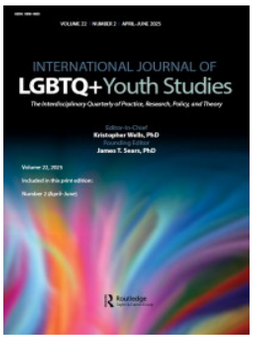

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Mental health service use and barriers to help-seeking among LGBTQ+ first-year college students in Chile

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ABSTRACT

This study aimed to describe university students' use of mental health services and the barriers to help-seeking by sexual orientation and gender identity and to examine the factors related to these variables. A total of 7,136 first-year students from five Chilean universities participated. They answered an online survey on mental health service use, barriers to help-seeking, 12-month mental disorders, and sociodemographic variables. Data were analyzed using logistic and negative binomial regression models. Lesbian, gay, bisexual, trans, questioning, and other sexual and gender minority (LGBTQ+) students, especially trans and gender non-conforming participants, reported higher mental health service use than non-LGBTQ+ students. Sexual minority students were less likely to report the help-seeking barriers "prefer to handle on one's own" and "talk with friends/family", but were more likely to report the barriers "cost", "unsure where to go", and "time, transportation, or scheduling problems". Some variables were associated with service use and barriers in both groups (e.g. lower parental education was associated with lower service use), while others were only associated with one group (e.g. non-LGBTQ+ women reported higher service use). These results suggest that initiatives aimed at promoting access to mental health services should be tailored to different subpopulations of university students.

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Introduction

Despite the high prevalence of mental health problems in the university student population (Auerbach et al., 2018), a large proportion of those who need treatment do not receive it (Osborn et al., 2022). Particularly, lesbian, gay, bisexual, trans, questioning, and other sexual and gender minority (LGBTQ+) university students have especially high prevalence of mental health problems compared to their heterosexual and cisgender peers (Brittain & Dinger, 2015; Liu et al., 2019; Przedworski et al., 2015; Rentería et al., 2021) and exhibit higher use of mental health services (Baams et al., 2018; Dunbar et al., 2017; Oswalt & Wyatt, 2011), whether in or out of campus (Sontag-Padilla et al., 2016). However, they also report multiple barriers to accessing these services (Dunbar et al., 2017).

One of the key barriers to help-seeking is mental health stigma (Clement et al., 2015; Eisenberg et al., 2009). However, stigma only partly explains help-seeking behaviors in university students with untreated mental health problems (Eisenberg et al., 2012). Other barriers frequently reported by college students with mental health needs are lack of time, low perceived need, thinking that stress is normal for college students (Horwitz et al., 2020), preferring to solve problems on their own, or choosing to talk to friends or family instead (Ebert et al., 2019).

There is still a need to learn more about the barriers to help-seeking that affect different groups in the college population, as the results for the general university population may not be representative of all groups of students (Horwitz et al., 2020). There are some barriers to help-seeking related to sexual orientation and gender identity that especially affect LGBTQ+ students, such as discrimination by professionals (experienced or anticipated), cost and availability of affirmative services, concerns about confidentiality, or denial of care due to trans gender identity (Crockett et al., 2022). It has also been noted that, compared to heterosexuals, sexual minority students report more barriers to help-seeking, such as poor accessibility, cost, concerns about eligibility, embarrassment, lack of confidentiality, inconvenient hours, and low reputation of services (Dunbar et al., 2017).

In Latin America, the literature on the use of mental health services and barriers to help-seeking in university students is scarce, and differences by sexual orientation and gender identity in barriers to help-seeking have not been sufficiently studied. Having a better understanding of how different university student subgroups use these services and determining what barriers affect their help-seeking behavior can inform mental health service planning and initiatives to improve access to these services. On the other hand, Chile has been characterized by legislative advances for LGBTQ+ people in recent years (e.g. anti-discrimination law, same-sex marriage, and gender identity law). However, discrimination and violence

toward LGBTQ+ communities are still a frequent problem (Subsecretaría de Prevención del Delito, 2021), as well as homophobic attitudes by health care workers (Oyarce-Vildósola et al., 2022). Thus, exploring the use of services and barriers to help-seeking among LGBTQ+ youth in Chile could shed light on similar contexts. Therefore, the aim of this study was to describe the use of mental health services and barriers to help-seeking by sexual orientation and gender identity and to examine factors related to service use and barriers to help-seeking in LGBTQ+ and non-LGBTQ+ Chilean students.

Most of the authors of this study belong to a Chilean research center on adolescent and youth mental health (MAC, VM, SM-G, AIL, JG, and DN). The first author (MAC) is part of the LGBTQ+ community and this study is part of his doctoral thesis, which focuses on exploring mental health differences/inequalities in LGBTQ+ university students. From this and through other studies that are being carried out in the research center, we hope to make visible the high percentages of mental health problems in LGBTQ+ university students in Chile as well as the barriers to accessing professional help. We are confident that these results can be useful for prevention and timely intervention, to improve the mental health of LGBTQ+ communities.

Methods

Participants

The participants were first-year university students from five universities (two private and three public universities) located in central and southern Chile. All students over 18 years of age were invited to participate in the study. The sample consisted of 7,225 students and the response rate was 34.7%, ranging from 29.6% to 60.4% across universities. Students without information about sexual orientation ($n = 10$) and gender identity ($n = 2$) were excluded from the analysis, as well as students over 30 years of age ($n = 77$). The final sample included 7,136 students. The data correspond to the baseline evaluation of the Chilean project 'Longitudinal Study of Mental Health in College Students', which is part of the World Health Organization – World Mental Health International College Student initiative (WMH-ICS; Cuijpers et al., 2019). Five authors of this study led the data collection at each of their universities (VM, AIL, JG, DN, and IL).

Measures

Data were collected using an online self-report survey from the WMH-ICS initiative, which has been administered in other studies (Auerbach et al., 2018; Ebert et al., 2019; Rentería et al., 2021).

Sexual orientation

A self-report item was used to assess sexual orientation. It was coded as 1 = *heterosexual*, 2 = *gay/lesbian*, 3 = *bisexual*, 4 = *questioning*, and 5 = *other sexual orientations* (such as asexual, pansexual, and demisexual).

Gender identity

The gender identity variable was created from the variables sex assigned at birth (male or female) and current gender (man, woman, or other). The categories were: 1 = *cisgender man*, 2 = *cisgender woman*, 3 = *trans and gender non-conforming (TGNC)*. Trans men and women ($n = 34$) were grouped in the TGNC category due to their low frequency in the sample.

LGBTQ+ status

The LGBTQ+ status variable groups students according to their sexual orientation and gender identity. It was coded as 0 = *non-LGBTQ+ (heterosexual cisgender students)* and 1 = *LGBTQ+*.

Use of mental health services

Items adapted from the Composite International Diagnostic Interview Screening Scales (CIDI-SD; Kessler & Ustün, 2004) were used to establish whether the respondents had received mental health treatment in their lifetime, in the past 12 months, or if they were currently under treatment (0 = *no* and 1 = *yes*); type of treatment received in their lifetime (psychological, pharmacological, and other type of nonprofessional treatment [e.g. priest, pastor, healer, or self-help groups]; 0 = *no* and 1 = *yes*); months under treatment during the past 12 months (0–12 months); and age of onset of first mental health treatment (in years). The variables of lifetime psychological and pharmacological treatment were grouped into the variable lifetime professional service use (0 = *no* and 1 = *yes*).

Barriers to help-seeking

Barriers to mental health help-seeking were measured with nine items adapted from other instruments (Hoge et al., 2004; Picco et al., 2016). The items originally had a five-point response scale, but were recoded as categorical variables (0 = *not at all important* to *moderately important* and 1 = *important* and *very important*) to distinguish respondents who strongly endorse these barriers for not seeking help. These items were only answered by students who mentioned that they had needed treatment for an emotional or substance use problem during the last 12 months but did not receive it. The sum of the nine barriers yielded the variable *number of barriers* (0–9 barriers).

12-month mental disorders

The following 12-month mental disorders were assessed using screening instruments: major depressive episode, generalized anxiety disorder, panic disorder, some bipolar disorder, drug abuse/dependence, and alcohol dependence. All disorders were assessed using the Composite International Diagnostic Interview Screening Scales (CIDI-SC; Kessler & Ustün, 2004) with *DSM-5* definitions and criteria, except for alcohol dependence, which was assessed using the Alcohol Use Disorders Identification Test (AUDIT; Saunders et al., 1993). Alcohol dependence on the AUDIT was defined as having a total score ≤16 or having a total score between 8 and 15 points and 4 or more points on the dependence items (Babor et al., 2001). All disorders were coded as dichotomous variables (0 = *no* or 1 = *yes*). Other authors have noted that the online version of the CIDI-SC has shown adequate classification ability (Ballester et al., 2019; Kessler et al., 2013), which is also true of the AUDIT (Ballester et al., 2021). The survey design included a randomization of the items for panic, bipolar, and alcohol dependence disorders to decrease the length of the survey. For these disorders, all participants answered the screening questions, but only one randomly selected group answered the full questionnaire for that mental health problem.

Sociodemographic and university information

The variables age (dichotomized as 0 = *18–19 years*, 1 = *20–30 years*) and maximum educational level of one of the parents (1 = *secondary school or less*, 2 = *some post-secondary education*, 3 = *university graduate or higher*) were used. The university-related variables used were type (0 = *private* and 1 = *public*) and location (0 = *Santiago* and 1 = *Other*), given that the characteristics of the respondents could vary according to the region in which they studied.

Procedure

Approval was obtained from the authorities and the Scientific Ethics Committees (SEC) of each institution (Human Research Ethics Committee, Facultad de Medicina, Universidad de Chile 168-2019, SEC Universidad de Talca 03-2021, SEC Universidad de los Andes CEC2021022, SEC Servicio de Salud Valdivia 075, and SEC Universidad de O'Higgins 019-2020). The survey was distributed by e-mail and answered online. A communication campaign was carried out on social media to boost the response rate. Before answering the survey, students gave their informed consent. At the end of the survey, students received feedback on their general mental health status along with information on places to seek mental health help. Participants detected to be at high risk for suicide were contacted for an

assisted referral to a mental health service. Data were collected at one university in 2020, and at all participating universities in 2021, so one university participated in both years.

Analyses

Mental health service use and barriers to help-seeking variables were described for the total sample and by sexual orientation and gender identity. Differences in the overall distribution by sexual orientation and gender identity were estimated using the design-adjusted chi-square test for categorical variables (which test the difference between observed and expected frequencies) and the Wald test for discrete variables (calculated from linear regression models and using zero as the expected value for the null hypothesis). To compare service use and barriers to help-seeking by sexual orientation and gender identity, logistic regression models adjusted for age, parental education, gender identity (when comparing by sexual orientation), and sexual orientation (when comparing by gender identity) were used. For discrete variables (months under treatment and number of barriers), negative binomial regression models were used due to the presence of overdispersion.

Logistic and negative binomial regression models (depending on the type of variable) stratified by LGBTQ+ status were used to examine the correlates of mental health service use and barriers to help-seeking in LGBTQ+ and non-LGBTQ+ students. For these analyses, LGBTQ+ students were grouped into one category due to the low number of TGNC students in the sample. In these models, all independent variables were entered simultaneously. For models examining correlates of mental health service use, sociodemographic, college-related, and mental disorder characteristics were included as independent variables. The models for barriers to help-seeking included the same independent variables plus two variables on lifetime professional and nonprofessional service use. Post-stratification weights were used in all analyses to correct for differences between those who completed the survey and those who did not (Royal, 2019). The weights were created from the sex and age variables of the entire university population based on enrollment records from each university. Mental disorders that were randomized in the survey design were imputed using multiple imputation by chained equations (White et al., 2011). Analyses were performed in Stata 17.

Results

The characteristics of the participants are in Table 1. LGBTQ+ students represented 34.0% of the total sample. Among LGBTQ+ students, 9.7%

Table 1. Characteristics of the participants.

	Total ($n = 7,136$) %	LGBTQ+ ($n = 2,568$) %	Non-LBGTQ+ ($n = 4,568$) %
Age			
18–19	78.6	79.4	78.2
20–30	21.4	20.6	21.8
Sexual orientation			
Heterosexual	66.1	0.5	100.0
Gay/lesbian	4.1	12.1	–
Bisexual	15.3	45.0	–
Questioning	11.0	32.3	–
Other	3.4	10.1	–
Gender identity			
Cisgender man	43.5	29.0	50.9
Cisgender woman	53.3	61.3	49.1
TGNC	3.3	9.7	–
Parental education			
Secondary school or less	35.6	34.0	36.4
Some post-secondary education	22.5	24.9	21.3
University graduate or higher	41.9	41.1	42.3
Type of university			
Private	20.6	17.5	22.2
Public	79.4	82.5	77.8
Location of the university			
Santiago	68.2	73.0	65.8
Other	31.8	27.0	34.2
12-month disorders			
Mayor depressive episode	38.5	52.0	31.5
Generalized anxiety disorder	18.8	26.1	15.1
Panic disorder	11.6	18.0	8.3
Any bipolar disorder	4.3	6.8	3.0
Drug abuse	7.2	10.4	5.6
Alcohol dependence	3.3	4.0	3.0

Note. %: weighted proportions. TGNC: trans and gender non-conforming.

were TGNC students (who reported different sexual orientations, such as heterosexual, gay/lesbian, bisexual, etc.). LGBTQ+ students were more likely to attend public universities, tended to study in universities in Santiago, and had a higher percentage of mental health problems compared to non-LGBTQ+ students.

Mental health service use

Mental health service use variables are described in Table 2. Statistically significant differences by sexual orientation and gender identity were observed in service use. LGBTQ+ students had higher percentages of lifetime, 12-month, and current service use than heterosexual and cisgender students, especially TGNC students. For the total sample, the most frequent type of lifetime service use was psychological (41.6%), followed by pharmacological treatment (20.9%) and nonprofessional services (8.4%). LGBTQ+ students had higher percentages of use of all three types of services examined. The average age at first treatment was similar regardless of sexual orientation and gender identity ($p \geq .716$), being

Table 2. Description of mental health service use and help-seeking barriers by sexual orientation and gender identity.

		Sexual orientation						Gender identity			
	Total	Heterosexual	Gay/ lesbian	Bisexual	Questioning	Other	*p*	Cisgender man	Cisgender woman	TGNC	*p*
Mental health service use ($n = 7,136$)											
Lifetime – psychological (%)	41.6	36.1	52.9	55.5	45.3	60.0	<.001	34.8	45.5	67.8	<.001
Lifetime – pharmacological (%)	20.9	17.4	26.4	29.7	22.2	38.1	<.001	16.1	23.1	49.6	<.001
Lifetime – nonprofessional (%)	8.4	7.2	9.3	10.4	11.1	13.2	<.001	5.5	10.3	15.9	<.001
Lifetime – any (%)	44.2	38.5	54.5	57.8	49.3	63.4	<.001	36.5	48.7	72.0	<.001
12-month – any (%)	24.6	20.0	30.8	35.0	30.2	39.7	<.001	17.8	28.7	47.1	<.001
Current – any (%)	12.8	9.8	17.9	19.5	15.5	25.6	<.001	8.2	15.4	30.9	<.001
Age first treatment (M)	14.4	14.4	14.7	14.5	14.4	14.1	.716	14.4	14.4	14.5	.989
Months under treatment – past year (M)	5.5	5.2	5.9	5.7	5.3	7.1	<.001	4.9	5.6	6.7	<.001
Barriers to help-seeking ($n = 3,025$)											
Unsure of treatment efficacy (%)	16.9	17.4	22.8	16.3	14.0	13.6	.153	19.4	15.0	21.2	.008
Prefers to handle on one's own (%)	55.4	60.1	45.3	48.3	50.9	41.4	<.001	59.4	53.4	47.1	.003
Too embarrassed (%)	32.9	31.0	35.2	34.1	38.0	35.8	.076	30.7	34.4	31.0	.126
Prefers to talk with friends/family (%)	28.7	31.6	28.6	24.5	22.1	25.4	<.001	29.0	28.7	25.3	.743
Cost (%)	43.8	37.7	62.6	57.7	46.1	45.6	<.001	36.8	47.3	59.6	<.001
Unsure where to go (%)	49.1	45.9	59.5	54.4	52.0	52.2	<.001	44.0	51.7	59.9	<.001
Time, transportation, or scheduling (%)	32.4	31.0	42.2	37.8	28.9	29.6	.002	28.4	34.5	38.3	.003
Potential harm academic career (%)	20.9	20.9	18.3	22.6	20.2	19.8	.797	20.2	21.4	21.4	.747
People would be treated differently (%)	21.1	21.0	17.1	21.8	22.5	19.2	.690	20.4	21.5	21.4	.812
Number of barriers (M)	3.0	3.0	3.3	3.2	2.9	2.8	.045	2.9	3.1	3.3	.025

Note. Percentages and means were estimated using post-stratification weights. TGNC: trans and gender non-conforming.

around 14.4 years. Gay/lesbian, other sexual orientation, and TGNC students had the highest mean of months under treatment during the past year.

Table 3 shows the adjusted comparisons (odds ratio [OR] and incidence rate ratios [IRR]) of service use variables by sexual orientation and gender identity. Non-heterosexual students reported significantly more lifetime, 12-month, and current treatment than heterosexual students (OR between 1.39 and 2.22), as did TGNC youth compared to cisgender students (OR between 1.82 and 2.06). LGBTQ+ students were more likely to report having received psychological or pharmacological treatment at some point in their lives (OR between 1.22 and 2.61), and only bisexual (OR = 1.28) and questioning (OR = 1.45) students reported significantly greater use of nonprofessional services than heterosexuals. In terms of months under treatment, only other sexual orientation students reported significantly more months under treatment than their heterosexual peers (IRR = 1.30).

The variables associated with service use are presented in Table 4. In LGBTQ+ and non-LGBTQ+ students, some similarities are observed: students aged 20 or older, who screened positive for depressive episode, generalized anxiety disorder, and panic disorder had significantly higher lifetime, 12-month, and current service use. In contrast, students with parents with less education had significantly lower service use compared to those with a university degree or more. Some differences were observed in the variables associated with service use among the LGBTQ+ and non-LGBTQ+ groups: heterosexual-cisgender (non-LGBTQ+) women reported significantly greater service use than heterosexual-cisgender men. Among LGBTQ+ students, TGNC students reported more service use than non-heterosexual cisgender men. On the other hand, non-LGBTQ+ students who screened positive for any bipolar disorder and alcohol dependence were more likely to report lifetime and current service use, respectively. Supplementary Table 1 presents the other models that examine correlates of service use by type of lifetime service (psychological, pharmacological, and nonprofessional) and months under treatment. These models show results similar to those observed in the model that include any type of lifetime service use.

Barriers to help-seeking

The barriers to help-seeking instrument was answered by 3,025 students (39.8% LGBTQ+) who during the past 12 months reported needing treatment for an emotional or substance use problem and did not receive it. The description of barriers to help-seeking is shown in Table 2. The most frequent barriers in the total sample were preferring to deal with the

Table 3. Adjusted comparisons of mental health service use and barriers to help-seeking by sexual orientation and gender identity.

	Sexual orientation[a]				Gender identity[b]
	Gay/lesbian	Bisexual	Questioning	Other	TGNC
	OR/IRR (95% CI)	OR/IRR (95% CI)	OR/IRR (95% CI)	OR/IRR (95% CI)	OR/IRR (95% CI)
Mental health service use					
Lifetime – psychological	2.09* (1.60, 2.75)	1.95* (1.70, 2.24)	1.33* (1.14, 1.55)	2.04* (1.53, 2.71)	1.90* (1.39, 2.59)
Lifetime – pharmacological	1.66* (1.22, 2.26)	1.72* (1.47, 2.02)	1.22* (1.01, 1.47)	1.91* (1.39, 2.60)	2.61* (1.92, 3.56)
Lifetime – nonprofessional	1.40 (0.88, 2.22)	1.28* (1.01, 1.62)	1.45* (1.12, 1.86)	1.45 (0.92, 2.30)	1.50 (0.98, 2.31)
Lifetime – any	2.03* (1.54, 2.66)	1.89* (1.64, 2.18)	1.39* (1.19, 1.62)	2.03* (1.52, 2.73)	2.06* (1.50, 2.83)
12-month – any	1.89* (1.40, 2.57)	1.84* (1.58, 2.13)	1.50* (1.27, 1.79)	1.93* (1.44, 2.60)	1.82* (1.35, 2.46)
Current – any	2.08* (1.45, 3.00)	1.89* (1.57, 2.28)	1.46* (1.17, 1.82)	2.22* (1.58, 3.11)	1.97* (1.41, 2.74)
Months under treatment – past year[c]	1.17 (1.00, 1.37)	1.07 (0.98, 1.17)	1.01 (0.91, 1.13)	1.30* (1.13, 1.49)	1.14 (0.99, 1.32)
Barriers to help-seeking					
Unsure of treatment efficacy	1.28 (0.80, 2.05)	0.96 (0.72, 1.26)	0.83 (0.60, 1.14)	0.67 (0.37, 1.19)	1.39 (0.82, 2.35)
Prefers to handle on one's own	0.51* (0.35, 0.75)	0.64* (0.53, 0.79)	0.72* (0.58, 0.89)	0.47* (0.31, 0.71)	1.03 (0.68, 1.56)
Too embarrassed	1.20 (0.80, 1.79)	1.14 (0.93, 1.41)	1.33* (1.06, 1.67)	1.28 (0.84, 1.95)	0.87 (0.56, 1.34)
Prefers to talk with friends/family	0.91 (0.60, 1.37)	0.69* (0.55, 0.88)	0.61* (0.46, 0.79)	0.70 (0.45, 1.12)	1.04 (0.64, 1.69)
Cost	3.19* (2.12, 4.80)	2.10* (1.72, 2.58)	1.41* (1.13, 1.76)	1.20 (0.79, 1.83)	1.31 (0.85, 2.03)
Unsure where to go	1.71* (1.15, 2.53)	1.30* (1.06, 1.58)	1.23 (0.99, 1.54)	1.11 (0.74, 1.65)	1.33 (0.87, 2.02)
Time, transportation, or scheduling	1.76* (1.19, 2.61)	1.27* (1.03, 1.56)	0.88 (0.69, 1.12)	0.83 (0.53, 1.29)	1.15 (0.75, 1.75)
Potential harm academic career	0.82 (0.50, 1.33)	1.08 (0.85, 1.38)	0.97 (0.74, 1.29)	0.95 (0.57, 1.56)	1.06 (0.63, 1.78)
People would be treated differently	0.74 (0.44, 1.23)	1.04 (0.82, 1.32)	1.09 (0.84, 1.42)	0.90 (0.55, 1.47)	1.07 (0.65, 1.76)
Number of barriers[c]	1.12* (1.00, 1.24)	1.05 (0.99, 1.12)	0.99 (0.93, 1.07)	0.92 (0.81, 1.05)	1.07 (0.95, 1.20)

Note. IRR: incidence rate ratio; OR: odds ratio; CI: confidence interval; TGNC: trans and gender non-conforming.
[a]Compared with heterosexual students. Models adjusted by age, parent education, and gender identity.
[b]Compared with cisgender students. Models adjusted by age, parent education, and sexual orientation.
[c]Negative binomial regression models. Results are expressed in IRR.
*$p < .05$.

Table 4. Variables associated with mental health service use stratified by LGBTQ+ status.

	Lifetime		12-month		Current	
	Non-LGBTQ+ OR (95% CI)	LGBTQ+ OR (95% CI)	Non-LGBTQ+ OR (95% CI)	LGBTQ+ OR (95% CI)	Non-LGBTQ+ OR (95% CI)	LGBTQ+ OR (95% CI)
Gender identity (ref = cisgender man)						
Cisgender woman	1.46* (1.28, 1.67)	1.10 (0.90, 1.36)	1.71* (1.44, 2.03)	1.13 (0.90, 1.42)	1.74* (1.37, 2.19)	1.20 (0.89, 1.60)
TGNC	–	1.96* (1.37, 2.79)	–	1.68* (1.19, 2.37)	–	1.88* (1.26, 2.80)
20–30 years (ref = 18–19 years)	1.64* (1.41, 1.92)	1.71* (1.37, 2.13)	1.51* (1.26, 1.81)	1.25* (1.00, 1.55)	1.82* (1.46, 2.28)	1.40* (1.09, 1.81)
Parental education (ref = university)						
Secondary school or less	0.63* (0.54, 0.73)	0.69* (0.57, 0.84)	0.55* (0.46, 0.66)	0.56* (0.46, 0.69)	0.48* (0.37, 0.61)	0.52* (0.41, 0.68)
Some post-secondary education	0.71* (0.60, 0.84)	0.81 (0.66, 1.01)	0.60* (0.49, 0.74)	0.70* (0.56, 0.87)	0.50* (0.38, 0.67)	0.66* (0.51, 0.87)
Public university (ref = private)	1.08 (0.92, 1.27)	1.20 (0.91, 1.56)	1.03 (0.85, 1.19)	0.99 (0.75, 1.32)	0.92 (0.72, 1.18)	0.81 (0.58, 1.12)
Location of the university – other (ref = Santiago)	1.16 (1.00, 1.34)	1.12 (0.89, 1.41)	0.99 (0.82, 1.19)	0.90 (0.71, 1.16)	0.91 (0.72, 1.17)	0.84 (0.62, 1.14)
Mayor depressive episode (ref = no)	1.71* (1.48, 1.99)	1.42* (1.18, 1.70)	2.00* (1.68, 2.38)	1.58* (1.30, 1.92)	1.90* (1.51, 2.40)	1.65* (1.30, 2.11)
Generalized anxiety disorder (ref = no)	1.60* (1.32, 1.94)	1.53* (1.23, 1.90)	1.64* (1.33, 2.03)	1.61* (1.31, 1.99)	1.78* (1.37, 2.30)	1.74* (1.37, 2.21)
Panic disorder (ref = no)	2.79* (2.16, 3.60)	2.99* (2.30, 3.88)	2.60* (2.03, 3.33)	2.34* (1.86, 2.95)	2.38* (1.78, 3.19)	2.26* (1.75, 2.94)
Any bipolar disorder (ref = no)	1.63* (1.06, 2.51)	1.42 (0.95, 2.12)	1.35 (0.90, 2.03)	1.31 (0.92, 1.86)	1.49 (0.94, 2.36)	1.08 (0.73, 1.60)
Drug abuse (ref = no)	1.26 (0.93, 1.70)	1.14 (0.84, 1.54)	1.29 (0.92, 1.82)	1.22 (0.91, 1.65)	0.93 (0.59, 1.47)	1.17 (0.84, 1.65)
Alcohol dependence (ref = no)	1.14 (0.69, 1.89)	1.35 (0.75, 2.41)	1.41 (0.81, 2.45)	1.09 (0.62, 1.94)	1.95* (1.03, 3.69)	1.35 (0.74, 2.45)
F(*ndf*, *ddf*)	29.86 (12, 57943.6)*	16.59 (13, 113629.1)*	31.34 (12, 45939.5)*	16.54 (13, 92942.8)*	23.53 (12, 49257.2)*	14.52 (13, 119882.7)*

Note. LGBTQ+: lesbian, gay, bisexual, trans, questioning, and other sexual and gender minority students; TGNC: trans and gender non-conforming; ref: reference category; *F*: *F*-test to evaluate the joint significance of the independent variables; *ndf*: numerator degrees of freedom; *ddf*: denominator degrees of freedom; OR: odds ratio; CI: confidence interval. The models were estimated using post-stratification weights.

*$p < .05$.

problem on one's own, unsure where to go, and cost. Compared to the total sample, LGBTQ+ students had lower percentages of prefers to handle on one's own and higher percentages of unsure where to go and cost. LGBTQ+ students reported between 2.8 and 3.3 barriers on average, compared to 3.0 barriers on average for the total sample.

Adjusted comparisons of barriers to help-seeking by sexual orientation and gender identity are presented in Table 3. Compared to heterosexual students, non-heterosexual students were significantly less likely to prefer to deal with problems on their own (OR between 0.47 and 0.72), while bisexual (OR = 0.69) and questioning students (OR = 0.61) were less likely to prefer to talk to a friend/family. In contrast, gay/lesbian, bisexual, and questioning students reported cost (OR between 1.41 and 3.19), gay/lesbian and bisexual students mentioned unsure where to go (OR between 1.30 and 1.71) and time, transportation, and scheduling problems (OR between 1.27 and 1.76), and questioning students reported embarrassment (OR = 1.33) as barriers. No differences were observed between TGNC and cisgender students in terms of barriers to help-seeking. Only gay and lesbian students reported significantly more barriers than heterosexual students (IRR = 1.12).

The variables associated with the number of barriers and two of the most frequent barriers (unsure where to go and cost) are presented in Table 5. In both groups (LGBTQ+ and non-LGBTQ+ students), those who screened positive for major depressive and generalized anxiety disorders as well as those with parents with secondary education or less had significantly more barriers than those whose parents held a university degree or more. Students from regional universities had fewer barriers on average compared to those from universities in Santiago only in the LGBTQ+ group, while students with lifetime experiences of professional and non-professional service use had fewer and more barriers, respectively, only in the non-LGBTQ+ group.

For the barrier unsure where to go, students (LGBTQ+ and non-LGBTQ+) with parents with secondary education or less (compared to university degree or more) and with major depressive episode were more likely to report this barrier, while those with lifetime professional service use were significantly less likely to do so. Only in the LGBTQ+ group, cisgender woman and TGNC students (compared to cisgender men) were more likely to report this barrier, while those studying in regions other than Santiago were less likely to do so. Only in the non-LGBTQ+ group, older age and generalized anxiety disorder exhibited a significant positive association with greater likelihood of reporting this barrier.

Regarding the cost barrier, in both groups (LGBTQ+ and non-LGBTQ+), students aged 20 years or older, with parents with less education, and with major depressive episode and generalized anxiety disorder were more likely

Table 5. Variables associated with help-seeking barriers stratified by LGBTQ+ status.

	Number of barriers		Unsure where to go		Cost	
	Non-LGBTQ+	LGBTQ+	Non-LGBTQ+	LGBTQ+	Non-LGBTQ+	LGBTQ+
	IRR (95% CI)	IRR (95% CI)	OR (95% CI)	OR (95% CI)	OR (95% CI)	OR (95% CI)
Gender identity (ref = cisgender man)						
Cisgender woman	1.02 (0.96, 1.10)	1.06 (0.97, 1.16)	1.21 (0.98, 1.50)	1.57* (1.17, 2.11)	1.16 (0.93, 1.44)	1.97* (1.45, 2.67)
TGNC	–	1.09 (0.95, 1.25)	–	1.85* (1.15, 2.99)	–	1.93* (1.18, 3.15)
20–30 (ref = 18–19 years)	1.05 (0.97, 1.13)	1.09 (1.00, 1.18)	1.46* (1.14, 1.88)	1.14 (0.84, 1.55)	1.61* (1.25, 2.07)	1.98* (1.42, 2.75)
Parental education (ref = university)						
Secondary school or less	1.12* (1.04, 1.20)	1.10* (1.01, 1.18)	1.57* (1.24, 1.99)	1.52* (1.16, 1.98)	1.62* (1.28, 2.06)	1.59* (1.21, 2.09)
Some post-secondary education	0.98 (0.90, 1.07)	1.02 (0.93, 1.11)	1.15 (0.88, 1.50)	1.20 (0.89, 1.61)	1.40* (1.07, 1.84)	1.60* (1.18, 2.17)
Public university (ref = private)	1.07 (0.99, 1.16)	0.91 (0.81, 1.01)	1.04 (0.80, 1.34)	0.96 (0.66, 1.40)	1.21 (0.92, 1.58)	0.78 (0.53, 1.15)
Location of the university – Other (ref = Santiago)	0.97 (0.90, 1.04)	0.88* (0.80, 0.97)	0.92 (0.73, 1.16)	0.70* (0.50, 0.97)	0.82 (0.65, 1.04)	0.60* (0.42, 0.84)
Lifetime professional service use (ref = no)	0.87* (0.81, 0.93)	0.99 (0.92, 1.06)	0.58* (0.46, 0.73)	0.71* (0.55, 0.92)	1.09 (0.86, 1.38)	1.14 (0.88, 1.48)
Lifetime nonprofessional service use (ref = no)	1.14* (1.00, 1.30)	0.94 (0.83, 1.08)	1.02 (0.67, 1.57)	0.88 (0.55, 1.40)	1.19 (0.78, 1.83)	1.18 (0.72, 1.94)
Mayor depressive episode (ref = no)	1.28* (1.20, 1.37)	1.25* (1.16, 1.35)	1.72* (1.38, 2.13)	1.46* (1.13, 1.89)	1.77* (1.41, 2.21)	1.55* (1.19, 2.02)
Generalized anxiety disorder (ref = no)	1.18* (1.09, 1.28)	1.12* (1.04, 1.22)	1.47* (1.11, 1.93)	1.16 (0.86, 1.57)	1.48* (1.13, 1.95)	1.58* (1.16, 2.15)
Panic disorder (ref = no)	1.03 (0.93, 1.14)	1.05 (0.95, 1.15)	1.07 (0.75, 1.53)	0.81 (0.57, 1.15)	1.06 (0.74, 1.51)	1.04 (0.72, 1.50)
Any bipolar disorder (ref = no)	1.15 (0.97, 1.36)	1.07 (0.92, 1.24)	1.57 (0.84, 2.95)	0.98 (0.56, 1.70)	1.45 (0.80, 2.65)	1.24 (0.69, 2.22)
Drug abuse (ref = no)	1.08 (0.95, 1.23)	1.02 (0.91, 1.15)	1.37 (0.88, 2.12)	1.06 (0.69, 1.62)	1.55 (1.00, 2.42)	1.18 (0.76, 1.84)
Alcohol dependence (ref = no)	1.06 (0.84, 1.33)	1.16 (0.95, 1.42)	1.04 (0.46, 2.36)	1.12 (0.50, 2.51)	0.89 (0.38, 2.08)	1.57 (0.64, 3.84)
F(*ndf*, *ddf*)	11.34 (14, 117839.3)*	7.05 (15, 256411.2)*	6.82 (14, 67842.7)*	2.89 (15, 174966.2)*	7.06 (14, 65641.0)*	6.37 (15, 176448.3)*

Note. LGBTQ+: lesbian, gay, bisexual, trans, questioning, and other sexual and gender minority students; TGNC: trans and gender non-conforming; ref: reference category; *F*: *F*-test to evaluate the joint significance of the independent variables; *ndf*: numerator degrees of freedom; *ddf*: denominator degrees of freedom; IRR: incidence rate ratio; OR: odds ratio; CI: confidence interval.

The models were estimated using post-stratification weights.

*$p < .05$.

to report this barrier. Cisgender woman and TGNC students from the LGBTQ+ group were more likely to report the cost barrier, while those from universities in regions other than Santiago were less likely to do so.

The models for the variables associated with the rest of the barriers to help-seeking are presented in Supplementary Table 2. Of note from these results is that, in the LGBTQ+ group, there were no statistically significant associations with the barrier preferring to handle the problem on one's own, $F(15, 226801.3) = 0.75$, $p = .736$, and that those who had used professional services in their lifetime were more likely to report the barriers unsure of treatment efficacy (OR = 1.58, 95% confidence interval [CI] 1.13, 2.21) and time, transportation, or scheduling (OR = 1.35, 95% CI 1.04, 1.75), while being less likely to report the barriers too embarrassed (OR = 0.74, 95% CI 0.57, 0.97) and people would treat differently (OR = 0.71, 95% CI 0.52, 0.97). Also, it is notable that major depressive episode was positively associated with seven of the nine barriers in LGBTQ+ and non-LGBTQ+ students: unsure of treatment efficacy, embarrassment, time, transportation, and scheduling problems, potential harm to academic career, and people would treat differently, in addition to the barriers unsure where to go and cost mentioned above (OR ≥ 1.37).

Discussion

The results of this study revealed that LGBTQ+ students, especially TGNC students, use services more extensively than their non-LGBTQ+ peers; that some barriers to help-seeking are differently distributed according to sexual orientation; and that there are differences and similarities in the variables associated with service use and barriers to help-seeking reported by LGBTQ+ and non-LGBTQ+ students. These results reinforce the importance of considering dimensions such as sexual orientation and gender identity in the analysis of service use and barriers to help-seeking.

The higher use of mental health services among LGBTQ+ college students in this study is consistent with what has been observed in other contexts (Baams et al., 2018; Dunbar et al., 2017; Oswalt & Wyatt, 2011; Sontag-Padilla et al., 2016). This population has a higher prevalence of mental health problems (Brittain & Dinger, 2015; Liu et al., 2019; Przedworski et al., 2015; Rentería et al., 2021), which could partially explain their higher use of mental health services. Other facilitators identified by LGBTQ+ youth who have used mental health services include symptom recognition by themselves, family members, or health professionals and positive attitudes toward mental health care (Crockett et al., 2022). Understanding the factors that account for increased service use in this population may be helpful in promoting service use for all students, especially in groups with larger treatment gaps.

A higher number of barriers were expected in LGBTQ+ students compared to non-LGBTQ+ students (Dunbar et al., 2017); however, this was only observed in gay/lesbian students. In addition, differences in sexual orientation were observed for some barriers. Non-heterosexual students were especially unlikely to report as a barrier preferring to handle the problems on their own and talking to friends/family, but were more likely to report the barriers related to services: cost, unsure where to go, time, transportation, and scheduling problems. The most frequent barriers found in this study match the results of another study with sexual minority students, in which the most frequent barriers were information about how to access, cost, and concerns about eligibility (Dunbar et al., 2017). These barriers reported by LGBTQ+ students are especially relevant to college health services and interventions to promote access to mental health services since they are susceptible to improvement by these services. For example, this can be achieved through the dissemination of information about cost, working hours, how to make an appointment, or other relevant information about how to access mental health care. However, it is important to consider that, while this study found differences in barriers that may be common to LGBTQ+ and non-LGBTQ+ students, the meaning of these types of barriers may differ depending on LGBTQ+ status. For example, cost and uncertainty about where to go may be related to access to affirming and safe services for LGBTQ+ students. In this context, qualitative studies may be helpful in examining the meaning of these types of barriers (Crockett et al., 2022).

TGNC students reported the highest percentages of service use, but no differences in barriers to help-seeking were observed between TGNC and cisgender students. This possibly occurred because of the wide variability in the types of barriers that cisgender men and women reported in this study (e.g. women had higher percentages of barriers cost, unsure where to go, and time, transportation, and scheduling problems than men), with these differences also being observed in other studies (e.g. men report more barriers related to stigma and women more cost and time barriers; Horwitz et al., 2020).

Variables associated with service use and barriers to help-seeking revealed similarities and differences between LGBTQ+ and non-LGBTQ+ students, reflecting the influence of factors that are important for all college students and others that have a larger impact on specific groups such as LGBTQ+ students. One similarity in the associated variables is that students with less educated parents report lower lifetime, 12-month, and current service use. This result may reflect socioeconomic disparities in access to mental health services in the college population. Similar results have been observed for lower service use in students from poorer socioeconomic backgrounds (Eisenberg et al., 2007) and current economic

problems (Nash et al., 2017), while contrasting results from another study showed that lower service use in lower social classes disappears when controlling for psychopathology (Cullinan et al., 2020). In this regard, a study that employed a general population sample from 25 countries found that those with a higher educational level had higher use of services after adjusting for economic income, thus suggesting that differences by educational level might not be due to income differences but to other types of barriers such as stigma or perceived need (Evans-Lacko et al., 2018). In this study, it was observed that lower educational level of parents was also associated with a greater number of barriers and the barriers unsure where to go and cost, which could partly explain the reasons for the lower use of services in this group.

Regarding differences in the associated variables, women in the non-LGBTQ+ group reported more service use, which is consistent with the literature (Eisenberg et al., 2011; Sontag-Padilla et al., 2016). However, this was not true of the LGBTQ+ group, possibly because non-heterosexual men have higher levels of service use, comparable to non-heterosexual women. Similarly, lifetime use of professional services was also differentially associated with some barriers according to LGBTQ+ status. For example, it was linked with unsure about treatment efficacy and time, transportation, and scheduling problems only in the LGBTQ+ group. This is possibly related to the fact that LGBTQ+ youth have often had negative experiences with mental health providers, resulting in lower perceived effectiveness of care (Crockett et al., 2022). Furthermore, based on these experiences, they have learned about the logistical aspects (time, transportation, and scheduling) involved in mental health care.

One of the limitations of this study is that it did not include measures on the use of university and non-university services or the type of services used during the 12-month and current period. A second limitation is that TGNC students had to be grouped into a single category because of their low frequency in the sample. Third, this study used a convenience sample of five universities where the entire university population was invited to participate, but only one-third of the population did so. Therefore, these results may not be representative for groups that are underrepresented or difficult to reach through online surveys. To counteract this limitation, a communication campaign accompanied the distribution of the survey, and all analyses were adjusted with post-stratification weights to reduce the differences between groups that did and did not complete the survey.

Based on a large sample of first-year university students from five universities, this study offers novel information on service use by LGBTQ+ university students in Chile, thus contributing to the scarce literature on the differences in barriers to help-seeking according to

sexual orientation and gender identity in university populations. These results may be useful for universities, decision makers, and professionals involved in improving access to mental health services for college students. In this regard, it is important to consider that while LGBTQ+ students seek mental health services more than their non-LGBTQ+ peers, they face multiple barriers such as those examined in this study (e.g. unsure where to go, cost, and preferring to handle problems on their own) as well as other barriers related to sexual orientation and gender identity reported elsewhere (e.g. discrimination, confidentiality concerns, availability and cost of affirmative services; Crockett et al., 2022; McDermott et al., 2018). Based on the above, it would be advisable to consider differences related to sexual orientation and gender identity when designing and implementing interventions and policies to improve access to mental health services. The barriers most frequently reported by non-heterosexual students were related to services (cost and uncertainty of where to go, time, transportation, and schedule), which can be addressed by providing more information about how to access mental health services (both public and university services). In addition, differences were found among the non-heterosexual students in the barriers to help-seeking (e.g. questioning students reported more the barrier of feeling too embarrassed to consult), which may account for different obstacles that may require specific supports to access mental health services. Moreover, university services can be favorable spaces to reduce inequities in access to mental health services through the provision of affordable, accessible, and affirmative interventions for its students, so it is recommended that the provision of university services could be strengthened.

Future studies could delve deeper into the factors that facilitate help-seeking in this population and test interventions aimed at improving help-seeking in the college population and decreasing disparities in service use. Also, future studies could consider regional differences when examining the use of services and barriers to help-seeking because there may be differences within the same country toward the LGBTQ+ population, for example, in the provision of affirmative services or attitudes toward the LGBTQ+ people, among others, that could account for the results.

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The authors report there are no competing interests to declare.

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Data availability statement

The data that support the findings of this study are available from the corresponding author, VM, upon reasonable request.

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