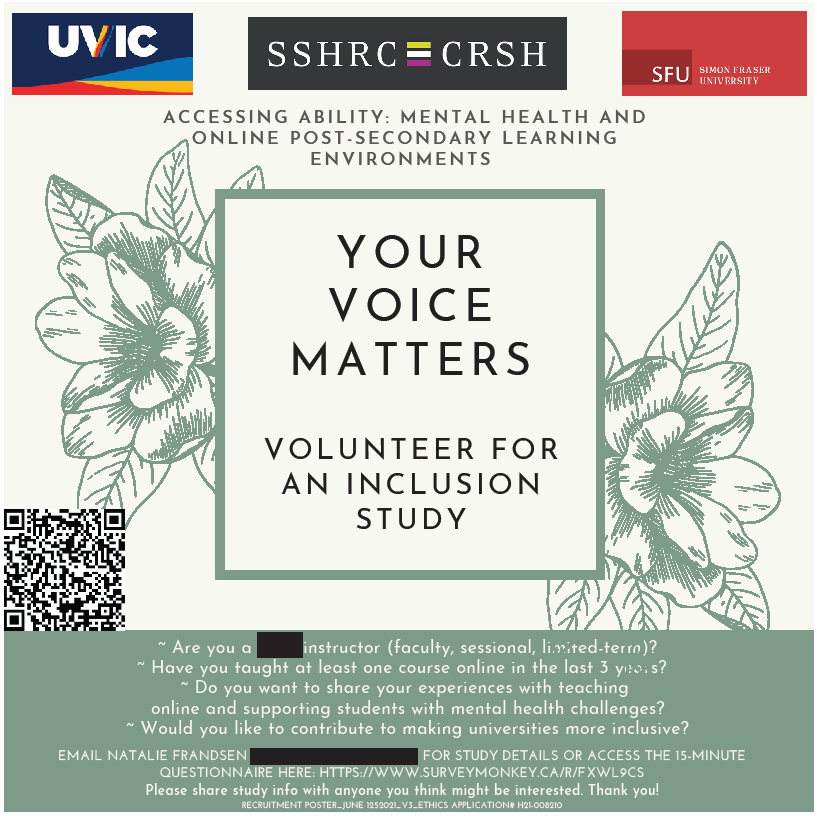
3. From your perspective, please describe the particular challenges students with mental-health-related challenges face.
4. *Probe:* Please use examples if that is helpful.
5. From your experience in a student support role, what challenges *have you faced* in providing services for students with mental-health-related challenges?
6. *Probe*: How have these challenges changed because of the COVID-19 pandemic?
7. From a student-support perspective, what do you think is different about supporting students with mental-health-related challenges, as compared to the general student population?
8. Can you describe university supports or resources that either have been or would be helpful to you in supporting students with mental-health-related challenges?
9. I have interviewed X# of students with mental-health-related challenges. When asked about support services at this university, they said: [*this will be a summary from the student interviews*]. How does that resonate with you? What might you do with this information?
10. Is there anything else you want to share with me on this topic?

Thank you so much for participating in this interview.

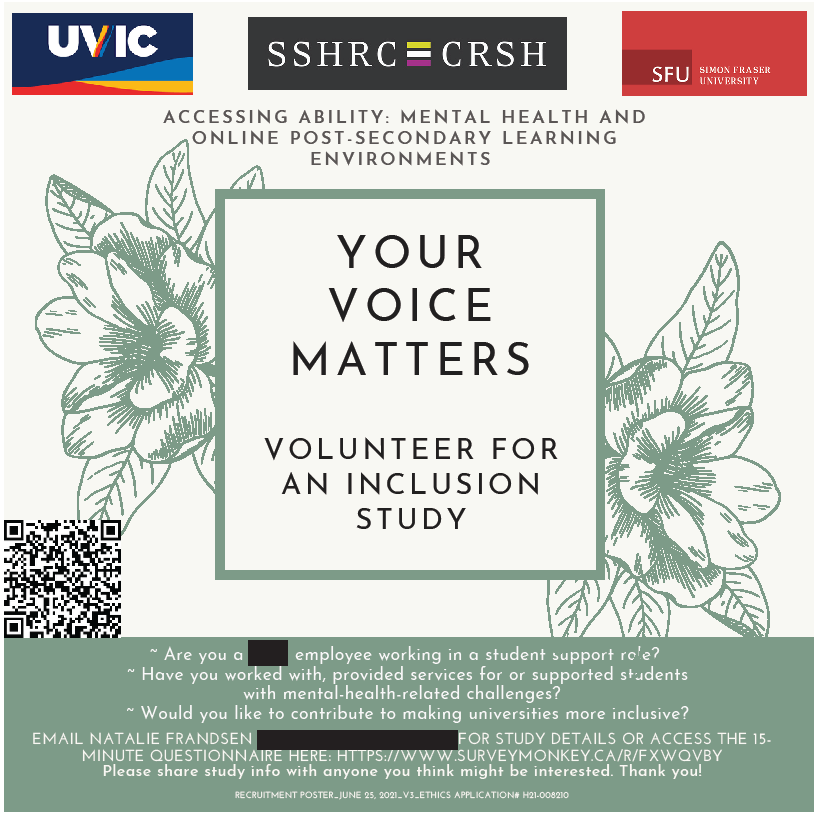
Appendix G. Student Recruitment Poster



Appendix H. Instructor Recruitment Poster



Appendix I. Support Staff Recruitment Poster



Appendix J. Student Consent Form

Office of Research Ethics
SFU ORE Application Number: HR21-00820
STUDY TEAM
PhD Student/Principal Investigator: Natalie M. Frandsen
Faculty: Faculty of Education
Faculty Supervisor: Dr. Kevin O'Neill
Dissertation Committee: Dr. Robert Williamson & Dr. Sheri Fabian
Research Personnel: C. Van Wingerden

Study Details and Informed Consent to Participate in PhD Research Study
"Accessing ability: Mental health and online post-secondary learning environments"

Natalie Frandsen is a PhD candidate at Simon Fraser University (SFU) and works as an instructor. Natalie is conducting this interview as a part of her PhD thesis and dissertation in the Educational Technology and Learning Design program. The research is funded by the Social Sciences and Humanities Research Council (SSHRC) of Canada. The objective of this study is to build understanding of the influences on learning for online, post-secondary students with mental-health-related disabilities. You are being invited to participate in this study because you are a student who is registered with the Centre for Accessible Learning, you have taken online classes and you have a diagnosed mental illness. We want to learn from your experiences to help make online learning environments more inclusive. Before you decide whether to participate, please take time to review the following information. If you have any questions or need additional information, please ask. After reviewing this information, if you are still interested in participating, then we will go forward with the interview. Participants will receive a $25 gift card upon completion of the interview.

The University and the person conducting this research study subscribe to the ethical conduct of research and to the protection at all times of the interests, comfort, and safety of participants. This research will be conducted in compliance with the Tri-Council Policy Statement (TCPS2). Should you wish to obtain information about your rights as a participant in research, or about the responsibilities of researchers, or if you have any questions, concerns or complaints about the manner in which you were treated in this study, you may contact the Committee through the Director of Research Ethics. Any complaint you make will be treated in confidence and investigated, and you will be informed of the outcome.

Interview Details

You are being invited to participate in this interview and participation is voluntary—you have the right to refuse to participate and can withdraw at any time. Interviews will be conducted by telephone or using Zoom ® (participant choice).

Participants will be given a unique meeting ID and password to enter the Zoom meeting room and the waiting room feature will be used. At any point during the interview, you can withdraw by leaving the Zoom meeting room and/or closing your internet browser. Should you want to withdraw, you will not be asked to provide a reason, and there will be no negative impact on your academic progress or benefits/services provided to you by the university. Interviews will be 60-75 minutes long. You will be asked questions about your experiences with online learning at this university, not your experience of living with a mental illness. However, a list of no-cost mental health support resources will be provided in case participants feel distressed in any way during their participation in the interview process. This information will be emailed to you at least two weeks prior to the scheduled interview. During the interview, you can refuse to answer any question without negative consequences and you will not be asked for a reason.

Any information that is obtained during this study will be kept confidential to the full extent permitted by the law. Interviews will be conducted by telephone or using Zoom ® (participant choice). Participants can choose to participate in the interview with their video turned on or off (audio only). Zoom ® is a US company, and as such, is subject to the USA Freedom Act and USA CLOUD Act. These laws allow government authorities to access the records of host services and internet service providers. By choosing to participate, you understand that your participation in this study may become known to US federal agencies.

All research data, including Zoom ® generated transcripts and interview recordings (audio only) will be maintained on secure servers at Simon Fraser University ("Vault"), accessible only to the research team, and will be archived at the conclusion of the study in a way that preserves your anonymity. Data and the code-breaking file will be kept for 10 years or until all research publications related to the study are complete. Once interview transcription is complete, the interview recordings will be deleted. All documents will be identified only by a unique code number. For example, the transcript for student participant #1 will be saved as "SP1 Transcript". Zoom ® recordings will not be saved to the Zoom cloud. During data analysis, the data (i.e., transcripts and audio recordings) will be used on the researcher's laptop. The laptop is password protected. Participants will not be identified by name in any reports or presentations of the completed study. Your instructors will not be aware of who has or has not participated, and participation will not affect your course standing or grades in any way. Research findings will be reported without naming the university that the research was conducted at. The PhD dissertation will be a public document; information from this study will also be used at academic conferences and future publications. Data may also be used to compare to future studies on related topics. If you choose to enter the study and then decide to withdraw at a later time, all data collected about you during your enrolment in the study will be destroyed.

In current best practices in research, electronic data is to be preserved for future use in open access initiatives. Open access initiatives allow researchers from different universities to share their data upon completion of studies, in an effort to stimulate further use and exploration of existing data sets. Data from this study will be uploaded to an online repository and these files will be stripped of any information that could identify participants (e.g., names, email addresses), to ensure confidentiality.

We do not think there is anything in this study that could harm you or be bad for you. No one knows whether or not you will benefit from this study. There may or may not be direct benefits to you from taking part in this study. However, in the future, you and others may benefit from what we learn in this study. Sharing your experiences may contribute to improving post-secondary learning experiences for students with mental-health-related disabilities.

Your instructor will also be invited to participate in the study. However, you are free to decide on your participation regardless of your instructor's participation and your instructor will not know if you participate or not. Whether you decide to participate or decline to, there will be no effect on your learning, evaluation or grading, or your relationship with your instructor. If you are a current or past student of Natalie Frandsen's, you will be interviewed by a member of the research team who is a PhD candidate at SFU and *does not* work at this university.

Giving your verbal consent will signify that you have read and understood the procedures, whether there are possible risks and expected benefits of this research study, that you have received an adequate opportunity to consider the information in the documents describing the study, and that you voluntarily agree to participate in the study.

Please note that posting to comments sections, liking or sharing on social media or other forums about this study may identify you as a participant. We therefore suggest that if this study was made available to you via a social media site or other online forums, you refrain from posting comments to protect your anonymity.

Please note: this consent form is being provided to you for your information. You do not need to sign the consent at this time—we will review this form and you will provide verbal consent prior to commencement of the interview.

Appendix K. Instructor Consent Form

Office of Research Ethics
SFU ORE Application Number: H21-00820
PhD Student/Principal Investigator: Natalie M. Frandsen
Faculty: Faculty of Education
Faculty Supervisor: Dr. Kevin O'Neill
Dissertation Committee: Dr. Robert Williamson & Dr. Sheri Fabian
Research Personnel: C. Van Wingerden

Study Details and Informed Consent to Participate in PhD Research Study
"Accessing ability: Mental health and online post-secondary learning environments"

Natalie Frandsen is a PhD candidate at Simon Fraser University (SFU) and works as an instructor. Natalie is conducting this interview as a part of her PhD thesis and dissertation in the Educational Technology and Learning Design program. The research is funded by the Social Sciences and Humanities Research Council (SSHRC) of Canada. The objective of this study is to build understanding of the influences on learning for online, post-secondary students with mental-health-related disabilities. You are being invited to participate in this study because you have taught at least one online course at this university. We want to learn from your experiences to help make online learning environments more inclusive. Before you decide whether to participate, please take time to review the following information. If you have any questions or need additional information, please ask. After reviewing this information, if you are still interested in participating, then we will go forward with the interview. Participants will receive a $25 gift card upon completion of the interview.

The University and the person conducting this research study subscribe to the ethical conduct of research and to the protection at all times of the interests, comfort, and safety of participants. This research will be conducted in compliance with the Tri-Council Policy Statement (TCPS2). Should you wish to obtain information about your rights as a participant in research, or about the responsibilities of researchers, or if you have any questions, concerns or complaints about the manner in which you were treated in this study, you may contact the Committee through the Director of Research Ethics. Any complaint you make will be treated in confidence and investigated, and you will be informed of the outcome.

Interview Details

You are being invited to participate in this interview and participation is voluntary—you have the right to refuse to participate and can withdraw at any time. Interviews will be conducted by telephone or using Zoom ® (participant choice). Participants will be given a unique meeting ID and password to enter the Zoom meeting room and the waiting room feature will be used. Participants can choose to participate in the interview with their video turned on or off (audio only). At any point during the

interview, you can withdraw by leaving the Zoom meeting room and/or closing your internet browser. Should you want to withdraw, you will not be asked to provide a reason, and there will be no negative impact on your employment or benefits/services provided to you by the university. Interviews will be 60-75 minutes long. You will be asked questions about your experiences teaching online courses at this university and your experiences supporting students with mental health challenges. You can refuse to answer any question without negative consequences and you will not be asked for a reason.

Any information that is obtained during this study will be kept confidential to the full extent permitted by the law. Zoom ® is a US company, and as such, is subject to the USA Freedom Act and USA CLOUD Act. These laws allow government authorities to access the records of host services and internet service providers. By choosing to participate, you understand that your participation in this study may become known to US federal agencies.

All research data, including Zoom ® generated transcripts and interview recordings (audio only) will be maintained on secure servers at Simon Fraser University ("Vault"), accessible only to the researcher, and will be archived at the conclusion of the study in a way that preserves your anonymity. Data and the code-breaking file will be kept for 10 years or until all research publications related to the study are complete. Once interview transcription is complete, the interview recordings will be deleted. All documents will be identified only by a unique code number. For example, the transcript for instructor participant #1 will be saved as "IP1 Transcript". Zoom ® recordings will not be saved to the Zoom cloud. During data analysis, the data (i.e., transcripts and audio recordings) will be used on the researcher's laptop. The laptop is password protected. Participants will not be identified by name in any reports or presentations of the completed study. Your students, department Chair or Faculty Dean will not be aware of who has or has not participated, and participation will not affect your employment in any way. Research findings will be reported without naming the university that the research was conducted at. The PhD dissertation will be a public document; information from this study will also be used at academic conferences and future publications. Data may also be used to compare to future studies on related topics. If you choose to enter the study and then decide to withdraw at a later time, all data collected about you during your enrolment in the study will be destroyed.

In current best practices in research, electronic data is to be preserved for future use in open access initiatives. Open access initiatives allow researchers from different universities to share their data upon completion of studies, in an effort to stimulate further use and exploration of existing data sets. Data from this study will be uploaded to an online repository and these files will be stripped of any information that could identify participants (e.g., names, email addresses), to ensure confidentiality.

We do not think there is anything in this study that could harm you or be bad for you. No one knows whether or not you will benefit from this study. There may or may not be direct benefits to you from taking part in this study. However, in the future, you and others may benefit from what we learn in this study. Sharing your experiences may contribute to improving post-secondary learning experiences for students with mental-health-related disabilities.

Giving your verbal consent will signify that you have read and understood the procedures, whether there are possible risks and expected benefits of this research study, that you have received an adequate opportunity to consider the information in the documents describing the study, and that you voluntarily agree to participate in the study.

Please note that posting to comments sections, liking or sharing on social media or other forums about this study may identify you as a participant. We therefore suggest that if this study was made available to you via a social media site or other online forums, you refrain from posting comments to protect your anonymity.

Please note: this consent form is being provided to you for your information. You do not need to sign the consent at this time—we will review this form and you will provide verbal consent prior to commencement of the interview.

Appendix L. Support Staff Consent Form

Office of Research Ethics
SFU ORE Application Number: H21-00820
STUDY TEAM
PhD Student/Principal Investigator: Natalie M. Frandsen
Faculty: Faculty of Education
Faculty Supervisor: Dr. Kevin O'Neill
Dissertation Committee: Dr. Robert Williamson & Dr. Sheri Fabian
Research Personnel: C. Van Wingerden

Study Details and Informed Consent to Participate in PhD Research Study
"Accessing ability: Mental health and online post-secondary learning environments"

Natalie Frandsen is a PhD candidate at Simon Fraser University (SFU) and works as an instructor. Natalie is conducting this interview as a part of her PhD thesis and dissertation in the Educational Technology and Learning Design program. The research is funded by the Social Sciences and Humanities Research Council (SSHRC) of Canada. The objective of this study is to build understanding of the influences on learning for online, post-secondary students with mental-health-related disabilities. You are being invited to participate in this study because you work in a role that provides student supports and/or services at this university. We want to learn from your experiences to help make online learning environments more inclusive. Before you decide whether to participate, please take time to review the following information. If you have any questions or need additional information, please ask. After reviewing this information, if you are still interested in participating, then we will go forward with the interview. Participants will receive a $25 gift card upon completion of the interview.

The University and the person conducting this research study subscribe to the ethical conduct of research and to the protection at all times of the interests, comfort, and safety of participants. This research will be conducted in compliance with the Tri-Council Policy Statement (TCPS2). Should you wish to obtain information about your rights as a participant in research, or about the responsibilities of researchers, or if you have any questions, concerns or complaints about the manner in which you were treated in this study, you may contact the Committee through the Director of Research Ethics. Any complaint you make will be treated in confidence and investigated, and you will be informed of the outcome.

Interview Details

You are being invited to participate in this interview and participation is voluntary—you have the right to refuse to participate and can withdraw at any time. Interviews will be conducted by telephone or using Zoom ® (participant choice). Participants will be given a unique meeting ID and password to enter the Zoom meeting room and the waiting room feature will be used. Participants can choose to participate in

the interview with their video turned on or off (audio only). At any point during the interview, you can withdraw by leaving the Zoom meeting room and/or closing your internet browser. Should you want to withdraw, you will not be asked to provide a reason, and there will be no negative impact on your employment or benefits/services provided to you by the university. Interviews will be 60-75 minutes long. You will be asked questions about your experiences supporting students with mental health challenges. You can refuse to answer any question without negative consequences and you will not be asked for a reason.

Any information that is obtained during this study will be kept confidential to the full extent permitted by the law. Interviews will be conducted by telephone or using Zoom ® (participant choice). Participants can choose to participate in the interview with their video turned on or off (audio only). Zoom ® is a US company, and as such, is subject to the USA Freedom Act and USA CLOUD Act. These laws allow government authorities to access the records of host services and internet service providers. By choosing to participate, you understand that your participation in this study may become known to US federal agencies.

All research data, including Zoom ® generated transcripts and interview recordings (audio only) will be maintained on secure servers at Simon Fraser University ("Vault"), accessible only to the research team, and will be archived at the conclusion of the study in a way that preserves your anonymity. Data and the code-breaking file will be kept for 10 years or until all research publications related to the study are complete. Once interview transcription is complete, the interview recordings will be deleted. All documents will be identified only by a unique code number. For example, the transcript for support staff participant #1 will be saved as "SSP1 Transcript". Zoom ® recordings will not be saved to the Zoom cloud. During data analysis, the data (i.e., transcripts and audio recordings) will be used on the researcher's laptop. The laptop is password protected. Participants will not be identified by name in any reports or presentations of the completed study. Your employer, clients and supervisors will not be aware of who has or has not participated, and participation will not affect your employment in any way. Research findings will be reported without naming the university that the research was conducted at. The PhD dissertation will be a public document; information from this study will also be used at academic conferences and future publications. Data may also be used to compare to future studies on related topics.

In current best practices in research, electronic data is to be preserved for future use in open access initiatives. Open access initiatives allow researchers from different universities to share their data upon completion of studies, in an effort to stimulate further use and exploration of existing data sets. Data from this study will be uploaded to an online repository and these files will be stripped of any information that could identify participants (e.g., names, email addresses), to ensure confidentiality.

We do not think there is anything in this study that could harm you or be bad for you. No one knows whether or not you will benefit from this study. There may or may not be direct benefits to you from taking part in this study. However, in the future, you and others may benefit from what we learn in this study. Sharing your experiences may contribute to improving post-secondary learning experiences for students with mental-health-related disabilities.

Giving your verbal consent will signify that you have read and understood the procedures, whether there are possible risks and expected benefits of this research study, that you have received an adequate opportunity to consider the information in the documents describing the study, and that you voluntarily agree to participate in the study.

Please note that posting to comments sections, liking or sharing on social media or other forums about this study may identify you as a participant. We therefore suggest that if this study was made available to you via a social media site or other online forums, you refrain from posting comments to protect your anonymity.

Please note: this consent form is being provided to you for your information. You do not need to sign the consent at this time—we will review this form and you will provide verbal consent prior to commencement of the interview.

Appendix M. Student Participants' Demographic Information

Table M.1: Phase One (n = 116) and Two (n = 14)

Student Demographics	Phase 1 n (%)	Phase 2 n (%)
Gender Identity		
Female	76 (65.5)	6 (42.9)
Male	8 (6.9)	3 (21.4)
Transgender	3 (2.78)	0 (0.0)
Gender diverse	6 (5.5)	2 (14.3)
Other	11 (9.5)	2 (14.3)
Prefer not to answer	4 (3.4)	1 (7.1)
Chose not to respond	8 (6.9)	0 (0.0)
Race		
White European	92 (79.3)	10 (71.4)
Indigenous	7 (6.0)	2 (14.3)
Latino	6 (5.2)	1 (7.1)
West Asian	2 (1.7)	1 (7.1)
East/Southeast Asian	11 (9.5)	1 (7.1)
South Asian	4 (3.4)	0 (0.0)
Middle Eastern	1 (0.9)	0 (0.0)
Black	0 (0.0)	0 (0.0)
Do not know	1 (0.9)	0 (0.0)
Other	1 (0.9)	0 (0.0)
Chose not to respond	7 (6.0)	0 (0.0)
Employment status		
Not able to work	16 (13.8)	5 (35.7)
Not employed by choice	15 (12.9)	2 (14.3)
Working 1–9 hours per week	13 (11.2)	3 (21.4)
Working 10–19 hours per week	17 (14.7)	2 (14.3)
Working 20–29 hours per week	10 (8.6)	0 (0.0)
Working >30 hours per week	25 (21.6)	2 (14.3)
Other [working but did not indicate # of hours]	3 (2.6)	0 (0.0)
Chose not to respond	7 (6.0)	0 (0.0)
Age		
18–21	47 (40.5)	2 (14.3)
22–25	31 (26.7)	3 (21.4)
26–29	13 (11.2)	3 (21.4)
30–33	8 (6.9)	3 (21.4)
34–37	4 (3.4)	2 (14.3)
38 and older	6 (5.2)	1 (7.1)
Chose not to answer	7 (6.0)	0 (0.0)

Academic Year		
First-year undergraduate	16 (13.8)	0 (0.0)
Second-year undergraduate	15 (12.9)	2 (14.3)
Third-year undergraduate	33 (28.4)	2 (14.3)
Fourth-year undergraduate	36 (31.1)	4 (28.6)
First-year graduate (Master's)	3 (2.6)	2 (14.3)
Second-year graduate (Master's)	5 (4.3)	2 (14.3)
First-year graduate (Doctoral)	1 (0.9)	1 (7.1)
Second-year graduate (Doctoral)	0 (0.0)	0 (0.0)
Third-year graduate (Doctoral)	1 (0.9)	1 (7.1)
Fourth-year graduate (Doctoral)	0 (0.0)	0 (0.0)
Faculty		
Science	34 (29.3)	5 (35.7)
Social Science	40 (34.5)	4 (28.6)
Human and Social Development	13 (11.2)	4 (28.6)
Humanities	15 (12.9)	1 (7.1)
Engineering & Computer Science	10 (8.7)	1 (7.1)
Fine Arts	10 (8.7)	0 (0.0)
Business	1 (0.9)	0 (0.0)
Education	5 (4.3)	0 (0.0)
Law	2 (1.7)	0 (0.0)
Chose not to answer	5 (4.3)	0 (0.0)
Student status		
Domestic/Permanent resident	103 (88.9)	11 (78.6)
International	8 (6.9)	3 (21.4)
Enrollment status		
Full-time	61 (52.6)	8 (57.1)
Full-time on reduced load due to disability	42 (36.2)	5 (35.7)
Part-time	9 (7.8)	1 (7.1)
Chose not to answer	5 (4.3)	0 (0.0)
Living arrangement		
With parents/family	32 (27.6)	5 (35.7)
With spouse/partner	25 (21.6)	6 (42.9)
University residence	11 (9.5)	1 (7.1)
With roommates	24 (20.7)	2 (14.3)
Alone	11 (9.5)	0 (0.0)
Chose not to answer	7 (6.0)	0 (0.0)
Mental illness diagnosis		

Mood disorder	92 (79.3)	13 (92.8)
Anxiety disorder	102 (87.9)	11 (79.6)
Mood disorder & anxiety disorder	84 (72.4)	10 (71.4)

Experience with online learning	Online asynchronous	Online synchronous	Remote synchronous
	Phase 1, Phase 2	Phase 1, Phase 2	Phase 1, Phase 2
0 courses	24 (20.7), 3 (21.4)	38 (32.8), 5 (35.7)	16 (13.8), 4 (28.6)
1–3 courses	60 (51.7), 8 (57.1)	39 (33.6), 5 (35.7)	42 (36.2), 6 (42.9
4–10 courses	26 (22.4), 2 (14.3)	33 (28.4), 3 (21.4)	50 (43.1), 4 (28.6)
11 or more courses	1 (0.9), 1 (7.1)	1 (0.9), 1 (7.1)	3 (2.6), 0 (0.0)
Chose not to answer	5 (4.3), 0 (0.0)	5 (4.3), 0 (0.0)	5 (4.3), 0 (0.0)

Appendix N. Instructor Participants' Demographic Information

Table N.2: Phase One (n = 40) and Two (n = 15)

Instructor Demographics	Phase 1, n (%)	*Phase 2, n (%)*
Gender Identity		
Female	28 (71.8)	12 (80.0)
Male	8 (20.5)	1 (6.7)
Non-binary	1 (6.7)	1 (6.7)
Gender diverse	2 (5.13)	1 (6.7)
Transgender	0 (0.0)	0 (0.0)
Prefer not to answer	1 (6.7)	0 (0.0)
Race		
White European	35 (89.7)	10 (66.7)
Indigenous	4 (10.3)	2 (13.3)
Latino	1 (2.6)	1 (6.7)
East/SE Asian	1 (2.6)	0 (0.0)
Other	2 (5.1)	2 (13.3)
Appointment classification		
Continuing sessional or lab	2 (5.0)	2 (13.3)
Instructor	11 (27.5)	3 (20.0)
Sessional	9 (22.5))	5 (33.3)
Teaching: Pre-tenure	5 (12.5)	2 (13.3)
Teaching: Tenure	2 (5.0)	1 (6.7)
Research: Pre-tenure	10 (25)	2 (13.3)
Research: Tenure		
Age		
<30	5 (12.8)	1 (6.7)
31–40	8 (21.5)	3 (20.0)
41–50	7 (18.0)	3 (20.0)
51–60	12 (20.8)	5 (33.3)
61–70	7 (18.0)	3 (20.0)
71 and older	0 (0.0)	0 (0.0)
Faculty		
Education	1 (2.6)	1 (6.7)
Human and Social Development	18 (45.0)	7 (46.6)
Humanities	5 (12.5)	2 (13.3)
Science	6 (15.0)	2 (13.3)
Social Science	8 (20.0)	3 (20.0)
Business	2 (5.0)	0 (0.0)

Combined teaching experience (online + in-person)			
1–5 courses	9 (22.5)		2 (13.3)
6–10 courses	4 (10.0)		2 (13.3)
11–15 courses	2 (5.0)		1 (6.7)
16 or more courses	25 (62.5)		10 (66.7)

Experience with online teaching	Online asynchronous	Online synchronous	Remote Synchronous
	Phase 1, Phase 2	Phase 1, Phase 2	Phase 1, Phase 2
0 courses	10 (25.0), 4 (26.7)	23 (57.5), 7 (46.7)	16 (40.0), 7 (46.7)
1–5 courses	17 (42.5), 4 (26.7)	13 (32.5), 5 (33.3)	23 (57.5), 8(53.3)
6–10 courses	5 (12.5), 1 (6.7)	2 (5.0), 2 (13.3)	1 (2.5), 0 (0.0)
11–15 courses	1 (2.5), 1 (6.7)	1 (2.5), 0 (0.0)	0 (0.0), 0 (0.0)
16 or more courses	7 (17.5), 5 (33.3)	1 (2.5), 1 (6.7)	0 (0.0), 0 (0.0)

Appendix O. Ethical Considerations for the Research Process

Researchers are bound by the ethical principles of beneficence ("doing good") and non-maleficence ("avoiding harm") (Hays & Singh, 2012). Ethical researchers show respect, keep their promises, do not deceive and do not pressure people to be involved in the research (Rubin & Rubin, 2012). Being a critical researcher takes this further by considering power, privilege and oppression within the research processes (Cannella & Lincoln, 2018). Participation in this study was completely voluntary and throughout the stages of the study every effort was made to protect the identities of the participants. For example, during the data collection phase, each participant was assigned a unique identifier (i.e., Student Participant (SP) 1, SP 2 etc.) and data was filed using these identifiers. In the reporting of findings, pseudonyms were used and in one case, instructor appointment classification was changed[94] as an extra layer of identity protection. This research was conducted in compliance with the Tri-Council Policy Statement (TCPS2) and approval to conduct this study was obtained through a harmonized review with the Provincial Research Ethics Platform. All research data were maintained on a secure server at Simon Fraser University (SFU) called *SFU Vault,* accessible only to the researcher.

Participation in this research was determined to be low-risk for all participants. Because I am professionally associated with the university where data collection took place, precautions were taken to mitigate any actual or perceived power-over relationships between myself and participants who were known to me. Consequently, two student participants were interviewed by a member of the research team ("CW") who is a PhD candidate at SFU and does not work at the host university. One instructor participant and one student support staff participant who have worked with me, were given the option to be interviewed by CW, but chose to be interviewed by me. To protect the identity of participants, I gave each participant a pseudonym for the purposes of including excerpts from the interviews. Additionally, demographic data was aggregated to further protect the identity of people in minority groups (Wasserman & Ossiander, 2018).

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[94] Only one lab instructor participated, and although it would be almost impossible to determine who this person was, to ensure their identity was protected they were classified in a teaching role (versus lab instructor role).

Psychological safety is a state in which people feel respected, included and able to contribute without fear of embarrassment, ridicule or punishment (Frazier et al., 2017; Kahn, 1990). Consideration of psychological safety includes preventing psychological harm and promoting mental health (MHCC, 2013), which is of particular importance for research associated with vulnerable populations.[95] Fostering strong researcher-participant relationships is central to psychologically safe research environments and is integral to trauma-informed-approaches (TIAs[96]) that prioritize safety and reciprocity in relationship (MCFD, 2017). This requires strong inter-personal skills, including the ability to build rapport with participants. Rapport is a pre-requisite for developing emotional connectedness, establishing trust in relationships, conducting ethical qualitative research and obtaining quality data (Roller & Lavrakas, 2012; Seitz, 2015; Thwaites, 2017; Weller, 2017). Rapport and trust are inextricably linked and are essential for candid disclosure and rich data sharing during interviews (Weller, p. 614).

To promote psychological safety, I built rapport and developed relationships upon first communication with participants. I provided clear and friendly communication regarding logistics such as time commitment, interview purpose, interview topics, and contact information (for me and my advisor). Two weeks prior to the interviews, a list of no-cost mental health support resources was provided to student-participants in case they were triggered during the interviews.[97] Throughout the interview process, I used non-verbal communication skills such as nodding and smiling, ensured privacy and confidentiality, and engaged in ongoing critical self-reflection. Critical self-reflection was done through journaling and debriefing with my supervisor.

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[95] While this research is focused on students with mental-health-related disabilities, a group that might be classified as "marginalized" or "vulnerable," I do not see this student population in this way. This research was centred on the student voice, was strength- and ability-based and provided opportunities for research participants to be heard and to contribute to making post-secondary institutions more inclusive and health-promoting.

[96] "Trauma-informed approaches" (TIA) are based on the recognition of the high prevalence and widespread impacts of trauma (Sweeney, 2018, p. 323). TIAs aim to create environments *and* relationships that both promote healing and prevent further or re-traumatization, making this an important consideration for this research.

[97] Triggers are external stimuli that trigger reactions that may produce uncomfortable emotional or psychiatric symptoms, such as anxiety, panic, discouragement, despair, or negative self-talk (Mentalhelp.net, 2013). Examples of supports include the University Mental Health programs, crisis lines, and multi-faith services.