



Exploring LGBT2Q+ Intracategorical Factors in Mental Health Service Utilization: Differences in Gender Modalities, Sexual Orientations, and Ethnoracial Groups in Canada

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Abstract

LGBT2Q+ (lesbian, gay, bisexual, transgender, Two-Spirit, queer, plus) Canadians face minority stressors that lead to higher mental health inequalities such as worse self-reported mental health and increased risk of mental health issues when compared to their heterosexual/straight and cisgender counterparts. However, there are within-group (intracategorical) differences within a community as large as LGBT2Q+ peoples. Guided by the Andersen Model of Healthcare Utilization, we sought to explore intracategorical differences in LGBT2Q+ Canadian predisposing, enabling, and need factors in mental health service utilization within the past year. Using data from the 2020 LGBT2Q+ Health Survey ($N=1542$), modified Poisson logistic regression found that more polysexual respondents and trans/gender-diverse respondents were more likely to have utilized mental health services within the past year than their gay, lesbian, and cis male counterparts. As well, compared to White respondents, Indigenous respondents were more likely to have utilized mental health services, while other racialized respondents were associated with less utilization. Backwards elimination of Andersen model of healthcare utilization factors predicting mental health service utilization retained two predisposing factors (ethnoracial groups and gender modality) and two need factors (self-reporting living with a mood disorder and self-reporting living with an anxiety disorder). Results suggest that polysexual, trans and gender-diverse, and racialized LGBT2Q+ peoples have an increased need for mental health services due to increased specific minority stressors that cisgender, White, monosexual peoples do not face. Implications for healthcare providers are discussed on how to improve service provision to LGBT2Q+ peoples.

Keywords Mental health · Health inequality · Healthcare utilization · LGBT2Q+ · Sexual orientation and gender identity

Introduction

Minority stressors are chronic stressors associated with LGBT2Q+ (lesbian, gay, bisexual, transgender, Two-Spirit, queer/questioning, plus) identities, also referred to as sexual orientation and gender minorities, that negatively impact an individual's health (Meyer, 2003). They are categorized as either distal or proximal stressors, with the former referring to objective stressors associated with LGBT2Q+ identities. For example, the way someone is perceived based on their sexual orientation and/or gender expression may lead to experiences of discrimination, stigma and/or violence (Meyer, 2003). The latter, proximal stressors, refers to subjective stressors experienced by the individual, in which they may come to expect rejection, conceal their identity, and/or come to internalize homophobia, biphobia, and/or

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transphobia (Meyer, 2003). Through this theory of minority stress, we can better understand health inequalities and mental health service utilization within LGBT2Q+ communities.

Health Inequalities

“Health inequality” refers to unequal health outcomes of individuals or groups (Braveman, 2006). LGBT2Q+ people are more likely to report lower levels of self-rated mental health and higher levels of mental health illnesses compared to straight or cisgender counterparts (Pan-Canadian Public Health Network, 2018; Scandurra et al., 2019; Tjepkema, 2008). While health inequality is present in LGBT2Q+ communities at large, especially when comparing to heterosexual/cisgender populations, it is important to note the diverse experiences within groups, or what is known as intersectional “intracategorical” differences (McCall, 2005). Such differences within the diverse population collectively referred to as the LGBT2Q+ community need to be explored further, to identify more precisely where inequalities might be more or less concentrated. For example, Rich and colleagues (2018) found that bisexual men had higher odds of depression and anxiety compared to gay men in Vancouver, British Columbia. Trans PULSE Canada (2020) found that more than 50% of transgender (trans) and non-binary respondents rated their self-reported mental health as either “fair” or “poor”. Almost half of the Trans PULSE Canada sample also reported having at least one unmet healthcare need. As well, sexual minority women have been shown as more likely to report lower levels of mental health, higher levels of unmet healthcare needs, and less utilization of mental health services than sexual minority men (Baptiste-Roberts et al., 2017; Everett & Mollborn, 2014). Such differences between subgroups are often attributed to differences in levels of minority stress experiences. Trans and gender-diverse people may face increased stigma and discrimination when compared to cisgender sexual orientation minorities (Nowaskie et al., 2023; Stanton et al., 2021). For example, Lefevor et al. (2019) noted that, in addition to minority stressors such as discrimination, trans and gender-diverse people face specific stressors such as non-affirmation of gender identity, lack of others’ knowledge, and further systemic discrimination that cisgender sexual orientation minorities do not face.

Along the same line of intracategorical inquiry into differences within LGBT2Q+ communities, ethnoracial background is another factor that must be considered. Ethnoracial minorities and “racialized” are context-dependent terms that refer to persons living in Canada who do not identify as ethnically White. It is important to note that one’s

ethnoracial identity is much more complex than simple categorizations of race/ethnoracial background. Oppressions such as homo/bi/transphobia and racism often go hand in hand. The Pan-Canadian Health Inequalities Report (2018) found that Southeast Asians and East Asians in Canada reported the poorest mental health, while South Asians reported the highest mental health outcomes amongst ethnoracial minority groups. The literature suggests that racialized LGBT2Q+ peoples experience greater psychological distress due to being at the nexus of two minority identities (Muhigaba, 2023; Salerno et al., 2023).

LGBT2Q+ Mental Health Service Utilization

Utilization of healthcare services is complex. Barriers to access may lead to healthcare needs that become unmet as a result. 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 while utilization is the usage of the services, which is dependent on the former (Liu et al., 2006). Due to minority stressors negatively affecting the health of LGBT2Q+ community members, their need for mental health services may in turn increase. Yet, barriers to access such as discrimination (Gustafsson et al., 2017; Hatzenbuehler & Pachankis, 2016), language (Subedi & Rosenberg, 2014; Thomson et al., 2015; Tiagi, 2016), provider incompetency (Smith & Turell, 2017), and stigma (Corrigan et al., 2014) have all been reported by LGBT2Q+ and racialized individuals. A study in Middlesex County, Ontario, Canada found that certain minority stressors (specifically, experiences of homophobia and internalized homonegativity) were associated with increased utilization of mental health services in GBMSM (Coleman et al., 2016). A scoping review revealed a common theme of LGB individuals tending to use more mental health services than their heterosexual counterparts (Filice & Meyer, 2018). Filice and Meyer’s (2018) findings in intracategorical LGB mental health service utilization patterns suggest that there may be underlying factors that hinder or facilitate mental health service utilization in LGBT2Q+ populations. As well, considering intersectional identities, many Indigenous peoples do not have equal access to health services, especially in rural and remote areas (National Collaborating Centre for Indigenous Health, 2019). As such, LGBT2Q+ peoples as a group tend to have a higher need for mental health services, though they face a multitude of barriers to access and then use, making it an important area of research to consider.

Theoretical Framework

The *Andersen Behavioural Model of Healthcare Utilization* operationalizes factors that influence an individual's healthcare utilization (Andersen et al., 2014). The general model can be separated into three factors: predisposing, enabling, and need. Since its conception, Gelberg et al. (2000) adapted the model for marginalized populations. The authors suggest that when looking at the healthcare utilization of vulnerable populations, we must consider other predisposing, enabling, and need factors specific to that population in addition to those posited in the original model. The present research incorporated both the Gelberg et al. (2000) edition and a newer edition of the Andersen Model of Healthcare Utilization (Andersen et al., 2014), in which 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 healthcare 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). Predisposing factors in this research are sociodemographic factors: age, sexual orientation, ethnoracial background, gender modality, and country of birth. Enabling factors are factors that 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.

Objectives

Given the vast differences in mental health outcomes and mental health service utilization among and within LGBT2Q+ communities, the present research is interested in factors associated with mental health service utilization. Health research in Canada is often overshadowed by results from other countries such as the US, but as health service is system-dependent, results may not be generalizable within the Canadian context to due sociopolitical differences, such as healthcare system and attitudes toward LGBT2Q+ peoples. Shifting the investigation inwards instead of the typical comparison to heterosexuals, results from this research are intended to provide a better understanding of intracategorical differences in mental health service utilization of LGBT2Q+ peoples in Canada. Framed by the Andersen Behavioral Model of Healthcare Utilization, our research question is: What predisposing, enabling, and need factors are associated with mental health service utilization within

the past 12 months for a sample of LGBT2Q+ peoples living in Canada?

Method

Data Collection

The present research analyzed data collected using the LGBT2Q+ Health Survey, in 2020 (REB #6567). The survey was a Canada-wide cross-sectional sampling survey that primarily looked at population health, with collected information on experiences of healthcare and service access, health status, social support, and minority stress from LGBT2Q+ Canadians. The survey was distributed through Qualtrics to its online panel of voluntary participants. Participants were compensated by Qualtrics after completing the survey, with their choice of cash, gift cards, redeemable points, sweepstake entries, vouchers, and airline miles. Eligibility criteria included: (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. During collection, data were stored on secure servers located in Toronto, Ontario, Canada. 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 LGBT2Q+ Canadians. Variables of interest were organized into the three factors in Andersen model of healthcare utilization; predisposing factors, enabling factors, need factors, and outcome variable (see Table 1).

Independent Variables

Predisposing Factors 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 identities. Sexual orientation categories were collapsed into four categories: monosexual (gay and lesbian), bisexual, more polysexual orientations (pansexual and queer), and other (heterosexual/straight, asexual, questioning/not sure, and respondents who selected “other”). Ethnoracial identities were collapsed into three overarching groups: White, racialized, and Indig-

Table 1 Descriptive Statistics from the LGBT2Q+ Health Survey ($N=1542$), separated by Andersen model of healthcare utilization categories and outcome variable

Variables	<i>n</i> (%) or Mean (SD)
PREDISPOSING FACTORS	
Age	30.94 (12.16)
	Missing 12 (0.78)
Sexual Orientation* (check all that apply)	
	Monosexual (gay, lesbian) 356 (23.1)
	Bisexual 982 (63.72)
	Polysexual (pan, queer) 125 (8.11)
	Other (ace, straight, questioning, “other”) 78 (5.06)
	Missing 1 (0.1)
Ethnoracial Group (check all that apply)	
	White 1018 (66.02)
	Racialized 381 (24.71)
	Indigenous 143 (9.27)
Gender Modality	
	Cis assigned male at birth (AMAB) 424 (27.5)
	Cis assigned female at birth (AFAB) 849 (55.06)
	Trans or gender-diverse AMAB 77 (4.99)
	Trans or gender-diverse AFAB 192 (12.45)
Born in Canada	
	Yes 1319 (85.59)
	No 222 (14.41)
	Missing 1 (0.1)
ENABLING FACTORS	
Income (before taxes, all household members, Canadian dollars)	
	< \$5,000 40 (2.59)
	\$5,000 – \$9,999 37 (2.4)
	\$10,000 – \$19,000 128 (8.3)
	\$20,000 – \$29,999 153 (9.92)
	\$30,000 – \$39,999 126 (8.17)
	\$40,000 – \$49,999 151 (9.79)
	\$50,000 – \$59,999 149 (9.66)
	\$60,000 – \$69,999 119 (7.72)
	\$70,000 – \$79,999 125 (8.11)
	≥ \$80,000 370 (23.99)
	Rather not say 144 (9.34)
Education	
	Did not graduate from high school 105 (6.81)
	High school graduate 361 (23.41)
	Some college or trade school 192 (12.45)
	Some university 214 (13.88)
	College or trade school graduate 249 (16.15)
	University graduate 421 (27.3)
Social Provisions	32.12 (5.82)
NEED FACTORS	
Self-Reported Mental Health	
	Excellent 331 (21.47)
	Very good 495 (32.1)
	Good 389 (25.23)
	Fair 243 (15.76)
	Poor 84 (5.45)
Minority Stress	37.42 (22.67)
Existing Mood Disorder	
	Yes 638 (41.37)

Table 1 (continued)

Variables		<i>n</i> (%) or Mean (SD)
Existing Anxiety Disorder	No	904 (58.63)
	Yes	763 (49.48)
	No	779 (50.52)
OUTCOME VARIABLE Talked to a health professional about their emotional or mental health within the past 12 months	Yes	793 (51.43)
	No	749 (48.57)

*Not in regression modelling due to sample size restriction

enous; called *ethnoracial groups* to differentiate from the original individual ethnoracial categories.

Gender modality was a variable created by combining 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". 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 did 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 have identified. This was done to allow for model convergence due to the relatively small number of participants who identified as gender diverse in our sample.

Enabling Factors Enabling factors included income, education, and social provisions. Income referred to a combined household income before taxes. Education was the highest completed education in or outside Canada and contains six response categories. Social provisions was 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, with a high global Cronbach's alpha=0.88. Higher social provision score corresponded to higher levels of social provisions. The Cronbach's alpha obtained from the survey sample was 0.92.

Need Factors Need factors were variables such as self-identifying as living with an anxiety disorder, living with

a mood disorder, self-reported mental health, and self-reported 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" to "poor". Minority stress was measured based on Outland's (2016) short version Minority Stress Measure (LGBT-MSM). Wording changes to the acronym were made to be inclusive of additional sexual and gender minority groups (i.e., "LGBT" changed to "LGBT2Q+") for the survey. The higher the score, the higher level of minority stress a respondent was showing. The lowest score an individual may score is a 0, and 129 the highest. 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. The Cronbach's alpha in the survey sample was 0.92.

Outcome Variable

The outcome variable of mental healthcare utilization in regression analyses was operationalized through asking whether participants had talked to a health professional about their emotional or mental health in the past 12 months. The question was a dichotomous yes/no question where either the respondent had talked to a health professional within the past 12 months, or they did not.

Data Analysis

Data analysis was completed 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 descriptive analyzes of continuous variables, such as age and scores for social provisions and minority stress. PROC GENMOD is a SAS

procedure that was used to conduct modified Poisson regression analyses, using a robust variance estimator in relative risks. Logistic regression relies on the assumption that the outcome event is rare (Zou, 2004). However, 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 in the dichotomous 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. Therefore, modified Poisson regression, also known as Poisson regression with robust error variance, is suggested by Zou (2004) as the alternative when analyzing a dichotomous outcome variable that is not a rare event. Furthermore, Zou (2004) has shown that modified Poisson regression is still able to produce reliable relative risk in sample sizes as small as 100 in simulations.

There were two main analytic procedures. First, modified Poisson regression models explored bivariate associations between variables of interest and utilization of mental health service within the past 12 months. Second, a backwards elimination was conducted using PROC LOGISTIC, starting with predisposing factors at $p=0.30$. Variables that were retained 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 retained variables that were then fitted into a modified Poisson model using PROC GENMOD, determined to be statistically significant at $p < 0.05$. Liberal p -values were used during the backwards elimination procedure to ensure that no variables were prematurely discarded (Bursac et al., 2008; Coleman et al., 2016).

Results

Sample descriptive statistics are summarized in Table 1. The mean sample age was 30.94 years old ($SD=12.16$). Approximately 66% of the sample identified as White. Racialized participants made up of almost 25% of the sample, while Indigenous respondents represented 9.3%. Respondents self-identified as bisexual (63.72%), monosexual (gay or lesbian; 23.1%), polysexual (queer or pansexual; 8.11%), and Other (asexual, straight, questioning, self-identified “other”; 5.06%). More than half of the sample identified as cis AFAB (55.06%); 27.5% identified as cis AMAB; while trans and 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, 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”. Respondents 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.

Bivariate Associations

Table 2 summarizes bivariate associations of all variables against likelihood of using mental health services within the past 12 months using modified Poisson regression.

Predisposing Factors

Bivariate associations show that increasing age was associated with a decrease (PR=0.99; 95% CI: 0.99–1.00) in mental health service utilization within the past 12 months. Being racialized was associated with decreased likelihood of utilization (PR: 0.86; 95% CI: 0.76–0.97), while being Indigenous was associated with approximately 33% (PR=1.33; 95% CI: 1.17–1.50) 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=1.27; 95% CI: 1.11–1.46) 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=1.59; 95% CI: 1.33–1.89). 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: 1.54; 95% CI: 1.31–1.80); followed by trans or gender-diverse AMAB identity associated with an increase of 33% (PR: 1.33; 95% CI: 1.05–1.68); and cis AFAB respondents associated with an increase of 31% (PR: 1.31; 95% CI: 1.15–1.49). Being born outside of Canada was not statistically significant at predicting mental health service utilization.

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 ($N=1542$)

Predictors		PR (95% CI)
PREDISPOSING FACTORS		
Age	One year increase	0.99 (0.99, 1.00)**
Sexual orientation		Overall***
	Gay, lesbian	Reference
	Bisexual	1.27 (1.11, 1.46)**
	Pansexual, queer	1.59 (1.33, 1.89)***
	Straight, asexual, questioning, other	1.13 (0.87, 1.48)
Gender modality		Overall***
	Cis AMAB	Reference
	Cis AFAB	1.31 (1.15, 1.49)***
	Trans/gender-diverse AMAB	1.33 (1.05, 1.68)*
	Trans/gender-diverse AFAB	1.54 (1.31, 1.80)***
Ethnoracial Group		Overall***
	White	Reference
	Racialized	0.86 (0.76, 0.97)*
	Indigenous	1.33 (1.17, 1.50)***
Born in Canada		$p > 0.05$ at both levels
ENABLING FACTORS		
Income		Overall*
	< \$5,000	1.22 (0.91, 1.62)
	\$5,000 – \$9,999	1.26 (0.94, 1.68)
	\$10,000 – \$19,000	1.24 (1.03, 1.48)*
	\$20,000 – \$29,999	1.19 (0.10, 1.42)
	\$30,000 – \$39,999	1.33 (1.12, 1.58)**
	\$40,000 – \$49,999	1.01 (0.83, 1.23)
	\$50,000 – \$59,999	1.02 (0.84, 1.25)
	\$60,000 – \$69,999	0.94 (0.75, 1.18)
	\$70,000 – \$79,999	1.17 (0.96, 1.41)
	≥ \$80,000	Reference
	Rather not say	0.98 (0.80, 1.21)
Education		$p > 0.05$ at all levels
Social provisions	One point increase	$p > 0.05$
NEED FACTORS		
Self-reported mental health	One point increase	0.79 (0.75, 0.82)***
Minority stress	One point increase	1.00 (1.00, 1.01)***
Mood disorder		2.13 (1.93, 2.35)***
Anxiety disorder		2.01 (1.80, 2.24)***

PR = prevalence ratio, 95% CI = 95% confidence interval, *** = ≤ 0.0001 , ** = ≤ 0.01 , * = ≤ 0.05

Enabling Factors

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: 1.24; 95% CI: 1.03–1.48) and 33% (PR: 1.33; 95% CI: 1.12–1.58), respectively. Education and social provisions were not statistically significant.

Need Factors

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: 2.13; 95% CI: 1.93–2.35 and PR: 2.01; 95% CI: 1.80–2.24, respectively). Higher self-reported mental health was associated with a decrease in mental health service utilization within the past year (PR: 0.79; 95% CI: 0.75–0.82). 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: 1.00; 95% CI: 1.00–1.01).

Backwards Elimination Regression

Table 3 shows backward elimination of variables, separated into Andersen model factors, predicting mental health service utilization within the past 12 months in PROC LOGISTIC.

Beginning at cut off $p=0.30$, *predisposing variables* of age, country of birth, sexual orientation, ethnoracial group, and gender modality were added to backwards logistic elimination model. Age and country of birth were eliminated while sexual orientation, gender modality, and ethnoracial group were retained. Overall, prevalence ratios decreased slightly when compared to bivariate associations.

Enabling variables were added to the model 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 $p<0.05$. Other variables under enabling factors such as social provisions and education were eliminated. Prior *predisposing variables* 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 $p<0.0001$ at bivariate level. Categories that were statistically significant in previous elimination were still statistically significant in model 2.

The next model added *need variables*: minority stress, self-rated mental health, living with a mood disorder, and living with an anxiety disorder with previously retained variables at $p=0.15$ cut off. Ethnoracial group, gender modality, income, living with a mood disorder, and living with an anxiety disorder were retained. Income overall was not statistically significant at $p<0.05$. The racialized category under ethnoracial groups was not statistically significant at $p<0.05$ (PR: 0.99; 95% CI: 0.88–1.11). Sexual orientation was eliminated in this model, along with minority stress and self-reported mental health. The retained variables were entered into a final model using PROC GENMOD or modified Poisson regression.

In the final model, compared to White participants, Indigenous participants were 16% more likely (PR: 1.16; 95% CI: 1.04–1.31) to have used mental health services within the past 12 months. Compared to cis male participants, those who identified as trans or gender-diverse and were AMAB were 1.3 times more likely (PR: 1.34; 95% CI: 1.06–1.68) to have used mental health services, while participants who identified as trans or gender-diverse and were AFAB were 1.2 times more likely (PR: 1.18; 95% CI: 1.02–1.37) to have used mental health services. Identifying as cis woman was not statistically significant in this model, though bivariate association showed an increase of 31% in likelihood of mental health service utilization (PR: 1.31;

95% CI: 1.15–1.49) compared to cis men. Living with a mood disorder was associated with a 71% increase in likelihood (PR: 1.71; 95% CI: 1.52–1.92) 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: 1.51; 95% CI: 1.33–1.71) to have utilized mental health services within the past 12 months than those who did not self-identify as living with an anxiety disorder.

Discussion

Guided by the Andersen Model of Healthcare Utilization, our results showed several significant intracategorical differences in utilization of mental health services within the past 12 months in a sample of LGBT2Q+ Canadians. The Andersen model posits that factors such as gender, ethnoracial background, and sexual orientation were factors that may predispose an individual to utilize healthcare (Andersen et al., 2014). Bivariate associations and backwards elimination results found that trans and gender-diverse participants were more likely to have utilized mental health services compared to cis male participants. Our results found that beside gender modality, another pronounced mental health service utilization intracategorical inequalities was among ethnoracial groups: compared to White respondents, racialized respondents 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. Lastly, more polysexual identities (bisexual, pansexual, and queer) were also associated with increased utilization when compared to monosexual respondents.

Compared to the recent Canadian Census profile in 2021, the ethnoracial makeup of the survey sample is fairly representative of the actual ethnoracial makeup in Canada (Statistics Canada, 2023). Non-Indigenous racialized persons account for 26.5% of the overall Canadian population, while they represented approximately 25% of our sample. Indigenous peoples accounted for 9.3% in our survey, where they account for 5.0% of the overall population. White Canadians account for 73.5% of the population, and 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 systemic experiences associated, such as racism, homophobia, biphobia, and transphobia that may underly mental health service utilization inequality.

Table 3 Backward Modified Poisson Regression Results of Mental Health Service Utilization within the past 12 Months; Separated by Andersen Model Categories: Findings from the LGBTQ+ Survey (N=1542)

Predictors	Model 1 ^a		Model 2 ^b		Final Model ^c	
	PR (95% CI)	<i>p</i> -value	PR (95% CI)	<i>p</i> -value	PR (95% CI)	<i>p</i> -value
PREDISPOSING FACTORS						
Age						
Sexual Orientation						
Gay, lesbian	Reference		Reference			
Bisexual	1.16 (1.00, 1.34)	<i>p</i> =0.0462	1.16 (1.01, 1.35)	<i>p</i> =0.0402		
Pan, queer	1.34 (1.11, 1.61)	<i>p</i> =0.0023	1.32 (1.10, 1.60)	<i>p</i> =0.0037		
Straight, asexual, questioning, other	1.03 (0.78, 1.35)	<i>p</i> =0.8518	1.06 (0.81, 1.39)	<i>p</i> =0.6769		
Ethnoracial Group						
White	Reference		Reference		Reference	
Racialized	0.85 (0.75, 0.97)	<i>p</i> =0.0145	0.87 (0.77, 0.99)	<i>p</i> =0.0286	0.99 (0.88, 1.11)	<i>p</i> =0.8201
Indigenous	1.28 (1.13, 1.45)	<i>p</i> <0.0001	1.27 (1.13, 1.44)	<i>p</i> =0.0001	1.16 (1.04, 1.31)	<i>p</i> =0.0105
Gender Modality						
Cis AMAB	Reference		Reference		Reference	
Cis AFAB	1.21 (1.05, 1.39)	<i>p</i> =0.0072	1.21 (1.05, 1.39)	<i>p</i> =0.0073	1.04 (0.92, 1.78)	<i>p</i> =0.4935
Trans/gender-diverse AMAB	1.27 (1.00, 1.61)	<i>p</i> =0.0501	1.29 (1.02, 1.64)	<i>p</i> =0.0361	1.34 (1.06, 1.68)	<i>p</i> =0.0145
Trans/gender-diverse AFAB	1.41 (1.19, 1.67)	<i>p</i> <0.0001	1.42 (1.20, 1.68)	<i>p</i> <0.0001	1.18 (1.02, 1.37)	<i>p</i> =0.0293
Born in Canada						
Yes						
No						
ENABLING FACTORS						
Income						
< \$5,000			<i>p</i> =0.0551 overall		<i>p</i> =0.1464 overall	
\$5,000 – \$9,999			1.12 (0.84, 1.49)	<i>p</i> =0.4506	0.93 (0.72, 1.19)	<i>p</i> =0.5453
\$10,000 – \$19,000			1.11 (0.84, 1.48)	<i>p</i> =0.4725	0.92 (0.72, 1.18)	<i>p</i> =0.5212
\$20,000 – \$29,999			1.19 (0.99, 1.42)	<i>p</i> =0.0619	1.02 (0.86, 1.20)	<i>p</i> =0.8317
\$30,000 – \$39,999			1.12 (0.93, 1.33)	<i>p</i> =0.2295	0.96 (0.81, 1.12)	<i>p</i> =0.5843
\$40,000 – \$49,999			1.24 (1.05, 1.47)	<i>p</i> =0.0116	1.08 (0.93, 1.26)	<i>p</i> =0.3242
\$50,000 – \$59,999			0.96 (0.79, 1.17)	<i>p</i> =0.6989	0.89 (0.74, 1.06)	<i>p</i> =0.1849
\$60,000 – \$69,999			0.99 (0.81, 1.20)	<i>p</i> =0.8897	0.94 (0.79, 1.13)	<i>p</i> =0.5221
\$70,000 – \$79,999			0.94 (0.75, 1.17)	<i>p</i> =0.5582	0.89 (0.72, 1.10)	<i>p</i> =0.2878
≥ \$80,000			1.19 (0.99, 1.43)	<i>p</i> =0.0725	1.21 (1.00, 1.45)	<i>p</i> =0.0461
Rather not say			Reference		Reference	
			0.92 (0.75, 1.13)	<i>p</i> =0.4359	0.89 (0.74, 1.07)	<i>p</i> =0.2098
Education						
Did not graduate from high school						
High school graduate						
Some college or trade school						
Some university						
College or trade school graduate						
University graduate						
Social Provisions						
NEED FACTORS						
Self-Reported Mental Health						
Minority Stress						
Mood Disorder						
					1.71 (1.52, 1.92)	<i>p</i> <0.0001
Anxiety Disorder						
					1.51 (1.33, 1.71)	<i>p</i> <0.0001

Note: ^a*p*=0.3; ^b*p*=0.2; ^c*p*=0.15

Trans and Gender-Diverse Differences

Trans and gender-diverse identities were associated with a higher likelihood in having utilized mental health services. Furthermore, they are the only two categories within the variable that were statistically significant retained in backwards elimination procedures, suggesting that trans and gender-diverse Canadians are more likely to have utilized mental health services when compared to their cisgender counterparts. One such reason may be due to the fact that in Canada, patients must undergo extensive psychosocial evaluations in order to access gender-affirming care (MacKinnon et al., 2021), meaning that they have to utilize mental health services much more than their cisgender counterparts. This may partly substantiate the increased utilization of mental health services in trans and gender-diverse respondents in our study. It should be noted that the utilization of gender-affirming care is not just unique to binary trans people, as Hu et al.'s (2023) study saw a large number of non-binary participants (100% of non-binary AFAB patients and 63% of non-binary AMAB patients) to have either completed or interested in gender-affirming surgery.

However, the above thinking largely ignores the broader systemic factors that influence the lived realities of trans and gender-diverse peoples in Canada. It does not elucidate why trans and gender-diverse people also face health inequalities. Trans PULSE Canada (2020) found that despite most trans and non-binary participants having had healthcare access, 56% still had lower self-rated mental health. Anxiety and depression are suggested to be indicative of distress in trans people (Budge et al., 2013). Trans and gender-diverse specific minority stressors play a vital role in their negative health status (Lefevor et al., 2019). Many trans and gender-diverse peoples also experience violence and harassment that often lead to avoidance of public spaces (Trans PULSE Canada, 2020). Higher minority stress may lead to increased mental health service utilization. Yet, Canadian and international research have shown that trans and gender-diverse people delay (Burgwal & Motmans, 2021) or even outright avoid (Tami et al., 2022) utilization of health services due to discrimination and anticipated rejection, which can in turn lead to an increase in unmet healthcare needs (Scheim et al., 2021). This places the health of trans and gender-diverse peoples in a much more precarious position compared to their cisgender counterparts.

Racialized Differences

The health inequalities faced by LGBT2Q+ peoples cannot be separated from those that racialized peoples face, as earlier research on observed health differences in Black and White peoples partly inspired the conceptualization of

minority stress theory (Meyer, 1995). Bivariate analyses saw those who identified as racialized in our sample were less likely to have utilized mental health services in the past 12 months than White participants. This may be due to barriers that prevent racialized LGBT2Q+ peoples from accessing care, such as the case with trans racialized youth (Lucente et al., 2022). Racialized youth in one study were more likely than their White counterparts to have less trust in the healthcare system because of historical trauma and existing discriminatory system embedded in our current health system in Canada (Lucente et al., 2022). Moreover, Chan and Saewyc (2022) specifically examining racialized trans and non-binary youth, reported that youth had higher likelihood of forgoing physical health care and experiencing negative health outcomes compared to White trans and non-binary youth. Similarly, Millar and Brooks (2021) found that such differences in psychological distress, discrimination, and victimization exist within BIPOC trans respondents. A systematic review of sexual minority mental health interventions also found that many mental health services were not considerate of identities such as ethnoracial identity, creating a barrier to mental health service utilization for racialized LGBT2Q+ peoples (Huang et al., 2020). As such, ethnoracial identity is a salient factor to consider when discussing LGBT2Q+ health, as racialized LGBT2Q+ peoples may face multiple jeopardy of minority stress stemming from differing minority identities.

Polysexual Differences

Our results showed that those who identified as more polysexual orientations (bisexual, pansexual, queer, and others) were more likely to have utilized mental health services than their monosexual (gay and lesbian) counterparts. According to the Andersen model (Gelberg et al., 2000), an increased need suggests an increased likelihood of healthcare utilization, which is what our results suggest. Linking back to the concept of trans-specific minority stressors by Lefevor et al. (2019), there can also be polysexual-specific minority stressors that contribute to their negative mental health status. Our results parallel that of the literature, suggesting that minority stressors such as discrimination, stigma, and the invisibility of more polysexual orientations negatively impact their health (Brennan et al., 2010; Ross et al., 2016, 2018; Steele et al., 2016). Steele et al. (2016) noted that polysexual people report a higher unmet need for mental health services is in part due their systemic exclusion from healthcare, operationalized by the authors based on participants' experiences of lack of cultural safety. The lack of cultural safety ranges from experiences such as negative previous experience with a mental health provider, to the mental health provider not being knowledgeable about

issues associated with their sexual orientation, gender, and ethnoracial identity, and other identity(ies) that are important to an individual (Steele et al., 2016). This points to a larger issue faced by various LGBT2Q+ subgroups in that minority stressors also extend to the provision and quality of mental health services.

Implications

Results from this study serve to further add to the growing LGBT2Q+ Canadian literature. This study is one of the papers to come out of the LGBT2Q+ Health Survey, a much-needed scan of LGBT2Q+ health at the national level. Specifically, our results highlighted intracategorical differences in utilization of mental health services in sexual orientations, gender modalities, and ethnoracial groups, and other Andersen model factors that must be taken into consideration in mental health service provision. LGBT2Q+ is a group that is often treated as homogenous, and our paper pointed out some critical within-group differences that suggest otherwise.

Primary healthcare providers often act as the first point of contact for those facing mental health problems. According to the Andersen model, healthcare experience has the ability to influence an individual from returning for care (Andersen et al., 2014). Given the role that minority stressors such as discrimination and anticipated rejection can play in acting as a barrier or resulting in negative healthcare experiences (Ayhan et al., 2020; Burgwal & Motmans, 2021; Kcomt et al., 2020; Lisy et al., 2018; Tami et al., 2022), more attention should be paid to the education and training of healthcare providers.

One study of a Canadian medical school found that almost half (41.7%) of medical students reported anti-LGBT and/or bullying from fellow classmates or the healthcare team (Nama et al., 2017). Minturn et al. (2021) developed a curriculum on LGBTQ health that was shown to be successful in increasing the self-confidence of first- and second-year medical students, suggesting that training can reduce the service gap between healthcare providers and LGBT2Q+ patients. As well, recommendations and results from the literature (Lisy et al., 2018; Schwab et al., 2024; Sileo et al., 2022) noted that healthcare providers must be cognizant of their assumptions and prejudice when interacting with LGBT2Q+ patients. This includes the avoidance of heteronormativity and to provide tailored information according to the needs of the individual. This is especially important for trans and gender-diverse peoples who may need to access gender-affirming care. The healthcare provider must listen to their patient and allow them to be the driver of their own health (Allison et al., 2021; Kattari et al., 2021). Finally, the authors also recommended that

environmental factors that can help create a more inclusive space, such as the display of LGBT2Q+ materials (Lisy et al., 2018). As gatekeepers of health, healthcare providers play a key role in addressing minority stress.

Limitations

One limitation was the sample size restrictions that limited us to look at more subcategories of LGBT2Q+ identities. Subcategories in variables *ethnoracial identity*, *sexual orientation*, and *gender modality* could not be split too finely, as it would affect model convergence and potentially generate unreliable estimates. This meant that our results were limited to slightly broader subcategories. In particular, the new variable *gender modality* may not be able to capture the nuanced experiences of trans and gender diverse peoples given their salience in mental health service utilization. Second, the use of a cross-sectional survey design did not allow us to definitively infer causality due to lack of temporality. Finally, the dichotomous outcome did not allow us to explore some of the additional factors, such as frequency of mental health service utilization.

Future Directions

As this was an exploratory study, future research should delve deeper into the nuances of intracategorical differences within LGBT2Q+ communities. As “LGBT2Q+” is an umbrella term used to describe a vibrant and diverse group of people, with their own experiences, future qualitative inquires on the intracategorical experiences of binary-trans and others who might identify as other gender modalities can help address our limitations. As well, future research could explore the frequency of mental health service utilization to further dissect intracategorical differences. A larger sample size may allow for model convergence of more subcategories to broaden the scope of what was done in our analyses. Second, more attention must be paid to Indigenous sexual orientation and gender minorities. Indigenous ancestry is named a social determinant of health due to overall trend pointing to high health inequality in Indigenous peoples compared to non-Indigenous populations (Raphael et al., 2020). Settler colonialism and systemic oppression of Indigenous peoples must be mentioned when talking about Indigenous mental health inequalities. Intergenerational trauma and racism are often cited as major factors that impact the mental health of Indigenous peoples (Nelson & Wilson, 2017). Lastly, our results did not see social support to be associated to mental health service utilization, despite the literature (Meyer, 2003; Perrin et al., 2020) suggesting otherwise. Future research can examine the topic of social

support and minority stress as related to mental health service utilization.

Conclusion

In lieu of research that often presents LGBT2Q+ people as a homogenous group, our results showed that distinctive within-group or intracategorical differences exist in their utilization of mental health services. Using the Andersen model of healthcare utilization as theoretical framework, bivariate and backwards elimination Poisson logistic regression found that predisposing factors such as gender modality, ethnoracial group, sexual orientation, and need factors such as living with an anxiety and/or living with a mood disorder to be particularly salient in increased prevalence of mental health service utilization. Trans and gender-diverse and racialized LGBT2Q+ individuals often face multiple jeopardy and unique minority stressors that their cisgender and White counterparts do not face, contributing to their differences in mental health status and mental health service utilization. Healthcare providers play a pivotal role in ensuring that all LGBT2Q+ subgroups are provided with appropriate and adequate care to contribute to LGBT2Q+ health equity.

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Declarations

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