

Mental Health Service Use in a Sample of Gay, Bisexual, and other Men who have Sex with Men Living in Middlesex County, Ontario, Canada: An Exploratory Analysis

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This work was supported by the Regional HIV/AIDS Connection, the Ontario HIV Treatment Network's Capacity-Building Funding Program (Grant ID # CCB 139), and the Canadian Institutes of Health Research (Funding reference # 120446). Additional student support for TC was provided by the Canadian Institutes of Health Research, the Ontario HIV Treatment Network, and The University of Western Ontario. The larger HiMMM Project was implemented by the Project team: Gloria Aykroyd, Greta Bauer, Todd Coleman, Meredith Fraser, Kevin Murphy, Rob Newman, Lyn Pierre-Pitman, Leanne Powell, and Daniel Pugh. Thanks also go to former HiMMM Project co-investigator Mark Defend for his contributions to survey design, to Barry Adam and Kathy Speechley for their reviews of the manuscript prior to submission, and to Marianne Beaulieu for her assistance in translating the abstract.

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ABSTRACT

Risks of mental health issues (e.g., depression, anxiety/mood disorders, and suicidality) are found to be elevated among Canadian gay, bisexual, and men who have sex with men (GB-MSM). We studied factors impacting mental health care use in a community sample of 202 GB-MSM in London-Middlesex, Ontario. Our results show that, for the entire sample, experiences of both homophobia and internalized homonegativity are associated with increased prevalence of mental health service use over the past year, and suggest that service use is lower among immigrant GB-MSM than among those born in Canada. Implications for mental health and social service providers are discussed.

Keywords: mental health service use; gay, bisexual, men who have sex with men

RÉSUMÉ

Les risques de problèmes de santé mentale (p. ex. la dépression, l'anxiété, les troubles de l'humeur et les tendances suicidaires) se trouvent à être élevé parmi les canadiens gais, bisexuels et les hommes ayant des relations sexuelles avec d'autres hommes (GB-HARSAH). Nous avons étudié les facteurs qui influencent l'utilisation des soins de santé mentale dans un échantillon communautaire de 202 GB-HARSAH à London-Middlesex, en Ontario. Nos résultats montrent que, pour la totalité de l'échantillon, les expériences d'homophobie et d'homonégativité intériorisée sont associées avec une augmentation de la prévalence d'utilisation des services de santé mentale pendant l'année précédente. Ils suggèrent également que l'utilisation des services est moins élevée parmi les GB-HARSAH immigrants quand ils sont comparés à ceux qui sont nés au Canada. Les implications pour les fournisseurs de services sociaux et de santé mentale sont discutées.

Mots clés : utilisation des services de soins de santé mentale, hommes gais, bisexuels, et ayant des relations sexuelles avec d'autres hommes

The mental health of Canadian sexual minority men (gay, bisexual, and other men who have sex with men, or "GB-MSM") expresses itself differently compared to heterosexual men. The 2003 population-based Canadian Community Health Survey (CCHS) found gay and bisexual men reported higher levels of mood/anxiety disorders and greater histories of lifetime suicidality (Brennan, Ross, Dobinson, Veldhuizen, & Steele, 2010), mirroring evidence from a meta-analysis (King et al., 2008). The 2007–2008 CCHS also found higher odds of mood disorders in Canadian gay and bisexual men (Pakula & Shoveller, 2013). Sexual orientation, identity and attraction are not static concepts, potentially changing over the lifecourse (Savin-Williams, Joyner, & Rieger, 2012), a concept not adequately captured in cross-sectional surveys. Further, homosexuality itself is not indicative of health pathology (Isacco, Yallum, & Chromik, 2012). Health disparities are often explained by systemic stigmas experienced by sexual minority groups (Meyer, 1995). "Minority stress" is the excess psychosocial stress resulting from belonging to a minority social position (Meyer, 1995), processes of which include objective discrimination events, expectations of rejection, and internalization of negative societal attitudes (Meyer, 2003). Adverse health outcomes related to minority stress in sexual minority groups occur outside Canada, in countries with differing social acceptance and policy-level protections for these groups (Carman, Corboz, & Dowsett, 2012). Social discrimination has been associated with suicidal ideation in gay and bisexual Latino men in the United States (Díaz, Ayala, Bein, Henne, & Marin, 2001). In a study

of perceived discrimination among Canadian gay men and lesbian women, receiving verbal insults was associated with greater depression and psychological distress (Morrison, 2011). Despite policy protections for sexual minority groups in Canada, stigma remains in some spaces (e.g., schools) and may have increased (Ferlatte, Salway Hottes, Trussler, & Marchand, 2014). Recent surveys of Canadian high school students found high rates of daily homophobic discourse and physical abuse due to sexual identities (Peter, Taylor, & Chamberland, 2015). Homosexual-related hate crimes in Canada in 2013 were more likely than other types of hate crimes (i.e., related to race/religion) to be violent (Allen, 2015).

CCHS findings from 2003–2005 indicate that, during the prior 12 months, Canadian gay and bisexual (operationalized with one question asking sexual orientation identity and behaviour) men were more likely to consult mental health service providers (MHSPs) (Tjepkema, 2008), echoing findings from other countries (Cochran, Sullivan, & Mays, 2003; Burgess, Lee, Tran, & van Ryn, 2008; Chakraborty, McManus, Brugha, Bebbington, & King, 2011). Controlling for mental health-related variables (e.g., self-rated mental health, anxiety, and mood disorders), this suggests a greater propensity towards seeking mental health services by GB-MSM. This could reflect resilience in GB-MSM, defined as beneficial behaviour patterns, functional competence, and cultural capacities that individuals, families, and communities use under adverse circumstances (Fredriksen-Goldsen, 2007).

Sexual minority inclusion at policy levels in Canada has evolved considerably in the past 50 years, beginning with decriminalization of homosexuality in 1969 (Adam, 1999). In 1996, sexual orientation became a prohibited ground of discrimination under the Canadian Human Rights Act (Smith, 2005) and, in 2005, the Civil Marriage Act legalized same-sex marriage (MacIntosh, Reissing, & Andruff, 2010). Internationally, in 1973, the American Psychiatric Association declassified homosexuality as a mental disorder within the *Diagnostic and Statistical Manual of Mental Disorders* (Silverstein, 2009). Notwithstanding, social stigmas such as homophobia and biphobia in Canada remain prevalent.

No studies of GB-MSM in Canada have examined mental health service use (MHSU) by GB-MSM outside metropolitan regions, where concentrations of GB-MSM and services designed for them differ substantially from other areas. Demographically, Canada's largest metropolitan centres (i.e., Toronto, Vancouver, and Montreal) account for 15.7% of Canada's population. It is estimated, however, that 33.9% of Canadians reside in mid-size cities with average proportions of immigrants and Aboriginal residents, factors forming the definition of a "health region peer group," the largest of which includes Middlesex-London (Statistics Canada, 2013). We explore demographic, socio-behavioural, and community-relevant factors associated with MHSU in the past 12 months by GB-MSM living in Middlesex County, discussing implications for mental health service provision and community-based interventions.

METHODS

Health in Middlesex Men Matters (HiMMM)

Formed from concerns identified at a local lesbian, gay, bisexual, transgender, two-spirit, queer (LGBT2SQ) health forum, HiMMM is a partnership of local GB-MSM, allies, agencies, and academics, a community-based research project investigating health care access for GB-MSM in Middlesex County,

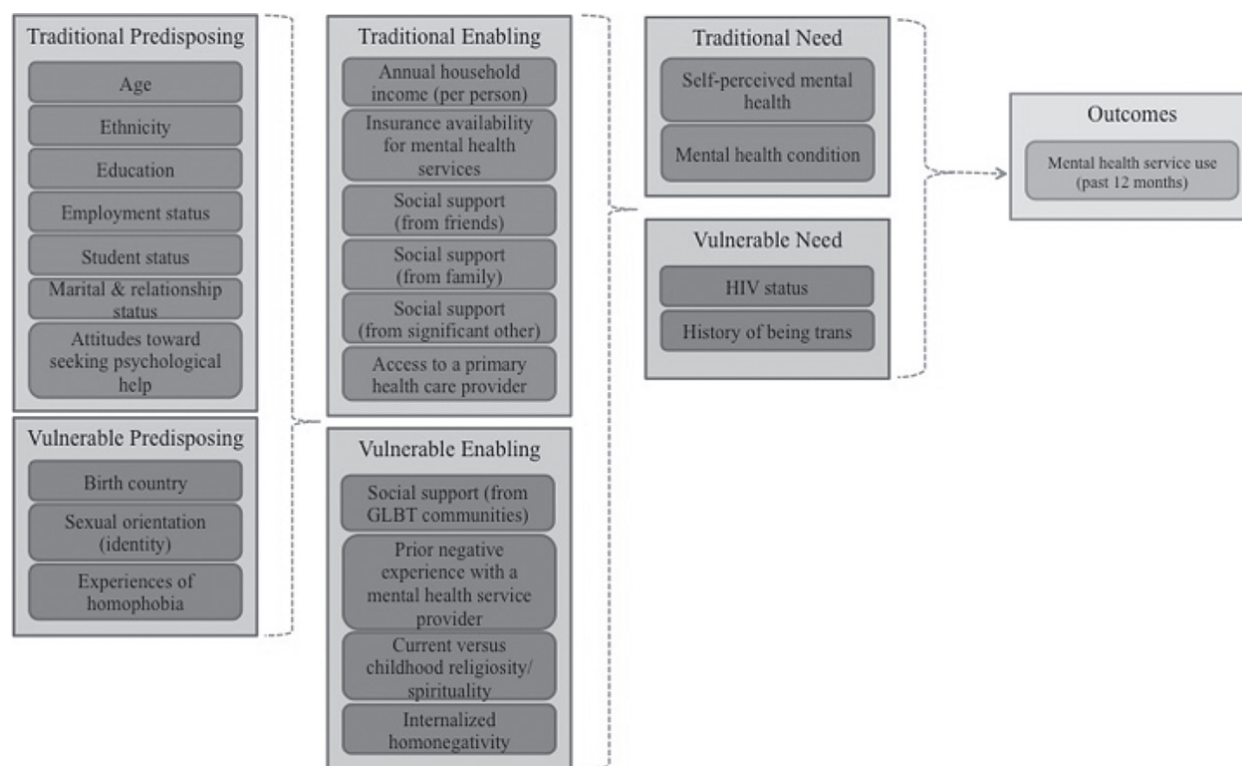
Ontario, Canada. Forum discussions identified three themes: (1) homophobia; (2) isolation and social exclusion; and (3) communication (Williams & Lester, 2007). The study protocol was approved by the Research Ethics Board at The University of Western Ontario.

Theoretical Framework

A conceptual framework was developed from the Behavioral Model of Health Services Use, categorizing traditional (i.e., affecting everyone) and community-relevant factors into the following categories: predisposing (individual characteristics), enabling (making health services available to the individual), and need (necessitating the use of health services) classifications (Gelberg, Andersen, & Leake, 2000). Included factors (see Figure 1) were based on literature reviews and community discussions.

Figure 1

Theoretical Model for Mental Health Service Use within the past 12 months by Gay, Bisexual, and other Men Who Have Sex With Men living in Middlesex County, Ontario



Study Sample

Cross-sectional questionnaires were completed online in English between November 2011 and November 2012 by 202 participants. Eligible participants were: (1) 18 years or older; (2) lived in Middlesex County, Ontario; and (3) identified as gay, bisexual, or as a man who has either had one or more sexual experiences with another man or has had strong and continual sexual attraction(s) to one man or men. Online listservs, social network websites and smartphone applications were used for survey promotion. Participants were asked to share the survey in their social networks. The questionnaire took approximately 34 minutes to complete. Participants received a \$10 gift card for completion and were entered into a draw for additional prizes for each additional person recruited (limit of three). Exactly 131 men were sampled directly, and 71 were referred by participants.

Measures

The questionnaire was reviewed, revised, pre-tested and pilot tested by local GB-MSM volunteers and HiMMM investigators. Items centred on LGBT2SQ community health forum themes, results from qualitative semi-structured interviews (not included in this paper), and additional information requests from community members and project-affiliated agencies. Conventional survey design guidelines (Aday & Cornelius, 2006; Dillman, 2007) were followed.

Adapted from the CCHS, cycle 4.1 (Statistics Canada, 2008) and other community-based surveys, demographics included age, ethno-racial background, birth country, education, household income, employment status, student status, marital and relationship status, and sexual orientation identity.

Ethnicity questions were created through consultations with local multi-cultural education and support agencies (check-all-that-apply). Identification as Aboriginal, regardless of additional identities checked, formed one category, based on the collective, unique impact colonization has had (Davidson, 2015). Identification as white Canadian, American, or European, with no other identities checked, formed the “Non-Aboriginal white” group. Others not checking “Aboriginal,” indicating another identity—which could have also included white Canadian, American, or European categories—formed the “Non-Aboriginal racialized” group (Ontario Human Rights Commission, 2009).

Household income per person was calculated using mid-points to range responses from the household income question, dividing by number of individuals supported.

Marital and relationship status variables were combined to form the following categories: single; married to, or living common-law with a man; married to, or living common-law with a woman; unmarried, in a monogamous relationship; and unmarried, in a non-monogamous relationship. Some participants were married and in non-monogamous relationships; however, sample size restrictions prevented further splitting.

Self-reported mental health (5-point, from “poor” to “excellent”), insurance availability for mental health services, whether respondents currently had a primary care provider, and our dichotomous outcome of whether respondents accessed mental health services within the past 12 months, were adapted from the CCHS. Social support from LGBT communities, whether respondents ever had negative discriminatory experiences with a MHSP, whether they had been told they had a mental health condition by a provider, and

whether respondents had histories of being trans (transgender), were all developed by HiMMM. HIV status was adapted from the M-Track questionnaire (Myers & Remis, 2011). Degree of religiosity and spirituality (childhood and current) were assessed using Likert scales. A “current vs. childhood level of religiosity/spirituality” variable was coded by subtracting these two.

Attitudes toward seeking professional psychological help (Cronbach’s $\alpha = 0.95$) was measured using statements related to receiving counselling and mental health services (Elhai, Schweinle, & Anderson, 2008). *Experiences of homophobia* (Cronbach’s $\alpha = 0.83$) were measured using items such as lifetime experiences of name-calling and violence due to being gay/bisexual (Díaz, Ayala, Bein, Henne, & Marin, 2001). The *Multidimensional Scale of Perceived Social Support* measured social support from family (Cronbach’s $\alpha = 0.95$), friends (Cronbach’s $\alpha = 0.95$), and significant others (Cronbach’s $\alpha = 0.96$; Zimet, Dahlem, Zimet, & Farley, 1988). *Internalized homonegativity* (Cronbach’s $\alpha = 0.80$), defined by Malyon (1982, p. 60) as “the internalization of the mythology and opprobrium that characterize current social attitudes toward homosexuality,” was measured using a short scale assessing three dimensions: “public identification as gay,” “social comfort with gay men,” and “sexual comfort with gay men” (Currie, Cunningham, & Findlay, 2004).

Data Analysis

Analyses were conducted using SAS Version 9.3.1 (SAS Institute, Inc., 2011), limited to respondents who answered the outcome variable ($n = 201$). One individual’s data was excluded due to a missing outcome variable. No evidence of multicollinearity was found using tolerance values and variance inflation factors (Freund & Littell, 1986). Prevalence ratios for crude associations were calculated using modified Poisson regression, used instead of logistic regression to produce prevalence ratios that provide more valid results than odds ratios, since our outcome is not rare (Zou, 2004). Since automated backward elimination procedures are not available for modified Poisson (Su, Lin, & Merck & Co., 2007), a blockwise sequence of logistic and modified Poisson models was employed. Subsequently, a logistic regression model was fit with predisposing factors, with backward elimination used for removal of variables not significant at $p = 0.30$. A liberal p -value was chosen to not prematurely eliminate variables known to be important (Bursac, Gauss, Williams, & Hosmer, 2008). Preserved variables were then fit in a modified Poisson model to obtain prevalence ratios and 95% confidence intervals. The same process was used to fit Enabling and Need Factors, with cut-point values of $p = 0.20$ and $p = 0.15$ (Hosmer, Lemeshow, & Sturdivant, 2013).

RESULTS

Demographic characteristics are summarized in Table 1. Over half of respondents were under 35 years old (54.7%). Most identified as white (87.1%), 9.4% non-Aboriginal racialized and 3.5% Aboriginal. Most were postsecondary graduates (55.5%), and 8.0% were currently attending school part-time, 19.5% full-time.

Many self-reported their mental health as “very good” (39.0%) or “excellent” (23.0%), with 4.0% indicating “poor” mental health (Table 2). Many (44.6%) considered themselves less religious or spiritual compared to childhood. Over half received none (27.1%) or less than half (28.1%) of their social support from LGBT communities, with 3.0% receiving “all” of their social support from LGBT communities. Approximately 14.4% indicated they were HIV-positive and one third indicated they had been told they had

Table 1

Sample Demographics from the Health in Middlesex Men Matters Survey: Gay, Bisexual and Men who have Sex with Men in London-Middlesex, Ontario

	Sample distribution (n=201) n (%)
Age group	
18-24	48 (23.8%)
25-34	62 (30.9%)
35-44	30 (14.9%)
45-54	38 (18.9%)
55+	23 (11.4%)
Ethno-racial group	
Non-aboriginal white	175 (87.1%)
Non-aboriginal racialized	19 (9.4%)
Aboriginal	7 (3.5%)
Ethnic or cultural identity indicated*	
White Canadian/American/European	179 (89.1%)
Aboriginal	7 (3.5%)
East/South/Southeast Asian	7 (3.5%)
Latin American	5 (2.5%)
Black Canadian/American/African/Caribbean	4 (2.0%)
Middle Eastern	3 (1.5%)
Indo-Caribbean	3 (1.5%)
Country of birth	
Canada	184 (91.5%)
Other	17 (8.5%)
Education	
High school not completed	12 (6.0%)
High school completed	20 (10.0%)
Some postsecondary	57 (28.5%)
Postsecondary graduate	111 (55.5%)
Household Income/per person	
< \$15,000	30 (15.7%)
\$15,000–\$29,999	63 (33.0%)
\$30,000–\$49,999	48 (25.1%)

Table 1
(Continued)

	Sample distribution (n=201) n (%)
\$50,000–\$79,999	27 (14.1%)
\$80,000 +	23 (12.0%)
Employment status	
Full-time job	116 (58.0%)
More than one part-time job	15 (7.5%)
One part-time job	31 (15.5%)
No job	38 (19.0%)
Student status	
Not attending school	145 (72.5%)
Attending school part-time	16 (8.0%)
Attending school full-time	39 (19.5%)
Marital/Relationship status	
Single, not married	94 (47.0%)
Married/Living common-law with a man	55 (27.5%)
Married/Living common-law with a woman	6 (3.0%)
In a monogamous relationship, not married	32 (16.0%)
In a non-monogamous relationship, not married	13 (6.5%)
Sexual orientation identity	
Homosexual	179 (89.1%)
Bisexual	19 (9.4%)
Don't know/Would rather not say	3 (1.5%)

Table 2**Mental health and psychosocial variables from the Health in Middlesex Men Matters Survey: Gay, Bisexual and Men who have Sex with Men in London-Middlesex, Ontario**

	Sample distribution (n=201) n (%)
Self-perceived mental health	
Excellent	45 (23.0%)
Very Good	78 (39.0%)
Good	41 (20.5%)
Fair	27 (13.5%)
Poor	8 (4.0%)
Insurance availability for mental health services	
Yes	125 (62.5%)
No	75 (37.5%)
Has a primary care provider	
Yes	173 (86.9%)
No	26 (13.1%)
Used mental health services within the past 12 months	
Yes	72 (35.8%)
No	129 (64.1%)
Current versus childhood religiosity & spirituality	
Less	87 (44.6%)
Equal	65 (33.3%)
More	43 (22.1%)
HIV status	
HIV Positive	29 (14.4%)
HIV Negative	145 (72.1%)
HIV status unknown	27 (13.4%)
Social support from LGBT communities	
All	6 (3.0%)
More than half	46 (23.1%)
About half	37 (18.6%)
Less than half	56 (28.1%)
None	54 (27.1%)

Table 2
(Continued)

	Sample distribution (n=201) n (%)
Been told they have the following mental health condition by a health care provider	
Addictions	12 (6.4%)
Adjustment disorder	6 (3.2%)
Anxiety	55 (29.1%)
Attachment disorder	5 (2.7%)
Attention deficit disorder	8 (4.2%)
Attention deficit hyperactivity disorder	7 (3.7%)
Bipolar disorder	11 (5.8%)
Borderline personality disorder	6 (3.2%)
Depression	65 (34.4%)
Dissociative identity disorder	2 (1.1%)
Eating disorder	9 (4.8%)
Insomnia	15 (8.0%)
Obsessive compulsive disorder	9 (4.8%)
Paranoia	4 (2.1%)
Psychosis	4 (2.1%)
Schizophrenia	4 (2.1%)
Stress-related disorder	25 (13.2%)
Other mental health condition	2 (1.1%)
Prior experiences with a mental health service provider (MHSP), ever	
MHSP made negative comments or gestures about LGBT people	9 (4.6%)
MHSP made negative comments or gestures related to gender, race, religion, culture, ethnicity	4 (2.0%)
MHSP belittled or made fun of respondent for being GB-MSM	6 (3.0%)
MHSP refused to see or ended care because of respondent's sexual orientation	5 (2.5%)
MHSP refused to see or ended care because of respondent's gender, race, religion, culture, or ethnicity	2 (1.0%)
MHSP refused to discuss or address health concerns related to being GB-MSM	7 (3.6%)
MHSP made assumptions about respondent or their health based on their sexual orientation	17 (8.6%)
MHSP assumed they were straight/heterosexual	31 (15.7%)
MHSP assumed respondent had a lot of sex partners based on their sexual orientation	9 (4.6%)
History of being trans	
Yes	5 (2.5%)
No	194 (97.5%)

Table 3

Summary of scale variables from the Health in Middlesex Men Matters Survey: Gay, Bisexual and Men who have Sex with Men in London-Middlesex, Ontario

Scale Variable	Range (scale)	Range (responses)	Mean	Standard Deviation
Social Support (from friends)	1 – 7	1.0 – 7.0	5.48	1.3756
Social Support (from family)	1 – 7	1.0 – 7.0	4.74	1.6694
Social Support (from significant other(s))	1 – 7	1.0 – 7.0	5.45	1.6014
Internalized Homonegativity	1 – 7	1.2 – 6.3	3.04	0.8984
Experiences of Homophobia	0 – 33	0 – 33.0	11.22	6.5256
Attitudes Towards Seeking Psychological Help	0 – 15	0 – 15.0	6.86	2.6226

depression (34.4%) or anxiety (29.1%), followed by fewer having a stress-related disorder (13.2%), insomnia (8.0%), or addictions (6.4%). Some indicated they had a MHSP assume they were straight/heterosexual (15.7%) or make assumptions about them or their health based on their sexual orientation (8.6%). Scale measure statistics are outlined in Table 3.

Crude associations from the modelling process of factors associated with MHSU within the past 12 months are summarized in Table 4. Compared to those not currently attending school, those attending school part-time were 85% more likely (PR = 1.85; 95% CI:1.19–2.88) to have used mental health services. With every standard deviation (SD) increase on the *Attitudes toward receiving professional psychological help scale*, participants were 21% more likely (PR = 1.21; 95% CI:1.03–1.42) to have used services. With every one SD increase on the *Experiences of homophobia* scale, respondents were 30% more likely (PR = 1.30; 95% CI:1.12–1.52) to have used services within the past 12 months. Conversely, a one SD increase in social support from friends (PR = 0.78; 95% CI:0.67–0.92) and family (PR = 0.82; 95% CI:0.69–0.96) were associated with a lesser likelihood of accessing mental health services. Prior negative experience with a MHSP was associated with an 80% greater likelihood of use (PR = 1.80; 95% CI:1.25–2.60). Those currently more religious or spiritual compared to childhood were more likely (PR = 2.01; 95% CI:1.23–3.30) to have used mental health services. Respondents with “poor” (PR = 8.05; 95% CI:3.38–19.18), “fair” (PR = 6.47; 95% CI:2.73–15.34), or “good” (PR = 5.16; 95% CI:2.16–12.33) self-reported mental health were more likely to access services, compared to those indicating “excellent” mental health. Self-identified HIV-positive participants were 85% more likely (PR = 1.85; 95% CI:1.25–2.72) to have used mental health services.

Using the $p = 0.30$ cut-off in logistic backward elimination, birth country, employment status, *Attitudes toward receiving professional psychological help*, and *Experiences of homophobia* were retained. *Experiences of homophobia* retained the direction seen in the crude association ($p < 0.05$) and birth country was newly significant at $p < 0.05$ —those born outside Canada were 84% less likely (aPR = 0.16; 95% CI:0.03–0.96) to have utilized mental health services within the past 12 months, compared to Canadian-born participants.

Table 4

Poisson regression results for predicting mental health service use within the past 12 months: gay, bisexual and men who have sex with men in Middlesex County, Ontario, Canada

PREDICTORS	Crude Associations (95% CI)		Model 1 ^a R ² _d = 0.1651		Model 2 ^b R ² _d = 0.3940		Final Model ^c R ² _d = 0.5533	
	PR ^e (95% CI) ^f	P-value	aPR ^g (95% CI) ^f	P-value	aPR ^g (95% CI) ^f	P-value	aPR ^g (95% CI) ^f	P-value
PREDISPOSING FACTORS								
Age		0.879						
5 year increase	1.00 (0.94, 1.07)							
Ethnicity		0.654						
Aboriginal	1.17 (0.49, 2.82)							
Non-Aboriginal white	1.00							
Non-Aboriginal racialized	0.72 (0.33, 1.57)							
Birth Country		0.054		0.045*		0.0004*		0.099
Canada	1.00		1.00		1.00		1.00	
Other	0.15 (0.02, 1.03)		0.16 (0.03, 0.96)*		0.11 (0.03, 0.37)*		0.24 (0.04, 1.30)	
Education		0.366						
High school not complete	1.09 (0.47, 2.54)							
High school graduate	1.31 (0.71, 2.39)							
Some postsecondary	1.43 (0.95, 2.15)							
Postsecondary graduate	1.00							
Employment		0.201		0.170		0.688		
Full-time	1.00		1.00		1.00			
> 1 part-time	0.86 (0.36, 2.08)		1.27 (0.78, 2.08)		0.75 (0.32, 1.76)			
1 part-time	1.35 (0.82, 2.22)		0.73 (0.31, 1.67)		1.20 (0.66, 2.20)			
None	1.53 (0.99, 2.35)		1.50 (0.97, 2.31)		1.15 (0.72, 1.82)			
Student		0.015*						
Attending school full-time	0.91 (0.54, 1.54)							
Attending school part-time	1.85 (1.19, 2.88)*							
Not currently attending school	1.00							

Table 4
(Continued)

PREDICTORS	Crude Associations (95% CI) ^a	Model 1 ^a R ² = 0.1651	P-value	aPR ^g (95% CI) ^f	P-value	aPR ^g (95% CI) ^f	Model 2 ^b R ² = 0.3940	P-value	aPR ^g (95% CI) ^f	Final Model ^c R ² = 0.5533	P-value
Marital & relationship status			0.704								
Single	1.00										
Married to/Common-Law with a man	0.81 (0.50, 1.29)										
Married to/Common-Law with a woman	0.44 (0.07, 2.65)										
Unmarried, in a monoga- mous relationship	0.98 (0.59, 1.64)										
Unmarried, in a non-monog- amous relationship	1.21 (0.64, 2.29)										
Stigma for receiving psycho- logical help			0.018*		0.085						
1 standard deviation increase	1.21 (1.03, 1.42)*			1.17 (0.98, 1.39)							
Sexual orientation identity			0.489								
Homosexual	1.00										
Bisexual	1.37 (0.82, 2.29)										
Rather not say	0.96 (0.19, 4.83)										
Experiences of Homophobia			0.001*		0.004*						
1 standard deviation increase	1.30 (1.12, 1.52)*			1.25 (1.07, 1.46)*							
ENABLING FACTORS											
Household income (per person)			0.163					0.027*			0.445
< \$15,000	1.60 (0.92, 2.78)					2.75 (1.25, 6.08)*			1.91 (0.87, 4.19)		
\$15,000-\$29,999	1.27 (0.76, 2.13)					2.12 (0.94, 4.80)			2.05 (0.95, 4.41)		
\$30,000-\$49,999	1.00					1.00			1.00		
\$50,000-\$79,999	0.83 (0.39, 1.78)					1.63 (0.70, 3.79)			1.64 (0.75, 3.58)		
\$80,000 +	0.70 (0.29, 1.68)					0.96 (0.35, 2.64)			1.62 (0.57, 4.55)		

Table 4
(Continued)

PREDICTORS	Crude Associations (95% CI)		Model 1 ^a R ² = 0.1651		Model 2 ^b R ² = 0.3940		Final Model ^c R ² = 0.5533	
	PR ^e (95% CI)	P-value	aPR ^g (95% CI)	P-value	aPR ^g (95% CI)	P-value	aPR ^g (95% CI)	P-value
Insurance availability for mental health services		0.097				0.103		
Yes	1.00							
No	0.70 (0.46, 1.07)				0.70 (0.46, 1.07)			
Social support (from friends)		0.002*				0.027*		
1 standard deviation increase	0.78 (0.68, 0.92)*				0.81 (0.67, 0.98)*			
Social support (from family)		0.016*						
1 standard deviation increase	0.82 (0.69, 0.96)*							
Social support (from significant other)		0.601						
1 standard deviation increase	0.95 (0.80, 1.14)							0.031*
Access to primary care provider		0.324						
Yes	1.00					1.00		
No	0.72 (0.37, 1.39)				0.43 (0.23, 0.78)*	0.006*	0.53 (0.30, 0.94)*	0.031*
Social support (% from LGBT communities)		0.875						
All	0.41 (0.07, 2.57)							
More than half	0.86 (0.49, 1.50)							
About half	1.00							
Less than half	0.84 (0.49, 1.43)							
None	0.91 (0.54, 1.54)							
Prior negative experience with a MHSP		0.002*				0.012*		0.313
Yes	1.80 (1.25, 2.60)*				1.72 (1.13, 2.61)*		1.25 (0.81, 1.92)	
No	1.00					1.00		

Table 4
(Continued)

PREDICTORS	Crude Associations		Model 1 ^a		Model 2 ^b		Final Model ^c	
	PR ^e (95% CI) ^f	P-value	aPR ^g (95% CI) ^f	P-value	aPR ^g (95% CI) ^f	P-value	aPR ^g (95% CI) ^f	P-value
Current versus childhood religiosity/spirituality		0.005*				0.0001*		0.004*
Less presently	1.08 (0.62, 1.87)				0.82 (0.47, 1.45)		0.91 (0.58, 1.44)	
Equally	1.00				1.00		1.00	
More presently	2.01 (1.23, 3.30)*				2.11 (1.33, 3.33)*		1.91 (1.22, 3.00)*	
Internalized homonegativity		0.002*				0.007*		0.003*
1 standard deviation increase	1.29 (1.09, 1.52)*				1.35 (1.09, 1.68)*		1.35 (1.12, 1.62)*	
NEED FACTORS								
Self-perceived mental health		<0.0001*						0.001*
Excellent	1.00						1.00	
Very good	2.12 (0.84, 5.33)						1.82 (0.77, 4.33)	
Good	5.16 (2.16, 12.33)*						3.40 (1.51, 7.63)*	
Fair	6.47 (2.73, 15.34)*						3.29 (1.43, 7.58)*	
Poor	8.05 (3.38, 19.18)*						4.64 (2.05, 10.52)*	
Respondent been told they have mental health condition		<0.0001*						0.005*
Yes	4.39 (2.68, 7.20)*						2.12 (1.26, 3.56)*	
No	1.00						1.00	
HIV Status		0.007*						
HIV positive	1.85 (1.25, 2.72)*							
HIV negative	1.00							
HIV status unknown	1.05 (0.59, 1.89)							

Table 4
(Continued)

PREDICTORS	Crude Associations (95% CI)		Model 1 ^a R ² d = 0.1651		Model 2 ^b R ² d = 0.3940		Final Model ^c R ² d = 0.5533	
	PR ^e (95% CI)	P-value	aPR ^g (95% CI)	P-value	aPR ^g (95% CI)	P-value	aPR ^g (95% CI)	P-value
History of being trans				0.833				
Yes	1.12 (0.38, 3.35)							
No	1.00							

a Model including only predisposing variables

b Model including predisposing and enabling variables

c Model including predisposing, enabling, and need variables

d Nagelkerke's maximum rescaled R² for multivariable model (logistic)

e Prevalence ratio

f Confidence Interval

g Adjusted prevalence ratio

*significant at the $\alpha=0.05$ level

Adding *Enabling* variables to those retained in the prior step, birth country, employment status, household income, insurance availability for mental health services, social support from friends, access to a primary care provider, prior negative experience with a MHSP, current versus childhood religiosity or spirituality (controlling for childhood religiosity or spirituality), and *Internalized Homonegativity* were retained ($p = 0.20$ cut-off). Birth country retained the direction seen in the prior stage. Statistically significant directions for prior negative experiences with a MHSP, current versus childhood religiosity or spirituality, social support from friends, and *Internalized Homonegativity* remained the same as those seen at crude levels. Those with household per person incomes less than \$15,000 per year were 75% more likely ($aPR = 2.75$; 95% CI:1.25–6.08) to have accessed services compared to those with household incomes of \$30,000–\$49,999. Those without a primary care provider were 57% less likely ($aPR = 0.43$; 95% CI:0.23–0.78) to have used mental health services within the past 12 months.

Adding *Need* variables, birth country, household income, access to a primary care provider, prior negative experiences with a MHSP, current versus childhood religiosity or spirituality, *Internalized Homonegativity*, self-perceived mental health, and having ever been told they have a mental health condition remained in this third model ($p = 0.15$ cut-point). Birth country, household income per person, and prior negative experiences with a MHSP were no longer significant at $p = 0.05$. Access to a primary care provider, current versus childhood religiosity or spirituality, and *Internalized Homonegativity* retained directions seen previously, whereas directions for self-perceived mental health, and respondents being told they have a mental health condition were similar to those at crude levels.

The final model had a Nagelkerke R^2 value of 0.55, an increase from the first Predisposing model (0.17), indicating the model provides a somewhat strong explanatory power.

DISCUSSION

This paper explores socio-demographic and community-relevant factors to consider when providing mental health services with GB-MSM in smaller mid-size cities/regions, suggesting strategies to address issues facing these communities (Fredriksen-Goldsen et al., 2013). Minority stress in GB-MSM may be informed by “geographic variations in rurality, religious climate, or discriminatory policies” (Lewis, 2014a, p. 212). Results should be considered amidst the equal rights provided to sexual minorities that do not necessarily translate to acceptance and inclusion at community and individual levels, where homophobic experiences remain prevalent.

Compared to the 2003–2005 CCHS, our sample is younger—over half our gay respondents were under 35, compared to one third of CCHS participants (Tjepkema, 2008). We had comparable proportions of white respondents (86.9% of gay men in our sample vs. 88.1%; and 87.5% of bisexual men vs. the CCHS’ 76.0%). Few (8.5%) were born outside of Canada, a percentage which is lower than Middlesex County’s 19.4% (Statistics Canada, 2014), potentially reflecting a tendency for LGBT individuals emigrating to Canada to land in larger, queer-friendly centres (Lewis, 2014b). The CCHS indicated 6.8% and 9.3% of gay and bisexual men, respectively, had consulted a social worker or counsellor (Tjepkema, 2008), whereas we found 10.1% and 26.3% had. We saw 6.1% and 15.8% of gay and bisexual men, respectively, had seen a psychologist, compared to 7.7% and 5.8% in the CCHS (Tjepkema, 2008). A study of gay and bisexual

men in Toronto found 6.6% and 11.3%, respectively, had seen a psychologist/counsellor (Makoroka, 2014). Similar levels of accessing self-help groups were seen in the CCHS and our study, with 3.7% and 4.5% of Canadian gay and bisexual men having accessed these, whereas 1.7% and 5.3% of our respondents had. Inferences about bisexual men in our study should be interpreted cautiously since we only had 19 bisexual-identified participants.

Higher levels of *Internalized Homonegativity* (in all models) and *Experiences of Homophobia* (at crude, predisposing levels) were associated with increased likelihoods of MHSU within the past 12 months. *Experiences of Homophobia* was not significant after including enabling variables (e.g., internalized homonegativity, prior negative experience with a MHSP), suggesting enabling factors provide more explanatory power to predict MHSU compared to the single homophobia variable. *Internalized homonegativity* has been associated with depression, dysthymia, and likelihood of being in therapy (Rosser, Bockting, Ross, Miner, & Coleman, 2008). Verbal harassment has also been associated with increased need and use of health and social services in sexual minorities (Grella, Greenwell, Mays, & Cochran, 2009; D'Anna, et al., 2012). Countries with equal rights laws and greater acceptance of sexual minorities tend to have lower internalized homonegativity levels (Ross et al., 2013). Comparing internalized homonegativity between studies is difficult since many measures have been used and, in our case, the scale we applied has rarely been used in empirical research (Newcomb & Mustanski, 2010). Greater service use in our results, despite these negative experiences, could potentially demonstrate resilience in GB-MSM. This interpretation is speculative, however, since we did not measure resilience in our survey.

Considering experiences of homophobia and internalized stigma, and that many indicated a MHSP assumed they were straight/heterosexual, or made assumptions about them or their health based on their sexual orientation, we present several identified strategies to show how mental health and social service providers can meet the needs of GB-MSM. Providers can recognize and integrate into their practices an understanding of minority stress; how internalized homonegativity, homophobia, and heterosexism affect sexual minority men (Isacco et al., 2012); and how these fit into the minority stress framework to cause adverse mental health outcomes (Chakraborty et al., 2011). Providers can learn and understand terminology related to and used by sexual minority groups (Rutherford, McIntyre, Daley, & Ross, 2012). Avoiding interventions that reinforce internalized homonegativity, having an awareness of remarks that could be interpreted as homophobic/heterosexist, and using inclusive language and appropriate questions that enable men to comfortably disclose sexual orientation without apprehension are also suggested. (Rutherford et al., 2012; Isacco et al., 2012). Providers can also recognize GB-MSM's sexuality and orientation as parts of a whole (Pixton, 2003; Landridge, 2007; Isacco et al., 2012). Natural strengths and resilience of GB-MSM can be harnessed by providers, as seen in examples abundantly noted in scientific and historical literature (Herrick, et al., 2011). Acceptance of sexual orientation diversity, and personal identity acceptance, consolidation, and integration of one's sexual identity into one's larger world and relationships have been identified as resilience traits (Knoble & Linville, 2012; DiFulvio, 2011; Isacco et al., 2012; Herrick, et al., 2013). Finally, providers can assist at the community level to design programs and create networks (including referrals, professional & community development, collaborations) aimed at reducing homophobia and support the development of sexual identity (e.g., gay-straight alliances, non-discrimination policies, and anti-bullying campaigns; Cahill, Valadez, & Ibarrola, 2013), and positively contributing to young GB-MSM's well-being.

Higher levels of current religiosity/spirituality (versus childhood levels) was associated with a greater likelihood of MHSU within the past 12 months, compared to those with no difference. Religious climate has been associated with mental health in sexual minorities, including alcohol abuse in youth (Hatzenbuehler, Pachankis, & Wolff, 2012). London, Ontario, is situated in a large, rural, regional Bible belt, a draw for younger, rural LGBT people from homophobic environments (Bruce & Harper, 2011; Lewis et al., 2015). Religiosity has been linked to overt experiences of homophobia and internalized homonegativity. While our sample size inhibits us from comparing religious denominations, some implications can be noted. Faith groups less accepting of sexual minorities can lead GB-MSM to experience rejection or feel unwelcome (Brennan-Ing & Seidel, 2013). Negativity in religion marginalizes and contributes to minority stress in GB-MSM, creating internal conflicts leading to psychological distress (Brennan-Ing & Seidel, 2013). Christian GB-MSM, specifically, struggle to merge sexual and religious identities, due to their incompatibilities (Wilkerson, Smolenski, Brady, & Rosser, 2012). Conversely, belonging to affirming religions that are accepting of sexual minorities can contribute to resilience in GB-MSM, including those living with HIV/AIDS, leading to health-promoting behaviours (Wilkerson et al., 2012; Brennan-Ing & Seidel, 2013). More modern, urbanized, post-materialistic countries with less religious influence tend to be more accepting of homosexuality (Berg, Ross, Weatherburn, & Schmidt, 2013; Gerhards, 2010). When working with GB-MSM clients, MHSPs should consider religious influences and the potential for internalized homonegativity (Ross, et al., 2013). While our data do not directly support this, if religious GB-MSM are hesitant to sever religious ties, it is suggested that providers could connect men with religious LGBT individuals or organizations to positively help resolve religious and sexual incompatibilities, offering faith-based social support, and encouraging GB-MSM to challenge shameful thoughts (Wilkerson et al., 2012). Due to the cross-sectional nature of our data, additional interpretations are possible. Those with more mental health challenges may seek more than one source of help for solutions (e.g., overcoming feelings of internalized homonegativity), seeking both religion and formal mental health services simultaneously.

Those born outside of Canada were less likely to access mental health services within the past 12 months compared to Canadian-born GB-MSM. Access to, and use of health services by, immigrant groups is different compared to Canadian-born service users (Gushulak et al., 2011). One interpretation suggests GB-MSM born outside of Canada have less need for mental health services. A review of Canadian population-level data found new immigrants had lower levels of mental health concerns, but these increased to levels similar to Canadian-born persons over time (Ali, McDermott, & Gravel, 2004). Typically explained by the “healthy immigrant effect,” this is a function of immigration selection process (both self-selection and Canadian immigration policy; De Maio & Kemp, 2010). Not accessing mental health services could be related to barriers faced by immigrants, including language differences (Gushulak, et al., 2011) and culture (Kirmayer, et al., 2011), and not seeing themselves as an immediate priority (Gushulak, et al., 2011). LGBT newcomers can experience additional stigmas, including intersecting stigmas of homophobia and racism (Isacco et al., 2012; Munro, et al., 2013). Providers could adopt a broader understanding of GB-MSM newcomers’ experiences and what sexual orientation means for different ethno-cultural backgrounds, have LGBT-friendly professional interpreters available, and share resources with LGBT-friendly agencies serving newcomer populations (Kirmayer, et al., 2011; Isacco et al., 2012).

Respondents without access to a primary care provider were less likely to have accessed mental health services within the past 12 months (Enabling and Need). This is likely explained by the nature of primary care in Ontario, where primary care settings are usually the first contact for individuals seeking help for mental health concerns (Select Committee on Mental Health and Addictions, 2010). Service provision in Ontario has shifted towards interdisciplinary family health teams (including mental health workers and social workers) in one setting (Hutchison & Glazier, 2013), which could also explain this finding.

These results should be considered alongside their strengths and limitations. Our data were collected outside metropolitan regions, where most studies of GB-MSM have been conducted. Historically, research with GB-MSM has been conducted through sampling at “gay” venues. Our survey promotion strategy included traditional venues, but also incorporated smartphone apps and web-based social networks. Unfortunately, this method does not allow for calculation of a response rate. Convenience samples can potentially contain unknown biases that cannot be adjusted for statistically. Though causal associations are difficult to ascertain from cross-sectional data, to the extent possible, we included measures with a time component (e.g., past year MHSU, childhood religiosity). Lastly, our sample size restricts the power to identify more precise effects and to undertake further subgroup analyses such as specific religious denominations.

Our findings highlight unique community-relevant factors and their associations with MHSU by GB-MSM and suggest implications for mental health service provision. Stigma, whether experienced and/or internalized, impacts health and healthcare use. Future research should explore homophobia, internalized homonegativity, resilience, and religion for Canadian GB-MSM, using a lifecourse perspective to examine how these change over time. Despite policy protections, stigma can manifest at other levels, in communities, in work, family, or school environments (Berg et al., 2013); however, effects can be buffered by mental health providers to ensure positive mental health development in Canadian GB-MSM.

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