Exploring Intersectional Factors Associated with Mental Health Service Utilization in a Sample of LGBT2Q+ Canadians

Samson Tse
tsx4280@mylaurier.ca

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Exploring Intersectional Factors Associated with Mental Health Service Utilization in a Sample of LGBT2Q+ Canadians

by

Samson Siu Chong Lucas Tse

Hon. BSc. in Psychology, University of Ottawa, 2019

THESIS

Submitted to the Department of Psychology

in partial fulfillment of the requirements for

Master of Arts in Community Psychology

Wilfrid Laurier University

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Committee:

Dr. Todd Coleman (Supervisor)
Dr. Simon Coulombe (Member)
Dr. Maritt Kirst (Member)

External Examiner:

Dr. Andrea Daley
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Abstract

The present thesis explores LGBT2Q+ (lesbian, gay, bisexual, transgender (trans), Two-Spirit, queer/questioning, plus) and racialized mental health service utilization within Canada using intersectionality-informed quantitative methodology, separated into additive and multiplicative stages. Data from the 2020 LGBT2Q+ Health Survey (N = 1542) were analyzed using modified Poisson regression. Additive analyses explored mental healthcare utilization as framed by the Andersen Behavioural Model of Healthcare Utilization categories: predisposing, enabling, and need. Results show that predisposing and need factors are more statistically associated with mental healthcare utilization, and that there are distinct intracategorical (within-group) differences in subgroups, particularly between racialized and Indigenous respondents. Bivariate associations between mental health conditions and predisposing factors further suggest increased mental health needs and mental health service utilization in sexual orientation and gender minorities. The multiplicative stage built upon results from the additive stage to further explore differences in mental health service utilization. Two-way to four-way interaction models of Andersen predisposing factors show persistent trends in identifying as non-White, trans or gender-diverse, more polysexual orientations, and being born outside of Canada as factors associated with increases in likelihood of mental health service utilization. In bivariate analyses, being racialized was associated with lower mental health service utilization as well as mood and anxiety disorders, yet being racialized was associated with an increase in mental health service use when the previously mentioned intersectional factors were considered. Findings demonstrate how plurality of systems of marginalized identities intersect to create distinct health outcomes.

**Keywords:** LGBT2Q+, ethnoracial minority, mental health, healthcare utilization, intersectionality
Acknowledgements

The only reason why I am able to complete this is because of the amazing support I have received over the last two years. I would first like to thank my supervisor Dr. Todd Coleman for his advice, expertise, and mentorship throughout my Master’s degree, and for taking a chance on me as a graduate student. His knowledge in statistics is what made this thesis possible. I am forever grateful for the opportunities and support he provided. I would like to thank my internal committee members Drs. Simon Coulombe and Maritt Kirst for their invaluable advice throughout the writing of this thesis, starting from a one-page proposal submitted in class to now a finished thesis. Their advice and knowledge on quantitative methods and health inequalities have been indispensable throughout the process.

I want to thank my parents for their unwavering support as I forge my way through the world. No words can describe the amount of gratitude and love I feel for them. I would not be here today without them. Lastly, I would like to thank my friends; new and old. To old friends, thank you for putting up with me after all these years, and for being understanding when I sporadically disappear. To new ones I’ve made in the program, thank you for making me feel welcomed and at home as soon as I stepped foot into the building. I can say with 100% certainty that I would not have made it through the program without them.
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Figure 1. Summary of key results from the LGBT2Q+ Health Survey ($N=1542$)
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Despite boasting of a universal healthcare system, health inequalities remain in Canada (Bryant et al., 2011; Dunlop et al., 2000). Canadian and international literature on ethnoracial minorities, also referred to as racialized peoples, and sexual orientation minorities have identified systemic barriers to healthcare such as language (Subedi & Rosenberg, 2014), accessibility (Lebrun, 2012), discrimination (Edge & Newbold, 2013; Gustafsson et al., 2017), and stigma (Corrigan et al., 2014). Additionally, subgroups within LGBT2Q+ and ethnoracial minorities are suggested to have differences (known as intracategorical differences in this thesis).

Intracategorical differences between bisexual individuals and monosexual individuals (people who are attracted to one gender) in self-reported mental and physical health have been reported, with bisexual peoples more likely to be diagnosed with a mental illness, while gay men tend to report higher income and report higher levels of overall health (Pennasilico & Amodeo, 2019; Platt et al., 2018). A gendered component may also be present, whereby researchers have found that sexual orientation minority women (lesbian, bisexual, and women who have sex with women) tend to report more unmet healthcare needs and have more diagnoses of mental illness than men (Baptiste-Roberts et al., 2017; Everett & Mollborn, 2014). The same intracategorical differences can be observed in racialized peoples. For instance, the Pan-Canadian Health Inequality Report (2018) found that South Asians reported high levels of mental health, while East and Southeast Asians reported the lowest levels of mental health. Furthermore, there is an intracategorical difference in health status and factors related to health, such as differences in financial resources and social support for racialized peoples. This research evidence points to potential differences in mental health among racialized and sexual orientation and gender
minorities that remain relatively unexplored. Findings from the literature indicate the need for
nuance in minority health research, as seen in intracategorical differences within diverse minority
groups and the limited literature that examine mental health outcomes of people who experience
multiple marginalization- a research and methodological gap that can be addressed by
intersectionality theory (see Crenshaw, 1989). In addition to taking on an intersectional lens in
the interpretation of results, one way in which intersectionality theory can be incorporated into
quantitative health research is by taking on additive and multiplicative steps during data analysis
(Bauer, 2014; Rouhani, 2014). To explore diversity in LGBT2Q+ mental health and mental
health service utilization within Canada, the present exploratory research is addressed through
two overarching research questions:

1. What predisposing, enabling, and need factors are associated with mental health
   service utilization within the past 12 months for a sample of sexual orientations and
gender minorities?

2. What are the intersectional differences in mental health service utilization during the
   past 12 months within a sample of different sexual orientations, gender identities, and
   ethnoracial minorities?

The present research uses modified Poisson regression to analyze data from the 2020 LGBT2Q+
Health Survey (N=1542), collected by Coleman and colleagues. The survey is comprised of
multiple components that explore the health of LGBT2Q+ people, as well as related factors, such
as minority stress and social provisions. The additive step assumes that variables or factors are
mutually exclusive. This will be represented by research question #1. The multiplicative step is
the statistical equivalent of intersectional axes intersecting to create distinct experiences. This is
embodied through research question #2 by looking at interactions of main effects of predisposing
factors (i.e., age, sexual orientation, ethnoracial group, gender modality, and birth country). At the same time, by framing variables of interest using the Andersen model of healthcare utilization, research questions #1 takes on two roles: to inform subsequent interaction models for holistic intersectionality-informed health research, and act as an exploration of factors associated with mental health service use within the 2020 LGBT2Q+ Health Survey. The aim of research question #1 is to use the Andersen model of healthcare utilization to explore variables of interest related to mental health service use and to inform subsequent multiplicative analyses. Research question #2 delves into how intersectional axes (interactions of main effects) such as age, ethnoracial identity, gender identity, sexual orientation, and whether a respondent was born in Canada intersect/interact to influence mental health service utilization.

Exploratory in nature, this thesis will first begin with a literature review to frame and contextualize the research topic at hand, followed by a Method section. Theoretical frameworks will fall under the method section. Albeit slightly unconventional in its placement within a thesis, theoretical frameworks were integral to the methodology of the present thesis, ranging from how variables of interest were categorized all the way to the number and types of analyses used. The results section is separated by additive and multiplicative results. A shared discussion allows the author to compare results from two similar yet different approaches to minority health research. Exploratory analyses produced numerous tables, so a visual with a summary of key findings is included at the beginning of the discussion to serve as a reminder to readers. Lastly, the thesis ends with a personal reflection and a brief conclusion.
Literature Review

Ethnoracial Minority Groups and Racialized Immigrants

Background

The rates and countries of origin of recent immigrants to Canada have changed drastically within the last few decades (Mensah, 2014; Thomson et al., 2015). Immigrants from non-White countries are now the face of recent immigrants (also known as newcomers), defined as those who have immigrated to Canada for five years or less. Despite the large and still-growing bodies of literature on immigration and ethnoracial identity in Canada, ethnoracial identities and the label of being an immigrant have oftentimes been conflated and homogenized to mean the same within academia and the public discourse (Mensah, 2014). Immigrants are not a homogenous group, but rather are made up of various ethnoracial and cultural groups from all over the world that do not identify, nor should be studied, as if they are a single population. Due to the homogenization of immigrants and ethnoracial minority groups in academic literature, the literature on immigrants is much richer compared to established immigrant ethnoracial minority groups.

Without going into the sociopolitics of why certain groups are considered immigrants and why some are not, a widely used basic definition of an “immigrant” is someone who is settling to Canada from their country of origin permanently; immigrants differs from persons who may hold visas, who may only stay for a definite amount of time, and are not considered Canadian citizens (Statistics Canada, 2019). Meanwhile, “ethnoracial group” is the combination of both an individual’s ethnicity and race. This is most commonly used to differentiate and to contextualize the social experiences of persons of colour who may be classified as “White” but are not treated as such (Viruell-Fuentes et al., 2012). Ethnoracial minorities and “racialized” are context-
dependent terms that refer to persons living in Canada who do not identify as White. It is important to note that a person’s ethnoracial identity is much more complex than simple categorizations of race/ethnoracial background. The terms “ethnoracial minority” and “racialized” will be used interchangeably in the present research. People of Arab descent are an example of why the categorization of race/ethnicity is not enough to fully encompass something as complex as social experiences. In the US, they are categorized as “White” in the census, yet such a categorization does not mean that others view nor treat people of Arab descent as White (Viruell-Fuentes et al., 2012).

**Intracategorical Differences**

Statistics on the general mental health of ethnoracial groups are limited, especially within the Canadian context. Research on the mental health of the general ethnoracial minority population is scant, in which the research either focuses on immigrants, or on subpopulations, such as adolescents or older adults (Hansson et al., 2012). While a considerable number of people who identify as an ethnoracial minority may be immigrants, the conflation between being an ethnoracial minority and immigrant erases the intracategorical differences that exist in the cultural identities of various ethnoracial and immigrant groups that live in Canada. This especially holds true for the recent African diaspora and long-established Black persons in North America, of which are socially and culturally distinct groups (Mensah, 2014). The literature suggests that the social experiences between immigrants coming from more affluent countries such as Hong Kong/China or Japan versus Black African immigrants differ significantly (Mensah, 2014). The experiences of White immigrants will also differ from those who are more likely to be perceived as “foreign” due to their ethnoracial appearances. All of the above factors point to the need for a much more refined and critical look at immigrant and ethnoracial minority
health that takes into account intersectionality, such as the effects of geopolitics and underlying sociocultural climate of the receiving country—Canada.

There are several subgroups that fall under the term “immigrant.” Economic immigrants are persons who the government deems to meet the labour market needs of Canada, while refugee claimants refer to the forced migration of persons to Canada due to various reasons that the Canadian government deems unsafe (Statistics Canada, 2019). Although both groups may be newcomers, the general trend in the literature suggests that there are differences in mental health between the two groups. One study on refugees found that maternal traumatic distress, in addition to her own mental health, has an adverse effect on child mental health and overall family functioning (Sangalang et al., 2017). More specifically, if parents do not have a full grasp of either of the official languages, a linguistic gap can develop between the parent and the child, since the latter tend to acculturate much faster. This can lead to lack of communication and even anger and frustration toward family members, all leading to disruption in family cohesion (Sangalang et al., 2017). Although a linguistic gap may still develop within immigrant families, the etiological difference lies in their experiences, which has the potential to impact their mental health status differently. The differences in experiences prior and during immigration have been linked to variations in healthcare utilization among different immigrant classes, for example, between economic immigrants and refugees (Durbin et al., 2014).

**Health Inequalities**

The relationship between health inequalities (defined as unequal or disparity in health outcomes of individuals or groups) and healthcare utilization is complicated and can be cyclical in nature (Braveman et al., 2011). Health inequalities are defined as unequal or disparate health outcomes between individuals or groups (Kawachi et al., 2002). Within this research context,
health inequality is seen due to LGBT2Q+ people as a group tending to report lower levels of mental health when compared to their heterosexual and cisgender counterparts. Though health inequalities and barriers to care may be presented in close proximity to each other in the literature due to their interconnectedness, a careful distinction between the two should be noted. Health inequalities can be conceptualized as the outcome, while barriers to healthcare access are the underlying mechanisms or factors that exacerbate and/or lead to health inequalities. By the same token, physical health and mental health in this research have the same entwined relationship. Frequently presented as mutually exclusive, physical and mental health reinforce and have direct and indirect effects on each other. Stress, especially chronic stress, activates physiological responses within the human body that can weaken the immune system, while living in constant stress make it much harder for individuals to engage in “healthy” behaviors, such as regular physical activities or healthy eating, making individuals much more susceptible to physical health issues. Finally, chronic stress takes a toll on an individual’s mental health through uncertainty and anxiety, in which individuals may be more likely to turn to damaging coping mechanisms; all factors leading to health inequalities (Raphael et al., 2020). It is due to the aforementioned entwinements that health inequalities and mental healthcare utilization, and physical and mental health are mentioned in this literature review. Research on physical health inequalities between groups will also be mentioned to provide more context for health inequalities and a more comprehensive overview of inequalities in health and access/utilization to healthcare.

The healthy immigrant effect posits that recent immigrants’ health on arrival are better than native-born Canadians (Lu et al., 2017; Vang et al., 2017). Immigrants having overall better health upon arrival can be attributed to selection bias in the immigration process and is reflected
in the effect. The criterion of letting “skilled” immigrants into Canada leads to the initial health boost observed in the healthy immigrant effect, given that higher education attainment is linked to higher socioeconomic status (SES) and better health (Lu et al., 2017; Vang et al., 2017). Combined with strict health screening of immigrants to Canada, a selection effect occurs in which the healthiest are able to emigrate to Canada (Gushulak et al., 2011; Lu et al., 2017). What is alarming, however, is that the initial health advantages have been found to decline over time in Canada. The transition into worse health status is especially more prominent with refugees and immigrants experiencing lower SES (Gushulak et al., 2011), suggesting that social factors such as SES may negatively influence the health of immigrants over time.

The decline and eventual convergence of immigrant health to their native-born counterparts has been hypothesized to be due to the acculturation process into Canadian culture, while other studies suggest that the deterioration of health has much to do with social determinants of health (defined as the living and working conditions that shape individuals’ health by Raphael et al. (2020)) that prevent healthcare access, or contribute to worsening health, such as lack of social support, lack of belonging, and inability to communicate in either one of the official languages (Subedi & Rosenberg, 2014; Viruell-Fuentes et al., 2012). One may draw the conclusion that a longer stay and better language(s) proficiency can lead to better health outcomes for ethnoracial minority groups, but that is not the case. Overall, racialized people in Canada report poorer physical and mental health compared to native-born and White Canadians (Pan-Canadian Public Health Network, 2018). Examples of underlying factors such as experiencing systemic racism and xenophobia can create a negative feedback loop of encountering barriers to healthcare, followed by worsening health outcomes. When comparing the health of Black and White Canadians, controlling for immigrant status alongside other
variables, Veenstra and Patterson (2016) hypothesized that certain societal factors such as racism may exacerbate worse health conditions such as higher rates of diabetes and hypertension. Paradoxically, they found that Black Canadians have lower cancer and heart disease rates than White Canadians. Qualitative literature on the perceived health status of immigrants shows that many report having better access to health resources compared to their countries of origin, though overall population health trends suggest otherwise (Dean & Wilson, 2010; Subedi & Rosenberg, 2014).

Indigenous peoples (First Nation, Métis, and Inuit) living in what is known as Turtle Island report lower levels of health, across multiple health measures (Adelson, 2005; de Leeuw et al., 2010). The life expectancy of Indigenous peoples is much lower than non-Indigenous peoples (Adelson, 2005; Tjepkema et al., 2019). Higher rates of suicide in Indigenous youth, and higher rates of depression have all been reported (de Leeuw et al., 2010). Indigenous mental health inequalities must be understood within the colonial context and the contemporary structures that uphold it (de Leeuw et al., 2010; Nelson & Wilson, 2017). Effects of colonialism are also intersected by other social determinants such as class, gender, and sexual orientation (Nelson & Wilson, 2017). Intergenerational trauma caused by colonial violence and anti-Indigenous racism are often cited as major factors that impact the mental and physical health of Indigenous peoples. Nelson and Wilson (2017) have argued that narratives of mental health for Indigenous peoples in research may play into essentialism of Indigenous healing methods and shift the focus onto the individual as cause of mental health conditions rather than as socially produced.
Social Determinants of Health

The literature suggests that social determinants such as social exclusion may impact an individual’s life course and mental health status. In an American study that analyzed the prevalence of mental disorders and healthcare use across ethnoracial adolescent groups, Georgiades et al. (2018) found that prevalence rates varied greatly according to ethnoracial background and immigration generation. They found that, while the odds of Hispanic adolescents developing mood or anxiety disorder were higher, the odds vary by immigrant generation. They further found that first generation Asian adolescents were less likely to develop mood and anxiety disorders, but the odds increased significantly in second generation. In Canada, the Pan-Canadian Report on Health Inequalities (2018) found that there are differences among self-reported mental health by various ethnoracial groups. East and Southeast Asians, compared to White adults, were more likely to report lower self-reported mental health, at 7.1% (CI: 6.1-8.2) and 5.8% (CI: 5.6-6.0) more, respectively. South Asians reported higher self-reported mental health across all ethnoracial minority categories. Such diversity in ethnoracial differences would have been obscured if quantitative health researchers focused solely on White versus non-White populations. Once again, this points to the need to move away from the non-White versus White binary to more intersectional analyses.

With the increased prevalence of mental disorders in ethnoracial minority groups, one would expect that their rates of mental healthcare access would be higher, but that is not the case (Tiwari & Wang, 2008). The patterns of worse mental health yet lower mental health utilization rates are present across most ethnoracial minorities (Tiwari & Wang, 2008). There is something much deeper, more systemic at play that cannot be simply elucidated by “culture” or acculturation, broadly defined as processes of behavioural, cultural, and psychological changes.
to an individual when they migrate to the receiving country (Berry & Hou, 2016; Viruell-Fuentes et al., 2012). Larger social constructs and systems such as racism, discrimination, and xenophobia all affect the mental health of ethnoracial minorities and immigrants. A criticism of acculturation is that it individualizes what is a structural problem onto new immigrants and ethnoracial minority groups to thrive to become “Canadian” in order to improve their health, all while ignoring the effects of precarious social and economic status (Viruell-Fuentes et al., 2012). Another assumption in using a cultural explanation to explain health inequalities is that it essentially blames the individual’s culture as the source for bad health. Emerging evidence has shown that discrimination is a major factor in health inequities for newcomers in Canada (Edge & Newbold, 2013). Discrimination can take on many forms, such as disproportionately working in precarious work environments, inadequate healthcare provision, and social exclusion, all impeding on the health status of newcomers. Despite this evidence, Edge and Newbold (2013, p.141) noted that research is still “limited with respect to the unique experiences of newcomer immigrant and refugee populations that may experience multiple, intersecting forms of discrimination not solely attributed to racial status or physical appearance”.

**Income Inequality.** Immigrants are often in a precarious position because economically, they do not fare as well as Canadian-born persons, as statistics have shown (D’Addario et al., 2007). The economic assimilation model states that the gap narrows over time, but researchers found that recent immigrants have a relative lower income, thus a delayed “catch up” period compared to earlier immigrant cohorts. Poverty tends to be highest for immigrants who have less than high school education, are female, do not speak English at home, and/or are of non-European ethnicity (D’Addario et al., 2007). A more recent report found that racialized immigrants earn a much lower wage for every dollar that non-racialized immigrants earned
(Block et al., 2019). Furthermore, that racialized immigrant wage gap continues onto next generations. Not only that, but the act of settling into a new country can bring about an increased precarious mental health status. Immigrants may go through what is called “povertization” in which they may experience a long period of little to no income upon initial settlement (Thomson et al., 2015). The effects of experiencing low SES cannot be ignored in its significance in exacerbating other chronic stressors that may combine to become precursor for the development of mental health issues (Thomson et al., 2015). Social exclusion may often occur concurrently, increasing their precariousness. Income and SES are important social determinants in terms of newcomer and ethnoracial minority mental health, thus is a factor that will need to be explored in its relation to access to mental healthcare.

**Mental Health Service Access and Utilization**

Utilization of healthcare services is not straightforward. Often, barriers to access lead to unmet healthcare needs (also known as unmet health needs), defined as the absence of appropriate care and services when there is a need for them (Carr & Wolfe, 1976). A distinction must be made between mental health service *access* and mental health service *utilization*. Healthcare access refers to an individual’s ability to receive healthcare services (Liu et al., 2006). Utilization is the actual usage of the services, which is dependent on accessibility. In general, newcomers across all immigrant classes are low users of the Canadian healthcare system (Durbin et al., 2014; Thomson et al., 2015). In combination with multiple other social determinants of health, an individual’s health is linked to their access to healthcare. The Anderson model of healthcare utilization (to be further elaborated on later) posits that a perceived need for healthcare is one of the factors that dictates whether someone will utilize healthcare (Andersen et al., 2014). Compared to the US, rates of healthcare utilization in Canada are much higher among
all immigrant groups (Lebrun, 2012). The difference is likely due to the healthcare systems in the two countries, with the US having a more fragmented insurance-based system and universal healthcare in Canada. However, Canadians are still plagued by poor access to healthcare, despite the higher overall access rates compared to the US (Bryant et al., 2011). Socioeconomic status plays a role in explaining the healthy immigrant effect, in which after analyzing the Canadian Community Health Survey (CCHS), Lu and Ng (2019) found that the healthy immigrant effect is most prominent within higher SES immigrant classes and least among refugees. Higher SES immigrants may have more material resources that act as a protective factor against mental health issues, or even if they did, they are able to access services in contrast to refugee claimants, who may not have the resources to do so.

**Identified Barriers.** Socioeconomic status, more specifically financial resources, often dictates the location that an immigrant will settle. Newbold (2010) found that the location in which new immigrants settle is directly linked to the access and availability to health and social services, thus affecting their overall health. Depending on the geographic location of settlement, certain healthcare providers or culturally appropriate or competent healthcare providers may not be available for those who need it. Indigenous communities, especially in rural and remote areas are unable to access proper and adequate health services (National Collaborating Centre for Indigenous Health, 2019). Newbold (2010) also found that individuals who settled in marginalized areas continue to stay there and become further marginalized. Housing in marginalized or low-income areas is often much cheaper, drawing new immigrants or persons with lower SES and/or limited financial resources to live there. Marginalized or low-income areas may not have as many health and social services to access, becoming another barrier to services.
Language is another key factor in determining the patterns of healthcare access for newcomers, in which those who do not speak French or English like to seek healthcare professionals who speak the same language as them (Subedi & Rosenberg, 2014; Thomson et al., 2015; Tiagi, 2016). This begs the question of whether health services in Canada are culturally appropriate or competent for non-Anglophone or non-Francophone Canadians when it is commonly cited as a major barrier (Leduc & Proulx, 2004; Lebrun, 2012; Tiagi, 2016). Cultural competency in healthcare, especially mental healthcare is important because it makes the individual much more likely to access and continue care, but is only an ameliorative change to the broader structural issue of racism (Viruell-Fuentes et al., 2012). Related to language barrier is the lack of knowledge on how to navigate a new healthcare system. Being unable to navigate the healthcare system is a systemic barrier that the literature has identified (Thomson et al., 2015; van der Boor & White, 2020). Barriers to accessing healthcare such as language proficiency and being unable to navigate the complex healthcare system help explain the statistics indicating that immigrants with a shorter length of stay and lower official language(s) proficiency have less access to healthcare services compared to those with longer stays and higher official language(s) proficiency (Lebrun, 2012).

**Sexual Orientation and Gender Minorities**

**Background**

The term sexual orientation minority is an umbrella term that refers to persons who do not identify as heterosexual, or “straight”. This includes sexual orientations such as gay, lesbian, bisexual, and other sexualities that people identify with. While researchers may use the term “sexual orientation minorities,” many are referring to the LGB community within their research context. The associations between sexual orientation minority status and mental health are well-
noted within the literature. The extensive stigma and discrimination, and even violence against sexual orientation minorities must be taken into account when talking about the mental health of sexual orientation minority persons. It was not until the early 1970s that the Diagnostic and Statistical Manual of Mental Disorders (DSM) removed “homosexuality” as a mental disorder as a result of gay liberation activists (Daley & Mulé, 2014). Even to this day, conversion therapy is still widely available, despite condemnations from the American Psychological Association and LGBTQ+ rights activists (Platt et al., 2018). A 2020 report by the International Lesbian, Gay, Bisexual, and Intersex Association (ILGA World) indicates that conversion therapy is much more prevalent in Canada, in addition to many parts of the world, than one would think (Ramon Mendos, 2020). This hostile sociopolitical environment has been hypothesized to contribute to the overall worse mental health trends for LGB peoples (Hatzenbuehler & Pachanski 2016; Meyer, 2003). For example, Coleman et al. (2016) found that experiences of discrimination (and internalized stigma) were associated with an increase in likelihood of utilizing mental health services within the past 12 months in a sample of gay, bisexual, and men who have sex with men in Middlesex County, Ontario. Although the body of literature about sexual minority health is growing rapidly, the intersections of ethnoracial minority group identity and sexual minority women are under-investigated compared to other groups or topics, such as men who have sex with men (MSM), sexual health risk behaviours, and HIV/AIDS (Baptiste-Roberts et al., 2017; Mereish & Bradford, 2014).

**Health Inequalities**

Discrimination, stigma, and lack of social support have all been noted to contribute to the higher prevalence of mental health disorders in sexual orientation minorities (Meyer, 2003). Prejudice, discrimination, and sexual orientation concealment are common experiences for
sexual orientation minorities (Bränström, 2017). While the literature often refers to sexual orientation minorities as a monolith, that is far from reality. Within-group (referred to as intracategorical in this thesis) differences have been noted by Tjepkema (2008) and in the recent 2018 Pan-Canadian Report on Health Inequalities, for example. Both of the aforementioned studies analyzed the Canadian Community Health Survey for rates of low self-reported mental health by sexual orientation minorities. Data spanning from 2003 to 2013 suggest that bisexual persons have a much higher prevalence of low self-reported mental health compared to persons who identify as gay or lesbian and heterosexual Canadians, at 17.8% more (Pan-Canadian Public Health Network, 2018). Gay and lesbian Canadians also report significantly lower self-reported mental health at 10% compared to heterosexual adults, with the prevalence slightly lower than bisexual persons.

**Bisexuality.** The significance of exploring intracategorical differences can be further elucidated through the comparison in health outcomes amongst gay, lesbian, and bisexual individuals across various health metrics. Bisexual individuals have greater prevalence of anxiety, depression, substance use, and suicidality compared to their gay and lesbian counterparts, in addition to facing barriers to mental health services (Chan et al., 2020; Kahn et al., 2018; Rich et al., 2018; Ross et al., 2014). The effects of discrimination and stigma on bisexual persons are understudied compared to persons who identify as gay or lesbian (Pennasilico & Amodeo, 2019). It comes to no surprise then, that a consensus cannot be reached on the impact of anxiety caused by biphobia, as studies jump from one conclusion to another. For example, Ross et al. (2016) found from a sample of bisexual peoples in Ontario, Canada that there is statistical significance in terms of poorer self-reported mental health for those under the low income cut off versus those who were above; in which their qualitative portion of the study
found various pathways that may explain the health inequality. Using data collected from the same sample as Ross et al. (2016), MacLeod et al. (2015) found that their results did not support that biphobia as proposed in the minority stress theory had an impact on anxiety. This is hypothesized to be due to their survey’s inability to measure various aspects of life stress. Their sample did not find high levels of biphobia either. Intersectional identities, such as ethnoracial identity, and immigrant status also need to be explored in relation to LGBT2Q+ mental health and mental health service utilization. It should be noted, however, that reaching a consensus is not the main goal, but a sign for the need for a better understanding of why results from studies vary. Ross et al. (2018) have noted that bisexual health research is dominated by research contexts stemming from North America and Europe. This obscures a whole slew of contextual and sociopolitical factors that may increase or decrease an individual’s minority stress, such as the lack of formal legislation that protect LGBT rights in many countries. Chan et al. (2020) saw within a sample of LGBT adults in Hong Kong that bisexual individuals were statistically significantly associated with poorer mental health, a finding that is consistent with the Western literature. Using the minority stress theory (to be discussed in detail further in this document), Chan et al. (2020) found that factors at the personal and interpersonal levels are much more present due to cultural norms, in which bisexual individuals are more likely to conceal their sexual identity, have a lower sense of belonging to the LGBT community, and greater identity uncertainty. Additionally, the same study found evidence of a statistical interaction between sexual orientation concealment and mental health inequalities. The inclusion of cultural norms should be explored further as a factor in predicting bisexual health inequalities, especially within the Canadian context, considering the multicultural landscape and the sizable population of newcomers that arrive in Canada every year.
**Indigenous Two-Spirit.** Two-Spirit is an Indigenous term first used during the Third Annual Intertribal Native American/First Nations Gay and Lesbian Conference in Winnipeg, Canada in 1990 to challenge sexual orientation and gender outside of settler-dominated conceptualization of the gender binary (Robinson, 2020). Robinson (2020) refers to settlers as “individual whose claim to territorial occupation derives from the permission of a colonial government” (p. 1675). It is important to understand that it goes beyond just sexual orientation and gender, it comes with specific roles and responsibilities within the nation that they are a part of (Robinson, 2017). Colonialism, through state-apprehension of Indigenous children and forcing them to speak either English and French, and instilling settler conceptualization of heteronormativity and gender, eliminated traditional Indigenous gender systems and resulted in some Indigenous communities being unwelcoming toward Indigenous sexual orientation and gender minorities (Robinson, 2020). The erosion of Indigenous languages and cultural frameworks have led to the use of “Two-Spirit”, a term coming from Anishinaabemowin, and is different from traditional gender identities, as many nations have their own languages and terms to refer to those who did not identify within the gender binary (Robinson, 2017; 2020). The identity allows Indigenous peoples refuge from settler-dominated LGBTQ communities by focusing on their cultural connections to their nation, and allows Indigenous peoples from different nations outside of the settler framework of sexual orientation and gender a common term (Robinson, 2017). The cultural distinctions, traditional Indigenous ways of knowing, as well as the settler-led LGBTQ community serves as a poignant reminder the important of intersectionality within sexual orientation and minority health research, as both groups (Indigenous peoples and LGBTQ+ community) are marginalized, yet those within latter group still benefit from settler colonialism. This includes racialized LGBTQ+ people, as while they
may experience racism and discrimination, their experiences are qualitatively different than that of Indigenous LGBT2Q+ peoples. As intersectionality is not additive, it is not a matter of who is more oppressed, rather, it is important to examine the ways in which sexual orientation and gender minority research is conducted to ensure that we are not continuing the cycle of oppression enacted upon us in order to be heard.

**Trans and Non-Binary Mental Health.** Trans (transgender) and gender non-binary peoples are underrepresented in sexual orientation and gender minority research (Ferlatte et al., 2020; Rutherford et al., 2021). Across Canada, trans and non-binary peoples report higher depression scores when compared to cisgender gay, bisexual, queer, and other men who have sex with men (Rutherford et al., 2021). Data from the Trans PULSE Canada study found that Indigenous gender-diverse peoples report lower levels of self-reported mental health, in which only 10% rated their mental health as “very good” or “excellent” (Merasty et al., 2021). Many have reported having experienced some form of discrimination within the past year, with 79% of Indigenous Two-Spirit, trans, and non-binary respondents reporting verbal harassment (Merasty et al., 2021). Similar statistics are reported in studies based in Canada and a systematic review, in which researchers found that trans and non-binary peoples have higher prevalences of depression and anxiety, and lower levels of self-reported mental health (Ferlatte et al., 2020; Scandurra et al., 2019).

**Mental Health Service Access and Utilization**

The literature on mental healthcare access for sexual orientation minorities suggest contradicting utilization of mental healthcare services. On one hand, there exists a body of literature suggesting that sexual orientation minorities are high users of mental healthcare compared to heterosexual counterparts (Bränström, 2017; Gustafsson et al., 2017; Platt &
Scheitle, 2018; Platt et al., 2018; Tjepkema, 2008; Urwin & Whittaker, 2016), while on the other hand, some researchers such as Trinh et al. (2017) suggest the opposite: that sexual orientation minorities are low users. Trans and non-binary peoples tend to report utilizing more health resources (Rutherford et al., 2021; Scandurra et al., 2019). Rutherford et al. (2021) suggested that the key issue is the quality of care. As seen in the fact that trans and non-binary peoples have shown that they wanted help with mental health issues and utilized more mental health services, yet still report higher rates of depression, anxiety, and suicidality when compared to cisgender counterparts (Rutherford et al., 2021). Lack of healthcare provider knowledge and discrimination are often cited as barriers to access (Noonan et al., 2018; Smith & Turell, 2017). Despite the polarity of findings within the literature, what researchers have consistently shown is that due to diverse factors, there exists systemic inequalities in the health outcomes and healthcare access and utilization of sexual orientation and gender minorities compared to the heterosexual and cisgender population. The process of seeking mental health services can, in itself be stigmatizing, and barriers that prevent access to services are exacerbated when sexuality intersects with race (Corrigan et al., 2014). For example, one study found that LGBTQ forced-migrants (migrants who left their countries of origin due to their sexuality or gender identity) were low users of healthcare when many face stressors and deal with mental illness (Kahn et al., 2018). Furthermore, studies similar to this thesis have found significant three-way interactions among sexual orientation, gender, and race in terms of substance use problems (Mereish & Bradford, 2014) and psychological distress (Platt & Scheitle, 2018), calling for the need for more intersectional examinations of inequalities in mental health status. The contextual factors that allow a sexual orientation minority person to access and utilize mental health services remain relatively unexplored, however.
Sexual orientation minority women have reported more unmet medical needs (including mental healthcare) than sexual orientation minority men or heterosexual counterparts (Baptiste-Roberts et al., 2017; Everett & Mollborn, 2014). Chronic stressors have led to a large gap between the mental health status of sexual orientation minorities compared to heterosexual persons. Canadian and international literature show trends that LGB persons are much more likely to access mental health services (Coleman et al., 2016; Filice & Meyer, 2018; Platt et al., 2018; Tjepkema, 2008). However, sexual minority women are more likely to report poorer physical and mental health, yet have less access to healthcare, suggesting that there may be some underlying factor other than just sexual orientation that is preventing sexual minority women from accessing healthcare (Baptiste-Roberts et al, 2017; Urwin & Whittaker, 2016). In comparison, gay men have been shown to use more mental health services due to mental health and substance use problems (Bränström, 2017; Platt et al., 2018), while bisexual men are more likely to suffer from mental distress out of all three groups (Rich et al., 2018; Tjepkema, 2008). The gender difference is something worth exploring further.

**Minority Stress and Resilience Factors in Access and Utilization**

Discrimination is a major barrier in accessing mental healthcare and a factor that contributes to worse mental health (Gustafsson et al., 2017; Slater et al., 2017). Though overt discrimination is still prevalent, discrimination may also take on a more covert form. Gustafsson et al. (2017) found that despite having a gay-friendly reputation, degrading treatment can explain 24-26% of the health gaps between sexual orientation minorities and heterosexual persons in Sweden. At the same time, sexual orientation minorities may feel the burden of having to disclose their sexual orientation to their healthcare providers. This fear is not unfounded, as sexual orientation discrimination, both personally and structurally, have been well documented in
healthcare settings (Everett & Mollborn, 2014). In a study on minority stress and youth, Williams and Chapman (2011) reported youth face barriers to healthcare due to not wanting their parents to know and being afraid of what the healthcare provider would say. Unaddressed physical and mental health needs during adolescence may accumulate to more severe health problems.

Sexual orientation stigma can take on many forms. It can be on an individual level, interpersonal, and structural (Hatzenbuehler & Pachankis, 2016). Individual stigma refers to the internalization of stigma. Individual stigma manifests in three types: internalized homophobia/transphobia, concealment, and rejection sensitivity. Internalized homophobia/transphobia is the internalization of negative societal views; concealment is the fear of disclosing one’s sexuality; and rejection sensitivity is the anxiety associated with being rejected due to the disclosure of one’s sexuality (Hatzenbuehler & Pachankis, 2016). A qualitative study in Canada revealed that some LGBT forced-migrants are hesitant to access mental healthcare providers who speak the same language and/or are from their cultural background for fear of being met with negative reactions or being outed to family members (Kahn et al., 2018). Similarly, Coleman et al.’s (2016) regional study within the province of Ontario found that discrimination and internalized homonegativity were associated with elevated mental health service utilization. Individual stigma can interact with interpersonal stigma to create barriers to mental healthcare. Next, interpersonal stigma is the relationship between a sexuality minority and a non-stigmatized individual. It can range from overt discrimination or covert microaggressions (Seelman et al., 2017). Lastly, structural stigma is arguably the most pervasive level of stigmatization, due to its overarching influence on societal norms and views that impact interpersonal relationships and even relationships with oneself.
Barriers that have been identified in the literature show the impact sociopolitical landscape has on the mental health of sexual orientation minorities. Within minority stress theory, Meyer (2003) posits that there are ameliorative factors such as social support that can reduce minority stress. As such, social support, or lack thereof, is a significant predictor to take into consideration when examining the mental health of sexual orientation minorities. Sattler et al. (2016) found that social support predicted higher self-reported mental health in gay men, and Ehlke et al. (2020) found the same in lesbian and bisexual women.

**Intersectionality**

The previous headings presented sexual orientation minorities and ethnoracial minority groups as two distinct groups, though that rarely reflects the authentic lived experiences of LGBTQ+ racialized peoples. This is where the idea of intersectionality, first coined by Black legal scholar Kimberlé Crenshaw (1989), comes into play. Originally used to describe the invisibility of Black women within the legal system as being part of two marginalized groups, the wider academic and public circle has since expanded intersectionality to include identities beyond race and gender (e.g., Cho et al., 2013; Bauer, 2014; Huang et al., 2020; Rouhani, 2014; Veenstra, 2011; Viruell-Fuentes et al., 2012). Intersectionality theory has its roots in critical race theory and Black feminism. Though first coined by Crenshaw, the Combahee River Collective, a group of radical Black feminists, were engaging with what is intersectionality much earlier (Taylor, 2019). A systematic review found that mental health interventions aimed at sexual orientation minority people do not adequately deal with the various minority statuses that some may possess (Huang et al., 2020). The majority of existing mental health interventions for sexual orientation and gender minorities assume that sexuality is the root cause of psychological distress without considering the effects of multiple minority statuses have on an individual. Health
inequalities may stem from unaddressed or wrongful diagnosis under a mental healthcare system that does not adequately address the intersectionality of stressors. The lack of intersectionality-informed mental health interventions reflects the significance and need for intersectionality within health research.

In Canada, Veenstra’s (2011) secondary analysis of the CCHS demonstrates that the multiplicative effect of various axes, or intersections, have statistical significance in predicting an individual’s self-reported health. The study found that across all axes, class was the strongest predictor of self-reported health. Though the conventional zeitgeist may be to assume that White, cis gay men are not in precarious positions, Veenstra (2011) showed that income has a stronger association amongst men than women. In terms of intersectionality and intracategorical differences, Veenstra (2011) found that South Asian women and lower income gay and lesbian respondents regardless of ethnoracial identity were more significantly associated with poorer self-reported health. An extension to the 2011 study, Veenstra and Patterson (2016) looked at health inequalities between White and Black Canadians and concluded that after controlling for confounding social determinants of heath variables, chronic stressors such as racism may be reflected in the poor health of marginalized populations, such as higher rates of hypertension and diabetes. For racialized sexual orientation minorities, racism and discrimination can add an extra layer to minority stressors, for example, facing homophobia or biphobia in addition to medical racism from healthcare providers, along with racism in general.

Social Determinants of Health Framework

The social determinants of health framework has been embraced by public health and social sciences alike due to its consideration of larger systemic factors that influence health (Braveman & Gottlieb, 2014). Social determinants of health in Canada can be traced back to the
Lalonde Report commissioned by the Canadian government. It was ahead of its time in its consideration of health influences outside of biology (Glouberman & Millar, 2003). Recently, Raphael et al. (2020) have identified 17 Canadian social determinants of health: 1) stress, 2) income and income distribution, 3) education, 4) unemployment and job security, 5) employment and working conditions, 6) early child development, 7) food insecurity, 8) housing, 9) social exclusion, 10) social safety net, 11) health services, 12) geography, 13) disability, 14) Indigenous ancestry, 15) gender, 16) immigration, and 17) race. This framework was used to determine variables from the LGBT2Q+ Health Survey that will be analyzed based on its fit regarding the scope of the research questions and fit against the Andersen model of healthcare utilization factors. Out of the 17 social determinants of health, [minority] stress, income, education, social exclusion (measured as social provisions in the survey), health services, gender, immigration and race (measured as ethnoracial identity) are variables that were explored in this thesis. Social provisions, based on Weiss’s social provisions model, contains six interpersonal social needs, and can act as a measure of social exclusion due to its scoring (Orpana et al., 2019). Social provisions as a measure will be discussed in detail later on. A higher score in social provisions is the inverse of social exclusion, meaning the respondent experiences lower or less social exclusion. It should be noted that the social provisions measure used the survey is based on Caron’s (2013) shortened validated scale, which removed one construct.

While Raphael et al. (2020) did not include sexual orientation into their list of social determinants of health, Hatzenbuehler and Pachanski (2016) have argued for the inclusion of stigma and minority stress as social determinants of health. The importance of an ecological thinking when exploring inequitable mental healthcare access should not be remiss (Bryant et al., 2011). This framework guided the overarching rationale and design for the present thesis.
Present Research

Given the vast differences in mental health outcomes and mental health service utilization among and within LGBT2Q+ and racialized persons, the present research is interested in examining bivariate and intersectional factors associated with mental health service access. Health research in Canada is often overshadowed by results from other countries such as the US. As health services and related access are system-dependent, results may not be generalizable to the Canadian context due to sociopolitical differences, such as healthcare systems and attitudes toward LGBT2Q+ peoples. Our data source (2020 LGBT2Q+ Health Survey) focuses on sexual orientation and gender minorities, providing a more nuanced understanding of marginalized individuals. Using gay and lesbian as a comparison group as opposed to the usual heterosexual comparison group, results from this research provides better understanding of mental health service utilization of LGBT2Q+ peoples in Canada. An overwhelming majority of literature about racialized health point to distinct inequalities in health outcomes, yet the subtleties and its paradoxical nature have yet to be fully researched or understood. This positions the present thesis to take on a theoretical and methodological perspective with the help of intersectionality theory in quantitative health research. Similar to how qualitative research is able to explore in-depth the diversities and differences in health, this exploratory intersectionality-informed quantitative research allows us to set baseline comparisons on a broad scale, which can then lead to subsequent areas of inquiry in smaller intracategorical quantitative and/or qualitative studies that delve even deeper within a more succinct research topic. The present research is guided by two research questions:
1. What predisposing, enabling, and need factors are associated with mental health service utilization within the past 12 months for a sample of sexual orientations and gender minorities?

2. What are the intersextional differences in mental health service utilization during the past 12 months within a sample of different sexual orientations, gender identities, and ethnoracial minorities?

Research question #1 is addressed through an additive approach as framed by the Andersen model of healthcare utilization (to be discussed), while research question #2 is addressed through a multiplicative approach. Combined, they create an intersectionality-informed analysis on the mental health service utilization within a sample of LGBT2Q+ Canadians.

**Method**

**Theoretical Frameworks**

**Intersectionality Theory**

Arising out of Black feminism and critical race theory, legal scholar Kimberlé Crenshaw is credited as the originator of intersectionality theory (Crenshaw, 1989). Intersectionality theory aims to examine how multiple axes create their own social experiences that cannot be explained in single-axis thinking. Though it was originally used to describe the social experiences of Black women who face racial discrimination as well as sexism, it has gone on to encompass other axes such as other ethnoracial groups, genders and gender expressions, and sexual orientations, to name a few (Cho et al., 2013). Intersectionality has been adapted into many different disciplines, though some works are met with skepticism and criticism more than others. Scholars such as Carastathis (2019) contends that intersectionality has been co-opted and institutionalized by academia, wherein intersectionality has been incorporated into every space possible, without
regard for the original intent or fit of the theory. Though one may be tempted to interpret intersectionality as a theory that represents the additive forms of oppression or marginalization to a certain group or person, it is imperative that we understand that intersecting oppressions are more than the sum of its parts. Intersecting oppressions are qualitatively specific experiences of oppression.

The incorporation of intersectionality theory in qualitative health research has helped to expand the literature into one that is much more conscious of societal impacts associated with health outcomes and healthcare access (Bauer, 2014). Intersectionality theory in health research adds to the holistic biopsychosocial frameworks and theories that embody how the social experiences of marginalized persons impact their health outcome (Bauer, 2014). The use of intersectionality theory in quantitative health research, however, has not been embraced until more recently due to the perception of fundamental differences between the two. The use of mathematical language in quantitative research has been criticized for ignoring the true meaning of intersectionality, but it is merely conceptual in nature rather than cooptation of the theory, and should not be discounted as such (Bauer, 2014). It is with these criticisms in mind that the incorporation of intersectionality theory in this research will do its best to demonstrate that quantitative research methods can keep the integrity and original intent of Crenshaw (1989; Cho et al., 2013). This research would like to contribute to the growing body of quantitative intersectionality-informed research and to complement the expansive intersectional qualitative health research.

Within quantitative research, Spiering (2012) has developed a framework for incorporating intersectionality into quantitative research, while Rouhani (2014) has created a comprehensive methodological guide for quantitative health research. Studies by LeVasseur et al.
(2013) and Veenstra (2011) have used intersectionality to look at suicide attempts due to bullying and at self-rated health inequality in Canada, respectively. The aforementioned authors are but a few of those who are conducting intersectionality-informed quantitative health research, exemplifying the ones whose research most closely relates to the present thesis. The present research will follow Rouhani’s (2014) methodological guide on intersectionality-informed quantitative research by using an additive approach to first set a “baseline”, and then analyze data using a multiplicative approach.

**Andersen Model of Healthcare Utilization**

The Andersen model of healthcare utilization was introduced by health researcher Ronald Andersen, and has seen many iterations and have been adopted by dozens of other scholars since its inception in 1968 (Babitsch et al., 2012). The Andersen model allows one to broadly categorize health care access predictors in small datasets up to larger population health samples, such as the CCHS. This present research incorporated both the Gelberg-Andersen version, along with the newest edition of the original model. Gelberg et al. (2000) adapted the model for marginalized populations, and the newest edition added a feedback loop with a greater emphasis on what the model calls “contextual characteristics.” Contextual characteristics account for the “circumstances and environment of health care access,” with the understanding that healthcare access takes place in an environment that is dependent on broader socioecological factors (Andersen et al., 2014, p. 34). The general model can be separated into three factors: predisposing, enabling, and need. Though the Andersen model’s use of predisposing factors is much more nuanced, in this research context, it can be simplified as sociodemographic factors that an individual does not have control over (e.g., age, sexual orientation, ethnoracial background, gender modality, and country of birth) (Andersen et al., 2014). Enabling factors are
factors that enable or allow an individual’s access or utilization of healthcare (e.g., social provisions, education, and income). Need factors refer to an individual’s perceived need or want to seek healthcare. In this research, need factors are minority stress score, diagnosis of a mood disorder, diagnosis of an anxiety disorder, and self-reported mental health. Variables were categorized into the three factors, in which they were used as independent variables in logistic regression models, with mental health service utilization as the outcome variable. Separating variables into the Andersen model categorizations allowed the researcher an easy way to build models that predicted factors associated with mental health service utilization. Furthermore, Andersen healthcare utilization factors overlap with social determinants of health, as well as identities commonly examined in intersectionality research, such as age, sexual orientation, ethnoracial identity, gender modality, and whether respondents were born in Canada (proxy variable for immigrant status).

**Data Collection**

The present research analyzed secondary data collected from the LGBT2Q+ Health Survey in 2020 (REB #6567). The survey was a Canada-wide cross-sectional survey that collected information on experiences of healthcare and service access, health status, social support, and minority stress from LGBT2Q+ Canadians. The primary use of the survey is for population health research. Dr. Todd Coleman was the principal investigator. The survey was distributed through Qualtrics to its online panel of voluntary participants. Participants were provided with a letter of information and consent, and consent was required prior to determining survey eligibility. Eligibility criteria include: 1) being 18 years or older; 2) identifying as lesbian, gay, bisexual, transgender, Two-Spirit, queer or any other sexual orientation or gender minority group; and 3) currently residing in Canada. Upon completion of the survey, compensation was
based on panelist’s preferences, including cash, gift cards, redeemable points, sweepstake entries, vouchers, and airline miles. Compensation procedures were managed entirely by Qualtrics via the respondent’s particular survey panel. During collection, data were stored on servers located in Toronto, Ontario, Canada. The entire survey took approximately 20 minutes to complete. A total of 1542 participants completed the survey.

**Measures**

The subjects of the LGBT2Q+ Health Survey encompassed sociodemographic information, health and well-being, experiences of health care services, victimization, minority stress, and social isolation related to lesbian, gay, bisexual, trans, Two-Spirit, and queer Canadians. Variables of interest were organized into the three factors in Andersen model of healthcare utilization; separated into predisposing factors, enabling factors, need factors, and outcome variable (see Table 1).

**Independent Variables**

Predisposing factors included most variables under the sociodemographic heading in the survey. Such variables were age, gender modality, sexual orientation, country of birth, and ethnoracial group. Age was scored on a continuous variable that allowed respondents to fill in their age. Sexual orientation had a total of seven options, with an additional “other, please specify” blank option for respondents to self-identify. Ethnoracial identity was modeled after the same question found in the CCHS, which asked respondents to check all that apply to them, with a total of 12 options, with identities such as White, West Asian, and to self-specify, among them (refer to Appendix B for full question). Due to the spread of categories, additional recoding had to be done to compromise between statistical power and ethos of intersectionality.
Due to limited sample size in categories within variables, variables for sexual orientation and ethnoracial identities needed to be combined to form bigger categories in order to have statistical power. The survey originally included: heterosexual/straight, gay, bisexual, lesbian, asexual, queer/questioning, pansexual, other, and space for respondents to self-identify. In this research, sexual orientation categories were collapsed into four categories: monosexual (gay, lesbian), bisexual, more polysexual orientations (pansexual, queer), and other (heterosexual/straight, asexual, questioning/not sure, and respondents who selected “other”). The same was done to ethnoracial identities. Due to sample size restrictions, ethnoracial identities were collapsed into three overarching categories: White, racialized, and Indigenous; called ethnoracial groups to differentiate from the original ethnoracial categories. This was done to ensure that the experiences of being perceived as racialized is still preserved, while having enough statistical power for meaningful explorations.

Gender modality was a variable created for data analyses to suit the research interests of the thesis, recoded using answers about respondents’ assigned sex at birth and whether they identify as “transgender, transsexual, non-binary, gender variant, or a person with a history of transitioning sex or gender”. There was a total of four categories within the variable to ensure enough sample size for meaningful analyses. The categories being cis[gender] assigned male at birth (AMAB); cis assigned female at birth (AFAB); trans[gender]/ gender-diverse AMAB; and trans/gender-diverse AFAB. The term “gender-diverse” is used to denote respondents who do not identify with the male-female binary, such as someone who identifies as gender non-binary or Two-Spirit, along with other genders that respondents may identified as.

Enabling factors included questions regarding income, education attainment, and social provisions from the survey. Income refers to a combined household income before taxes. There
was a total of 11 options, including a “I’d rather not say” option (refer to table 1). Education refers to the highest completed education in or outside Canada and contains six response categories. Income and education are both categorical variables while social provisions is measured using the Social Provisions Scale-10 (SPS-10) (Caron, 2013). Caron (2013) developed the SPS-10 to shorten the original 24-item scale to 10 items with five of its original subscales: attachment, social integration, reassurance of worth, reliable alliance, and guidance. These constructs reflect the social needs in interpersonal relationships (Orpana et al., 2019). Each question is scored on a 4-point Likert scale from strongly disagree, disagree, agree, to strongly agree. SPS-10 was validated in Canada and shown to have a high global Cronbach’s alpha, at 0.880. It is also used in the national Canadian Community Health Survey (CCHS) by Statistics Canada since 2012 and subsequent cycles. Social provisions was recoded to become continuous variable for ease of analysis and interpretation. The lowest score is a 10 and the highest possible score is a 40. Higher social provision score corresponds to higher levels of social provisions. The Cronbach’s alpha obtained from the survey sample is 0.92.

Need factors are variables such as self-identifying as living with an anxiety disorder, living with a mood disorder, self-reported mental health, and minority stress in the survey. Existing anxiety and mood disorder were self-reported in a question that encompassed all physical, emotional and mental health issues that respondents could check all that apply. Self-reported mental health was scored on a five-point Likert scale, from “excellent”, “very good”, “good”, “fair”, and “poor”. Minority stress was measured based on Outland’s (2016) Minority Stress Measure (LGBT-MSM). It consists of 25 items with seven subscales based on Meyer’s minority stress theory: prejudice of events, victimization events, everyday discrimination, internalized stigma, identity concealment, community support, and anticipation of rejection. The
subscales are ordered in a way that makes it more likely that a respondent will complete the measure by starting from a more general and neutral topic to end on a more positive topic. The scale was scored on a five-point Likert scale from either “never” to “all of the time” or “strongly disagree” to “strongly agree”. Slight wording was changed to be inclusive of more sexual and gender minorities (i.e., “LGBT” to “LGBT2Q+”). A short version was used in the survey.

Community connectedness was reverse-scored. The higher the score, the higher level of minority stress a respondent is showing. The LGBT- MSM has a high internal reliability (Cronbach’s alpha = 0.91). It has been validated in other ethnocultural settings, such as in gay, bisexual, and men who have sex with men in Nigeria (Ogunbajo et al., 2020), suggesting high external validity. In data analysis, minority stress was recoded so that a higher score in minority stress means greater experiences of minority stress. The lowest score an individual may score is a 0, and 129 the highest. The Cronbach’s alpha in this survey sample is 0.92. Similar recoding was done to self-reported mental health. Originally scored on a five-point Likert scale, it was turned into a continuous variable, with a higher score corresponding to higher levels of self-reported mental health.

**Outcome Variable**

The outcome/dependent variable of mental healthcare utilization in regression analyses is operationalized through the question of whether they have talked to a health professional about their emotional or mental health in the past 12 months. The question was a yes/no question where either the respondent had talked to a health professional within the past 12 months or they did not. In this research, it is referred to as mental health service utilization within the past 12 months. It was dichotomously coded as 0 for “no” and 1 for “yes”. The present thesis was interested in respondents who answered “yes” as the outcome variable.
Data Analysis

Data analysis for this research was done using SAS Enterprise Guide 7.13. The PROC FREQ procedure was used to analyze descriptive characteristics of categorical variables, while PROC UNIVARIATE was used for continuous variables, such as age and scores for social provisions and minority stress. PROC GENMOD is a SAS procedure that uses modified Poisson regression, using a robust variance estimator in relative risks. Logistic regression relies on the assumption that the outcome event is rare (Zou, 2004). In this sample, more than half of respondents (51.43%) responded “yes” to having seen or talked to a health professional about [their] emotional or mental health in the past 12 months. Because of the near-even split of the outcome variable, using normal logistic regression has the potential to provide invalid confidence intervals and overestimations of relative risk. On the other hand, use of regular Poisson regression tends to produce conservative estimates. To rectify, modified Poisson regression, also known as Poisson regression with robust error variance, is suggested as the alternative when analyzing a dichotomous outcome variable that is not a rare event (Zou, 2004). While normally used with clustered data, the REPEATED function in PROC GENMOD becomes a good estimator of robust error when there is only one observation from each cluster. Furthermore, Zou (2004) has shown that modified Poisson regression is still able to produce reliable relative risk in sample sizes as small as 100. Thus, modified Poisson regression was chosen over other types of regression modelling in this thesis.

Each categorical variable in models used a reference category for comparison purposes. For example, “White” is the reference category for ethnoracial groups, “gay or lesbian” for sexual orientations, “cis AMAB” (cisgender assigned male at birth) in gender modality, and respondents who answered “yes” to being born in Canada. The three Andersen categories can be
conceptualized as three “blocks” of variables that were explored. The outcome variable in all regression models measured whether the respondent has seen or talked to a health professional about their emotional or mental health in the past 12 months.

**Additive Analyses**

Research question #1 asks:

1. What predisposing, enabling, and need factors are associated with mental health service utilization within the past 12 months for a sample of sexual orientations and gender minorities?

Modified Poisson regression models looked at each variable of interest predicting utilization of mental health service within the past 12 months. Then, modified Poisson regression models tested for potential differences in sexual orientation outcomes and ethnoracial group outcomes against utilization of mental health services within the past 12 months, controlling for one predisposing, enabling, or need variable at a time. Given the relationships between sexual orientation and ethnoracial identity and mental health and mental health service utilization, as shown by the literature, this second procedure was done to explore whether associations with sexual orientation and ethnoracial group still held their significance when controlling for other variables. Lastly, variables of interest from each categorization were added into the Andersen model. Using backwards elimination in PROC LOGISTIC starting with predisposing factors at \( p=0.30 \), variables that were not eliminated were added to a subsequent model with enabling factors, where variables not eliminated (e.g., variables with \( p<0.20 \)) were added to a subsequent model with need factors (e.g., variables with \( p<0.15 \)). All culminated into a final model of variables that were fitted into a modified Poisson model using PROC GENMOD, determined to
be significant at $p<0.05$. Liberal p-values were used during backwards elimination procedure to ensure that no variables were prematurely discarded (Bursac et al., 2008; Coleman et al., 2016).

**Multiplicative Analyses**

Research question #2 asks:

2. What are the intersectional differences in mental health service utilization during the past 12 months within a sample of different sexual orientations, gender identities, and ethnoracial minorities?

Multiplicative approach in intersectionality-informed quantitative research refers to looking at interactions of main effects through multiple regression, theoretically equal to axes intersecting. Using the PROC GENMOD procedure in SAS, variables and reference categories remained the same during multiplicative analyses. Multiple regression model can notice any differences amongst predictors, such as interactions between predictors and the main effects of predictors.

Results from the previous additive step informed data analyses in this section. To limit the number of possible models, variables explored were: ethnoracial group, sexual orientation, gender modality, born outside of Canada, and age, also known as predisposing variables from the Andersen model of healthcare utilization (e.g., mental health service utilization within the past 12 months = sexual orientation + ethnoracial group + sexual orientation*ethnoracial group). This was due to their overall statistically significant bivariate associations with mental health service utilization. All possible combinations of variables ranging from two-way to five-way interactions were explored, however only models that converged were included. Due to the close relationship shared between mental health service utilization and self-rated mental health (a need factor), as posited theoretically in the Andersen model and in additive results, self-rated mental health was controlled in all interaction models. What is left then, were the relationships between mental
health service utilization within the past 12 months and predisposing factors, regardless of need. Lastly, to explore how bivariate associations between predisposing factors and mental health service utilization fair compared to need, separate analyses using living with a mood disorder and living with an anxiety disorder as outcome variables in predicting associations with predisposing factors were done using modified Poisson regression.

Results

Additive Results

Descriptive statistics of the sample are summarized in Table 1. The average age of the sample was 30.94 years old. Ethnoracial backgrounds allowed participants to check as many categories as they wished that best reflected their identity. Approximately 76% of the sample identified as White. The second and third largest groups based on ethnoracial identity were Indigenous (9.27%) and Chinese (6.87%). While the overall sample is diverse, certain categories such as West Asian (0.58%) accounted for a minor percentage of the overall sample size. Respondents self-identified as bisexual (63.72%), gay (16.29%), queer or pansexual (8.11%), and lesbian (6.81%). More than half of the sample identified as cis AFAB (55.06%); 27.5% identified as cis AMAB; while trans or gender-diverse respondents who were assigned female at birth and assigned male at birth accounted for 12.45% and 5%, respectively.

Most respondents were born in Canada (85.59%). Twenty-four percent of the sample reported having a household annual income, before taxes, of $80,000 or more. In terms of education attainment, 23.41% responded that high school or equivalent was their highest education completed, while 27.3% were university graduates. The average minority stress score was 37.42 out of possible 129 (SD = 22.67). Scored out of 40, the mean social provisions score was 32.12 (SD = 5.81). Respondents who rated their mental health as “good” or above accounted
for almost 79% of the sample, while approximately 21% rated their mental health as either “fair” or “poor”. The sample reported living with a mood disorder (41.37%) and/or an anxiety disorder (49.48%). Lastly, 51.43% of the sample have utilized mental health service within the past 12 months.

Table 1

*Descriptive statistics from the LGBT2Q+ Health Survey (N=1542), separated by Andersen model of healthcare utilization categories and outcome variable*

<table>
<thead>
<tr>
<th>Variables</th>
<th>n (%) or Mean (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PREDISPOSING FACTORS</strong></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>30.94 (12.16)</td>
</tr>
<tr>
<td>Missing</td>
<td>12 (0.78)</td>
</tr>
<tr>
<td>Sexual Orientation*</td>
<td></td>
</tr>
<tr>
<td>(check all that apply)</td>
<td></td>
</tr>
<tr>
<td>Heterosexual/straight</td>
<td>10 (0.65)</td>
</tr>
<tr>
<td>Bisexual</td>
<td>982 (63.72)</td>
</tr>
<tr>
<td>Gay</td>
<td>251 (16.29)</td>
</tr>
<tr>
<td>Lesbian</td>
<td>105 (6.81)</td>
</tr>
<tr>
<td>Queer or pansexual</td>
<td>125 (8.11)</td>
</tr>
<tr>
<td>Other</td>
<td>68 (4.41)</td>
</tr>
<tr>
<td>Missing</td>
<td>1 (0.1)</td>
</tr>
<tr>
<td>Ethnoracial Identity*</td>
<td></td>
</tr>
<tr>
<td>(check all that apply)</td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>1177 (76.33)</td>
</tr>
<tr>
<td>Indigenous</td>
<td>143 (9.27)</td>
</tr>
<tr>
<td>South Asian</td>
<td>57 (3.7)</td>
</tr>
<tr>
<td>Chinese</td>
<td>106 (6.87)</td>
</tr>
<tr>
<td>Black African</td>
<td>18 (1.17)</td>
</tr>
<tr>
<td>Black Canadian or African</td>
<td>44 (2.85)</td>
</tr>
<tr>
<td>American</td>
<td></td>
</tr>
<tr>
<td>Black Caribbean</td>
<td>32 (2.08)</td>
</tr>
<tr>
<td>Filipino</td>
<td>33 (2.14)</td>
</tr>
<tr>
<td>Latin American</td>
<td>56 (3.63)</td>
</tr>
<tr>
<td>Arab</td>
<td>18 (1.17)</td>
</tr>
<tr>
<td>Southeast Asian</td>
<td>39 (2.53)</td>
</tr>
<tr>
<td>West Asian</td>
<td>9 (0.58)</td>
</tr>
<tr>
<td>Korean</td>
<td>17 (1.1)</td>
</tr>
<tr>
<td>Japanese</td>
<td>20 (1.3)</td>
</tr>
<tr>
<td>Other</td>
<td>42 (2.7)</td>
</tr>
<tr>
<td>Ethnoracial Group</td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>1018 (66.02)</td>
</tr>
<tr>
<td>Racialized</td>
<td>381 (24.71)</td>
</tr>
<tr>
<td>Indigenous</td>
<td>143 (9.27)</td>
</tr>
</tbody>
</table>
### Gender Modality

<table>
<thead>
<tr>
<th>Category</th>
<th>Count (Percentage)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cis assigned male at birth (AMAB)</td>
<td>424 (27.5)</td>
</tr>
<tr>
<td>Cis assigned female at birth (AFAB)</td>
<td>849 (55.06)</td>
</tr>
<tr>
<td>Trans or gender-diverse AMAB</td>
<td>77 (4.99)</td>
</tr>
<tr>
<td>Trans or gender-diverse AFAB</td>
<td>192 (12.45)</td>
</tr>
</tbody>
</table>

### Born in Canada

<table>
<thead>
<tr>
<th>Category</th>
<th>Count (Percentage)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>1319 (85.59)</td>
</tr>
<tr>
<td>No</td>
<td>222 (14.41)</td>
</tr>
<tr>
<td>Missing</td>
<td>1 (0.1)</td>
</tr>
</tbody>
</table>

### ENABLING FACTORS

#### Income (before taxes, all household members, Canadian dollars)

<table>
<thead>
<tr>
<th>Income Range</th>
<th>Count (Percentage)</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; $5,000</td>
<td>40 (2.59)</td>
</tr>
<tr>
<td>$5,000 – $9,999</td>
<td>37 (2.4)</td>
</tr>
<tr>
<td>$10,000 – $19,000</td>
<td>128 (8.3)</td>
</tr>
<tr>
<td>$20,000 – $29,999</td>
<td>153 (9.92)</td>
</tr>
<tr>
<td>$30,000 – $39,999</td>
<td>126 (8.17)</td>
</tr>
<tr>
<td>$40,000 – $49,999</td>
<td>151 (9.79)</td>
</tr>
<tr>
<td>$50,000 – $59,999</td>
<td>149 (9.66)</td>
</tr>
<tr>
<td>$60,000 – $69,999</td>
<td>119 (7.72)</td>
</tr>
<tr>
<td>$70,000 – $79,999</td>
<td>125 (8.11)</td>
</tr>
<tr>
<td>&gt; $80,000</td>
<td>370 (23.99)</td>
</tr>
<tr>
<td>Rather not say</td>
<td>144 (9.34)</td>
</tr>
</tbody>
</table>

#### Education Attainment

<table>
<thead>
<tr>
<th>Category</th>
<th>Count (Percentage)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Did not graduate from high school</td>
<td>105 (6.81)</td>
</tr>
<tr>
<td>High school graduate</td>
<td>361 (23.41)</td>
</tr>
<tr>
<td>Some college or trade school</td>
<td>192 (12.45)</td>
</tr>
<tr>
<td>Some university</td>
<td>214 (13.88)</td>
</tr>
<tr>
<td>College or trade school graduate</td>
<td>249 (16.15)</td>
</tr>
<tr>
<td>University graduate</td>
<td>421 (27.3)</td>
</tr>
</tbody>
</table>

### Social Provisions

<table>
<thead>
<tr>
<th>Social Provisions</th>
<th>Count (Percentage)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>32.12 (5.82)</td>
</tr>
</tbody>
</table>

### NEED FACTORS

#### Self-Reported Mental Health

<table>
<thead>
<tr>
<th>Category</th>
<th>Count (Percentage)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Excellent</td>
<td>331 (21.47)</td>
</tr>
<tr>
<td>Very good</td>
<td>495 (32.1)</td>
</tr>
<tr>
<td>Good</td>
<td>389 (25.23)</td>
</tr>
</tbody>
</table>
**INTERSECTIONALITY IN MENTAL HEALTH SERVICE UTILIZATION**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Fair</td>
</tr>
<tr>
<td></td>
<td>243 (15.76)</td>
</tr>
<tr>
<td>Poor</td>
<td>84 (5.45)</td>
</tr>
<tr>
<td>Minority Stress</td>
<td>37.42 (22.67)</td>
</tr>
<tr>
<td>Existing Mood Disorder</td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>638 (41.37)</td>
</tr>
<tr>
<td>No</td>
<td>904 (58.63)</td>
</tr>
<tr>
<td>Existing Anxiety Disorder</td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>763 (49.48)</td>
</tr>
<tr>
<td>No</td>
<td>779 (50.52)</td>
</tr>
</tbody>
</table>

**OUTCOME VARIABLE**

Talked to a health professional about their emotional or mental health within the past 12 months

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>793 (51.43)</td>
</tr>
<tr>
<td></td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>749 (48.57)</td>
</tr>
</tbody>
</table>

*Not in regression modelling due to sample size restriction*

Table 2 summarizes bivariate associations of all variables against likelihood of using mental health services within past 12 months using modified Poisson regression. Bivariate associations show that increasing age was associated with a decrease (PR = 0.9918; 95% CI: 0.9875 – 0.9963) in mental health service utilization within the past 12 months. Being racialized was associated with decreased likelihood of utilization (PR: 0.8585; 95% CI: 0.7559 – 0.9749), while being Indigenous was associated with approximately 33% (PR = 1.3263; 95% CI: 1.1694 – 1.5044) increase in likelihood to have used mental health services within the past 12 months when compared to White respondents. Compared to gay and lesbian counterparts, bisexual participants were associated with an increase of 27% likelihood (PR = 1.2725; 95% CI: 1.111 – 1.4575) of having utilized mental health services in the past 12 months; while being pansexual or queer increased likelihood of utilization by almost 59% compared to gay and lesbian respondents (PR = 1.5865; 95% CI: 1.3321 – 1.8894). Compared to cis AMAB participants, trans or gender-diverse AFAB identity was associated with the largest increase in likelihood of having used
mental health services, at 54% (PR: 1.5357; 95% CI: 1.3121 – 1.7974); followed by trans or gender-diverse AMAB identity associated with an increase of 33% (PR: 1.3292; 95% CI: 1.0522 – 1.679); and cis AFAB respondents associated with an increase of 31% (PR: 1.3088; 95% CI: 1.1492 – 1.4906). Compared to respondents with a before-tax household income of more than $80,000, respondents in income categories “$10,000 – $19,000” and “$30,000 – $39,999” were associated with an increase in likelihood of mental health service use within the past 12 months by 24% (PR: 1.2388; 95% CI: 1.0337 – 1.4847) and 33% (PR: 1.3256; 95% CI: 1.1157 – 1.575), respectively.

Respondents with need factors such as living with a mood disorder and living with an anxiety disorder were two times more likely to have utilized mental health services within the past 12 months compared to those who did not identify as living with a mood disorder and those who did not identify as living with an anxiety disorder (PR: 2.1276; 95% CI: 1.9259 – 2.3504 and PR: 2.0113; 95% CI: 1.8049 – 2.2414, respectively). Higher self-reported mental health was associated with a decrease in mental health service utilization within the past year (PR: 0.7865; 95% CI: 0.7505 – 0.8242). Participants with higher minority stress scores were more likely to have utilized mental health services within the past 12 months compared to those who scored lower (PR: 1.0041; 95% CI: 1.0022 – 1.0061). Born outside of Canada, education attainment, and social provisions score were not significant at the $p<0.05$ level.

Table 2

Factors associated with utilization of mental health services within the past 12 months using modified Poisson regression: Findings from the LGBT2Q+ Health Survey (N=1542)

<table>
<thead>
<tr>
<th>Predictors</th>
<th>PR (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PREDISPOSING FACTORS</strong></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>One year increase</td>
</tr>
<tr>
<td></td>
<td>0.9918 (0.9875, 0.9963)**</td>
</tr>
<tr>
<td>Sexual orientation</td>
<td>Overall***</td>
</tr>
<tr>
<td></td>
<td>0.9963 (0.9926, 0.9999)**</td>
</tr>
<tr>
<td>Sexual Orientation</td>
<td>Reference</td>
</tr>
<tr>
<td>--------------------</td>
<td>-----------</td>
</tr>
<tr>
<td>Bisexual</td>
<td></td>
</tr>
<tr>
<td>Pansexual, queer</td>
<td></td>
</tr>
<tr>
<td>Straight, asexual, questioning, other</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Gender Modality</th>
<th>Overall***</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cis AMAB</td>
<td>1.3088 (1.1492, 1.4906)***</td>
<td></td>
</tr>
<tr>
<td>Cis AFAB</td>
<td>1.3292 (1.0522, 1.679)*</td>
<td></td>
</tr>
<tr>
<td>Trans/gender-diverse AMAB</td>
<td>1.5357 (1.3121, 1.7974)***</td>
<td></td>
</tr>
<tr>
<td>Trans/gender-diverse AFAB</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ethnic Group</th>
<th>Overall***</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>0.8585 (0.7559, 0.9749)*</td>
<td></td>
</tr>
<tr>
<td>Racialized</td>
<td>1.3263 (1.1694, 1.5044)***</td>
<td></td>
</tr>
<tr>
<td>Indigenous</td>
<td>p&gt;0.05 at both levels</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Born in Canada</th>
<th>ENABLING FACTORS</th>
<th>NEED FACTORS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Income</td>
<td>Overall*</td>
<td></td>
</tr>
<tr>
<td>$&lt;5,000</td>
<td>1.2157 (0.9121, 1.6204)</td>
<td></td>
</tr>
<tr>
<td>$5,000 – $9,999</td>
<td>1.2571 (0.9435, 1.675)</td>
<td></td>
</tr>
<tr>
<td>$10,000 – $19,000</td>
<td>1.2388 (1.0337, 1.4847)*</td>
<td></td>
</tr>
<tr>
<td>$20,000 – $29,999</td>
<td>1.1884 (0.9962, 1.4177)</td>
<td></td>
</tr>
<tr>
<td>$30,000 – $39,999</td>
<td>1.3256 (1.1157, 1.575)**</td>
<td></td>
</tr>
<tr>
<td>$40,000 – $49,999</td>
<td>1.0081 (0.8265, 1.2297)</td>
<td></td>
</tr>
<tr>
<td>$50,000 – $59,999</td>
<td>1.0217 (0.8383, 1.2452)</td>
<td></td>
</tr>
<tr>
<td>$60,000 – $69,999</td>
<td>0.9417 (0.75, 1.1822)</td>
<td></td>
</tr>
<tr>
<td>$70,000 – $79,999</td>
<td>1.1671 (0.9641, 1.4128)</td>
<td></td>
</tr>
<tr>
<td>$ ≥ 80,000</td>
<td>0.9837 (0.801, 1.2081)</td>
<td>p&gt;0.05 at all levels</td>
</tr>
<tr>
<td>Rather not say</td>
<td></td>
<td>p&gt;0.05</td>
</tr>
</tbody>
</table>

| Education | One point increase | p>0.05 |
| Social provisions | One point increase | p>0.05 |

Exploratory modified Poisson regression analyses of sexual orientation and ethnoracial groups against mental health service utilization, controlling for one variable of interest at a time to explore if their associations to mental health service utilization still held are presented in Appendix F for brevity. Results showed that associations between sexual orientation and mental
health service utilization within the past 12 months still held strong. The same was true for ethnoracial groups.

Table 3 shows bivariate associations of variables separated into Andersen model factors with mental health service utilization within the past 12 months in PROC LOGISTIC. Using backwards logistic elimination at \( p=0.30 \) cut off, sexual orientation, ethnoracial group, and gender modality were predisposing factors retained when modelled together. Overall, prevalence ratios decreased slightly when compared to bivariate associations. Age was not retained, although it was significant (PR: 0.992; 95% CI: 0.988 – 0.996) in bivariate associations.

Adding enabling variables at \( p=0.20 \) cut off, sexual orientation, ethnoracial group, gender modality, and income were retained. Out of the retained variables, income was not statistically significant at the \( p<0.05 \) level. Other variables under enabling factors such as social provisions and education were eliminated. Prior predisposing factors remained relatively similar to bivariate levels, with marginal decreases in prevalence ratios and slight increase in \( p \)-values. For example, the overall \( p \)-value for sexual orientation became \( p=0.0283 \) as opposed to \( p<.0001 \) at bivariate level. Categories that were statistically significant in previous elimination were still statistically significant.

Adding need variables (minority stress, self-rated mental health, living with a mood disorder, and living with an anxiety disorder), ethnoracial group, gender modality, income, living with a mood disorder, and living with an anxiety disorder were retained at \( p=0.15 \). That said, ethnoracial group, gender modality, living with a mood disorder and living with an anxiety disorder were the only ones with an alpha level of \( <0.05 \). Income remained statistically non-significant. Sexual orientation was eliminated in this model, along with minority stress and self-reported mental health. Racialized category was not statistically significant at \( p<0.05 \) (PR: 0.986;
95% CI: 0.875 – 1.114). In a final model using PROC GENMOD, compared to their White
counterpart, Indigenous participants were 16% more likely (PR: 1.163; 95% CI: 1.036 – 1.306)
to have used mental health services. Compared to cis male participants, those who identified as
trans or gender-diverse and were assigned male at birth were 1.3 times more likely (PR: 1.335;
95% CI: 1.059 – 1.682) to have used mental health services, while participants who identified as
trans or gender-diverse and were assigned female at birth were 1.2 times more likely (PR: 1.180;
95% CI: 1.017 – 1.367) to have used mental health services. Identifying as cisgender and
assigned female at birth was not statistically significant in this model, though bivariate
association showed an increase of 31% in likelihood of mental health service utilization (PR:
1.309; 95% CI: 1.149 – 1.491) compared to cis men. Living with a mood disorder was associated
with a 71% increase in likelihood (PR: 1.705; 95% CI: 1.517 – 1.916) of mental health service
use compared to respondents who did not self-identify as living with a mood disorder.
Participants who were living with an anxiety disorder were 51% more likely (PR: 1.508; 95% CI:
1.333 – 1.707) to have utilized mental health services within the past 12 months than those who
did not self-identify as living with an anxiety disorder.
Table 3

Modified Poisson regression results of mental health service utilization within the past 12 months; separated by Andersen model categories: Findings from the LGBT2Q+ Heath Survey (N=1542)

<table>
<thead>
<tr>
<th>Predictors</th>
<th>Bivariate Associations</th>
<th>Model 1&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Model 2&lt;sup&gt;b&lt;/sup&gt;</th>
<th>Final Model&lt;sup&gt;c&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>PR (95% CI)</td>
<td>p-value</td>
<td>PR (95% CI)</td>
<td>p-value</td>
</tr>
<tr>
<td><strong>PREDISPOSING FACTORS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>0.992 (0.988, 0.996)</td>
<td>p=0.0003</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>p&lt;.0001 overall</td>
<td></td>
<td>p=0.0159 overall</td>
<td></td>
</tr>
<tr>
<td>Sexual Orientation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gay, lesbian</td>
<td>Reference</td>
<td></td>
<td>Reference</td>
<td></td>
</tr>
<tr>
<td>Bisexual</td>
<td>1.273 (1.111, 1.458)</td>
<td>p=0.0005</td>
<td>1.158 (1.003, 1.338)</td>
<td>p=0.0462</td>
</tr>
<tr>
<td>Pan, queer</td>
<td>1.587 (1.332, 1.889)</td>
<td>p=.0001</td>
<td>1.335 (1.109, 1.608)</td>
<td>p=0.0023</td>
</tr>
<tr>
<td>Straight, asexual, questioning, other</td>
<td>1.133 (0.871, 1.475)</td>
<td>p=0.3522</td>
<td>1.026 (0.783, 1.346)</td>
<td>p=0.8518</td>
</tr>
<tr>
<td>Ethnoracial Group</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>Reference</td>
<td></td>
<td>Reference</td>
<td></td>
</tr>
<tr>
<td>Racialized</td>
<td>0.859 (0.756, 0.975)</td>
<td>p=0.0187</td>
<td>0.854 (0.753, 0.969)</td>
<td>p=0.0145</td>
</tr>
<tr>
<td>Indigenous</td>
<td>1.326 (1.169, 1.504)</td>
<td>p&lt;.0001</td>
<td>1.280 (1.130, 1.449)</td>
<td>p&lt;.0001</td>
</tr>
<tr>
<td>Gender</td>
<td>p&lt;.0001 overall</td>
<td></td>
<td>p=0.0012 overall</td>
<td></td>
</tr>
<tr>
<td>Cis AMAB</td>
<td>Reference</td>
<td></td>
<td>Reference</td>
<td></td>
</tr>
<tr>
<td>Cis AFAB</td>
<td>1.309 (1.149, 1.491)</td>
<td>p&lt;.0001</td>
<td>1.212 (1.053, 1.394)</td>
<td>p=0.0072</td>
</tr>
<tr>
<td>Trans/gender-diverse AMAB</td>
<td>1.329 (1.052, 1.679)</td>
<td>p=0.017</td>
<td>1.270 (0.999, 1.612)</td>
<td>p=0.0501</td>
</tr>
<tr>
<td></td>
<td>1.335 (1.059, 1.682)</td>
<td>p=0.0145</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trans/gender-diverse AFAB</td>
<td>1.536 (1.312, 1.797)</td>
<td>p &lt; .0001</td>
<td>1.411 (1.190, 1.673)</td>
<td>p &lt; .0001</td>
</tr>
<tr>
<td>----------------------------</td>
<td>----------------------</td>
<td>-----------</td>
<td>----------------------</td>
<td>-----------</td>
</tr>
<tr>
<td>Born in Canada</td>
<td>Reference</td>
<td>0.868 (0.745, 1.012)</td>
<td>p = 0.0706</td>
<td></td>
</tr>
</tbody>
</table>

### ENABLING FACTORS

<table>
<thead>
<tr>
<th>Income</th>
<th>p = 0.0166 overall</th>
<th>p = 0.0551 overall</th>
<th>p = 0.1464 overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; $5,000</td>
<td>1.216 (0.912, 1.620)</td>
<td>p = 0.1827</td>
<td>1.116 (0.839, 1.485)</td>
</tr>
<tr>
<td>$5,000 – $9,999</td>
<td>1.257 (0.944, 1.675)</td>
<td>p = 0.1181</td>
<td>1.110 (0.835, 1.477)</td>
</tr>
<tr>
<td>$10,000 – $19,000</td>
<td>1.239 (1.034, 1.485)</td>
<td>p = 0.0204</td>
<td>1.188 (0.992, 1.424)</td>
</tr>
<tr>
<td>$20,000 – $29,999</td>
<td>1.188 (0.996, 1.418)</td>
<td>p = 0.0552</td>
<td>1.115 (0.934, 1.330)</td>
</tr>
<tr>
<td>$30,000 – $39,999</td>
<td>1.326 (1.116, 1.575)</td>
<td>p = 0.0013</td>
<td>1.242 (1.050, 1.470)</td>
</tr>
<tr>
<td>$40,000 – $49,999</td>
<td>1.008 (0.827, 1.230)</td>
<td>p = 0.9363</td>
<td>0.962 (0.791, 1.170)</td>
</tr>
<tr>
<td>$50,000 – $59,999</td>
<td>1.022 (0.838, 1.245)</td>
<td>p = 0.8318</td>
<td>0.986 (0.813, 1.197)</td>
</tr>
<tr>
<td>$60,000 – $69,999</td>
<td>0.942 (0.75, 1.182)</td>
<td>p = 0.6046</td>
<td>0.936 (0.750, 1.168)</td>
</tr>
<tr>
<td>$70,000 – $79,999</td>
<td>1.167 (0.964, 1.413)</td>
<td>p = 0.113</td>
<td>1.187 (0.985, 1.432)</td>
</tr>
<tr>
<td>≥ $80,000</td>
<td>Reference</td>
<td></td>
<td>Reference</td>
</tr>
<tr>
<td>Rather not say</td>
<td>0.984 (0.801, 1.208)</td>
<td>p = 0.8757</td>
<td>0.922 (0.750, 1.132)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Education Attainment</th>
<th>1.112 (0.906, 1.364)</th>
<th>p = 0.3113</th>
</tr>
</thead>
<tbody>
<tr>
<td>Did not graduate from high school</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Odds Ratio (95% CI)</td>
<td>p-value</td>
</tr>
<tr>
<td>----------------</td>
<td>--------------------------</td>
<td>---------</td>
</tr>
<tr>
<td>High school graduate</td>
<td>1.068 (0.927, 1.230)</td>
<td>0.3617</td>
</tr>
<tr>
<td>Some college or trade school</td>
<td>1.172 (0.999, 1.375)</td>
<td>0.0508</td>
</tr>
<tr>
<td>Some university</td>
<td>1.140 (0.974, 1.334)</td>
<td>0.104</td>
</tr>
<tr>
<td>College or trade school graduate</td>
<td>1.046 (0.893, 1.226)</td>
<td>0.5766</td>
</tr>
<tr>
<td>University graduate</td>
<td>Reference</td>
<td></td>
</tr>
<tr>
<td>Social Provisions</td>
<td>0.999 (0.991, 1.007)</td>
<td>0.8229</td>
</tr>
</tbody>
</table>

**NEED FACTORS**

<table>
<thead>
<tr>
<th>Factor</th>
<th>Odds Ratio (95% CI)</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-Reported Mental Health</td>
<td>0.787 (0.751, 0.824)</td>
<td>&lt;.0001</td>
</tr>
<tr>
<td>Minority Stress</td>
<td>1.004 (1.002, 1.006)</td>
<td>&lt;.0001</td>
</tr>
<tr>
<td>Mood Disorder</td>
<td>2.128 (1.926, 2.350)</td>
<td>&lt;.0001</td>
</tr>
<tr>
<td>Anxiety Disorder</td>
<td>2.011 (1.805, 2.241)</td>
<td>&lt;.0001</td>
</tr>
<tr>
<td></td>
<td>1.705 (1.517, 1.916)</td>
<td>&lt;.0001</td>
</tr>
<tr>
<td></td>
<td>1.508 (1.333, 1.707)</td>
<td>&lt;.0001</td>
</tr>
</tbody>
</table>

a p=0.3  
b p=0.2  
c p=0.15
Multiplicative Results

Table 4 summarizes interaction models. Interactions show a general trend of being non-White, identifying as more polysexual orientations (bisexual, polysexual, or queer), being trans or gender-diverse, and born outside of Canada as intersectional factors that increase likelihood of mental health service utilization within the past 12 months. Considering two-way interactions first, only one combination was statistically significant: older Indigenous participants were associated with increased likelihood of utilizing mental health services within the past 21 months compared to younger White participants (PR: 1.6932; 95% CI: 1.1006 – 1.6047).

Five three-way interactions were significant overall. Interaction of increasing age × ethnoracial group × sexual orientation found that older Indigenous respondents who identified as bisexual were associated with an increase in likelihood of mental health service utilization within the past 12 months (PR: 1.0104; 95% CI: 1.006 – 1.0205) when compared to younger White gay and lesbian respondents. An increase in likelihood of mental health utilization within the past 12 months was also found in older Indigenous participants who identified as being pansexual and queer (PR: 1.0167; 95% CI: 1.0068 – 1.0269) when compared to young White gay and lesbian participants. Compared to White gay and lesbian respondents who were born in Canada, being racialized, bisexual, and born outside of Canada were associated with a 45% increase (PR: 1.4538; 95% CI: 1.0523 – 2.0083) in likelihood of mental health service use within the past 12 months, while being Indigenous, identifying as straight, asexual, questioning, or other orientations, and born outside of Canada increased likelihood of mental health service use by three times (PR: 3.0171; 95% CI: 2.0728 – 4.3916). Older bisexual cisgender women were more likely to have utilized mental health services (PR: 1.0095; 95% CI: 1.0015 – 1.0176) compared to younger cis gay men. In terms of sexual orientation × gender modality × country of birth,
pansexual and queer respondents who identified as trans or gender-diverse AFAB, and were born outside of Canada were associated with a substantial increase in likelihood of mental health service utilization within the past 12 months (PR: 1.7862; 95% CI: 1.1895 – 2.6821), compared to cis gay men who were born in Canada. The same increase in likelihood of mental health service utilization was observed in pansexual and queer respondents who identified as trans or gender-diverse AMAB, and were born outside of Canada (PR: 1.7148; 95% CI: 1.1208 – 2.6235). Compared to gay cisgender men who were born in Canada, trans or gender-diverse AMAB participants who identified as straight, asexual, questioning or other orientations and were born outside of Canada were associated with an increase of 2.5 times (PR: 2.4826; 95% CI: 1.5915 – 3.8725) in mental health service utilization within the past 12 months. Being straight, asexual, questioning or other orientations, trans or gender-diverse AFAB, and born outside of Canada were associated with a 95% increase (PR 1.9490; 95% CI: 1.3023 – 2.9168) in utilization within the past 12 months compared to gay cisgender men who were born in Canada. The last statistically significant three-way interaction saw an increase in likelihood of mental health service utilization within the past 12 months for racialized trans or gender-diverse AMAB respondents who were born outside of Canada (PR: 2.6002; 95% CI 1.7561 – 3.9497) and for Indigenous cisgender women who were born outside of Canada (PR: 2.0614; 95% CI: 1.2663 – 3.2743), when compared to White cisgender men who were born in Canada.

Results from four-way interactions show two statistically significant interactions: increasing age × sexual orientation × gender modality × born outside of Canada and increasing age × ethnoracial group × gender modality × born outside of Canada. The first model showed that compared to younger respondents who were born in Canada and self-identified as gay cisgender men, an increase in mental health service utilization within the past 12 months was
likely to have happened for older respondents who were born outside of Canada, identified as pansexual or queer, and trans or gender-diverse AMAB (PR: 1.0136; 95% CI: 1.009 – 1.0265), and older respondents who were born outside of Canada, identified as pansexual or queer, and trans or gender-diverse AFAB (PR: 1.0148; 95% CI: 1.0034 – 1.0263). Compared to younger cis gay participants who were born in Canada, older trans or gender-diverse AFAB respondents who were born in Canada and identified as straight, asexual, questioning or other orientations were more likely to have utilized mental health services within the past 12 months (PR: 1.0339; 95% CI: 1.0170 – 1.0513), while older trans or gender-diverse AFAB respondents who were born outside of Canada and identified as straight, asexual, questioning, or other orientations were associated with an increase as well (PR: 1.0289; 95% CI: 1.0110 – 1.0473). The second model found that compared to younger White cisgender AMAB participants who were born outside of Canada, an increase in mental health service utilization within the past 12 months was found in older racialized trans or gender-diverse AMAB participants racialized respondents who were born outside of Canada (PR: 1.0271; 95% CI: 1.0126 – 1.0418) and in older Indigenous cis women who were born outside of Canada (PR: 1.0242; 95% CI: 1.0107 – 1.0379).

Table 5 summarizes modified Poisson regression associations between mood disorder and anxiety disorder predicting intersectional variables age, sexual orientation, ethnoracial group, gender modality, and born outside of Canada. Results found that variables were all highly associated with living with a mood disorder and with an anxiety disorder. Each year of increasing age was associated with a decrease in living with a mood disorder (PR: 0.9861; 95% CI: 0.9805 – 0.9916) and living with an anxiety disorder (PR: 0.9801; 95% CI: 0.9751 – 0.9852). Self-identified bisexual participants were 75% more likely (PR: 1.7529; 95% CI: 1.449 – 2.1204) to live with a mood disorder and 57% more likely (PR: 1.573; 95% CI: 1.3414 – 1.8445) to live
with an anxiety disorder than gay and lesbian participants. Identifying as pansexual or queer was
2.3 times more likely (PR: 2.3473; 95% CI: 1.869 – 2.9479) to live with a mood disorder, while
pansexual and queer respondents were 2.1 times more likely (PR: 2.1481; 95% CI: 1.7854 –
2.5844) to live with an anxiety disorder compared to respondents who self-identified as gay or
lesbian. Identifying as straight, asexual, questioning, or other orientations were also associated
with an increase in likelihood of living with a mood disorder (PR: 1.605; 95% CI: 1.1658 –
2.2096) and an anxiety disorder (PR: 1.6632; 95% CI: 1.297 – 2.1328) compared to gay and
lesbian respondents. Racialized participants were less likely to report living with a mood disorder
(PR: 0.6485; 95% CI: 0.5448 – 0.7719) or an anxiety disorder (PR: 0.7856; 95% CI: 0.6848 –
0.9012) compared to White participants. Indigenous participants were associated with an
increase in likelihood of living with a mood disorder (PR: 1/3598; 95% CI: 1.1677 – 1.5835) and
a ncrease in likelihood of living with an anxiety disorder (PR: 1.2943; 95% CI: 1.1333 –
1.4783) compared to White respondents. Compared to cis AMAB participants, cis AFAB
participants were 85% more likely to report living with a mood disorder (PR: 1.851; 95% CI:
1.5515 – 2.2084) and an anxiety disorder (PR: 1.8528; 95% CI: 1.5887 – 2.1607). Identifying as
trans or gender-diverse AFAB was associated with an increase likelihood of living with a mood
disorder (PR: 2.1476; 95% CI: 1.7478 – 2.6387) and increase in likelihood of living with an
anxiety disorder (PR: 2.029; 95% CI: 1.6903 – 2.421). Participants born outside of Canada were
less likely to report living with a mood disorder (PR: 0.7088; 95 CI: 0.576 – 0.8722) and living
with an anxiety disorder (PR: 0.7857; 95% CI: 0.6634 – 0.9306) when compared to those who
were born in Canada.
Table 4

Summary of two-way to four-way modified Poisson regression interaction models with predisposing variables, controlling for self-reported mental health: Findings from the LGBT2Q+ Health Survey (N=1542).

<table>
<thead>
<tr>
<th>Predictors</th>
<th>PR (95% CI)</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Two-Way Interactions</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Age x Sexual Orientation</td>
<td></td>
<td>p&gt;0.05 in all comparisons</td>
</tr>
<tr>
<td>2. Age x Ethnoracial Group</td>
<td>One year increase age Indigenous</td>
<td>1.6932 (1.1006, 1.6047) p=0.0035</td>
</tr>
<tr>
<td>3. Age x Gender Modality</td>
<td></td>
<td>p&gt;0.05 in all comparisons</td>
</tr>
<tr>
<td>4. Age x Born in Canada</td>
<td></td>
<td>p&gt;0.05 in all comparisons</td>
</tr>
<tr>
<td>5. Ethnoracial Group x Sexual Orientation</td>
<td></td>
<td>p&gt;0.05 in all comparisons</td>
</tr>
<tr>
<td>6. Sexual Orientation x Gender Modality</td>
<td></td>
<td>p&gt;0.05 in all comparisons</td>
</tr>
<tr>
<td>7. Sexual Orientation x Gender Modality</td>
<td></td>
<td>p&gt;0.05 in all comparisons</td>
</tr>
<tr>
<td>8. Ethnoracial Group x Gender Modality</td>
<td></td>
<td>p&gt;0.05 in all comparisons</td>
</tr>
<tr>
<td>9. Ethnoracial Group x Born in Canada</td>
<td></td>
<td>p&gt;0.05 in all comparisons</td>
</tr>
</tbody>
</table>
### 10. Gender Modality x Born in Canada

*p>0.05 overall*

#### Three-Way Interactions

<table>
<thead>
<tr>
<th>11. Ethnoracial Group x Sexual Orientation x Age</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bisexual</td>
</tr>
<tr>
<td>Pansexual, queer</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>12. Sexual Orientation x Ethnoracial Group x Born in Canada</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bisexual</td>
</tr>
<tr>
<td>Straight, asexual, questioning, other</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>13. Sexual Orientation x Age x Gender Modality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bisexual</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>14. Age x Sexual Orientation x Born in Canada</th>
</tr>
</thead>
</table>

*p>0.05 in all comparisons*

<table>
<thead>
<tr>
<th>15. Sexual Orientation x Gender Modality x Born in Canada</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pansexual, queer</td>
</tr>
</tbody>
</table>
Trans/gender-diverse AFAB  1.7862 (1.1895, 2.6821)  p=0.0052

Trans/gender-diverse AMAB  2.4826 (1.5915, 3.8725)  p<.0001

Trans/gender-diverse AFAB  1.9490 (1.3023, 2.9168)  p=0.0012

16. Ethnoracial Group x Age x Gender Modality

17. Ethnoracial Group x Age x Born in Canada

18. Ethnoracial Group x Gender Modality x Born in Canada

Racialized Trans/gender-diverse AMAB  No  2.6002 (1.7561, 3.9497)  p<.0001

Indigenous Cis AFAB  No  2.0614 (1.2663, 3.2743)  p=0.0022

19. Age x Gender Modality x Born in Canada

p>0.05 in all comparisons

Four-Way Interactions

20. Sexual orientation x Ethnoracial Group x Age x Gender Modality

21. Sexual Orientation x Ethnoracial Group x Age x Born in Canada

Bisexual Indigenous One year increasing age No  1.0073 (1.0025, 1.0124)  p=0.0041

p>0.05 in all comparisons

p>0.05 overall
### 22. Sexual Orientation x Age x Gender Modality x Born in Canada

<table>
<thead>
<tr>
<th>Sexual Orientation</th>
<th>Age</th>
<th>Gender Modality</th>
<th>Born in Canada</th>
<th>Overall**</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pansexual, queer</td>
<td>One year increasing age</td>
<td>Trans/gender-diverse AMAB</td>
<td>No</td>
<td>1.0136 (1.009, 1.0265) ( p=0.0359 )</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Trans/gender-diverse AFAB</td>
<td></td>
<td>1.0148 (1.0034, 1.0263) ( p=0.0106 )</td>
</tr>
<tr>
<td>Straight, asexual, questioning, other</td>
<td>One year increasing age</td>
<td>Trans/gender-diverse AMAB</td>
<td>No</td>
<td>1.0339 (1.0170, 1.0513) ( p&lt;.0001 )</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Trans/gender-diverse AFAB</td>
<td></td>
<td>1.0289 (1.0110, 1.0473) ( p=0.0015 )</td>
</tr>
</tbody>
</table>

### 23. Ethnoracial Group x Age x Gender Modality x Born in Canada

<table>
<thead>
<tr>
<th>Ethnoracial Group</th>
<th>Age</th>
<th>Gender Modality</th>
<th>Born in Canada</th>
<th>Overall**</th>
</tr>
</thead>
<tbody>
<tr>
<td>Racialized</td>
<td>One year increasing age</td>
<td>Trans/gender-diverse AMAB</td>
<td>No</td>
<td>1.0271 (1.0126, 1.0418) ( p=0.0002 )</td>
</tr>
<tr>
<td>Indigenous</td>
<td>One year increasing age</td>
<td>Cis AFAB</td>
<td>No</td>
<td>1.0242 (1.0107, 1.0379) ( p=0.0004 )</td>
</tr>
</tbody>
</table>

PR = prevalence ratio, 95% CI = 95% confidence interval, *** \( \leq 0.001 \), ** \( \leq 0.01 \), * \( \leq 0.05 \). Only models that converged are shown.
Table 5

Comparisons of mental health service utilization, mood disorder, and anxiety disorder as outcomes against predisposing variables:

*Findings from the LGBT2Q+ Health Survey (N=1542)*

<table>
<thead>
<tr>
<th>Intersectional Variables</th>
<th>Mental Health Service Utilization</th>
<th>Mood Disorder</th>
<th>Anxiety Disorder</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>PR (95% CI)</td>
<td>PR (95% CI)</td>
<td>PR (95% CI)</td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td>One year increasing</td>
<td>0.9918 (0.9875, 0.9963)**</td>
<td>0.9861 (0.9805, 0.9916)***</td>
</tr>
<tr>
<td><strong>Sexual Orientation</strong></td>
<td>Overall***</td>
<td>Overall***</td>
<td>Overall***</td>
</tr>
<tr>
<td>Gay, lesbian</td>
<td>Reference</td>
<td>Reference</td>
<td>Reference</td>
</tr>
<tr>
<td>Bisexual</td>
<td>1.2725 (1.111, 1.4575)**</td>
<td>1.7529 (1.449, 2.1204)***</td>
<td>1.573 (1.3414, 1.8445)***</td>
</tr>
<tr>
<td>Pansexual, queer</td>
<td>1.5865 (1.3321, 1.8894)***</td>
<td>2.3473 (1.869, 2.9479)***</td>
<td>2.1481 (1.7854, 2.5844)***</td>
</tr>
<tr>
<td>Straight, asexual,</td>
<td>1.1334 (0.8706, 1.4754)</td>
<td>1.605 (1.1658, 2.2096)**</td>
<td>1.6632 (1.297, 2.1328)***</td>
</tr>
<tr>
<td>questioning, other</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Ethnoracial Group</strong></td>
<td>Overall***</td>
<td>Overall***</td>
<td>Overall***</td>
</tr>
<tr>
<td>White</td>
<td>Reference</td>
<td>Reference</td>
<td>Reference</td>
</tr>
<tr>
<td>Racialized</td>
<td>0.8585 (0.7559, 0.9749)*</td>
<td>0.6485 (0.5448, 0.7719)***</td>
<td>0.7856 (0.6848, 0.9012)**</td>
</tr>
<tr>
<td>Indigenous</td>
<td>1.3263 (1.1694, 1.5044)***</td>
<td>1.3598 (1.1677, 1.5835)***</td>
<td>1.2943 (1.1333, 1.4783)***</td>
</tr>
<tr>
<td><strong>Gender Modality</strong></td>
<td>Overall***</td>
<td>Overall***</td>
<td>Overall***</td>
</tr>
<tr>
<td>Cis AMAB</td>
<td>Reference</td>
<td>Reference</td>
<td>Reference</td>
</tr>
<tr>
<td>Cis AFAB</td>
<td>1.3088 (1.1492, 1.4906)***</td>
<td>1.851 (1.5515, 2.2084)***</td>
<td>1.8528 (1.5887, 2.1607)***</td>
</tr>
<tr>
<td>Trans/gender-diverse AMAB</td>
<td>1.3292 (1.0522, 1.679)*</td>
<td>0.9598 (0.6291, 1.4645)</td>
<td>1.0929 (0.775, 1.5411)</td>
</tr>
<tr>
<td>Trans/gender-diverse AFAB</td>
<td>1.5357 (1.3121, 1.7974)***</td>
<td>2.1476 (1.7478, 2.6387)***</td>
<td>2.0229 (1.6903, 2.421)***</td>
</tr>
<tr>
<td>Born in Canada</td>
<td>p&gt;0.05 at both levels</td>
<td>Overall**</td>
<td>Overall**</td>
</tr>
<tr>
<td>---------------</td>
<td>----------------------</td>
<td>-----------</td>
<td>-----------</td>
</tr>
<tr>
<td>Yes</td>
<td>Reference</td>
<td>Reference</td>
<td>Reference</td>
</tr>
<tr>
<td>No</td>
<td>0.8684 (0.7453, 1.0119)</td>
<td>0.7088 (0.576, 0.8722)**</td>
<td>0.7857 (0.6634, 0.9306)**</td>
</tr>
</tbody>
</table>

PR = prevalence ratio, 95% CI = 95% confidence interval, *** = ≤.0001, ** = ≤.01, * = ≤.05
Summary of Key Results: Findings from the 2020 LGBT2Q+ Health Survey

### Bivariate Associations:

- **Racialized**
  - Decrease in utilization: 14%
- **Indigenous**
  - Increase in utilization: 33%
- **Bisexual**
  - Increase in utilization: 27%
- **Pansexual & queer**
  - Increase in utilization: 59%
- **Trans/gender-diverse AMAB**
  - Increase in utilization: 33%
- **Trans/gender-diverse AFAB**
  - Increase in utilization: 54%

### Interaction Associations:

- **Age**
  - Increase in utilization: 69%
- **Racialized**
  - Increase in utilization: 45%
- **Bisexual**
  - Increase in utilization: 3%
- **Not born in Canada**
  - Increase in utilization: 3%

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Figure 1. Summary of key results from the LGBT2Q+ Health Survey (N=1542)
This section discusses findings from additive and multiplicative analyses. We found inequalities in utilization of mental health services within the past 12 months among older, more polysexual orientations (attracted to more than one gender), gender minorities respondents, most notably within those who also identified as racialized or Indigenous when compared to younger White cis gay participants. Bivariate results of associations between mood disorder and anxiety disorder against intersectional variables parallel trends seen in utilization of mental health services, pointing to mental health inequalities. Exploratory analyses found that even after controlling for need (self-reported mental health), mental health service utilization associations with sexual orientation and ethnoracial groups held strong. The most pronounced inequality was among ethnoracial groups: compared to White respondents, racialized respondents were much less likely to live with a mood or anxiety disorder, and were less likely to have utilized mental health services within the past 12 months, while Indigenous respondents were more likely to have utilized mental health services within the past 12 months, and were more likely to report living with a mood disorder and/or an anxiety disorder. Finally, study limitations are discussed.

Compared to the recent Canadian census profile in 2016, the ethnoracial makeup of the survey sample is fairly representative of the actual ethnoracial makeup in Canada (Statistics Canada, 2017). Non-Indigenous racialized persons account for 22.7% of the overall Canadian population, while they represented approximately 25% of the sample. Indigenous peoples accounted for 9.3% in our survey, where they account for 6.4% of the overall population. Statistics Canada does not provide the proportion of White Canadians, but we can infer that it is approximately 70% of the overall population. Approximately 66% of the survey sample identified as non-Indigenous White. It is important to reiterate that individuals often do not fall into just one ethnoracial group and may have picked more than one ethnoracial background when
answering the survey question. In this aspect, categorizing the sample into White, racialized, and Indigenous was able to account for the intersectionality of having multiple ethnoracial identities, as well as the general social experiences associated, such as race/racism.

**Andersen Behavioural Model of Healthcare Utilization**

Research question #1 aimed to explore the predisposing, enabling, and need factors associated with mental health service utilization. The Andersen model posits that a need for healthcare (categorized as a need factor) contributes to the utilization of healthcare. Living with mental health conditions such as mood and anxiety disorders and having higher experiences of minority stress are all factors that increase the likelihood of mental health service utilization. With that in mind, our results parallel the Andersen model’s needs factors in increasing the likelihood of mental health service utilization within the past 12 months. Respondents who were living with a mood and/or an anxiety disorder were at least two times more likely to have utilized mental health services in bivariate associations, while higher levels of minority stress were associated with an increase in likelihood of having utilized mental health services. Using backwards elimination, a final model of all variables separated into Andersen model categorizations- two predisposing variables (ethnoracial group and gender modality) and two need factors (living with a mood disorder and living with an anxiety disorder)- were retained and found to be statistically significant. Furthermore, bivariate models looking at associations of living with a mood disorder and living with an anxiety disorder as outcomes against predisposing factors such as gender modality, ethnoracial group, sexual orientation, age, and whether participants were born outside of Canada showed similar trends as the mental health service utilization outcome. Similar findings across the three variables as outcomes suggest that need and utilization are related, as posited in the Andersen model (Andersen et al., 2014; Gelberg et
al., 2000). Associations with living with a mood and/or an anxiety disorder can be inferred to as having a higher mental health need, which increased utilization of mental health services. Results throughout different analyses hint at some form of relationship amongst all three, though it should be noted that mainly associations at the bivariate level were explored in this research. Racialized respondents were associated with a much lower likelihood of living with a mood and/or anxiety disorder, and were less likely to have utilized mental health services within the past 12 months at the bivariate levels, which can be interpreted as racialized respondents either do not have as much mental health needs, thus no need to utilize mental health services, or that there are underlying mechanisms such as barriers to access or utilization that prevent them from utilizing mental health services.

**Minority Stress and Social Provisions**

At the bivariate level, minority stress was associated with an increase in mental health service utilization. This may have been due to the nature of the sample size and the minority stress measure used. Outland’s (2016) minority stress measure used was for LGBT, meaning that it measured minority stress such as stigma and discrimination pertaining to both sexual orientation and gender minorities. Additionally, the sample consisted only of LGBT2Q+ participants, which may help explain why at the bivariate level minority stress was associated with a slight increase in mental health service utilization.

Analyses predicting mental health service utilization with other negative mental health outcomes as need factors (self-rated mental health, living with an anxiety disorder, and living with a mood disorder) showed that within this sample, need factors are highly predictive of mental health service utilization at the bivariate level. What was unexpected was that social provisions was unable to predict mental health service utilization. Minority stress refers to the
proximal and distal stressors experienced by sexual orientation and gender minorities, and social support is a factor that can mitigate said minority stress (see Meyer, 2003). Social support (measured as social provisions in the survey and analyses) was not associated with mental health service utilization. This was in contrast to findings in other research which has found that social support is a protective factor in mitigating stressors or negative mental health outcomes within LGBT2Q+ health literature (Meyer, 2003; Ehlke et al., 2020; Fingerhut, 2018; Verrelli et al., 2019). That said, this study is not the first that did not find social support/provisions to have an association with mental health. Sattler et al. (2016) found that while social support and minority stress were statistically significant associated with mental health, it was only a marginal effect. It is important to note that minority stress score and social provisions were only tested at the bivariate level in this paper and analyses of those variables did not carry into the multiplicative step as predisposing factors were much more salient in predicting mental health service utilization, as well as theoretical overlap between predisposing factors and marginalized identities within intersectionality theory. However, in future multivariate analyses, they may very well become statistically significant when combined with other interaction terms. Parallels may be drawn with racialized respondents and those born outside of Canada, in which being racialized was associated with a decrease of likelihood of mental health service utilization as well as lower prevalence of mood and anxiety disorders, while being born outside Canada was not statistically significant in associating with utilization at the bivariate level. Yet, both variables came to increase likelihood of mental health service use when in combination with other interaction terms.
Intersectionality in Interactions

Research question #2 was interested in exploring interactions/intersectionality within predisposing factors that were associated with mental health service utilization within the sample. Intersectionality theory originated to elucidate the social experiences of race and gender in Black women (Crenshaw, 1989). As many have done prior, this thesis expands on intersectionality theory to include other marginalized identities such as sexual orientation, newcomer status, and age, in addition to ethnoracial identity and gender (Bowleg, 2008; Veenstra, 2011). In this sample, ethnoracial minority status and gender still play a role in health inequalities, as seen in the higher prevalence of mental healthcare utilization in results among cis AFAB, trans, or gender-diverse respondents, racialized, and Indigenous respondents compared to cis male and White respondents, implying an increased mental health service need in the first place. In addition, intersections of more polysexual orientations and being born outside of Canada are persistent alongside gender modality and ethnoracial minority identity in increasing mental health service utilization even after controlling for need, indicating that various intersectional identities coalesce to create distinct forms of oppression that lead to higher usage of mental health services.

Racialized Mental Health

Two-thirds of racialized peoples are immigrants to Canada (Raphael et al., 2020). While the scope of this paper focuses on mental health service utilization, mental health outcomes such as living with a mood and/or anxiety disorder cannot be ignored. Results in this thesis found that being racialized was associated with a decrease in mental health utilization and less likelihood of reporting a mood or anxiety disorder. These results are consistent with some of the literature, in which racialized peoples tend to use less healthcare (not just mental health services) and report
fewer mental health conditions (Ahmed et al., 2016; Chiu et al., 2018; Durbin et al., 2014; Thomson et al., 2015).

**Racialized LGBTQ+ Immigrants**

There were significant interactions with respondents who identified as either straight/heterosexual, asexual, questioning, or “other”, but due to the category holding such a vast variation of orientations, it is difficult to draw inferences. Thus, this subheading will focus on results from additive and multivariate analyses that suggest increased utilization of mental health services in racialized, more polysexual oriented, and trans or gender-diverse respondents who were born outside of Canada, from here referred to as racialized LGBTQ+ immigrants. As immigrant class was not measured in the survey, this discussion will speak broadly of refugee and asylum seekers as well as other forms of immigration under the umbrella term “immigrant.”

At the bivariate level, there were high associations between increased prevalence of mood and anxiety disorder and bisexual, pansexual, and queer participants, and between mood and anxiety disorders and trans or gender-diverse identities, suggesting increased mental health needs in those subpopulations when compared to cisgender gay and lesbian respondents. Additionally, results from interactions of more polysexual orientations (i.e., bisexual, polysexual, and queer identities), trans and gender-diverse identities, and those who were born outside of Canada having utilized much more mental health services within the past 12 months, regardless of need, give further indication that the intersections of gender, ethnoracial identity, sexual orientation, and newcomer status converge to reporting more mental health conditions and increased utilization of mental health services. Qualitative and quantitative literature on racialized LGBTQ+ newcomers postulate that they often face multiple systems of oppression, ranging from homophobia/transphobia, anti-immigrant attitudes, racism within the LGBTQ+ community, and
discrimination within the immigration process, all contributing to increased mental health stressors and barriers to services (Fox et al., 2020; Munro et al., 2013; White et al., 2019).

**Healthy Immigrant Effect**

The concept of the healthy immigrant effect has been suggested by some scholars to explain why racialized participants reported lower likelihood of mood and anxiety disorder and less mental health service utilization within the past 12 months. Economic immigration (of which accounts for most immigrants in Canada) comes with a set of rigid criteria in order for the individual to immigrate to Canada. The process often involves “investing” a large sum of money as well as a comprehensive health examination, not to mention costs associated with the immigration process. Thus, the healthy immigrant effect is argued to be a self-selection process, in which most economic immigrants who end up entering Canada tend to be the healthiest and have high education and more financial resources. This may be a simple way to explain the decrease in likelihood of mental health service utilization. After all, according to the Andersen model, if there are no mental health needs, there is no need to utilize mental health services. However, that does not explain why the healthy immigrant effect dissipates over time, and why the literature has found that racialized people report poorer mental health as their stay prolongs. Explanation of the health convergence remain divided (Constant, 2021). Among the various explanations, I will be touching on three explanations that pertain to results from the study: age, cultural differences, and structural racism.

**Age.** One may argue that age plays a role in explaining worsening health status, though results from this study and from other researchers did not find that in their analyses. The final model of the Andersen model categorization saw that age was eliminated fairly early on in the elimination process, meaning that age was not able to predict mental health service utilization
within the past 12 months as best as other variables, one of which was ethnoracial group. At the bivariate level, increasing age was associated with a decrease in mental health service utilization. Furthermore, researchers such as Kobayashi and Prus (2012) have found that the healthy immigrant effect mainly stems from being racialized and immigrant status, and that demographic factors such as age had a marginal impact on the association. While this may be satisfactory in explaining why at the additive level, racialized participants reported less mental health service utilization and less mental health conditions, it contradicts findings in interaction models. The models suggest higher levels of utilization and mental health conditions when it is combined with other variables, especially being born outside of Canada.

**Culture.** Cultural differences such as conceptualization of health have been suggested as to why racialized peoples tend to report less mental health outcomes and less mental health service use, though the accessibility to said services is important (Chiu et al., 2018). There are differences in cultural attitudes toward mental health, but that does not adequately explain the etiology of the mental health issue itself. The rhetoric that racialized individuals report lower levels of mental health service utilization because of their culture places the blame on individuals and maintains that structural problems can be solved at the individual-level. Viruell-Fuentes et al. (2012) have argued that acculturation, often (but not always) conceptualized as an individual-level process in which the immigrant sheds their cultural characteristics and adapts to mainstream culture, does not account for broader and structural determinants of health associated with migration and at the crossroads of racism that affect their health. Indeed, common measures seen in immigrant health research such as length of stay and official language(s) proficiency are all dimensions of acculturation that require the individual to adapt to mainstream Canadian
sociocultural sphere. One of the consequences of not changing or adapting is an increase in health needs.

**Structural Racism and Barriers.** Racism and discrimination against racialized sexual orientation and gender minorities readily produce health inequalities, whether it be through systemic barriers or through the settlement process. One qualitative study based in the Greater Toronto Area found that discrimination from their respective diasporic communities and from Canada is a common theme for LGBTQ+ newcomers (Munro et al., 2013). Racialized trans and non-binary people tend to experience higher incidences of violence and harassment, considering the already-high rates experienced by trans and non-binary individuals overall (Chih et al., 2020). Most importantly, perceived discrimination has been found to be negatively associated with poorer mental health in immigrants and refugees (Szaflarski & Bauldry, 2019).

Language barriers to mental healthcare utilization is one of the most commonly cited barriers by newcomers and immigrants, leading to unmet health needs (Ahmed et al., 2016; Marshall et al., 2010; Pandey et al., 2021; Thomson et al., 2015). A related barrier is the complexity of the Canadian healthcare system (Ahmet et al., 2016; Marshall et al., 2016; Pandey et al., 2015). As healthcare is managed at the provincial or territorial level, differences in coverage can vary widely. As well, the Canadian healthcare system is known for long wait times (Barua, 2015). A qualitative study found that Punjabi and Chinese-speaking immigrants feel frustration with the Canadian healthcare system for not being responsive to their needs (Marshall et al., 2010). Mistrust or lack of confidence in healthcare service may lead to avoidance. This is also true for sexual orientation and gender minorities who have had negative experiences with the healthcare system, leading to avoidance of healthcare services (Lee & Kanji, 2017; The TransPULSE Canada Team, 2020). Chiu et al. (2018) argued that Chinese respondents having a lower
level of mental healthcare utilization is due to cultural differences as seen in their increased use of alternative health services, but when shifting healthcare utilization to a broader ecological perspective rather than at the individual-level, it may also be interpreted as mistrust or frustration with the non-responsiveness of the healthcare services to their needs, which is what caused respondents to seek alternate forms of health services. As well, the immigration and settlement process come with a whole host of stressors that may cause increased mental health conditions, ranging from social exclusion, stress related to financial resources, to settling into a new environment, all affecting access and utilization of mental health services (Durbin et al., 2015; Edge & Newbold, 2013). Lastly, interaction models showed that after controlling for need, racialized LGBT2Q+ respondents who were born outside of Canada were associated with a higher likelihood of having used mental health services within the past 12 months when compared to younger cis White gay respondents within the sample. The above barriers and social processes may very well be why immigrants report less mental health conditions and utilize mental health services, because they cannot access said services, let alone receive a diagnosis or treatment for mental health conditions.

**Life Course Perspective in LGBT2Q+ Research**

Age is both a social determinant of health and a predisposing factor in the Andersen model (Andersen et al., 2014; Raphael et al., 2020). At the bivariate level, increasing age was consistently associated with a decrease in likelihood of utilizing mental health services within the past 12 months, as well as decrease in likelihood of mood disorder and anxiety disorder, suggesting that younger respondents were more likely to utilize mental health services and identify as living with more mental health conditions. Yet, at the multivariate level, increasing age was one of the predisposing factors that increased likelihood of mental health service
utilization. For example, a two-way interaction of age and ethnoracial group found that older Indigenous respondents were more likely to have used mental health services within the past 12 months, amongst many other interaction models where increasing age was associated with an increase in utilization (see table 4). Given that the sample consists of LGBT2Q+ respondents and bivariate result showing that more experiences of minority stress were associated with an increase in mental health utilization, it is plausible that it may be a result of chronic stress experienced over the life course manifesting at an older age as mental health conditions, in additional to stress associated with ageism. The caveat being that at the bivariate level, increasing age was consistently associated with lower utilization of mental health services, lower self-reported prevalence of a mood disorder, and lower self-reported prevalence of an anxiety disorder. The conflicting results do not point to inconsistencies in methodology or the data source, but rather are a clear indication of the differences between an additive versus a multiplicative/intersectional approach to health.

The life course theory posits that health trajectories are intimately linked to age from the developmental and structural perspectives (Jones et al., 2019; Pearlin et al., 2005). Similarly, the minority stress theory also emphasizes the effects of chronic stress as precursor to worsening health (Meyer, 2003). Factors such as chronic [minority] stress, socioeconomic status, and gender all contribute to the health of an individual, and that health is a consequence of those experiences (Corna, 2013; Pearlin et al., 2005). In addition, Fredriksen-Goldsen et al. (2017) found that in a sample of older LGB adults, those who were in the “beleaguered at-risk” group were more likely to have depressive symptoms and higher perceived stress, while Kneale and French (2018) found that older LGB adults in England were more likely to have experienced traumatic life events, such as sexual assault and financial hardship compared to their
heterosexual counterparts. Furthermore, Fredriksen-Goldsen et al. (2019) found that in LGBTQ adults, microaggressions were positively associated with physical and mental health. Perhaps, in addition to the minority stress, life course theory should be more prominent within sexual orientation and gender minority research, evident from findings in this study and by other researchers. More research is needed on the experiences of older LGBT2Q+ adults, especially given the rapidly shifting societal views on LGBT2Q+ communities, which may see differences between older and younger LGBT2Q+ peoples.

**Indigeneity**

Whether it be at the bivariate level or in interaction models, being Indigenous unfailingly was statistically significant in increasing likelihood of utilizing mental health services, as well as bivariate associated with an increase in likelihood of living with a mood and/or an anxiety disorder. What sets Indigeneity apart is that while increasing age was associated with a decrease in mental health service utilization at the bivariate level, two-way interaction of increasing age and being Indigenous was associated with an increase in mental health service utilization, implying that older Indigenous participants were more likely to have utilized mental health services compared to younger White participants. This suggests chronic mental health conditions that continue throughout the life course into older age, as with each increasing year in age, Indigenous participants were more likely to have utilized mental health services.

Indigeneity is considered to be a social determinant of health in Canada (Raphael et al., 2020). The original scope of the thesis was to look at non-Indigenous ethnoracial identities and how this might interact with other social determinants of health to influence mental healthcare utilization, but the results from statistical exploration have shown a much different picture than expected. Even the CCHS, which is arguably the biggest population health survey in Canada,
excludes Indigenous peoples living in reserves, meaning that any Indigenous participant sampled would be living off-reserve, further echoing the common thread of systemic marginalization of Indigenous communities. As well, being cisgender and assigned female at birth and being Indigenous in interaction models were associated with an increase in utilization of mental health services within the past 12 months, suggesting intersection of gender and Indigeneity in mental health and mental health service utilization. Results may be contextualized through gendered violence and colonialism (National Inquiry into Missing and Murdered Indigenous Women and Girls [NIMMIWG], 2019). Due to the history of settler colonialism and the systemic eradication of Indigenous peoples and their cultures, large health gaps are present between that of Indigenous peoples and non-Indigenous people in Canada. De Leeuw et al. (2010) also brought in the effects of colonialism continue to exert influence over the narrative of mental health and addiction in order to continue to oppress Indigenous peoples, through child protective services. The report by NIMMIWG (2019) found four ways that maintain colonial violence, including ignoring the expertise and agency of Indigenous women, girls, and 2SLGBTQQIA people. Colonialism as a structure eradicated and displaced the traditional knowledges and roles of Indigenous women and Indigenous Two-Spirit, Indigiqueer, trans, and non-binary peoples, and with the efforts to convert Indigenous peoples to Christianity, comes the violent imposition of heteropatriarchal European values onto Indigenous peoples (NIMMIWG, 2019). Bourassa et al. (2004) provided an example of The Indian Act of 1876 as a tool of multiple oppressions, in which Indigenous women were/are treated as the “other”, to further alienate Indigenous women from their identity. Status Indian women who married non-Indian men lost their status, but men who married non-Indian women were not subjected to the same legislation, in fact, they and their children became status Indians. Thus, the Act served and continues to serve the loss of Indigenous identity, especially in
Indigenous women. It is of crucial importance that one contextualizes Indigenous health inequalities not as personal failings, but as consequences of colonial violence (NIMMIWG, 2019). This is one way in which intersectionality theory may be useful in elucidating results that single-axis thinking cannot do.

One finding from analyses was the co-occurrence of being Indigenous and self-reporting as being born outside of Canada within interaction models in increased mental health service utilization within the past 12 months. It was made clear within the survey that Indigenous referred to anyone who identified as First Nation, Inuit, and/or Métis. Given the broader sociopolitical context, it serves as a clear reminder of the brutal histories on unceded territory that is modern day Canada, and why there may be Indigenous participants who felt that they do not belong, or reject the notion of Canada. Lastly, considering the social location of the author as a non-Indigenous racialized immigrant/settler, he strongly encourages readers to read more works by Indigenous researchers that speak to life course histories of structural, community, and individual factors that affect overall health status, as well as settler researchers who challenge colonial understandings and responses to mental health that oftentimes serve as a tool of oppression for Indigenous peoples.

**Implications**

Results from this thesis provided insights into the practicality of using intersectionality theory in quantitative population health research. Intersectionality-informed quantitative health research adds to the growing bodies of literature in our understanding of health inequalities and ways to mitigate systems-level harms such as racism, colonialism, and discrimination against sexual orientation and gender minorities. Intersectionality is more than the sum of its parts. As Bowleg (2008) has effectively demonstrated, Black + lesbian + woman does not equal Black
lesbian woman. Most importantly, health researchers (Bauer, 2014; Bowleg, 2008; 2012; Mereish & Bradford, 2014; Rouhani, 2014; Veenstra, 2011) have demonstrated intersectionality theory to be an invaluable asset in our understanding of health and well-being research in plurality of marginalization and oppression. Methodologies have been proposed, replicated, and fine-tuned, yet one major question remains: how does one advance intersectionality theory into a cohesive intersectionality-informed framework toward mental health services? This feels like a natural progression to the next step in intersectionality-informed health research.

Thesis results showed that the realities of mental health outcome, access, and utilization varied greatly based on factors or identities, and must be considered at each stage. Single-axis or individual-level conceptualization of mental health is detrimental to the health of people who experience multiple systems of oppression. To bring about change, a bottom-up approach toward intersectionality-informed mental health services and interventions should be an area of focus for mental health service providers. Keeping in line with intersectionality’s feminist root, an example of a bottom-up approach that led to policy change was the decriminalization of abortion in Canada. Dr. Morgentaler was a Montreal doctor who performed safe abortions in his home practice after an amendment to the criminal code meant that it was illegal for someone to have an abortion unless their health was threatened (Action Canada, 2020). At the same time, a national movement and collaboration of various feminist organizations occurred in protest of the criminal code. The 1970 Abortion Caravan, in which a group of feminists travelled from Vancouver to Ottawa’s Canadian Parliament in protest, though not directly involved in the ruling that makes abortion much more accessible, remains a milestone in Canadian feminist and reproductive justice movement that demonstrates the power of change that we hold as a collective (Action Canada, 2020).
Thinking holistically, the causes that contribute to mental health conditions should be addressed, while also mitigating barriers that prevent access for those who need said services. Similarly, Huang et al. (2020) and Turan et al. (2019) call for the need for intersectionality-informed mental health interventions in sexual orientation minorities and in people who face intersectional stigma, respectively. McCall (as cited in Huang et al., 2020) elucidated three approaches toward intersectionality-informed mental health interventions by 1) focusing on the combined effects of multiple marginalization; 2) approaching intervention in an intracategorical way that allows for classification of subgroup differences; and 3) relying more on personal and individual interpretations of mental health to avoid categorization based on identity alone. The participation of clients for whom those services are meant for during decision-making can make the services and interventions more efficacious in addressing intersectional needs.

In addition, Sterzing et al. (2017) put forth an intersectional framework in social work research and amongst other themes, education is arguably the most immediate when it comes to mental health service provision. Education as suggested by Sterzing et al. (2017) refers to education toward youths to reduce microaggressions against marginalized groups, but it may be applicable towards mental health service providers. In fact, many have noted the importance of education of primary healthcare providers in addressing LGBTQ+ health inequalities (McCann & Brown, 2018; Smith & Turell, 2017; Zelin et al., 2018). Toward an intersectional approach to mental health interventions that address the holistic needs and causes of marginalized peoples, interventions such as relational cultural therapy and narrative therapy are suggested (Sterzing et al., 2017).

Finally, constructs such as racism, heterosexism, colonialism call for changes at the systems-level. Mental health interventions are that- interventions. They do not prevent the
systems of marginalization from harming the health of multiple marginalized peoples, nor do they reflect their needs. More must be done at the upstream level, or from top-down, such as preventative interventions and policies that disrupt negative impacts of oppressive social structures on marginalized peoples. Hankivsky et al. (2014) have shown us what intersectionality-based policy analysis (IBPA) can look like. Hankivsky et al. (2014) suggest that underlying intersectional values and principles can be found within their 12 questions when analyzing policies, separated into descriptive and transformative questions. Descriptive questions aim to create a critical background in all its contexts, while transformative questions aim to identify alternative policies or solutions that promote social justice and equity. Applying an IBPA framework, Bill C6, a legislation that would make conversion therapy illegal in Canada can be analyzed with an intersectional lens. What the policy analyst’s experiences and knowledge bring to the policy analysis; how different groups are affected by the problem; what kinds of inequities exist; and how the proposed policy will reduce inequities are examples of questions that should be asked in IBPA. Hankivsky et al.’s (2014) framework demonstrates how intersectionality can be applied at the policy level to bring about structural upstream changes by shifting our perspective from single-axis to multi-axes to ensure that multiple identities are considered and consulted, and most importantly, recognizing and challenging the ways in which our current understanding of mental health, delivery of mental health services, and institutions can be harmful to multiple marginalized peoples.

Limitations

As the present thesis is an exploratory analysis, it produced numerous result tables for consideration. The main goal of this thesis was to explore whether there were in fact intersectional factors associated with mental health service utilization a sample of LGBT2Q+
Canadian, and to explore how intersectionality theory can be incorporated into quantitative population health research. The present research suffers from two main methodological limitations: insufficient sample size for more in-depth intergroup research, and its cross-sectional nature. The survey’s sample size ($N=1542$) is more than sufficient to conduct general LGBT2Q+ discrimination and health research, but not when research involves very specific subgroups. For instance, there were only seven participants who identified as straight/heterosexual. Though not a sexual orientation minority, they may have identified as gender minorities, as the sample consists of sexual orientation and gender minority respondents. Collapsed sexual orientation categorizations were able to produce meaningful results for interpretation, such as revealing differences among more polysexual orientations compared to gay and lesbian respondents. Similarly, demographic characteristics for ethnoracial identities in the sample prevented this thesis from delving deeper into categories other than if someone is racialized, White, or Indigenous, though the categorizations were still able to give insightful results. The dataset also did not have an item that specifically asked for immigration status, distinguished between what immigration class, or length of stay, so immigrant status in this thesis was inferred through their country of birth and general immigration trends in Canada. There may have been intracategorical differences between different immigration classes that the survey did not capture.

Next, the survey is a cross-sectional dataset, meaning that it is only a “snapshot” of participants. While many analyses can be done using the data, it limited types of data analysis and conclusions drawn. For instance, the dataset cannot draw causality among variables due to its temporality. A larger scale dataset and/or aggregated data over a few years will be able to mitigate the lack of sample size when it comes to minorities within minorities and the inability to infer causality. Datasets such as the Canadian Community Health Survey will make a good
choice for future exploring mental health utilization in minorities, especially when intersectionality theory is used. Previously, sexual orientation minority research with the CCHS was limited to LGB and the gender binary due to lack of options, but since the 2020 cycle Statistics Canada added more options for respondents, making it a wealth of data for intersectional and LGBT2Q+ research. Finally, there may be a potential for social desirability bias, especially for sensitive questions such as income and self-rated measures such as mental health, minority stress, or social provisions. However, that was likely mitigated through the anonymous nature of the survey.

**Future Directions**

This thesis contributes to the growing body of literature exploring intracategorical differences and other nuanced understandings of mental health service utilization in LGBT2Q+ and ethnoracial minorities. The present research takes on two common theoretical approaches to health research, and the findings from additive and multiplicative analyses reflect the differences. Most importantly, results demonstrate the need for intersectional thinking when considering mental health. In addition, results suggest intracategorical differences within groups that were often treated as homogenous, such as bivariate level differences in mental health service utilization within non-White ethnoracial groups: associations show that Indigenous participants were much more likely to have used mental health services, while racialized participants were less likely to have utilized services. Even within sexual orientation minorities there are differences; compared to gay and lesbian respondents, bisexual, polysexual and queer respondents were more likely to have utilized mental health services, and were more likely to self-identify as living with a mood and/or an anxiety disorder. The inclusion of intersectionality theory in the methodology supplements bivariate results, in which multivariate results suggest
that looking at one aspect of identity is not enough. For example, additive results showed that racialized peoples were less likely to have used mental health services, that likelihood increases when factors such as immigrant status (proxy through not being born in Canada), identifying as more polysexual orientations, and being trans or gender-diverse are taken into consideration at the multivariate step. Plurality of systems of oppression and marginalization combine to create distinct health outcomes. Findings on mental health and mental health service utilization of racialized LGBTQ+ newcomers and immigrants need further exploring, as well as Indigenous mental health, in particular those who identify as Indigenous-specific sexual orientation and gender identities, such as Two-Spirit and Indigiqueer.

Future research directions regarding racialized, Indigenous, sexual orientation and gender minorities should look at the multiplicative effects of having multiple identities that affect health outcome and access and utilization of health services. Going hand in hand with intersectionality-informed health research is the need to acknowledge intracategorical differences in groups and to explore how and why the differences exist. Intracategorical differences amongst various classes of newcomers is something that needs to be explored further, especially considering contextual factors associated with different pathways of entry, such as SES, ethnoracial identity, location of settlement, and social support for different categories of immigrants, all of which may affect their mental health differently. Social factors such as barriers experienced during the settlement process, and structural factors such as racism and anti-immigrant sentiments may place their mental health status in a precarious position. As well, intracategorical differences amongst sexual orientation and gender minorities, such as people who identify as asexual or demisexual, for example, are often not the focus of sexual orientation and gender minority health research.
Another future focus would be the need for an even larger scale health data on LGBT2Q+ peoples in Canada. The sample size restricted a more in-depth exploration of intracategorical differences within the various non-Indigenous racialized ethnoracial groups and in sexual orientations. Results from the present research will guide my future dissertation work after completion of my Master’s. I plan on using a mixed methods approach to look at perceptions and utilization of mental health services in racialized LGBTQ+ immigrants. I will be using newer cycles of CCHS, as it contains a variable for immigrant status and more gender options. As the literature has shown, there are variations in perceptions and utilization patterns in racialized people, LGBTQ+ people, and in immigrants.

**Reflection**

The thesis topic came about because of my own experiences of mental health and mental health service utilization as a racialized sexual orientation minority living in Canada, as well as my own social and political views. This thesis is a continuation of my undergraduate thesis where I was exploring access to health and social services of Canada-born and newcomer families staying at emergency shelters in the Ottawa region. Combined with my own experiences as a racialized immigrant, it laid the groundwork for my Master’s thesis work, and eventually, my doctoral dissertation. Racial and LGBT2Q+ health equity research is not just a research interest; it is my reality. With this thesis, I was curious as to how intersectionality theory can be incorporated into quantitative health research in a way that stays true to what intersectionality theory stands for, and how useful it could be. Of course, I am not the first, nor will I be the last to do intersectionality-informed health research. Intersectionality theory holds such a fascination to me because it seems such a juxtaposing way of thought compared to the traditional science-is-
apolitical mentality that served as the backdrop of most classes I attended. The more I grew as a person the more I realized that science is not apolitical, and has never been apolitical.

The defining moment of my Master’s experience was the COVID-19 pandemic. What was supposed to be a three-week break back in my family home in Halifax, Nova Scotia turned into months, and at the time of writing this reflection, a year and a half. I finished my first year of graduate school during my 14-day mandatory quarantine in my childhood bedroom. The original data source was going to be the Canadian Community Health Survey, a comprehensive health survey collected by Statistics Canada every year. Due to the nature of the survey, I must go in person to the data centre to access the data. The process became delayed with each lockdown for months until it was February of 2021 that I finally gotten the okay to start accessing the data. Facing the worst wave that Ontario had seen yet, I did not feel comfortable stepping outside my home, let alone to the data centre in person. My supervisor Dr. Coleman, internal committee members Drs. Coulombe and Kirst, and I agreed that switching to a new dataset that allowed secure remote access will keep my progress on track while keeping us safe (refer to Appendix D for summary of changes). Collected by Dr. Coleman and colleagues, the 2020 LGBT2Q+ Health Survey ended up being a more suitable data source since it was designed with my populations of interest in mind.

As cliché as it sounds, this thesis truly was a product of blood (countless paper cuts), sweat, and tears. I am immensely proud of myself for getting to where I am now in my academic career as a burgeoning researcher. It is my hope that my research will be helpful in the fight for racial and sexual orientation and gender minority health equity. Living in a time of major social changes, I want my work to reflect that. My work is infused with my values. It is an extension of
my reality. The completion of this thesis energizes me and reaffirms that I am on the right path. I look forward to what I can accomplish in the future.

**Conclusion**

Our exploratory findings highlight the intersectional factors associated with mental health service utilization and methodological considerations when incorporating intersectionality theory into quantitative health research within a sample of LGBT2Q+ Canadians. Results suggest need for intersectional and intracategorical considerations in LGBT2Q+ mental health and mental health service utilization, such as age, more polysexual orientation identities, trans and gender-diverse identities, ethnoracial identities, and those who were born outside of Canada. Implications of results point to need for an intersectional approach toward mental health services to better address service users who experience multiple marginalization. Upstream interventions and policies will help to address systems-level oppressions that led to poorer mental health outcomes in the first place. Exploratory findings serve as a start for future in-depth areas of inquiry, such as racialized LGBT2Q+ immigrants.
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Appendix A

Exploring Intersectional Predictors in Access to Mental Healthcare for Sexual Orientation and Ethnoracial Minority Groups: Results from 2015-18 Canadian Community Health Survey

Samson Tse 195804280

Thesis Proposal

Department of Psychology

Wilfrid Laurier University

Author Note

Samson Tse, Department of Psychology, Wilfrid Laurier University.

Correspondence concerning this proposal should be addressed to Samson Tse, Department of Psychology, Wilfrid Laurier University, 75 University Ave West, Waterloo, ON N2L 3C5
Abstract

Despite boasting of a universal healthcare system, health inequalities remain in Canada. Canadian literature on ethnoracial minorities and sexual orientation minorities have identified systemic barriers to healthcare such as language, accessibility, discrimination, and stigma. Literature on minority health suggests there are also intracategorical differences amongst different groups. This research will use an intersectional framework to explore predictors and intracategorical differences in mental healthcare access for sexual orientation and ethnoracial minority groups. Incorporating intersectionality theory into quantitative health research is relatively new. This study will incorporate intersectionality in a way that stays true to the underlying message of the theory. This is reflected in the methodology, in which an additive approach (bivariate regression) will first determine significant predictors to mental healthcare access from 2015-2018 Canadian Community Health Survey, and then a multiplicative approach (multiple logistic regression) will explore significant intersectional predictors. The Andersen model of healthcare utilization and social determinants of health framework will frame predictors. The interdisciplinary nature of the topic and methodological approach of this study will be relevant multiple fields in social sciences and health research. It also has implications in health policymaking, in which enabling factors and barriers to mental healthcare access are identified.

Keywords: mental health, ethnoracial minority, LGB health, intersectionality, healthcare utilization
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Exploring Intersectional Predictors in Access to Mental Healthcare for Sexual Orientation and Ethnoracial Minority Groups: Results from 2015-18 Canadian Community Health Survey
Despite boasting of a universal healthcare system, health inequalities remain in Canada (Bryant et al., 2011; Dunlop et al., 2000). Researchers have shown that non-White people and sexual orientation minorities (defined in this research as lesbian, gay, and bisexual) consistently report worse mental health and physical health compared to their White and heterosexual counterparts, even after controlling for variables such as income, education, and age (Pan-Canadian Public Health Network, 2018; Ross et al., 2018; Veenstra, 2011). These include higher rates of mental illness and worse physical health. It is with this in mind that the present research aims to look beyond physical or mental health outcomes to explore intersectional predictors that either enable or hinder mental healthcare access for sexual orientation minorities and ethnoracial groups.

Health inequalities (often used interchangeably with health disparities) refer to the systematic yet often-avoidable differences in health outcome or status (Braveman et al., 2011). Braveman et al. (2011) note that “social disadvantages” such as ethnoracial identity, sexual orientation, gender, and socioeconomic status (SES) are linked to health inequalities and can reinforced existing social disadvantages by affecting their health, though not all groups are equally affected by health inequalities (p. S151). Health inequalities go beyond differences in health; they are meant to reflect the underlying social inequalities linked to health. In the pursuit of social justice for health equity, the present research will be exploring inequalities in access to mental health services among sexual orientation minorities and ethnoracial minority groups, as well as their intersections.

The previously mentioned factors that are linked to health inequalities are known as social determinants of health. The conceptualization of “health” in social sciences has, in recent decades, begun to move away from the traditional biomedical model that responsibilized
individuals for their own health, ushering in a new wave of both quantitative and qualitative health research that takes into account sociopolitical environmental factors that greatly influence population health. Healthcare utilization is the point in which an individual not only has access to healthcare, but chooses to access it.

Arguably, one of the most widely used framework in health equity research is the social determinants of health framework, in which one takes on an ecological approach when looking at health and health inequities by considering societal factors that impact an individual’s health (Mikkonen & Raphael, 2010). This framework does not deny that medical care does not influence health, rather it challenges the previous assumption of power that medical care holds in influencing health (Braveman & Gottlieb, 2014).

This present research proposal aims to explore predictors to mental healthcare access for sexual orientation minorities and ethnoracial groups, and their intersections, within the Canadian context. Data will be drawn from the Canadian Community Health Survey (CCHS) between the years 2015-2018. The CCHS is an annual national health survey conducted by Statistics Canada on the health status, healthcare utilization, and determinants of health (Statistics Canada, 2018). Variables from the CCHS will then be framed using both the social determinants of health framework and the Andersen model of healthcare utilization to determine predictors that will be analyzed, using bivariate regression and multiple regression to examine main effects and interactions among predictors to account for intersectionalities among categories. The literature review is split into three main subheadings that look at the health of ethnoracial minority groups, sexual orientation minorities, and lastly, the overlap, or intersectionality, between the two.
Literature Review

Ethnoracial Minority Groups and Immigration

Background

The rates and countries of origin of recent immigrants to Canada have changed drastically within the last few decades (Mensah, 2014; Thomson et al., 2015). Immigrants from non-White countries are now the face of newcomers into Canada. Despite the large and still-growing bodies of literature on immigration and ethnoracial identity in Canada, ethnoracial identities and the label of being an immigrant have oftentimes been conflated and homogenized to mean the same within academia and the public discourse (Mensah, 2014). Immigrants are not a homogenous group, but rather made up of various ethnoracial and cultural groups from all over the world that do not identify, nor should be studied as if they are a single population. Due to the homogenization between the two populations within academia, the literature on immigrants is much richer compared to non-recent immigrant ethnoracial minorities groups. Without going into the sociopolitics of why certain groups are considered “immigrants” and why some are not, a widely used basic definition of an “immigrant” is someone who is settling to Canada from their country of origin permanently, and differ from persons who may hold visas, who may only stay for a definite amount of time and are not considered Canadian citizens (Statistics Canada, 2019). Meanwhile, “ethnoracial group” is the combination of both an individual’s ethnicity and their race. This is most commonly used to differentiate and to contextualize the social experiences of persons of colour who may be classified as “White” but are not treated as such (Viruell-Fuentes et al., 2012). People of Arab descent are an example of why the categorization of race/ethnicity is not enough to fully encompass something as complex as social experiences. In the US, they are
categorized as White in the census, yet such a categorization does not mean that others view nor treat them as White.

**Intracategorical Differences**

While a considerable number of people who identify as an ethnoracial minority may be recent immigrants or newcomers, the conflation erases the nuances that exist in the cultural identities of various ethnoracial groups that live in Canada. This especially holds true for recent African diaspora and long-established Black persons in North America (Mensah, 2014). The literature has suggested that the social experiences between immigrants coming from more affluent countries such as Hong Kong/China or Japan versus Black African immigrants differ significantly (Mensah, 2014). The experiences of White immigrants will also differ from those who are more likely to be perceived as “foreign” due to their ethnoracial appearances. All of the above factors point to the need for a much more refined and critical look at immigrant and ethnoracial minority health that takes into account intersectionalities such as the effects of geopolitics and underlying sociocultural climate of the host country- Canada.

Even within the newcomer population, there are several subgroups that exist. Economic immigrants are persons who the government deems to meet the labour market needs of Canada, while refugee claimants refer to the forced migration of persons to Canada due to various reasons that the Canadian government deems unsafe (Statistics Canada, 2019). While both groups are immigrants, the general trend in the literature suggests that there are differences in mental health between the two groups. One study found that maternal traumatic distress has an adverse effect on child mental health and overall family functioning (Sangalang et al., 2017). More specifically, if newcomer parents do not have full grasp of either of the official languages, a linguistic gap can develop between the parent and the child, since the latter tend to acculturate much faster. This
can lead to lack of communication and even anger and frustration toward family members, all leading to disruption in family cohesion. Although a linguistic gap may still develop within immigrant families, the etiological difference lies in their experiences, which has the potential to impact their mental health status differently. The differences in experiences prior and during immigration have been linked to variances in healthcare utilization among different immigrant classes (Durbin et al., 2014).

**Health Inequalities**

The relationship between health inequalities and healthcare utilization is complicated and can be cyclical in nature (Braveman et al., 2011). Though in this literature they may be presented in close proximity to each other due to the interconnectedness between health inequalities and barriers to access healthcare, a careful distinction between the two should be noted. Health inequalities can be conceptualized as the outcome, while barriers to healthcare access are the underlying mechanisms or factors that exacerbate and/or lead to health inequalities. By the same token, physical health and mental health in this research have the same entwined relationship. Oftentimes presented as mutually exclusive, physical and mental health reinforce and have direct and indirect effects on each other. Stress, especially chronic, activates physiological responses within the human body that can weaken the immune system while living in constant stress make it much harder for individuals to engage in “healthy behaviors” such as regular physical activities or healthy eating, making individuals much more susceptible to health issues. Finally, chronic stress takes a toll on an individual’s mental health through uncertainty and anxiety, in which individuals may be more likely to turn to damaging coping mechanisms; all factors leading to health inequalities (Raphael et al., 2020). It is due to the aforementioned entwinements that health inequalities and mental healthcare utilization, and physical and mental health are
mentioned prominently in this literature review. Research on physical health inequalities between
groups will also be mentioned to provide more context for health inequalities and a more
comprehensive overview of inequalities in health and access to healthcare.

The healthy immigrant effect posits that recent immigrants’ health on arrival is better than
native-born Canadians (Lu et al., 2017; Vang et al., 2017). Immigrants having overall better
health upon arrival can be attributed to selection bias in the immigration process and is reflected
in the effect. The criterion of letting “skilled” immigrants in Canada has led to this initial health
boost, especially when higher education attainment is linked to better health and higher
socioeconomic status (SES), incentivising higher SES immigrants to emigrate (Lu et al., 2017;
Vang et al., 2017). Combined with strict health screening of immigrants into Canada, a selection
effect occurs in which the healthiest are able to emigrate to Canada (Gushulak et al., 2011; Lu et
al., 2017). What is alarming, however, is that the initial health advantages decline rapidly. The
transition into worse health status is especially more significant with refugee claimants and
immigrants experiencing lower SES (Gushulak et al., 2011).

The decline and eventual convergence of immigrant health to their native-born
counterparts has been hypothesized to be due to the acculturation process into Canadian culture,
while other studies suggest that the deterioration of health has much to do with social
determinants of health that prevent healthcare access, or contribute to worsening health, such as
lack of social support, lack of belonging, and inability to communicate in either one of the
official languages (Subedi & Rosenberg, 2014; Viruell-Fuentes et al., 2012). One may draw on
the conclusion then, that a longer stay and better language(s) proficiency can lead to better health
outcomes for ethnoracial groups, but that is not the case. Overall, racialized peoples in Canada
suffer from both worse physical and mental health compared to native-born and White Canadians
(Pan-Canadian Public Health Network, 2018). Examples of underlying factors such as experiencing systemic racism and xenophobia can create a negative feedback loop of encountering barriers to healthcare, followed by worsening health outcomes. When comparing the health of Black and White Canadians, Veenstra and Patterson (2016) hypothesized that certain societal factors such as racism may exacerbate worse health conditions such as higher rates of diabetes and hypertension, but paradoxically, Black Canadians have lower cancer and heart disease rates than White Canadians. The limited qualitative literature on the perceived health status of immigrants show that many report having better access to health resources compared to their countries of origin, though overall population health trends suggest otherwise (Dean & Wilson, 2010; Subedi & Rosenberg, 2014). Qualitative research is able to get an in-depth snapshot of data, but a drawback is its inability to generalize findings to a wider population. An overwhelming majority of literature about racialized health point to distinct inequalities and inequities in health outcomes, yet the subtleties and its paradoxical nature have yet to be fully researched or understood. Quantitative research on a population level allows us to set baseline comparisons on a broad scale, which can then lead to subsequent areas of inquiry in smaller intracategorical quantitative and/or qualitative studies.

Statistics on the general mental health state of ethnoracial groups are limited, especially within the Canadian context. Research on the mental health of the general ethnoracial minority population is scant, in which the research either focuses on immigrants, or on subpopulations, such as adolescents or older adults (Hansson et al., 2012). What is available suggests that social determinants like social exclusion may impact an individual’s life course and mental health status. In an American study that analyzed the prevalence of mental disorders and healthcare use across ethnoracial groups adolescents, Georgiades et al. (2018) found that prevalence rates varied
greatly according to ethnoracial background and immigration generation. They found that, while the odds of Hispanic adolescents developing mood or anxiety disorder were higher, the odds vary by immigrant generation. Meanwhile, first generation Asian adolescents are less likely to develop mood and anxiety disorders, but the odds increase significantly in second generation. In Canada, the Pan-Canadian Report on Health Inequalities (2018) found that there are differences among the reported mental health by ethnoracial groups. East and Southeast Asians, compared to White adults, were more likely to report lower self-reported mental health, at 7.1 (CI: 6.1-8.2) and 5.8 (CI: 5.6-6.0) times more respectively. South Asians reported higher self-reported mental health across all ethnoracial minority categories. Such diversity in ethnoracial differences would have been obscured if quantitative health researchers focused solely on White versus non-White populations. Once again, this points to the need to move away from the non-White versus White binary to more intersectional analysis.

With the increased prevalence of mental disorders in ethnoracial minority groups, one would expect that their rates of mental healthcare access would be higher, but that is not the case (Tiwari & Wang, 2008). The patterns of worse mental health yet lower mental health utilization rates are present across all ethnoracial minorities (Tiwari & Wang, 2008). There is something much deeper, more systemic at play that cannot be simply elucidated by “culture” or acculturation. A criticism of acculturation is that much like the previous public health model, it places the responsibility on and individualizes new immigrants and ethnoracial minority groups to thrive to become “Canadian” in order to improve their health, all while ignoring the effects of precarious social and economic status (Viruell-Fuentes et al, 2012). Another assumption in using a cultural explanation to explain health inequalities is that it essentially blames the individual’s culture as the source for bad health. Emerging evidence has shown that discrimination is a major
factor in health inequities for newcomers in Canada (Edge & Newbold, 2013). Discrimination can take on many forms, such as disproportionately working in precarious work environments, inadequate healthcare provision, and social exclusion, all impeding on the health status of newcomers. Despite this evidence, Edge and Newbold (2013, p.141) noted that research is still “limited with respect to the unique experiences of newcomer immigrant and refugee populations that may experience multiple, intersecting forms of discrimination not solely attributed to racial status or physical appearance”.

Immigrants are often in a precarious position because economically, they do not fare as well as Canadian-born persons, as statistics have shown (D’Addario et al., 2007). The economic assimilation model states that the gap narrows over time, but researchers found that recent immigrants have a relative lower income, thus a delayed “catch up” period compared to earlier immigrant cohorts. Poverty tends to be highest for immigrants who have less than high school education, are female, do not speak English at home, and/or are of non-European ethnicity (D’Addario et al., 2007). Not only that, but the act of settling into a new country can bring about an increased precarious mental health status. Immigrants may go through what is called “povertization” in which they may experience a long period of little to no income upon initial settlement (Thomson et al., 2015). The effects of experiencing low SES cannot be ignored in its significance in exacerbating other chronic stressors that may combine to become precursor for the development of mental health issues (Thomson et al., 2015). Social exclusion may often occur concurrently, increasing their precariousness. Income and SES are a big social determinant in terms of newcomer and ethnoracial minority mental health, thus is a factor that will need to be explored in its relation to access to mental healthcare.

*Mental Healthcare Access and Utilization*
In general, people across all immigrant classes are under users of the Canadian healthcare system (Durbin et al., 2014; Thomson et al., 2015). In combination with a multiple of other social determinants of health, an individual’s health is linked to their access to healthcare. The Anderson model of healthcare utilization (to be further elaborated on later) posits that a perceived need for healthcare is one of the factors that dictates whether someone will utilize healthcare. Compared to the US, rates of healthcare utilization in Canada are much higher among all immigrant groups (Lebrun, 2012). It is likely due to the differences in the healthcare systems in the US and Canada, however. Canadians are still plagued by poor access to healthcare, despite the higher overall access rates compared to the US (Bryant et al., 2011). Socioeconomic status plays a role in explaining the healthy immigrant effect, in which after analyzing the CCHS, Lu and Ng (2019) found that the healthy immigrant effect is most prominent within higher SES immigrant classes and least among refugees. Higher SES immigrants may have more material resources that act as a protective factor against mental health issues, or even if they did, they are able to access services in contrast to refugee claimants, who may not have the resources to do so.

**Identified barriers.** Socioeconomic status, more specifically financial resources, often dictates the location that an immigrant will settle. Newbold (2010) found that the location in which new immigrants settle is directly linked to the access and availability to health and social services, thus affecting their overall health. Depending on the geographic location of settlement, certain healthcare providers or culturally appropriate or competent healthcare providers may not be available for those who need it. Newbold (2010) also found that individuals who settled in marginalized areas continue to stay there and become further marginalized. Housing in marginalized or low-income areas is often much cheaper, drawing new immigrants or persons with lower SES with limited financial resources to live there. Marginalized or low-
income areas do not have as many health and social services to access, becoming another barrier to services.

Language barrier is another key factor in determining the patterns of healthcare access for newcomers, in which those that do not speak French or English, like to seek healthcare professionals who speak the same language as them (Subedi & Rosenberg, 2014; Thomson et al., 2015; Tiagi, 2016). This begs the question of whether health services in Canada are culturally appropriate or competent for non-Anglophone or non-Francophone Canadians when it is commonly cited as a major barrier (Leduc & Proulx, 2004; Lebrun, 2012; Tiagi, 2016). Cultural competency in healthcare, especially mental healthcare is important because it makes the individual much more likely to access and continue care, but is only an ameliorative change to the broader structural issue of racism (Viruell-Fuentes et al., 2012). Related to language barrier, is the lack of knowledge on how to navigate a new healthcare system. Being unable to navigate the healthcare system is a systemic barrier that the literature has identified (Thomson et al., 2015; van der Boor & White, 2020). Barriers to accessing healthcare such as language proficiency and being unable to navigate the complex healthcare system help explain the statistics indicating that immigrants with a shorter length of stay and lower official language(s) proficiency have less access to healthcare services compared to those with longer stays and higher official language(s) proficiency (Lebrun, 2012).

**Sexual Orientation Minorities**

**Background**

The term sexual orientation minority is an umbrella term that refers to persons who do not identify as heterosexual, or “straight”. This includes sexual orientations such as gay, lesbian, bisexual, and other sexualities that people identify with. While researchers may use the term
“sexual orientation minorities,” many are referring to the LGB community within their research context. The associations between sexual orientation minority status and mental health are well-noted within the literature. The extensive stigma and discrimination, and even violence against sexual orientation minorities must be taken into account when talking about the mental health status of sexual orientation minority persons. In clinical psychology, it was not until gay activism in 1970s that the Diagnostic and Statistical Manual of Mental Disorders (DSM) removed “homosexuality” as a mental disorder (Daley & Mulé, 2014). Even to this day, conversion therapy is still widely available, despite condemnations from the American Psychological Association and LGBTQ+ rights activists (Platt et al., 2018). A 2020 report by the International Lesbian, Gay, Bisexual, and Intersex Association (ILGA World) has found that conversion therapy is much more prevalent in Canada, in addition to many parts of the world, than one would think (Ramon Mendos, 2020). This hostile sociopolitical environment has been hypothesized to contribute to the overall worse mental health trends for LGB peoples (Hatzenbuehler & Pachanski 2016; Meyer, 2003). Although the body of literature about sexual minority health is growing rapidly, the intersections of ethnoracial minority group identity and sexual minority women are under-investigated compared to other groups or topics, such as men who have sex with men (MSM), sexual health risk behaviours, and HIV/AIDS (Baptiste-Roberts et al., 2017; Mereish & Bradford, 2014).

**Health Inequalities**

Barriers that have been identified in the literature show the impact sociopolitical landscape has on the mental health of sexual orientation minorities. Within minority stress theory, Meyer (2003) posits that there are ameliorative factors such as social support that can reduce minority stress. As such, social support, or lack thereof, is a significant predictor to take
INTERSECTIONALITY IN MENTAL HEALTH SERVICE UTILIZATION

into consideration when examining the mental health of sexual orientation minorities. Sattler et al. (2016) found that social support predicted higher self-reported mental health in gay men, and Ehlke et al. (2020) found the same in lesbian and bisexual women.

Discrimination, stigma, and lack of social support have all been noted to contribute to the higher prevalence of mental health disorders in sexual orientation minorities (Meyer, 2003). Prejudice, discrimination, and sexual orientation concealment are common experiences for sexual orientation minorities (Bränström, 2017). While the literature often refers to sexual orientation minorities as a monolith, that is far from reality. Within-group (referred to as intracategorical in this thesis) differences have been noted by Tjepkema (2008) and in the recent 2018 Pan-Canadian Report on Health Inequalities, for example. Both of the aforementioned studies analyzed the CCHS for rates of low self-reported mental health by sexual orientation minorities. Data spanning from 2003 to 2013 suggest that bisexual persons have a much higher prevalence of low self-reported mental health compared to persons who identify as gay or lesbian and heterosexual Canadians, at 17.8% more (Tjepkema, 2008; Pan-Canadian Public Health Network, 2018). Gay and lesbian Canadians also report significantly lower self-reported mental health at 10% compared to heterosexual adults, with the prevalence slightly lower than bisexual persons.

**Bisexuality.** The significance of exploring intracategorical differences can be further elucidated through the comparison in health outcomes amongst gay, lesbian, and bisexual individuals across various health metrics. Bisexual individuals have greater prevalence of anxiety, depression, substance use, and suicidality compared to their gay and lesbian counterparts, in addition to facing barriers to mental health services (Chan et al., 2020; Kahn et al., 2018; Rich et al., 2018; Ross et al., 2014). The effects of discrimination and stigma on
bisexual persons are understudied compared to persons who identify as gay or lesbian (Pennasilico & Amodeo, 2019). It comes to no surprise then, that a consensus cannot be reached on the impact of anxiety caused by biphobia, as studies jump from one conclusion to another. For example, Ross et al. (2016) found from a sample of bisexual persons in Ontario, Canada that there is statistical significance in terms of poorer self-reported mental health for those under the low income cut off versus those who were above; in which their qualitative portion of the study found various pathways that may explain the health inequality. Using data collected from the same sample, MacLeod et al. (2015) found that their results did not support that stressors proposed by the minority stress theory on the impact of stress or anxiety. This is hypothesized to be due to their survey’s inability to measure various aspects of life stress. Their sample did not find high levels of biphobia either. Intersectional identities also need to be explored. It should be noted, however, that reaching a consensus is not the main goal, but a sign for the need for a better understanding of why results from studies vary. Ross et al. (2018) have noted that bisexual health research is dominated by research contexts stemming from North America and Europe. This obscures a whole slew of contextual and sociopolitical factors that may increase or decrease an individual’s minority stress, such as the lack of formal legislation that protect LGBT rights in many countries. Chan et al.’s (2020) study on a sample of LGBT adults in Hong Kong showed that bisexual individuals statistically significantly have poorer mental health, consistent with findings from Western literature. Using the minority stress theory, factors at the personal and interpersonal levels are much more present due to cultural norms, in which bisexual individuals are more likely to conceal their sexual identity, have a lower sense of belonging to the LGBT community, and greater identity uncertainty. Additionally, Chan et al. (2020) found evidence for an interaction between sexual orientation concealment and mental health inequalities. The
inclusion of cultural norms should be explored further as a factor in predicting bisexual health inequalities, especially within the Canadian context, considering the multicultural landscape and the sizable population of newcomers that arrive in Canada every year.

**Mental Healthcare Access and Utilization**

The literature on mental healthcare access for sexual orientation minorities suggest contradicting utilization of mental healthcare services. On one hand, there exists a body of literature suggesting that sexual orientation minorities are high users of mental healthcare compared to heterosexual counterparts (Bränström, 2017; Gustafsson et al., 2017; Platt & Scheitle, 2018; Platt et al., 2018; Tjepkema, 2008; Urwin & Whittaker, 2016), while on the other hand, some researchers such as Trinh et al. (2017) suggest the opposite: that sexual orientation minorities are low users. Despite the polarity of findings within the literature, what researchers have consistently shown is that due to diverse factors, there exists systemic inequalities in the health outcomes and healthcare access of sexual orientation minorities compared to the heterosexual population. The process of seeking mental health services can, in itself, be stigmatized, and barriers that prevent access to services are exacerbated when sexuality intersects with race (Corrigan et al., 2014). For example, one study found that LGBTQ forced-migrants (refugee claimants who left their countries of origin due to their sexuality) were under-users of healthcare when many face stressors and deal with mental illness (Kahn et al., 2018). Furthermore, studies similar to this proposed thesis have found significant three-way interactions among sexual orientation, gender, and race in terms of substance use problems (Mereish & Bradford, 2014) and psychological distress (Platt & Scheitle, 2018), calling for the need for more intersectional examinations of inequalities in mental health status. The contextual factors that
allow a sexual orientation minority person to access and utilize those mental health services remains relatively unexplored, however.

Lesbian women have reported more unmet medical needs (including mental healthcare) than other sexual orientation minority groups or heterosexual counterparts (Brennan et al., 2010; Everett & Mollborn, 2014). Chronic stressors have led to a large gap between the mental health status of sexual orientation minorities compared to heterosexual persons. Canadian and international literature show trends that LGB persons are much more likely to access mental health services. However, sexual minority women are more likely to report poorer physical and mental health, yet have less access to healthcare, suggesting that there may be some underlying factor other than just sexual orientation that is preventing sexual minority women from accessing healthcare (Baptiste-Roberts et al, 2017; Urwin & Whittaker, 2016). In comparison, homosexual men have been shown to use more mental health services due to mental health and substance use problems (Bränström, 2017; Platt et al., 2018), while bisexual men are more likely to suffer from mental distress out of all three groups (Rich et al., 2018; Tjepkema, 2008). The gender difference is something worth exploring further.

**Minority Stress and Resilience Factors in Utilization.**

Discrimination is a major barrier in accessing mental healthcare and a factor that contributes to worse mental health (Gustaffson et al., 2017; Slater et al., 2017). Though overt discrimination is still prevalent, discrimination may also take on a more covert form. Gustaffson et al. (2017) found that despite having a gay-friendly reputation, they found that degrading treatment can explain 24-26% of the health gaps between sexual orientation minorities and heterosexual persons in Sweden. At the same time, sexual orientation minorities may feel the burden of having to disclose their sexual orientation to their healthcare providers. This fear is not
unfounded, as sexual orientation discrimination, both personally and structurally, have been well documented in healthcare settings (Everett & Mollborn, 2014). In a study on minority stress and youth, Williams and Chapman (2011) reported youth face barriers to healthcare due to not wanting their parents to know and being afraid of what the healthcare provider would say. Unaddressed physical and mental health needs during adolescence may accumulate to more severe health problems.

Sexual orientation stigma can take on many forms. It can be on an individual level, interpersonal, and structural (Hatzenbuehler & Pachankis, 2016). Individual stigma refers to the internalization of stigma. Individual stigma manifests in three types: internalized homophobia/transphobia, concealment, and rejection sensitivity. Internalized homophobia/transphobia is the internalization of negative societal views; concealment is the fear of disclosing one’s sexuality; and rejection sensitivity is the anxiety associated with being rejected due to the disclosure of one’s sexuality (Hatzenbuehler & Pachankis, 2016). A qualitative study in Canada revealed that some LGBT forced-migrants are hesitant to access mental healthcare providers who speak the same language and/or are from their cultural background for fear of being met with negative reactions or being outed to family members (Kahn et al., 2018). Similarly, Coleman et al.’s (2016) regional study within the province of Ontario found that discrimination and internalized homonegativity were associated with elevated mental health services utilization. Individual stigma can interact with interpersonal stigma to create barriers to mental healthcare. Next, interpersonal stigma is the relationship between a sexuality minority and a non-stigmatized individual. It can range from overt discrimination or covert microaggressions (Seelman et al., 2017). Lastly, structural stigma is arguably the most
pervasive level of stigmatization, due to its overarching influence on societal norms and views that can have on interpersonal relationships and even relationships with oneself.

**Intersectionality**

The previous headings presented sexual orientation minorities and ethnoracial minority groups as two distinct groups, though that rarely reflects the authentic lived experiences of LGB racialized peoples. This is where the idea of intersectionality, first coined by Black legal scholar Kimberlé Crenshaw (1989), comes into play. The wider academic and public circle has since expanded intersectionality to include identities beyond race and gender (e.g., Cho et al., 2013; Bauer, 2014; Huang et al., 2020; Rouhani, 2014; Veenstra, 2011; Viruell-Fuentes et al., 2012). In this present proposal, the author aims to explore the influences of sexual orientation and class in addition to the two aforementioned intersections. A systematic review found that mental health interventions aimed at sexual orientation minority people do not adequately deal with the various minority statuses that someone may possess (Huang et al., 2020). The majority of existing sexuality-based mental health interventions assume that sexuality is the root cause of psychological distress without considering the effects of multiple minority statuses have on an individual. Health inequalities may stem from unaddressed or wrongful diagnosis under a mental healthcare system that do not adequately address the intersectionalities of stressors. The lack of intersectionality-informed mental health interventions reflects the significance and need for intersectionality within health research.

In Canada, Veenstra’s (2011) secondary analysis of the CCHS demonstrates that the multiplicative effect of various axes, or intersections, have statistical significance in predicting an individual’s self-reported health. The study found that across all axes, class was the strongest predictor to self-reported health. Though the conventional zeitgeist may be to assume that White,
cis gay men are not in precarious positions, Veenstra (2011) showed that income has a stronger association amongst men than women. In terms of intersectionality and intracategorical differences, Veenstra (2011) found that South Asian women and lower income homosexual persons (regardless of race or gender) were more significantly associated with poorer self-reported health. An extension to the 2011 study, Veenstra and Patterson (2016) looked at health inequalities between White and Black Canadians and concluded that after controlling for confounding social determinants of heath variables, chronic stressors such as racism may be reflected in the health of marginalized populations, such as higher rates of hypertension and diabetes. For racialized sexual orientation minorities, racism and discrimination can add an extra layer to minority stressors, for example, facing homophobia or biphobia in addition to medical racism from healthcare providers.

**Proposed Research**

This thesis proposal seeks to explore experiences of intersectionality and minority stress to mental healthcare access in ethnoracial groups and sexual orientation minority groups. The main goals of this thesis are to 1) explore mental healthcare access inequalities in Canada, which is often understudied in the literature, 2) show the complementarity between quantitative research and intersectionality, and 3) to outline the possible change that intersectional-informed community health research can facilitate.

**Objectives**

Data from the Canadian Community Health Survey between 2015-18 will be used to explore predictors to healthcare access. The research will employ quantitative methodology to explore predictors that enable or prevent access to mental healthcare for people who identify as part of an ethnoracial minority group and/or a sexual orientation minority group. Acknowledging
that there are many other sexual orientations that people may identify with, in this thesis, sexual orientation minority refers broadly to lesbian, gay, and bisexual (LGB) persons due to limited response options in the CCHS. The Andersen model of healthcare utilization and social determinants of health framework will be incorporated to help determine variables that will be analyzed. Intersectionality theory will guide the types of statistical analyses the research will use (e.g. bivariate logistic regression and multiple logistic regression). Results will be interpreted using intersectionality theory and minority stress theory to better capture the realities and nuances of persons who identify with intersecting identities. The exploration of intersectional predictors will be operationalized through the examination of interactions within regression models.

Research Questions

This present thesis will be guided by three overarching research questions. It is important to note the deliberate use of research questions in this thesis proposal rather than hypotheses as is typical of quantitative research. By forming hypotheses, it limits the scope of exploration that can be done due to null hypothesis testing. This thesis takes on an exploratory and intersectional lens beginning from its inception to its interpretation of results. Research questions are shown below:

**RQ #1**: Is sexual orientation associated with differential mental healthcare access? What are the predictors to mental healthcare access for sexual orientation minorities?

a. If so, what are the intracategorical differences within sexual orientation minorities (e.g. between homosexual and bisexual subgroups) when it comes to their predictors to mental healthcare access?
RQ #2: Is ethnoracial minority identity associated with differential healthcare access?

What are the predictors to mental healthcare access for different ethnoracial groups?

a. If so, what are the intracategorical differences within ethnoracial groups (e.g. between East Asian and South Asian subgroups) when it comes to their predictors to mental healthcare access?

RQ #3: What are the predictors that seem to enable or hinder mental healthcare access for individuals who identify with sexual orientation minority and ethnoracial groups?

a. What are the intersectional differences to mental healthcare access for different intersections of sexual orientation and ethnoracial identities?

Method

Theoretical Frameworks

Andersen Model of Healthcare Utilization

The Andersen model of healthcare utilization was introduced by health researcher Ronald Andersen, and has seen many iterations and has been adopted by dozens of other scholars since its inception (Babitsch et al., 2012). The Andersen model allows one to broadly categorize healthcare access predictors in small datasets up to larger population health samples, such as the CCHS. This present research will incorporate both the Gelberg-Andersen version, along with the newest edition of the original model. Gelberg et al. (2000) adapted the model for marginalized populations, and the newest edition added a feedback loop with a greater emphasis on what the model calls “contextual characteristics”. Contextual characteristics account for the “circumstances and environment of health care access”, with the understanding that healthcare access takes place in an environment that is dependent on broader socioecological factors (Andersen et al., 2014, p. 34). The general model can be separated into three factors:
predisposing, enabling, and need. Though the Andersen model’s use of predisposing factors is much more nuanced, in this research context, it can be simplified as sociodemographic factors that an individual does not have control over (e.g. age, sexual orientation, ethnoracial background) (Andersen et al., 2014). Predisposing factors will encompass the intersectional identities and experiences that this thesis will be exploring. Enabling factors are factors that enable or allow an individual’s access or utilization of healthcare (e.g. social support, official language(s) proficiency, and income). Need factors refer to an individual’s perceived need or want to seek healthcare. In this thesis, need factors are perceived life stress, diagnosis of a mental disorder, and self-reported mental health. Enabling factors and need factors will be used as independent variables/predictors in regression models, using mental healthcare access as the outcome/dependent variable. The Andersen model will be used to frame variables for statistical analyses.

**Social Determinants of Health**

The social determinants of health framework has been embraced by public health and social sciences alike due to its consideration of larger systemic factors that influence health (Braveman & Gottlieb, 2014). Social determinants of health in Canada can be traced back to the Lalonde Report commissioned by the Canadian government. It was ahead of its time in its consideration of health influences outside of biology (Glouberman & Millar, 2003). Fast forward to more recent times, Mikkonen and Raphael (2010) have identified 14 Canadian social determinants of health: 1) aboriginal status, 2) disability, 3) early life, 4) education, 5) employment and working conditions, 6) food insecurity, 7) health services, 8) gender, 9) housing, 10) income and income distribution, 11) race, 12) social exclusion, 13) social safety net, and 14) unemployment and job security. Social determinants are factors that may lead to health
inequalities and inequities. While Mikkonen and Raphael (2010) did not include sexual orientation into their list of social determinants of health, scholars such as Hatzenbuehler & Pachanski (2016) have argued for the inclusion of stigma and minority stress as social determinants of health. The importance of an ecological thinking when exploring inequitable mental healthcare access should not be remiss (Bryant et al., 2011). This framework will guide the overarching rationale and design for the present thesis.

**Intersectionality theory.** Arising out of Black feminism and critical race theory, legal scholar Kimberlé Crenshaw (1989) is credited as the originator of intersectionality theory. Intersectionality theory aims to examine how multi-axes create their own social experiences that cannot be explained in single-axis thinking. Though it originally was to describe the social experiences of Black women who face racial discrimination as well as sexism, it has gone on to encompass other axes such as all ethnoracial groups, genders and gender expressions, and sexual orientations, to name a few (Cho et al., 2013). Intersectionality has been adapted into many different disciplines, though some are met with skepticism and criticism more than others. Scholars such as Carastathis (2019) have criticized that intersectionality has been co-opted and institutionalized by academia, wherein the term intersectionality being incorporated into every space possible, without regard for the original intent or fit of the theory. Though one may be tempted to interpret intersectionality as a theory that represents the additive forms of oppression or marginalization to a certain group or person, it is imperative that we understand that intersectionality is more than the sum of its parts. It is with these criticisms in mind that the incorporation of intersectionality theory in this present research will do its best to demonstrate that quantitative research methods can still keep the integrity and original intent of Crenshaw (1989; Cho et al., 2013).
Coinciding with the rise of social determinant of health framework, the incorporation of intersectionality theory in qualitative health research has helped to expand the literature into one that is much more conscious of societal impacts and the nuances associated with health outcomes and healthcare access (Bauer, 2014). The incorporation of intersectionality theory into health research will add to the holistic biopsychosocial frameworks and theories that embody how the social experiences of marginalized persons impact their health outcome (Bauer, 2014). The use of intersectionality theory and quantitative health research, however, has not been embraced until more recently due to the perception of fundamental differences between the two. The use of mathematical language in quantitative research has been criticized for ignoring the true meaning of intersectionality, but it is merely conceptual in nature rather than cooptation of the theory, and should not be discounted as such (Bauer, 2014). This research would like to contribute to the growing bodies of quantitative intersectionality-informed research and to complement the expansive intersectional qualitative health research.

The sharp rise in intersectional quantitative health literature since the 2000s has demonstrated that intersectionality theory and quantitative research methods in health are, in fact, complementary. Spiering (2012) has developed a framework for intersectionality-informed quantitative methods and Rouhani (2014) has created a comprehensive methodological guide, while studies by LeVasseur et al. (2013) and Veenstra (2011) have used intersectionality to look at suicide attempts due to bullying and at self-rated health inequality in Canada, respectively. The aforementioned authors are but a few of those who are conducting intersectionality-informed quantitative health research, exemplifying the ones whose research most closely relates to the present thesis.

**Minority Stress Theory**
Meyer (2003) created the minority stress theory out of the debate regarding the health inequalities between gay and lesbian persons versus their heterosexual counterparts. The theory posits that minority stress is unique, that stressors are additive to any stressors that non-sexual orientation minority individuals may face, is chronic, and that it is socially based (Meyer, 2003). Minority stress can be broken down into two categories: distal stressors and proximal stressors. Distal stressors are stressors that are more objective in nature in that they stem from the perception of a sexual orientation minority person (Meyer, 2003). A man who has sex with men may not identify as gay, yet may still experience the same discrimination and stigma from persons who perceived them as gay, regardless of their own identification. Oppositely, proximal stressors are much more subjective and internalized, and deals with the person’s own self-identity along with stressors experienced by them (Meyer, 2003).

While their origins differ, minority stress theory and intersectionality theory share commonalities in their conceptualizations of the social experiences of marginalized groups. Both of these theories will be utilized to determine and group variables from the dataset into regression model predictors and the subsequent data interpretation of results.

**Research Design**

This thesis will use quantitative methods to explore predictors to mental healthcare access for ethnoracial and sexual orientation minority groups using the 2015-18 CCHS data. The Andersen model of healthcare utilization and social determinants of health framework will be used to organize variables from the CCHS that will be of interest to statistical analyses. The variables will be separated into predisposing factors, enabling factors, and need factors. Predisposing factors will include intersectional identities. Intersectional predictors within this research context refers to any potential statistical interactions that may be statically significant in
regression models. Variable interactions are conceptually the equivalent of axes of intersections combining to form unique predictors to mental healthcare access.

**Rationale for Research Design**

The present research questions will benefit from quantitative methods the most. This is due to the large amount of data that the CCHS can provide. A population-wide data set such as the CCHS has the ability to give us a general look at the intersectionality between various groups that is difficult to do in qualitative methods. The CCHS is a popular secondary data source due to its broad scope in terms of questions, sample size and population, and its relatively easy accessibility.

A local sample of intersectional identities and experiences may be contingent on several other factors such as the population size and diversity of their place of settlement. Recent immigrants may tend to settle in larger cities such as Toronto, Ontario, or Vancouver, British Columbia for a host of pull factors. For example, participants in a qualitative research study on the experiences of LGB refugee claimants who settled in Toronto, Ontario, have expressed that they chose to settle in Toronto due to perceived acceptance and a bigger population of their respective diasporic members (Munro et al., 2013). Using a large data set such as the CCHS will help to increase the generalizability of results to ethnoracial and LGB persons living across Canada.

The second rationale is that this research will contribute to the growing body of intersectionality-informed literature on health. The rationale to use a quantitative approach in exploring intersectionality within this present research health is both innovative and traditional at the same time (Bauer, 2014; Rouhani, 2014). On one hand, intersectionality has been much easier for qualitative health research to incorporate due the nature of qualitative methodologies
allowing researchers to provide a much more in depth and unique perspectives of participants. Yet, it is only within the last decade or so that the incorporation of intersectionality theory into quantitative population health research has gained traction due to the previous perceived incompatibility between the two (Bauer, 2014). The criticisms have been due to the terminology used in statistics that may seem contradictory to the root of intersectionality (Bauer, 2014). However, if done “correctly”, quantitative methods can still produce results without compromising the integrity of both quantitative methods and intersectionality theory. In order to do so, the limited literature on how to conduct intersectional quantitative research suggests taking on an additive approach, and then a multiplicative approach (Bauer, 2014; Rouhani, 2014). The combination of the two approaches ensures that variables used in data analysis are not treated as mutually exclusive or in addition to other variables statistically.

**Research Paradigm**

This research will take on a blend of both post-positivist and constructivist research paradigms. Post-positivism arose out of criticisms of positivism and has since dominated psychology (Ponterotto, 2005). A post-positivist research paradigm posits that there is no one “true” reality, and that objectivity is not possible. Furthermore, whereas positivism was interested in verifying theories, post-positivism seeks to examine the possible ways in which theories may not be verified. Both paradigms still share many similarities, such as the goal to explain phenomena and prediction (Ponterotto, 2005). That said, this research will take on a constructivist turn in its data analyses and interpretations. One can argue that by including intersectionality theory and minority stress theory into the research design and its interpretation of results, this research can further be considered to take on a constructivist research paradigm, in which multiple realities can exist, and that they are influenced by the social environment.
intersectionality in mental health service utilization (Ponterotto, 2005). The methodology of this research may be post-positivist in terms of how the data were collected and its use of quantitative methods, but the invocation of intersectionality theory and minority stress theory in its research design and data interpretation makes it constructivist in praxis.

**Research Context**

The Canadian Community Health Survey is a population health data set that is often used when exploring health of Canadians. Using this data set, the current research will be able to create a general snapshot of access to mental health services for marginalized groups. As outlined, research gaps exist within research on marginalized groups such as ethnoracial minorities and sexual orientation minorities, especially in a Canadian context. Furthermore, while qualitative research is able to delve into the experiences of such marginalized groups, they are limited by the scope of the population and its generalizability to others within that marginalized group. By using the CCHS, this research will have higher generalizability to those communities while simultaneously providing enough data for more in-depth quantitative analyses that can divulge into the differences in social experiences between the two categories, and those that fit into both: LGB persons who also identify as ethnoracial minority.

**Data Collection**

The present research will be analyzing secondary data collected from the Canadian Community Health Surveys between the years of 2015 to 2018. The CCHS is a nation-wide cross-sectional survey that collects information regarding healthcare utilization, sociodemographic determinants pertaining to health status, and the health of Canadians (Statistics Canada, 2018). The primary use of the CCHS is for population health research. The CCHS began in 2001 but received an overhaul in design in 2015. The CCHS is representative of
approximately 98% of Canadians living in provinces and territories, and has a sample of 130,000 respondents (120,000 over the age of 18 and over and 110,000 between age 12 - 17) over two years for a total of 260,000 respondents to be included in this analysis. Extrapolating from the 2015-16 aggregated data, there are approximately 3,600 respondents \(N = \sim 3600\) between 2015-18 data who identify as homosexual or bisexual. The sample is selected through two different frames: an area frame for persons 18 years or older, and a Canada child benefit (CCB) frame for persons from 12 to 17 years old. When collecting data, a person 18 years or older is automatically selected using selection probabilities based on age and household composition. When using the CCB frame, one child is pre-selected to complete the survey from a household. The CCHS uses a multi-stage sample allocation strategy that results in a fair sampling distribution to health regions and provinces. The sample is allocated among provinces using a power allocation of 0.75 in respect to their population size, after which each province’s sample is then allocated among its health regions using a 0.35 power allocation in respect to the population size of each health region (Statistics Canada, 2018). Though concerns have been raised regarding the fact that data collection must be collected with intersectionality in mind in order to have the proper variables and categories, a large data set such as the CCHS is able to mitigate this issue (Rouhani, 2014; Veenstra, 2011). For example, Bowleg (2008) has cautioned against the use of binary categories when conducting intersectionality-informed quantitative research. The CCHS response categories are not binary (ie. White vs non-White), allowing crucial sociodemographic variables such as ethnoracial and cultural background and sexual orientation to produce multiple categories for analysis (see Appendix A for all variables of interest).

However, by having multiple categories, statistical analyses, especially when modelling interactions, will run into the issue of introducing too much unexplained variance into regression
models due to compounding of main effect and interaction terms variance. To counterbalance the loss of statistical power, this research will use a large sample size through the pooling of 4 years’ worth of CCHS data, as well as through the use of a more liberal p-value (p < 0.30) when including predictors in RQ #3 (multiple regression models) to prevent the loss of potentially significant variables (Bauer, 2014; Rouhani, 2014; Veenstra, 2011). An application will be sent to Statistics Canada in order to access the data at the SouthWestern Ontario Research Data Centre (SWORDC) located within the University of Waterloo, Ontario. The processing time takes approximately three months.

**Measures**

The subjects of the Surveys include: 1) disease and health conditions, 2) health, 3) health care services, 4) lifestyle and social conditions, and 4) mental health and well-being (Statistics Canada, 2018). The CCHS releases an aggregated two-year data while releasing a smaller annual one each year. An aggregated version of the 2017-18 data will be available in the fall of 2020, in time for data analysis of this research. The CCHS mostly uses a categorical scale for questions, in which the respondents can only pick one response, with the exception of certain questions that may ask the respondent to check all that apply to them. For questions regarding the age of respondents, it uses a numerical scale. Variables that this thesis will be analyzing can be separated into the three factors within the Andersen model of healthcare utilization: predisposing, enabling, and need (Andersen et al., 2014).

Predisposing factors will include most variables under the sociodemographic heading in the CCHS (see Appendix A). Such variables are age of respondent, sex, sexual orientation, immigrant status, and ethnoracial or cultural background. It should be noted that the CCHS does not make the distinction between economic immigrants versus refugee claimants. Enabling
factors will include questions that tap into income, social support, official language(s) proficiency, and perceived health need; most of which are social determinants of health. Need factors are variables such as existing mental disorder, low self-reported mental health, and perceived life stress. Lastly, the outcome/dependent variable of mental healthcare utilization in regression analyses is operationalized through the CCHS question of whether they have talked to a health professional about their emotional or mental health. For most questions within the CCHS there are options to either “refuse to answer” or “don’t know”. These responses will not be included in statistical analyses. For certain variables and their corresponding CCHS questions, only some responses will be of interest in this thesis. For example, respondents are asked to rate their self-reported mental health on a five-point Likert scale from excellent to poor. The Andersen model posits that persons with excellent mental health (need factor) are less likely to access mental healthcare, so to measure low self-reported mental health, only “fair” and “poor” options will be considered during data analysis as a "need" variable.

The CCHS does have its limitations. The first limitation is that at the time this thesis is written, the CCHS questions only include the sex of respondents, not their gender, effectively ignoring trans or nonbinary identities within participants. It should be noted that the 2019 iteration of the CCHS does include more questions related to sex at birth and current gender identity, but the data’s release date does not match the data collection and analysis period of this proposed thesis, and is not yet available through the Research Data Centres. Next, the survey was not created with sexual orientation minority stress in mind, in which while it measures sexual orientation and life stress separately, it does not measure how much of that stress is related to being a sexual orientation minority. This thesis will infer minority stress through proxy variables.
such as life stress and sense of belonging to community, and its impact on health outcomes and access to mental healthcare.

Data Analysis

Data analysis for this research will be done using SAS 9.4. The SURVEY procedures in SAS will be used to take into account the complex sampling procedures of the CCHS. Specifically, PROC SURVEYMEANS will be used to calculate means with associated standard deviations; PROC SURVEYFREQ will be used to calculate proportions with associated 95% confidence intervals; and PROC SURVEYLOGISTIC (for our binary regression outcome) will be used to calculate odds ratios with associated 95% confidence intervals. All analyses will be weighted using weights provided by Statistics Canada for this particular dataset, which provides population-based estimates.

Variables from the CCHS will be organized into the Anderson model of healthcare utilization’s three factors: predisposing, enabling, and need. The three factors can be conceptualized as three “columns” or “blocks” of variables that logistic regression will explore. The outcome/dependent variable in all regression models will be question CMH_Q005 in the CCHS (whether the respondent has seen or talked to a health professional about their emotional or mental health within the last 12 months). Analysis will vary depending on which research question it is trying to address. Bauer (2014) and Rouhani (2014) suggest that when taking on an intersectional methodology, one should take on an additive approach and then a multiplicative one. As such, the three research questions in this research are meant to reflect that approach. Analyses will include bivariate logistic regression in order to find out statistically significant predictors that either allow for access or prevent mental healthcare access for each of the groups independently. After which the research will use multiple logistic regression to determine
potential intersectional predictors to mental healthcare access that includes all previous significant predictors. A liberal p-value ($p < 0.30$) will be used to ensure that no variables that may potentially have a statistically significant interaction will be prematurely discarded (Bursac et al., 2008; Coleman et al., 2017).

Research questions #1 and #2 are meant to look at the subpopulations independently, while research question #3 will look at the intersectionalities that exist among the two groups, and the predictors of mental healthcare utilization. Taking an additive approach first in RQ #1 and #2 allows the researcher to model main effects of identities to mental healthcare access, while a multiplicative approach in the form of multiple regression in RQ #3 allows for a closer examination of those main effects, such as potential two-way or higher-order interactions. Variables in the regression models are the statistical equivalent of identities and stressors in intersectionality theory and minority stress theory, respectively, while interactions among predictors reflect axes of intersections that combine to form unique experiences of marginalized groups. Combined, results from the two forms of regression are able to address the research questions adequately and provide statistical results that are intersectional- and minority stress-informed.

**Bivariate logistic regression.** Bivariate logistic regression will be used to achieve the first part of RQ #1 and #2, in which this method will be used to note any statistically significant ($p < 0.05$) predictors (dependent variables) to mental healthcare (independent variable) for sexual orientation minorities and ethnoracial groups independently. Bivariate regression is the statistical representation of an additive approach to analysis, in which the regression models assume that predictors and categories are mutually exclusive. Results from bivariate logistic regression models are able to 1) show predictors that enable or prevent certain groups from accessing
mental healthcare and 2) inform the researcher of significant predictors to include in the next step.

**Multiple logistic regression.** The last research question, RQ #3, will use multiple regression to explore intersectional predictors (interactions among predictors in regression models) to mental healthcare access. Multiple regression takes on a multiplicative approach in which predictors are not treated as mutually exclusive. A multiple regression model is adept at noticing any nuanced interactions amongst predictors, such as interactions between predictors and the main effects of predictors. Potential interactions among predictor variables are intersectional predictors that this thesis will be exploring. To ensure statistical power, predictors that are not statistically significant at $p < 0.30$ will be eliminated from subsequent models. A $p$-value that is $<0.30$ ensures that no potential predictors that may be statistically significant are discarded (Bursac et al., 2008; Coleman et al., 2017). Both $p$-values and odds ratio will be considered when determining the statistical significance of predictors and the overall models. Any significant predictors will then be labeled as either an enabling factor (if the coefficient is positive) or a barrier (if the coefficient is negative) to mental healthcare access for interpretation under the discussion heading of the thesis.

**Ethical Considerations**

Consultation with the Wilfrid Laurier Research Ethics Board (REB) concluded that this study is exempt from REB review. Wilfrid Laurier REB has a process for review and clearance for the secondary use of data, but they assess requirements for review on a case-by-case basis. The data that this research uses is legally accessible to the public and appropriately protected by law, as per Tri-Council Policy Statement Ethical Conduct for Research (TCPS 2) Article 2.2. In addition, the researcher has completed the TCPS 2 Course on Research Ethics (TCPS 2: CORE;
see Appendix B). An application to Statistics Canada will be sent, after reviewing with thesis supervisor Dr. Coleman. As of this proposal is written, the application process to access the data takes about three months. This is taken into consideration in which the application will be sent as soon as possible to ensure that the data will be available for analysis during fall of 2020.

**Personal Reflexivity**

**Positionality**

This research is one that has close personal ties to me. As a first-generation immigrant to Canada and identifying as part of the LGBTQ+ community, I know firsthand the complexity of challenges and barriers that are placed upon individuals that exist between these two intersections. At the same time, it is important for me to acknowledge the immense privileges that come with being from a middle-class household where post-secondary education attainment is possible. I also acknowledge the privileges that being part of academia afford me. My roles as both an insider and an outsider allow me to be reflective and reflexive to my own power and privileges. It is my goal that I am able to effect positive changes (ameliorative or transformational) to members of my communities through effective research and knowledge mobilization with integrity.

**Institutional Fit**

This thesis can be thought of as an extension of my undergraduate thesis during my time at the University of Ottawa under the supervision of Dr. John Sylvestre in the Centre for Research on Educational and Community Services. My undergraduate thesis was a thematic analysis on the experiences and service (both health and social) utilization of foreign-born and Canada-born families living emergency shelters in Ottawa, Ontario. My findings, like many in the literature on healthcare access of newcomers, suggested that there are some differences
between the two groups, though the sample size, methodology, and time constraint did not lend itself to exploring deeper. This is what led me to want to explore the intersectional factors that may play a role in mental healthcare access amongst the various subpopulations in marginalized populations such as sexual orientation minorities and ethnoracial minority groups.

The legacy and reputation of the community psychology graduate program at WLU is well-known throughout the ever-growing field of community psychology in North America. Being part of this program has allowed me to polish my analytical skills using community psychology principles in my research. My supervisor, Dr. Todd Coleman, is an associate professor at the department of health sciences at WLU and co-director of the Social Inequality and Health Equity Research Group alongside Dr. Robb Travers. Their research has been focused on LGBTQ+ health equity using various methodologies, and they have been involved in large-scale Canadian LGBTQ+ health research such as TransPULSE. Dr. Coleman has a background in statistics and research experiences in collecting and analyzing large sets of population health data. As such, his expertise will be much appreciated in guiding not only my research topic, but also my methodology. A combination of my own positionality as both an insider and outsider, my previous academic and research experiences, and the expertise of my supervisor will hold me accountable and to keep the integrity of this research.

**Potential Contributions**

My research will provide a much-needed critical look at how intersectional ethnoracial and sexual orientation experiences influence access to mental healthcare in Canada. Due to the interdisciplinary nature and methodological approach of the current research, it can be applied broadly to multiple fields and disciplines across social sciences. Health psychology, LGB research, and epidemiology are just some examples of disciplines that may be interested in
results from this research. Intersectionality theory in quantitative health research is still relatively new, and this research will add to the growing body of literature. Not only that, it exemplifies how one can go about combining two seemingly opposing components: quantitative methods and intersectionality theory without co-optation that some intersectionality studies scholars such as Carastathis (2019) have criticized surrounding the widespread usage of intersectionality in various fields. Lastly, findings from this research has the potential to influence policy making to promoting better healthcare access. Intersectional predictors from this study can inform policymakers of the enabling factors that need to be supported and bolstered, while try to minimize barriers to access, including any intracategorical differences that may exist.

Knowledge Translation and Exchange

Toward the end of data analysis in which preliminary results are available, presenting at conferences and other events will be the goal. The goal for knowledge translation is to take on a two-pronged approach in which results are presented to academics and the public. An example of a conference in which the results may be helpful is the Guelph Sexuality Conference, or the Society for Community, Research and Action Conference. From a more community-based approach, the researcher hopes to use connections made during his practicum at SHORE (Sexual Health, Options, Resources, and Education Centre) in Kitchener, Ontario to create a community report of the results that is more accessible to the general public and other local mental healthcare providers. Partnership with SHORE Centre will be discussed closer to completion of the thesis. Once the thesis is successfully defended, the aim is to publish in a high impact journal that either is open access, or has the option to do so.
Timeline

The proposed study will start by meeting(s) with the advisory committee. The advisory committee will include supervisor Dr. Coleman, alongside Dr. Simon Coulombe and Dr. Maritt Kirst, who have similar research interests and expertise on the research topic and/or quantitative analysis. Due to the recent development of COVID-19, these meetings will be done online through a secure and Laurier-approved application Zoom, which all members have access to. This phase is hypothesized to take about a month to complete, making the completion time toward the end of August 2020. As soon as this proposal is deemed accepted by both the advisory committee and the student, an application to request access to the CCHS data from 2015-18 will be sent to Statistics Canada. The processing time will likely be affected due to COVID-19, marking the approval period to about October 2020. Data examination will take roughly one to two months to first have a rough look at the data before the actual data analysis begins.

Data analysis will also take one to two months, since the researcher will need to familiarize himself with the data analysis software, SAS, marking the end of the fall semester. The winter semester of 2021 will begin by finishing the remaining analyses and end with fully realized interpretations of the statistical analyses. During this time the student will be in close contact with the advisory committee to ensure proper interpretations of results and integrity. With preliminary results, this is where the researcher may be able to participate and present at any appropriate conferences. During the spring and last semester of the master’s program in 2021, a fully written thesis will be presented to the advisory committee to be edited and revised as needed. Toward the end of the semester, preparations to successfully defend the thesis will be the focus. Last, the timeline ends with the knowledge translation plan. It will be submitted to an appropriate journal such as Social Science and Medicine, as well as writing a community report.
that, through connections made during the student’s practicum, can be read by as many local organizations as possible.

It is important to note that with the exception of the processing time to gain access to the data, the above timeline assumes that most if not all academic and governmental functioning resumes to normal during the fall semester. As of this proposal is written, the SWORDC is making plans to allow researchers to access their data in person, while the researcher is exploring Statistics Canada’s Real Time Remote Access function as a potential option.

**Potential Limitations**

Limitations of this thesis stems from the limitation of the data set. As mentioned previously, the CCHS is limited in its answers for sexual orientation and gender identities. The options for question SDC_Q035 “Do you consider yourself to be…?” are 1) heterosexual, 2) homosexual, 3) bisexual, 8) refuse to answer, and 9) don’t know. This clearly does not capture the various sexual orientations that exist. Other sexual orientations such as pansexual or asexual are not options that respondents can identify with. The CCHS captures approximately 98% of the Canadian population, but the missing 2% are some of the most marginalized populations, such as incarcerated persons and people who are experiencing homelessness, in which the bodies of literature about their mental healthcare access suggest that they also face various intersectional barriers to mental healthcare (Daiski, 2007; Jordan, 2011; LeBlanc et al., 2015; Piat et al., 2015). Such limitations will limit the generalizability of the results to only the general population, and as a result, the interpretation of the data, will not capture the intersectional experiences of all Canadians.
References


Bauer, G. R. (2014). Incorporating intersectionality theory into population health research methodology: Challenges and the potential to advance health equity. *Social Science & Medicine, 110.* 10-17. Doi: 10.1016/j.socscimed.2014.03.022


Dean, J., & Wilson, K. (2010). “My health has improved because I always have everything I need here…”: A qualitative exploration of health improvement and decline among immigrants. *Social Science & Medicine, 70*(8), 1219–1228. https://doi.org/10.1016/j.socscimed.2010.01.009


receiving countries. *Journal of Immigrant and Minority Health, 15*(1), 141–148. doi: 10.1007/s10903-012-9640-4


Ehlke, S., Braitman, A., Dawson, C., Heron, K., & Lewis, R. (2020). Sexual minority stress and social support explain the association between sexual identity with physical and mental health problems among young lesbian and bisexual Women. *Sex Roles.*
https://doi.org/10.1007/s11199-019-01117-w


10.1037/0022-0167.52.2.126.


Appendix B

Original variables of interest from the Canadian Community Health Survey

<table>
<thead>
<tr>
<th>Factor in Andersen Model</th>
<th>Variables in Data Analysis</th>
<th>Question and Response Options of Interest</th>
</tr>
</thead>
<tbody>
<tr>
<td>Predisposing Factors</td>
<td>Immigration Status</td>
<td><strong>SDC_Q007</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Are you now, or have you ever been a landed immigrant in Canada?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>● 1: Yes</td>
</tr>
<tr>
<td></td>
<td></td>
<td>● 2: No</td>
</tr>
<tr>
<td>Ethnoracial Identity</td>
<td><strong>SDC_Q020</strong></td>
<td>You may belong to one or more racial or cultural groups on the following list. Are you... ?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>● 01: White</td>
</tr>
<tr>
<td></td>
<td></td>
<td>● 02: South Asian (e.g., East Indian, Pakistani, Sri Lankan)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>● 03: Chinese</td>
</tr>
<tr>
<td></td>
<td></td>
<td>● 04: Black</td>
</tr>
<tr>
<td></td>
<td></td>
<td>● 05: Filipino</td>
</tr>
<tr>
<td></td>
<td></td>
<td>● 06: Latin American</td>
</tr>
<tr>
<td></td>
<td></td>
<td>● 07: Arab</td>
</tr>
<tr>
<td></td>
<td></td>
<td>● 08: Southeast Asian (e.g., Vietnamese, Cambodian, Malaysian, Laotian)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>● 09: West Asian (e.g., Iranian, Afghan)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>● 10: Korean</td>
</tr>
<tr>
<td></td>
<td></td>
<td>● 11: Japanese</td>
</tr>
<tr>
<td></td>
<td></td>
<td>● 12: Other - Specify</td>
</tr>
</tbody>
</table>
### Sexual Orientation

**SDC_Q035**

Do you consider yourself to be...?

- 1: Heterosexual (sexual relations with people of the opposite sex)
- 2: Homosexual, that is lesbian or gay (sexual relations with people of your own sex)
- 3: Bisexual (sexual relations with people of both sexes)

### Sex

**GEN_BEG**

SEX_Q01: sex of specific respondent (1 = male, 2 = female) from Sex block.

### Age

**ANC1_Q05**

What is ^SPECRESPNAME's age?

Min = 0; Max = 121

### Enabling Factors

**INC_Q35**

Please stop me when I have read the category which applies to your household.

Was it... ?

- 1: Less than $5,000
- 2: $5,000 to less than $10,000
- 3: $10,000 to less
than $15,000
● 4: $15,000 to less than $20,000
● 5: $20,000 to less than $30,000
● 6: $30,000 to less than $40,000
● 7: $40,000 to less than $50,000

INC_Q40

Please stop me when I have read the category which applies to your household.

Was it... ?

● 1: $50,000 to less than $60,000
● 2: $60,000 to less than $70,000
● 3: $70,000 to less than $80,000
● 4: $80,000 to less than $90,000
● 5: $90,000 to less than $100,000
● 6: $100,000 to less than $150,000
● 7: $150,000 and over

<table>
<thead>
<tr>
<th>Official Language(s) Proficiency</th>
<th>PHC_Q040</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do you usually speak in English, in French or in another language with this [family physician/specialist/nurse practitioner/regular health care provider]?</td>
<td></td>
</tr>
</tbody>
</table>

● 1: English
● 2: French
● 3: English and French
• 4: English and another language
• 5: French and another language
• 6: Another language

**ACC_Q015**
What types of difficulties did you experience?

• 01: Difficulty getting a referral
• 02: Difficulty getting an appointment
• 03: Waited too long between booking appointment and visit
• 04: Waited too long to see the specialist (i.e. in-office waiting)
• 05: Service not available at time required
• 06: Service not available in the area
• 07: Transportation problems
• 08: Language problem
• 09: Cost
• 10: General deterioration of health
• 11: Appointment cancelled or deferred by specialist
• 12: Unable to leave the house because of a health problem
• 13: Other

**SPS_Q015**
I have close relationships that provide me with a sense of emotional security and
wellbeing.

- 1: Strongly agree
- 2: Agree
- 3: Disagree
- 4: Strongly disagree

**SPS_Q035**

I feel part of a group of people who share my attitudes and beliefs.

- 1: Strongly agree
- 2: Agree
- 3: Disagree
- 4: Strongly disagree

**SPS_Q040**

I feel a strong emotional bond with at least one other person.

- 1: Strongly agree
- 2: Agree
- 3: Disagree
- 4: Strongly disagree

---

**Perceived Health Need**

<table>
<thead>
<tr>
<th>Need Factors</th>
<th>Existing Mental Disorder</th>
</tr>
</thead>
<tbody>
<tr>
<td>CCC_Q195</td>
<td>Do you have a mood disorder such as depression, bipolar disorder, mania or dysthymia?</td>
</tr>
<tr>
<td></td>
<td>- 1: Yes</td>
</tr>
<tr>
<td></td>
<td>- 2: No</td>
</tr>
</tbody>
</table>

**CCC_Q200**

Do you have an anxiety disorder such as a phobia, obsessive-compulsive disorder or a panic disorder?
Self-Rated Mental Health  

**GEN_Q015**
In general, would you say your mental health is...?

- 1: Excellent
- 2: Very good
- 3: Good
- 4: Fair
- 5: Poor

Perceived Life Stress  

**GEN_Q020**
Thinking about the amount of stress in your life, would you say that most of your days are...?

- 1: Not at all stressful
- 2: Not very stressful
- 3: A bit stressful
- 4: Quite a bit stressful
- 5: Extremely stressful

Outcome Variables  

**Perceived Health Need  **  

**PNC_Q01**
During the past 12 months, did you receive the following kinds of help because of problems with your emotions, mental health or use of alcohol or drugs?

- 1: Information about these problems, treatments or available services
- 2: Medication
- 3: Counselling, therapy, or help for problems with
personal relationships
  • 4: Other type of help
  5: None

Mental Healthcare Utilization
Appendix C

TCPS2 Certificate

Samson Tse

Date of Issue: 24 January, 2017

This document certifies that

has completed the Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans Course on Research Ethics (TCPS 2: CORE)
Appendix D

Summary of Changes to Data Source for Thesis

7/25/21

Summary of Changes to Thesis

Exploring intersectional predictors in access to mental healthcare for sexual orientation and ethnoracial minority groups

By Samson Tse

<table>
<thead>
<tr>
<th>Original Canadian Community Health Survey (2015-2018) variables of interest*</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Predisposing</strong></td>
</tr>
<tr>
<td>Immigrant Status</td>
</tr>
<tr>
<td>Ethnoracial identity</td>
</tr>
<tr>
<td>Sexual orientation</td>
</tr>
<tr>
<td>Sex</td>
</tr>
<tr>
<td>Age</td>
</tr>
</tbody>
</table>

* separated into Anderson model of healthcare utilization factors
**New LGBT2Q+ Health Survey (2020) variables of interest**

<table>
<thead>
<tr>
<th>Predisposing</th>
<th>Enabling</th>
<th>Need</th>
<th>Outcome Var.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Immigrant Status</td>
<td>Income + education (socioeconomic status)</td>
<td>Existing mental disorder</td>
<td>Perceived health need</td>
</tr>
<tr>
<td>Country of birth</td>
<td></td>
<td>Existing mental health conditions</td>
<td>Mental healthcare utilization</td>
</tr>
<tr>
<td>Ethnoracial identity</td>
<td></td>
<td>Self-rated mental health</td>
<td></td>
</tr>
<tr>
<td>Sexual orientation</td>
<td></td>
<td>Perceived life stress</td>
<td></td>
</tr>
<tr>
<td>Gender modality</td>
<td></td>
<td>Minority stress</td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*separated into Anderson model of healthcare utilization factors

---

**Canadian Community Health Survey vs LGBT2Q+ Health Survey**
**Change 1: immigrant status**

<table>
<thead>
<tr>
<th>Before</th>
<th>After</th>
<th>What does it entail?</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Immigrant status</strong></td>
<td><strong>Country of birth</strong></td>
<td><strong>Slight change</strong></td>
</tr>
<tr>
<td>In the CCHS there was a question on whether the respondent has ever been a landed immigrant</td>
<td>The LGBT2Q+ survey asks whether the respondent was born in Canada or not</td>
<td>Country of birth will now replace immigrant status to account for intersectionalities in ethnoracial minorities and immigration. *Just because someone was not born in Canada, they could be White or racialized, hence the need for intersectional analysis.</td>
</tr>
</tbody>
</table>
Change 2: gender modality

<table>
<thead>
<tr>
<th>Before</th>
<th>After</th>
<th>What does it entail?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex</td>
<td>Gender modality</td>
<td>Change for the better</td>
</tr>
<tr>
<td>2015-2018 CCHS only asks for respondents' binary sex</td>
<td>The new dataset includes several questions on the sex AND gender identities of respondents</td>
<td>Missing a gender modality variable was cited as a major limitation of my study Accounting for different genders will give me a richer and more nuanced exploration</td>
</tr>
</tbody>
</table>

Change 3: education

<table>
<thead>
<tr>
<th>Before</th>
<th>After</th>
<th>What does it entail?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Income</td>
<td>Income + education</td>
<td>Change for the better</td>
</tr>
<tr>
<td>2015-2018 CCHS only has a question on the income of respondents No question on education attainment of respondents</td>
<td>The new dataset has a question on income and one on the highest level of education that a respondent has completed in or outside Canada</td>
<td>Income and education will fall under the &quot;socioeconomic status&quot; variable of interest Means that my analysis of SES will be more comprehensive</td>
</tr>
</tbody>
</table>
Change 4: social provisions

<table>
<thead>
<tr>
<th>Before</th>
<th>After</th>
<th>What does it entail?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social support</td>
<td>Social provision</td>
<td>Slight change</td>
</tr>
<tr>
<td>2015-2018 CCHS has a few questions that fell under &quot;social support&quot; variable.</td>
<td>The new dataset has a whole section on what is called &quot;social provision&quot; but has a lot of similarities to questions that used to fall under &quot;social support&quot; in the CCHS</td>
<td>Terminology change</td>
</tr>
<tr>
<td></td>
<td></td>
<td>More data on social provision - 5 subscales for detailed information (e.g. guidance, reliable alliance, reassurance of worth, attachment, social integration)</td>
</tr>
</tbody>
</table>

Change 5: Existing mental health condition

<table>
<thead>
<tr>
<th>Before</th>
<th>After</th>
<th>What does it entail?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Existing mental disorder</td>
<td>Existing mental health condition</td>
<td>Change for the better</td>
</tr>
<tr>
<td>2015-2018 CCHS has a question on what kind of mood and/or anxiety disorder a respondent may have</td>
<td>New survey has a question on whether respondents are dealing with anxiety and/or mood disorders</td>
<td>Having an anxiety and/or mood disorder are mental health conditions that may motivate someone to access healthcare</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Additional measures of depression and anxiety are present in the new survey through the PHQ-4</td>
</tr>
</tbody>
</table>
Change 6: minority stress

**Before**

**Perceived life stress**
2015-2018 CCHS has questions on chronic stressors that respondents face
Used as a proxy variable to measure minority stress

**After**

**Minority stress**
New dataset has a block of questions that measure the multiple facets of minority stress (e.g., community connectedness, identity concealment, discrimination events, everyday microaggressions)

**What does it entail?**

**Change for the better**
Before I was using perceived life stress as a proxy variable for minority stress
Now I can analyze minority stress directly

---

In summary...

The LGBT2Q+ Health Survey still aligns with the original goals and research questions of my thesis

While there are trade-offs, new variables add better representation of axes of intersectionality that I’m interested in exploring

Allows for remote access (very important now due to constantly changing travelling restrictions)
Appendix E

2020 LGBT2Q+ Health Survey

Letter of Information and Consent

Welcome to the 2020 LGBT2Q+ Health Survey!

WILFRID LAURIER UNIVERSITY
LETTER OF INFORMATION AND CONSENT FORM

Researchers:
Dr. Todd Coleman, Department of Health Sciences, Wilfrid Laurier University
Dr. Simon Coulombe, Department of Psychology, Wilfrid Laurier University
Dr. Robb Travers, Department of Health Sciences, Wilfrid Laurier University

This letter provides key information about a survey examining LGBT2Q+ (lesbian, gay, bisexual, trans, 2-spirit, queer) experiences in Canada, conducted by a group of community-based researchers at Wilfrid Laurier University.

Invitation to Participate
You are being invited to participate in a survey examining LGBT2Q+ experiences in Canada.

Purpose of the Letter
The purpose of this letter is to provide you with the necessary information required for you to make an informed decision about participating in this survey.

Purpose of this Study
The researchers would like to gather information about LGBT2Q+ Canadians’ experiences about community health, health and social service access, suicide, alcohol and drug use, adverse childhood experiences, such as sexual and physical abuse, and social support. Once the information has been collected, analyzed and distributed (e.g. at community meetings, reports, academic publications), the research team hopes to work with the community on initiatives that promote the health and well-being of LGBT2Q+ populations in Canada.

Inclusion Criteria
To participate in this survey, one must:
Be 18 years of age or older, AND Identify as Lesbian, Gay, Bisexual, Transgender, Two-spirit, or Queer, or any other similar sexual orientation minority or gender identity minority, AND Currently reside in Canada.

You will be asked to complete a short eligibility assessment at the beginning of the study. If you meet the eligibility criteria listed above, you will be directed to the survey. We anticipate that up to 1500 individuals meeting these criteria will complete the survey.

Study Procedures
If you agree to participate, you will be asked to fill out a survey about your experiences as an LGBT2Q+ individual. The questions from this survey were derived from existing surveys on broader populations, LGBT2Q+ communities, or were developed by members of the research team.

Findings will never be presented at the individual level. We will present overall responses to questions (e.g. such as percentages of people who have access to a primary care provider) in publications and/or presentations that result from this study. No quotations from the final, open-ended question will ever be presented.

The survey can be filled out online at a time and location of your choosing. The survey should take approximately 20 minutes to complete.
9/4/2020 Qualtrics Survey Software

**Possible Risks and Harms**

There are no apparent social risks for participating in this survey as the information that is collected will be combined, and thus individual responses will not be singled out. There is a potential, however, that the survey could result in psychological or emotional stress since the information collected will be on topics such as homophobia, transphobia, social isolation, adverse childhood experiences such as sexual and physical abuse, drug and alcohol use, and other mental health issues, such as suicidal thoughts and attempts. In light of this, contact information for health/mental health services will be provided with this information, in particular sensitive questions, as well as at the end of the survey. Please note that temporary feelings of discomfort are normal and should be temporary; however, if you experience persistent discomfort because of participating in this study, please contact the researchers and/or health and mental health services, also listed in the survey.

**Possible Benefits**

By completing this survey your experiences will help inform planning for future initiatives for LGBTQ2+ populations in Canada.

**Incentive**

By participating in this study you are eligible for the rewards offered through your panel partner as set out in their terms of agreement. Depending on these terms, the specific compensation varies (e.g., based on length of the survey and panelist profile) and it may include cash, airline miles, gift cards, redeemable points, sweepstakes entrance and vouchers. The compensation process is managed by your panel and not by the research team. Please note that while you are free to skip any question or procedure and/or withdraw from the study at any time, in order to receive compensation, you will need to proceed to the final page of the survey. Any compensation received related to the participation in this research study is taxable. It is the participant’s responsibility to report the amount received for income tax purposes and Wilfrid Laurier University will not issue a tax receipt for the amount received.

**Voluntary Participation**

Please note that participation in this survey is voluntary, and that you can refuse to participate, answer any questions or withdraw from the survey altogether with no effects to you. You may withdraw from the study at any time without penalty. If you begin the study, but withdraw prior to completion, your data will be destroyed. Please note that your data cannot be withdrawn once data collection is complete because the data are stored without identifiers.

**Privacy and Confidentiality**

Data will be collected anonymously and kept confidential. Please note, however, that while in transmission on the internet, confidentiality of data cannot be guaranteed. Wilfrid Laurier University will administer the survey using an online survey tool (Qualtrics). Your IP address will not be collected. Once survey administration is complete, researchers will extract survey data from the online Qualtrics system and store the file in its secure document management system. All electronic materials will be saved on an encrypted computer in a locked office at Wilfrid Laurier University. All data pertaining to this research will be destroyed by Wilfrid Laurier researchers seven years after the study has been completed (i.e., by July 31, 2027). During this time, the data may be analyzed as part of a separate project (i.e., secondary data analysis).

**Contacts for Further Information**

This project has been reviewed and approved by the University Research Ethics Board (REB #6567), which receives funding from the Research Support Fund. If you feel you have not been treated according to the descriptions in this form, or your rights as a participant in research have been violated during the course of this project, you may contact Dr. Jayne Kalmar, Chair, Research Ethics Board, Wilfrid Laurier University, (519) 884-0710, extension 3131 or REBChair@wlu.ca. If you have any questions or comments about the administration of the survey (or you experience adverse effects as a result of participating in the survey), please contact Dr. Todd Coleman at tcoleman@wlu.ca or (519) 884-0710, ext. 2127.

**Feedback and Publication**

The results of this study will be included in a community report, and will be presented to community members and organizations, which they may then present to different service providers or agencies in Canada. The community report will be available by December 1, 2020. Please email Dr. Todd Coleman (tcoleman@wlu.ca) if you would like to receive a copy. The results may also be presented at conferences or published in scholarly journals, and may be available through Open Access resources.

**Consent to Participate**

Please check the appropriate box below.

- I have read and understand the above information. I agree to participate in this study (selecting this will lead to the study)

- I have read and understand the above information. I do not wish to participate in this study (selecting this will send you to the end page)

We recommend that you print or save a copy of this form for your records.

Some questions on this survey relate to the sensitive issue of discrimination and suicide. If you need to speak to someone immediately regarding suicide, please contact any of the following:

- National Suicide Prevention Lifeline at 1-800-273-8255
  Canada's Trans Life Line (call 877-330-6366)
- The Indigenous Hope for Wellness Help Line (call 1-855-242-3310)

https://wlu.ca/1.qualtrics.com/OJEdtSection0Blocks/Ajax/GetSurveyPreview?ContextSurveyId=SV_bDucuWhpMWwvPKB&ContextLibraryId=UR...
Block 1

Are you 18 years of age or older?
- Yes
- No

Do you live in Canada?
- Yes
- No

Are you heterosexual/straight?
- Yes
- No

Are you transgender, transsexual, non-binary, gender variant, or a person with a history of transitioning sex or gender?
- Yes
- No

Do you consider yourself to be two-spirit?
- Yes
- No

Block 2

How old are you?  

You may belong to one or more racial or cultural groups on the following list. Are you...? (check all that apply)
- White
- Indigenous (e.g. First Nations, Inuit, Métis)
- South Asian (e.g. East Indian, Pakistani, Sri Lankan)
- Chinese
- Black African (e.g. Ghana, Kenya, Somalia)
- Black Canadian or African-American
- Black Caribbean
- Filipino
- Latin American
- Arab
- Southeast Asian (Eg., Vietnamese, Cambodian, Malaysian, Laotian)
- West Asian (Eg., Iranian, Afghan)
- Korean
- Japanese
- Other, please specify:  

Which of the following would best describe how you currently identify?

- Bisexual
- Gay
- Lesbian
- Asexual
- Queer
- Straight or heterosexual
- Not sure or questioning
- Other (please specify):

What sex were you assigned at birth, meaning the sex on your original birth certificate?

- Male
- Female

Which best describes your current gender identity?

- Male
- Female
- Indigenous or other cultural gender minority identity [e.g. two-spirit]
- Non-binary
- Gender fluid
- Something else

What gender do you currently live as in your day-to-day life?

- Male
- Female
- Sometimes male, sometimes female
- Something other than male or female

Which of the following applies to your current situation regarding hormones and/or surgery?

- I have medically transitioned (hormones and/or surgery)
- I am in the process of medically transitioning
- I am planning to transition, but have not begun
- I am not planning to medically transition
- The concept of transitioning does not apply to me
- I am not sure whether I am going to medically transition

What is your best estimate of the total income, before taxes, of all your household members (including yourself) from all sources in the past 12 months?

- Less than $5,000
- $5,000-$9,999
- $10,000-$19,999
- $20,000-$29,999
- $30,000-$39,999
- $40,000-$49,999
- $50,000-$59,999
- $60,000-$69,999
- $70,000-$79,999

https://wik.ca1.qualtrics.com/secure/SectionBlocks/Ajax/SurveyPrintPreview?ContextSurveyId=SV_bDuczWhpMWwePKB&ContextLibraryId=JR...
$80,000 or more
I'd rather not say

Including yourself, how many people live in your household?

Were you born in Canada?
Yes
No

In which province/territory do you currently live?
Alberta
British Columbia
Manitoba
New Brunswick
Newfoundland and Labrador
Northwest Territories
Nova Scotia
Nunavut
Ontario
Prince Edward Island
Quebec
Saskatchewan
Yukon

What are the first three characters of your postal code?

Are you currently enrolled in high school, college, trade school or university?
Yes, full-time, in college, trade school, or university
Yes, full-time, in high school
Yes, part-time, in college, trade school, or university
Yes, part-time, in high school
No

What is the highest level of education that you have completed (in Canada or any other country)?
Did not graduate from high school
High school graduate
Some college or trade school
Some university
College or trade school graduate
University graduate

Prior to March 1, 2020, what was your employment status?
Employed full-time
Employed part-time

INTERSECTIONALITY IN MENTAL HEALTH SERVICE UTILIZATION

9/4/2020 Qualtrics Survey Software

What is your current employment status?

○ Employed Full-time
○ Employed part-time
○ Retired
○ Not employed and looking for employment
○ Not employed and not looking for employment
○ On disability
○ Receiving general social assistance

Since March 1, 2020, have you received the Canadian Emergency Response Benefit, or other COVID-19 related benefits?

○ Yes
○ No

Block 3

Please read each statement carefully, and then indicate how frequently the situation described occurs in your life.

<table>
<thead>
<tr>
<th></th>
<th>Never happens</th>
<th>Happens a little bit</th>
<th>Happens sometimes</th>
<th>Happens a lot</th>
<th>Happens all the time</th>
</tr>
</thead>
<tbody>
<tr>
<td>I avoid telling people about certain things in my life that might imply I am LGBT2Q+.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>I avoid talking about my romantic life because I do not want others to know I am LGBT2Q+.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>I change my mannerisms or speech because I do not want others to think I am LGBT2Q+.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>I do not bring a date to social events because I do not want others to know I am LGBT2Q+.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>I do not object when I hear anti-LGBT2Q+ remarks because I do not want others to assume I am LGBT2Q+.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>I limit what I share on social media, or who can see it, because I do not want others to know I am LGBT2Q+.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>

Please read each statement carefully, and then indicate how frequently the situation described occurs in your life.

<table>
<thead>
<tr>
<th></th>
<th>Never happens</th>
<th>Happens a little bit</th>
<th>Happens sometimes</th>
<th>Happens a lot</th>
<th>Happens all the time</th>
</tr>
</thead>
<tbody>
<tr>
<td>I am expected to educate non-LGBT2Q+ people about LGBT2Q+ issues.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>
### INTERSECTIONALITY IN MENTAL HEALTH SERVICE UTILIZATION

<table>
<thead>
<tr>
<th>Date</th>
<th>Qualtrics Survey Software</th>
</tr>
</thead>
<tbody>
<tr>
<td>9/4/2020</td>
<td>People have re-labeled my identity, or referred to me by a name/pronouns that are different than how I identify myself.</td>
</tr>
<tr>
<td></td>
<td>When in an organization or activity that is sorted by gender, I feel out of place because I am LGBTQ+.</td>
</tr>
<tr>
<td></td>
<td>Please choose the answer 'Happens a lot' so that we know you are paying attention.</td>
</tr>
<tr>
<td></td>
<td>I have been accused of being too defensive or politically correct when talking about LGBTQ issues with someone who is not LGBTQ+.</td>
</tr>
<tr>
<td></td>
<td>Please read each statement carefully, and then indicate how frequently the situation described occurs in your life.</td>
</tr>
<tr>
<td></td>
<td>When I meet someone new, I worry that they secretly do not like me because I am LGBTQ+.</td>
</tr>
<tr>
<td></td>
<td>I brace myself to be treated disrespectfully because I am LGBTQ+.</td>
</tr>
<tr>
<td></td>
<td>I expect that others will not accept me because I am LGBTQ+.</td>
</tr>
<tr>
<td></td>
<td>I worry about what will happen if people find out I am LGBTQ+.</td>
</tr>
<tr>
<td></td>
<td>Please read each statement carefully, and then indicate how frequently the situation described occurs in your life.</td>
</tr>
<tr>
<td></td>
<td>I have been excluded from an organization (e.g. a religious group, sports team, etc.) because I am LGBTQ+.</td>
</tr>
<tr>
<td></td>
<td>I have been pressured to receive unnecessary services by a healthcare professional because I am LGBTQ+.</td>
</tr>
<tr>
<td></td>
<td>I have been denied service by a healthcare professional because I am LGBTQ+.</td>
</tr>
<tr>
<td></td>
<td>I have received poor service at a business because I am LGBTQ+.</td>
</tr>
<tr>
<td></td>
<td>I have been treated unfairly by supervisors or teachers because I am LGBTQ+.</td>
</tr>
<tr>
<td></td>
<td>Please read each statement carefully, and then indicate how much you agree or disagree with the statement.</td>
</tr>
<tr>
<td></td>
<td>Strongly disagree</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>9/4/2020</th>
<th>Qualtrics Survey Software</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly disagree</td>
<td>Disagree</td>
</tr>
<tr>
<td>If I was offered the chance to be someone who is not LGBT2Q+, I would accept the opportunity.</td>
<td>☐</td>
</tr>
<tr>
<td>I wish I wasn’t LGBT2Q+.</td>
<td>☐</td>
</tr>
<tr>
<td>I feel that being LGBT2Q+ is a personal flaw in me.</td>
<td>☐</td>
</tr>
<tr>
<td>I feel that me being LGBT2Q+ must have been a mistake of fate/nature/God/etc.</td>
<td>☐</td>
</tr>
<tr>
<td>I wonder why I am not &quot;normal&quot; and like everyone else.</td>
<td>☐</td>
</tr>
<tr>
<td>I envy people who are not LGBT2Q+.</td>
<td>☐</td>
</tr>
<tr>
<td>I have tried to stop being LGBT2Q+.</td>
<td>☐</td>
</tr>
</tbody>
</table>

Please read each statement carefully, and then indicate how frequently the situation described occurs in your life.

<table>
<thead>
<tr>
<th>9/4/2020</th>
<th>Qualtrics Survey Software</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never happens</td>
<td>Happens a little bit</td>
</tr>
<tr>
<td>I have been verbally harassed or called names because I am LGBT2Q+.</td>
<td>☐</td>
</tr>
<tr>
<td>I have received unwanted sexual attention or been asked inappropriate questions about my sexual life because I am LGBT2Q+.</td>
<td>☐</td>
</tr>
<tr>
<td>I have been physically attacked because I am LGBT2Q+.</td>
<td>☐</td>
</tr>
<tr>
<td>I have had my personal property purposefully damaged by others because I am LGBT2Q+.</td>
<td>☐</td>
</tr>
<tr>
<td>I have endured unwanted sexual contact because I am LGBT2Q+.</td>
<td>☐</td>
</tr>
<tr>
<td>Others have threatened to harm me because I am LGBT2Q+.</td>
<td>☐</td>
</tr>
<tr>
<td>I have been bullied by others because I am LGBT2Q+.</td>
<td>☐</td>
</tr>
<tr>
<td>I have experienced silent harassment [e.g. being stared at, being whispered about] because I am LGBT2Q+.</td>
<td>☐</td>
</tr>
</tbody>
</table>

Please read each statement carefully, and then indicate how much you agree or disagree with the statement.

<table>
<thead>
<tr>
<th>9/4/2020</th>
<th>Qualtrics Survey Software</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly disagree</td>
<td>Disagree</td>
</tr>
<tr>
<td>I feel that I could find information and pamphlets on LGBT2Q+ issues.</td>
<td>☐</td>
</tr>
<tr>
<td>I feel that I could find professional services for LGBT2Q+ issues if I needed to.</td>
<td>☐</td>
</tr>
<tr>
<td>I feel that I could find a public space that is supportive of LGBT2Q+ activities.</td>
<td>☐</td>
</tr>
</tbody>
</table>
### SOCIAL PROVISION

Please read each statement carefully, and then indicate how much you agree or disagree with the statement.

<table>
<thead>
<tr>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>There are people I can depend on to help me if I really need it.</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>There are people who enjoy the same social activities I do.</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>I have close relationships that provide me with a sense of emotional security and well-being.</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>There is someone I could talk to about important decisions in my life.</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>I have relationships where my competence and skill are recognized.</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>There is a trustworthy person I could turn to for advice if I were having problems.</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>Please choose the answer 'Disagree' so that we know you are paying attention.</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>I feel part of a group of people who share my attitudes and beliefs.</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>I feel a strong emotional bond with at least one other person.</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>There are people who admire my talents and abilities.</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>There are people I can count on in an emergency.</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
</tbody>
</table>

Over the last 2 weeks, how often have you been bothered by the following problems?

<table>
<thead>
<tr>
<th>Not at all</th>
<th>Several days</th>
<th>More than half the days</th>
<th>Nearly every day</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feeling nervous, anxious or on edge</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>Not being able to stop or control worrying</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>Little interest or pleasure in doing things</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>Feeling down, depressed, or hopeless</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
</tbody>
</table>

Please answer the following questions about how you have been feeling during the past month. Place a check mark in the box that best represents how often you have experienced or felt the following:

During the past month, how often did you feel ...

<table>
<thead>
<tr>
<th>Never</th>
<th>Once or twice</th>
<th>About once a week</th>
<th>About 2 or 3 times a week</th>
<th>Almost every day</th>
<th>Every day</th>
</tr>
</thead>
<tbody>
<tr>
<td>happy</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>interested in life</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>satisfied with life</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
</tbody>
</table>
### 9/4/2020

<table>
<thead>
<tr>
<th>Qualtrics Survey Software</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never</td>
</tr>
<tr>
<td>---</td>
</tr>
<tr>
<td>that you had something important to contribute to society</td>
</tr>
<tr>
<td>that you belonged to a community (like a social group, or your neighborhood)</td>
</tr>
<tr>
<td>that our society is a good place, or is becoming a better place, for all people</td>
</tr>
<tr>
<td>that people are basically good</td>
</tr>
<tr>
<td>that the way our society works makes sense to you</td>
</tr>
<tr>
<td>that you liked most parts of your personality</td>
</tr>
<tr>
<td>good at managing the responsibilities of your daily life</td>
</tr>
<tr>
<td>that you had warm and trusting relationships with others</td>
</tr>
<tr>
<td>that you had experiences that challenged you to grow and become a better person</td>
</tr>
<tr>
<td>confident to think or express your own ideas and opinions</td>
</tr>
<tr>
<td>that your life has a sense of direction or meaning to it</td>
</tr>
</tbody>
</table>

**Block 5**

While you were growing up, during your first 18 years of life:

Did a parent or other adult in the household **often or very often** ... Swear at you, insult you, put you down, or humiliate you? or Act in a way that made you afraid that you might be physically hurt?
- Yes
- No

Did a parent or other adult in the household **often or very often** ... Push, grab, slap or throw something at you? or Ever hit you so hard that you had marks or were injured?
- Yes
- No

Did an adult or person at least five years older than you **ever** ... Touch or fondle you or have you touch their body in a sexual way? or Attempt or actually have oral, anal, or vaginal intercourse with you?
- Yes
- No

Did you **often or very often** feel that ... No one in your family loved you or thought you were important or special? or Your family didn’t look out for each other, feel close to each other, or support each other?
- Yes
- No

Did you \textit{often or very often} feel that ... You didn’t have enough to eat, had to wear dirty clothes, and had no one to protect you? or Your parents were too drunk or high to take care of you or take you to the doctor if you needed it?

- Yes
- No

Were your parents \textit{ever} separated or divorced?

- Yes
- No

Was your mother or stepmother: \textit{Often or very often} pushed, grabbed, slapped, or had something thrown at her? or \textit{Sometimes, often, or very often} kicked, bitten, hit with a fist, or hit with something hard? or \textit{Ever} repeatedly hit at least a few minutes or threatened with a gun or knife?

- Yes
- No

Did you live with anyone who was a problem drinker or alcoholic or who used street drugs?

- Yes
- No

Was a household member depressed or mentally ill, or did a household member attempt suicide?

- Yes
- No

Did a household member go to prison?

- Yes
- No

Block 6

In general, would you say your health is...?

- Excellent
- Very good
- Good
- Fair
- Poor

Do you currently have any of the conditions listed below ...? (check all that apply)

- Asthma
- Chronic bronchitis
- Emphysema
- Chronic obstructive pulmonary disease (COPD)
- Human Immunodeficiency Virus (HIV)
- Sleep apnea
- Fibromyalgia
<table>
<thead>
<tr>
<th>Question</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arthritis (ex: osteoarthritis, rheumatoid arthritis, gout, or any other type excluding fibromyalgia)</td>
<td></td>
</tr>
<tr>
<td>Osteoporosis</td>
<td></td>
</tr>
<tr>
<td>High blood pressure</td>
<td></td>
</tr>
<tr>
<td>High blood cholesterol or lipids</td>
<td></td>
</tr>
<tr>
<td>Heart disease</td>
<td></td>
</tr>
<tr>
<td>Suffered a stroke</td>
<td></td>
</tr>
<tr>
<td>Type II diabetes</td>
<td></td>
</tr>
<tr>
<td>Cancer</td>
<td></td>
</tr>
<tr>
<td>Alzheimer's Disease or Dementia</td>
<td></td>
</tr>
<tr>
<td>Chronic fatigue syndrome</td>
<td></td>
</tr>
<tr>
<td>Mood disorder such as depression, bipolar disorder, mania, or dysthymia</td>
<td></td>
</tr>
<tr>
<td>Anxiety disorder such as phobia, obsessive compulsive disorder or a panic disorder</td>
<td></td>
</tr>
<tr>
<td>Other:</td>
<td></td>
</tr>
<tr>
<td>What year were you diagnosed with Asthma?</td>
<td></td>
</tr>
<tr>
<td>What year were you diagnosed with Chronic bronchitis?</td>
<td></td>
</tr>
<tr>
<td>What year were you diagnosed with Emphysema?</td>
<td></td>
</tr>
<tr>
<td>What year were you diagnosed with Chronic obstructive pulmonary disease (COPD)?</td>
<td></td>
</tr>
<tr>
<td>What year were you diagnosed with Human Immunodeficiency Virus (HIV)?</td>
<td></td>
</tr>
<tr>
<td>What year were you diagnosed with Sleep apnea?</td>
<td></td>
</tr>
<tr>
<td>What year were you diagnosed with Fibromyalgia?</td>
<td></td>
</tr>
<tr>
<td>What year were you diagnosed with Arthritis (ex: osteoarthritis, rheumatoid arthritis, gout, or any other type excluding fibromyalgia)?</td>
<td></td>
</tr>
<tr>
<td>What year were you diagnosed with Osteoporosis?</td>
<td></td>
</tr>
<tr>
<td>What year were you diagnosed with High blood pressure?</td>
<td></td>
</tr>
</tbody>
</table>
What year were you diagnosed with High blood cholesterol or lipids?

What year were you diagnosed with Heart disease?

What year did you suffer a stroke?

What year were you diagnosed with Type II diabetes?

What year were you diagnosed with Cancer?

What year were you diagnosed with Alzheimer's Disease or Dementia?

What year were you diagnosed with Chronic fatigue syndrome?

What year were you diagnosed with Mood disorder such as depression, bipolar disorder, mania, or dysthymia?

What year were you diagnosed with Anxiety disorder such as phobia, obsessive compulsive disorder or a panic disorder?

What year were you diagnosed with Other: $(c://QID49/ChoiceTextEntryValue/211)?

Block 7

Please choose the answer 'No' so that we know you are paying attention.

☐ Yes  
☐ No

In general, would you say your mental health is...?

☐ Excellent  
☐ Very good  
☐ Good  
☐ "  
☐ Poor  
☐ None of these

The following questions deal with the sensitive issue of suicidal thoughts and attempts. If you are currently in distress, please contact the National Suicide Prevention Lifeline at 1-800-273-8255. If you are in an emergency or crisis situation, please call 9-1-1.

Have you ever seriously contemplsted suicide?
- Yes
- No

You indicated you have seriously contemplsted suicide. Has this happened in the past 12 months?
- Yes
- No

Have you ever seriously attempted suicide?
- Yes
- No

You indicated you have seriously attempted suicide. Did this happen in the past 12 months?
- Yes
- No

Do you currently have a regular primary health care provider, that is, someone you can go to for routine medical check-ups or for specific health concerns? A regular primary health care provider can include, but is not limited to, a family doctor, a nurse practitioner, a walk-in clinic, or interdisciplinary health centre.
- Yes
- No

Do you feel comfortable sharing your gender identity with your current regular primary health care provider?
- Yes
- No

Have you told your current regular primary health care provider about your gender identity?
- Yes
- No

Do you talk to your current regular primary health care provider about health issues specific to your gender identity?
- Yes
- No

Do you feel comfortable sharing your sexual orientation identity with your current regular primary health care provider?
- Yes
- No
Have you told your current regular primary health care provider about your sexual orientation identity?
☐ Yes
☐ No

Do you talk to your current regular primary health care provider about health issues specific to your sexual orientation identity?
☐ Yes
☐ No

For each of the following, has your current regular primary health care provider ever...? (Check all that apply):
☐ Made negative comments or gestures about LGBTQ+ people
☐ Made negative comments or gestures related to a person’s gender, race, religion, culture or ethnicity
☐ Belittled or made fun of you for your sexual orientation
☐ Refused to see you or ended care because of your sexual orientation
☐ Refused to see you or ended care because of your gender, race, religion, culture, or ethnicity
☐ Refused to discuss or address health concerns related to your sexual orientation
☐ Made assumptions about you or your health based on your sexual orientation
☐ Assumed you were straight/heterosexual
☐ Assumed you had a lot of sex partners based on your sexual orientation
☐ Refused to see you or ended care because you were trans
☐ Used hurtful or insulting language about trans identity or experience
☐ Refused to discuss or address trans-related health concerns
☐ Told you that you were not really trans
☐ Discouraged you from exploring your gender
☐ Told you they don’t know enough about trans-related care to provide it
☐ Belittled or ridiculed you for being trans
☐ Thought the gender listed on your ID or forms was a mistake
☐ Refused to examine parts of your body because you are trans
☐ None of the above

Now I would like to ask you some questions about mental and emotional well-being.

In the past 12 months, that is, from September 4, 2019 to yesterday, have you seen or talked to a health professional about your emotional or mental health?
☐ Yes
☐ No

Whom did you see or talk to? (Check all that apply)
☐ Family doctor or general practitioner
☐ Psychiatrist
☐ Psychologist
☐ Nurse
☐ Social worker or counsellor
☐ Other - Specify __________________________

For each of the following, in the last 12 months, has a mental health provider ...? (check all that apply):
☐ Made negative comments or gestures about LGBTQ+ people
☐ Made negative comments or gestures related to a person’s gender, race, religion, culture or ethnicity
☐ Belittled or made fun of you for your sexual orientation

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Qualtrics Survey Software

Refused to see you or ended care because of your sexual orientation
Refused to see you or ended care because of your gender, race, religion, culture, or ethnicity
Refused to discuss or address health concerns related to your sexual orientation
Made assumptions about you or your health based on your sexual orientation
Assumed you were straight/heterosexual
Assumed you had a lot of sex partners based on your sexual orientation
Refused to see you or ended care because you were trans
Used hurtful or insulting language about trans identity or experience
Refused to discuss or address trans-related health concerns
Told you that you were not really trans
Discouraged you from exploring your gender
Told you they don’t know enough about trans-related care to provide it
Bullied or ridiculed you for being trans
Thought the gender listed on your ID or forms was a mistake
None of the above

Here are a few questions about drugs. Please answer as correctly and honestly as possible by indicating which answer is right for you. When referring to drugs other than alcohol, the following are examples of drugs:

<table>
<thead>
<tr>
<th>Cannabis</th>
<th>Amphetamines</th>
<th>Cocaine</th>
<th>Opiates</th>
<th>Hallucinogens</th>
<th>Solvents/inhalants</th>
<th>GHB and Other Drugs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marijuana</td>
<td>Methamphetamine</td>
<td>Crack</td>
<td>Smoked heroin</td>
<td>Ecstasy</td>
<td>Thinners</td>
<td>GHB</td>
</tr>
<tr>
<td>Hash</td>
<td>Phermetrine</td>
<td>Freebase</td>
<td>Heroin</td>
<td>LSD (Lsergic acid)</td>
<td>Trichlorethylene</td>
<td>Anabolic steroids</td>
</tr>
<tr>
<td>Hash oil</td>
<td>Khat</td>
<td>Coca leaves</td>
<td>Opium</td>
<td>Mescaline</td>
<td>Gasoline/petrol</td>
<td>Laughing gas (Halothane)</td>
</tr>
<tr>
<td>Ritaline (Methylphenidate)</td>
<td>Betel nut</td>
<td>PCP angel dust (Phencyclidine)</td>
<td>PCP</td>
<td>Peyote</td>
<td>Glass</td>
<td>Amyl nitrate (Poppers)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Anticholinergic compounds</td>
</tr>
</tbody>
</table>

NOTE: Pills count as drugs when you take:
- more of them or take them more often than the doctor has prescribed for you
- pills because you want to have fun, feel good, get "high", or wonder what sort of effect they have on you
- pills that you have received from a relative or a friend
- pills that you have bought on the "black market" or stolen

Pills do NOT count as drugs if they have been prescribed by a doctor and you take them in the prescribed dosage.

How often do you use drugs other than alcohol?

- Never
- Once a month or less often
- 2 to 4 times a month
- 2 to 3 times a week
- 4 times a week or more

Do you use more than one type of drug on the same occasion?

- Never
- Once a month or less often
- 2 to 4 times a month
- 2 to 3 times a week
- 4 times a week or more

How many times do you take drugs on a typical day when you use drugs?
- 0
- 1 to 2 times
- 3 to 4 times
- 5 to 6 times
- 7 or more times

Please read each statement carefully, and then indicate how frequently the situation described occurs in your life.

<table>
<thead>
<tr>
<th>How often are you influenced heavily by drugs?</th>
<th>Never</th>
<th>Less often than once a month</th>
<th>Every month</th>
<th>Every week</th>
<th>Daily or almost every day</th>
</tr>
</thead>
<tbody>
<tr>
<td>Over the past year, have you felt that your longing for drugs was so strong that you could not resist it?</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Has it happened, over the past year, that you have not been able to stop taking drugs once you started?</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>How often over the past year have you taken drugs and then neglected to do something you should have done?</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>How often over the past year have you needed to take a drug the morning after heavy drug use the day before?</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>How often over the past year have you had guilt feelings or a bad conscience because you used drugs?</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>

Have you or someone else been hurt (mentally or physically) because you used drugs?
- No
- Yes, but not over the last year
- Yes, over the last year

Has a relative or a friend, a doctor or a nurse, or anyone else been worried about your drug use or said that you should stop using drugs?
- No
- Yes, but not over the last year
- Yes, over the last year

Now, some questions about your alcohol consumption.
A ‘drink’ refers to:
- a 12 ounce bottle or small can of beer, cider or cooler with 5% alcohol content, or a small draft;
- a 5 ounce glass of wine with 12% alcohol content;
- an 8-9 ounce serving of 7% alcohol malt liquor;
- a glass or cocktail containing 1.5 oz. of a spirit with 40% alcohol content

How often do you have a drink containing alcohol?
- Never
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Qualtrics Survey Software

How many drinks containing alcohol do you have on a typical day when you are drinking?

- 1 or 2
- 3 or 4
- 5 or 6
- 7 to 9
- 10 or more

How often during the last year...

Never | Less than monthly | Monthly | Weekly | Daily or almost daily
---|---|---|---|---

...did you have six or more drinks on one occasion?

...have you found that you were not able to stop drinking once you had started?

...have you failed to do what was normally expected of you because of drinking?

...have you needed a first drink in the morning to get yourself going after a heavy drinking session?

...have you had a feeling of guilt or remorse after drinking?

...have you been unable to remember what happened the night before because of your drinking?

Have you or someone else been injured because of your drinking?

- No
- Yes, but not in the last year
- Yes, during the last year

Has a relative, friend, doctor, or other health care worker been concerned about your drinking or suggested you cut down?

- No
- Yes, but not in the last year
- Yes, during the last year

The next questions are about cigarette smoking.

Have you ever smoked cigarettes daily or occasionally?

- Yes
- No

At the present time, do you smoke cigarettes every day, occasionally or not at all?
Similar to bivariate modelling, participants who identified as straight, asexual, questioning, or other orientations were not statistically associated with mental health service utilization across all models compared to gay and lesbian participants. Compared to gay and lesbian respondents, bisexual, pansexual, and queer respondents were much more likely to have utilized mental health services within the past 12 months; the biggest increase being after controlling for social provisions, respondents who identified as pansexual or queer were associated with a 59% increase (PR: 1.5877; 95% CI: 1.333 – 1.8906) in mental health service utilization. This is comparable to bivariate association between pansexual and queer participants and mental health service utilization (PR: 1.5865; 95% CI: 1.3321 – 1.8894). Compared to gay and lesbian participants, bisexual participants were associated with a 30% increase (PR: 1.2995; 95% CI: 1.1351 – 1.4878) in mental health service utilization after controlling for minority stress. This is a three-percent point increase compared to association between bisexual and mental health service utilization in bivariate modelling (PR: 1.2725; 95% CI: 1.111 – 1.4575).

After controlling for mood disorder and anxiety disorder (in separate models), participants who identified as pansexual or queer were the only sexual orientation category that were statistically significantly associated with mental health service utilization within the past 12 months (PR: 1.2268; 95% CI: 1.1351 – 1.4878 and PR: 1.2411; 95% CI: 1.0487 – 1.4689, respectively).

Compared to White respondents, racialized respondents were still less likely to have utilized mental health services within the past 12 months, and Indigenous respondents were still more likely to have utilized mental health services even after controlling for other variables. Associations for racialized participants in this analysis were near identical to bivariate association in table 2; the biggest decrease in mental health service utilization within the past 12
months was after controlling for increasing age, at a 17% decrease (PR: 0.8259; 95% CI: 0.7263 – 0.9392) in mental health service utilization when compared to White respondents. The bivariate association for racialized respondents and mental health utilization was a decrease of 14% (PR: 0.8585; 95% CI: 0.7559 – 0.9749) compared to White respondents. After controlling for mood disorder and anxiety disorder (separately), Indigenous participants were the only category still statistically significant associated with mental health service utilization within the past 12 months, at an increase of 19% (PR: 1.1882; 95% CI: 1.0603 – 1.3316) and 21% increase (PR: 1.2088; 95% CI: 1.0726 – 1.3622) compared to White respondents, respectively. Compared to White respondents, the bivariate association between Indigenous participants and mental health service utilization was an increase of 33% (PR: 1.3263; 95% CI: 1.1694 – 1.5044).

**Table 6.**

*Modified Poisson regression models of mental healthcare utilization within the past 12 months against sexual orientation and ethnoracial group, controlling for one variable of interest at a time: Findings from the LGBT2Q+ Health Survey (N=1542)*

<table>
<thead>
<tr>
<th>Variable of Interest</th>
<th>Controlled Variable</th>
<th>p-value or PR (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>#1 Sexual Orientation</td>
<td>PREDISPOSING FACTORS</td>
<td></td>
</tr>
<tr>
<td>Gay, lesbian</td>
<td>Age (one year increase)</td>
<td>p^α = .0001</td>
</tr>
<tr>
<td>Bisexual</td>
<td>Reference</td>
<td>1.2203 (1.061, 1.4035)**</td>
</tr>
<tr>
<td>Pansexual, queer</td>
<td>1.4999 (1.2517, 1.7972)**</td>
<td></td>
</tr>
<tr>
<td>Straight, asexual,</td>
<td>1.0873 (0.833, 1.4193)</td>
<td></td>
</tr>
<tr>
<td>questioning, other</td>
<td>Gender Modality</td>
<td>p^α = 0.0012</td>
</tr>
<tr>
<td>Gay, lesbian</td>
<td>Reference</td>
<td>1.1726 (1.0148, 1.3548)*</td>
</tr>
<tr>
<td>Bisexual</td>
<td>1.3671 (1.1335, 1.6488)**</td>
<td></td>
</tr>
<tr>
<td>Pansexual, queer</td>
<td>1.0251 (0.7825, 1.3431)</td>
<td></td>
</tr>
<tr>
<td>Straight, asexual,</td>
<td>Ethnoracial Group</td>
<td>p^α &lt; .0001</td>
</tr>
<tr>
<td>questioning, other</td>
<td>Reference</td>
<td>1.2535 (1.0946, 1.4355)**</td>
</tr>
<tr>
<td>Category</td>
<td>Reference</td>
<td>Pansexual, queer</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>--------------------------------</td>
<td>------------------</td>
</tr>
<tr>
<td>Born in Canada</td>
<td>$p^a &lt; .0001$</td>
<td>1.5499 (1.3036, 1.8428)**</td>
</tr>
<tr>
<td>Gay, lesbian</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bisexual</td>
<td>Reference</td>
<td>1.2649 (1.1044, 1.4488)**</td>
</tr>
<tr>
<td>Pansexual, queer</td>
<td></td>
<td>1.5796 (1.3292, 1.8814)**</td>
</tr>
<tr>
<td>Straight, asexual, questioning, other</td>
<td></td>
<td>1.1298 (0.8676, 1.4712)</td>
</tr>
</tbody>
</table>

**ENABLING FACTORS**

<table>
<thead>
<tr>
<th>Category</th>
<th>Reference</th>
<th>Pansexual, queer</th>
<th>Straight, asexual, questioning, other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Income</td>
<td>$p^a &lt; .0001$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gay, lesbian</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bisexual</td>
<td>Reference</td>
<td>1.2761 (1.1134, 1.4626)**</td>
<td></td>
</tr>
<tr>
<td>Pansexual, queer</td>
<td></td>
<td>1.5638 (1.31, 1.8669)**</td>
<td></td>
</tr>
<tr>
<td>Straight, asexual, questioning, other</td>
<td></td>
<td>1.1665 (0.8933, 1.5232)</td>
<td></td>
</tr>
<tr>
<td>Education</td>
<td>$p^a &lt; .0001$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gay, lesbian</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bisexual</td>
<td>Reference</td>
<td>1.2674 (1.106, 1.4524)**</td>
<td></td>
</tr>
<tr>
<td>Pansexual, queer</td>
<td></td>
<td>1.578 (1.3243, 1.8803)**</td>
<td></td>
</tr>
<tr>
<td>Straight, asexual, questioning, other</td>
<td></td>
<td>1.1306 (0.8698, 1.4696)</td>
<td></td>
</tr>
<tr>
<td>Social Provisions (one point increase)</td>
<td>$p^a &lt; .0001$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gay, lesbian</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bisexual</td>
<td>Reference</td>
<td>1.2732 (1.1116, 1.4582)**</td>
<td></td>
</tr>
<tr>
<td>Pansexual, queer</td>
<td></td>
<td>1.5877 (1.333, 1.8906)**</td>
<td></td>
</tr>
<tr>
<td>Straight, asexual, questioning, other</td>
<td></td>
<td>1.1301 (0.8677, 1.4717)</td>
<td></td>
</tr>
</tbody>
</table>

**NEED FACTORS**

<table>
<thead>
<tr>
<th>Category</th>
<th>Reference</th>
<th>Pansexual, queer</th>
<th>Straight, asexual, questioning, other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-Reported Mental Health (one point increase)</td>
<td>$p^a = 0.0098$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gay, lesbian</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bisexual</td>
<td>Reference</td>
<td>1.1654 (1.0214, 1.3297)*</td>
<td></td>
</tr>
<tr>
<td>Pansexual, queer</td>
<td></td>
<td>1.3301 (1.1194, 1.5804)**</td>
<td></td>
</tr>
<tr>
<td>Straight, asexual, questioning, other</td>
<td></td>
<td>1.043 (0.8038, 1.3532)</td>
<td></td>
</tr>
<tr>
<td>Minority Stress (one point increase)</td>
<td>$p^a &lt; .0001$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gay, lesbian</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bisexual</td>
<td>Reference</td>
<td>1.2995 (1.1351, 1.4878)**</td>
<td></td>
</tr>
<tr>
<td>Pansexual, queer</td>
<td></td>
<td>1.5825 (1.3293, 1.8839)**</td>
<td></td>
</tr>
<tr>
<td>Straight, asexual, questioning, other</td>
<td></td>
<td>1.1483 (0.8871, 1.4863)</td>
<td></td>
</tr>
<tr>
<td>Mood Disorder</td>
<td>$p^a = 0.0768$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gay, lesbian</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bisexual</td>
<td>Reference</td>
<td>1.0934 (0.9646, 1.2393)</td>
<td></td>
</tr>
<tr>
<td>Pansexual, queer</td>
<td></td>
<td>1.2268 (1.0452, 1.4399)**</td>
<td></td>
</tr>
</tbody>
</table>
## PREDISPOsing FACTORS

<table>
<thead>
<tr>
<th>Factor</th>
<th>Reference</th>
<th>Racialized</th>
<th>Indigenous</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (one year increase)</td>
<td>$p^b &lt; .0001$</td>
<td>0.8259 (0.7263, 0.9392)**</td>
<td>1.2848 (1.1302, 1.4605)***</td>
</tr>
<tr>
<td>Gender Modality</td>
<td>$p^b &lt; .0001$</td>
<td>0.8464 (0.7457, 0.9606)**</td>
<td>1.2885 (1.1365, 1.4609)***</td>
</tr>
<tr>
<td>Sexual Orientation</td>
<td>$p^b &lt; .0001$</td>
<td>0.8647 (0.7619, 0.9812)*</td>
<td>1.2979 (1.1467, 1.469)***</td>
</tr>
<tr>
<td>Born in Canada</td>
<td>$p^b &lt; .0001$</td>
<td>0.8734 (0.763, 0.9998)*</td>
<td>1.3254 (1.1685, 1.5035)***</td>
</tr>
</tbody>
</table>

## ENABLING FACTORS

<table>
<thead>
<tr>
<th>Factor</th>
<th>Reference</th>
<th>Racialized</th>
<th>Indigenous</th>
</tr>
</thead>
<tbody>
<tr>
<td>Income</td>
<td>$p^b &lt; .0001$</td>
<td>0.8711 (0.7671, 0.9892)*</td>
<td>1.3123 (1.156, 1.4896)***</td>
</tr>
<tr>
<td>Education</td>
<td>$p^b &lt; .0001$</td>
<td>0.8602 (0.7573, 0.9771)*</td>
<td>1.3229 (1.1656, 1.5013)***</td>
</tr>
<tr>
<td>Social Provisions (one point increase)</td>
<td>$p^b &lt; .0001$</td>
<td>0.8577 (0.7552, 0.9741)*</td>
<td>1.3269 (1.1699, 1.5048)***</td>
</tr>
</tbody>
</table>

## NEED FACTORS

<table>
<thead>
<tr>
<th>Factor</th>
<th>Reference</th>
<th>Racialized</th>
<th>Indigenous</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-Reported Mental Health (one point increase)</td>
<td>$p^b &lt; .0001$</td>
<td>0.8505 (0.7516, 0.9624)**</td>
<td>1.2325 (1.0912, 1.392)***</td>
</tr>
<tr>
<td>Minority Stress (one point increase)</td>
<td>$p^b &lt; .0001$</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mood Disorder</td>
<td>Anxiety Disorder</td>
<td></td>
</tr>
<tr>
<td>------------------</td>
<td>---------------</td>
<td>------------------</td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>Reference</td>
<td>Reference</td>
<td></td>
</tr>
<tr>
<td>Racialized</td>
<td>0.8392 (0.7391, 0.9528)**</td>
<td>0.9685 (0.8584, 1.0926)</td>
<td></td>
</tr>
<tr>
<td>Indigenous</td>
<td>1.3088 (1.1546, 1.4836)***</td>
<td>1.1882 (1.0603, 1.3316)**</td>
<td></td>
</tr>
<tr>
<td></td>
<td>( p^b = 0.0063 )</td>
<td>( p^b = 0.0011 )</td>
<td></td>
</tr>
</tbody>
</table>

95% CI = 95% confidence interval, *** = \( \leq 0.0001 \), ** = \( \leq 0.01 \), * = \( \leq 0.05 \); Reference = reference in which all other levels within the variable is compared against; \( a = p \)-value for sexual orientation; \( b = p \)-value for ethnoracial group.