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Discrimination, Mental Health, and Substance Use Disorders Among Sexual Minority Populations

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Abstract

Purpose: Sexual minority (lesbian, gay, bisexual) populations have a higher prevalence of mental health and substance use disorders compared to their heterosexual counterparts. Such disparities have been attributed, in part, to minority stressors, including distal stressors such as discrimination. However, few studies have examined associations between discrimination, mental health, and substance use disorders by gender among sexual minority populations.

Methods: We analyzed data from 577 adult men and women who self-identified as lesbian, gay, or bisexual and participated in Wave 2 of the National Epidemiologic Survey on Alcohol and Related Conditions (NESARC). Six questions assessed discrimination due to sexual orientation. Weighted multivariable logistic regression examined associations between experiences of sexual orientation discrimination and both mental health and substance use disorders. Analyses were conducted separately for sexual minority men and women, adjusting for sociodemographic covariates.

Results: Sexual minority men who ever experienced discrimination (57.4%) reported higher odds of any lifetime drug use disorder and cannabis use disorder compared to sexual minority men who never experienced discrimination. Sexual minority women who ever experienced discrimination (42.9%) reported higher odds of any lifetime mood disorder and any lifetime anxiety disorder compared to sexual minority women who never experienced discrimination.

Conclusion: The findings suggest that discrimination is differentially associated with internalizing (mental health) and externalizing (substance use) disorders for sexual minority men and women. These findings indicate a need to consider how homophobia and heteronormative discrimination may contribute to distinct health outcomes for lesbian and bisexual women compared with gay and bisexual men.

Key words: discrimination, gender, mental health, sexual minorities, substance use.

Introduction

Mental health and substance use disorders have been shown to be more prevalent among sexual minority (lesbian, gay, and bisexual [LGB]) adults than among heterosexual adults in the United States.[1–5] In accordance with the minority stress model,[6,7] distal stressors such as the experience of discrimination—that is, unequal or unfair treatment by others due to identity or category membership—have negative psychological consequences for sexual minority individuals and specifically can contribute to internalizing disorders such as mental health problems and externalizing disorders such as substance use.[8,9] Indeed, empirical evidence has found that discrimination based on sexual orientation or sexual identity is associated with psychiatric disorders[9] and substance use disorders[10] among sexual minority people.

The minority stress model provides a useful framework for explaining health inequities among sexual minority adults. Studies using diverse methodologies consistently attribute the source of sexual orientation-related mental health and substance use disparities in sexual minorities to disproportionate exposure to minority stress—the stress associated with stigma-related social disadvantage that compounds general life stress.[6,11–13] According to this model,[6] minority stress emerges from stigmatizing societal structures—termed *structural stigma*[14]—that deny sexual minority individuals

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(i.e., those who identify as gay, bisexual, or lesbian or engage in same-sex sexual behavior) the same rights and opportunities afforded to heterosexuals. In addition, discrimination within families, religious communities, schools, and workplaces elevate stress and, therefore, the mental health and substance burden experienced by sexual minorities across the lifespan.[15]

Despite numerous studies documenting associations between minority stressors and mental health outcomes,[16] only a handful of representative studies have focused on associations between discrimination, mental health, and substance use problems by gender.[1] This is particularly important as epidemiological evidence indicates gender differences in the prevalence of many mental health disorders.[17] For example, women have nearly twice the prevalence of mental health disorders, including major depression, generalized anxiety, panic disorder, social phobia, and specific phobia, compared with men; in contrast, men show higher prevalences of alcohol and drug dependence.[18,19]

Researchers have previously described a ''liability model'' of gender differences related to internalizing versus externalizing problems,[20] such that women tend to have a greater prevalence of internalizing disorders, while men have a higher prevalence of externalizing disorders.[17,18] Accordingly, the patterns of the associations between discrimination, mental health, and substance use disorders may differ by gender, such that sexual minority women who experience discrimination are more vulnerable to mental health disorders and sexual minority men who experience discrimination are more vulnerable to substance use disorders. To date, studies have examined the impact of discrimination on mental health and substance use separately[1,8]; however, we are unaware of studies that examine both of these outcomes together according to gender.

This study sought to examine whether associations between discrimination, mental health, and substance use disorders among sexual minority adults patterned differentially by gender. Guided by the minority stress model and the liability model of gender differences in internalizing–externalizing disorders, our *a priori* hypothesis was that experiences of discrimination would be associated with elevated prevalence of mental health disorders among sexual minority women and with substance use disorders among sexual minority men.

Methods

Sample

The data were drawn from the 2004–2005 National Epidemiologic Survey on Alcohol and Related Conditions (NESARC), a nationally representative sample of 34,653 civilian, noninstitutionalized U.S. adults, aged 18 and older. Sample weights were calculated to ensure that the weighted sample represented the U.S. adult noninstitutionalized population based on the 2000 census. Detailed information on the NESARC survey methods and procedures is described elsewhere.[21,22] The analytic sample for this study included $n=577$ individuals who self-identified as LGB. The ethical review and approval of the NESARC was received from the U.S. Office of Management and Budget and from the U.S. Census Bureau. This study used deidentified publicly available data and was considered exempt by the institutional review board at Brown University.

Measures

Sexual orientation. Participants were shown a preprinted response card and asked about their sexual identity: ''Which category on the card best describes you?'' (1) heterosexual (straight), (2) gay or lesbian, (3) bisexual, or (4) not sure. Of the 34,653 NESARC Wave 2 participants, $n=577$ (1.47%) self-identified as LGB (271 men and 306 women). To reduce the potential for misclassification, we excluded the 170 participants who responded ''not sure,'' given evidence indicating that individuals who identify as ''not sure'' or ''don't know'' often do not understand the meaning of the question.[23]

Discrimination. The Experiences of Discrimination (EOD) Scale[24] assesses EOD. Participants responded to six questions about how often they had experienced any of the following in the past year or before the past year because they were LGB: discrimination in their ability to obtain healthcare or health insurance coverage; discrimination when they got care; discrimination in public; discrimination in any other situation (obtaining a job, on a job, getting admitted to a school or training program, in courts, or by the police); called names; and made fun of, picked on, pushed, shoved, hit or threatened with harm. Participants answered ''never,'' ''almost never,'' ''sometimes,'' ''fairly often,'' or ''very often'' to any of the six discrimination questions. The item was highly skewed and thus dichotomized at the median such that responses were classified into ''ever experienced discrimination'' ($n=269$, 50%, weighted) and ''never experienced discrimination'' ($n=308$, 50%, weighted).[8]

Lifetime mental health disorders. The Alcohol Use Disorder and Associated Disabilities Interview Schedule—DSM IV version (AUDADIS-IV)—was used to determine the presence of any lifetime DSM-IV psychiatric disorders. The mood disorders assessed included major depressive episode, manic episode, dysthymic episode, hypomanic episode, and any mood disorder, which included any of these mood disorders. Anxiety disorders included panic disorder with and without agoraphobia, agoraphobia without history of panic disorder, social phobia, specific phobia, posttraumatic stress disorder, generalized anxiety disorder, and any anxiety disorder, which included any of these anxiety disorders.[22] Reliability and validity of the NESARC mood and anxiety disorder measures are extensively discussed in detail elsewhere.[21]

Lifetime substance use disorders. The AUDADIS-IV was used to assess DSM-IV criteria for nicotine dependence, alcohol and drug-specific abuse, and dependence for 10 separate categories of illicit and/or medicinal drugs. In this study, drug use disorders were categorized as any prescription drug use disorder (sedatives, tranquilizers, opioids, and amphetamine), cannabis use disorder, other drug use disorder (hallucinogens, cocaine, inhalants/solvents, heroin, and other drugs), and any drug use disorder, which included any of these drug use disorders. Any participant who met diagnostic criteria for either lifetime substance abuse or dependence was defined as having lifetime substance use disorder. Reliability and validity of the AUDADIS-IV measures for substance use disorders are discussed extensively elsewhere.[25]

Sociodemographic variables. We included age, sex, race/ethnicity, marital status, place of birth, employment, highest

level of education, total family income past year, any health insurance at any time within the previous year, and private health insurance at any time within the previous year.

Statistical analyses

All analyses took into account the sampling weights and clustering within sample strata using Taylor linearization implemented by STATA survey commands. All analyses were conducted using STATA 13.1 software (StataCorp LP, College Station, TX). Data were analyzed using weighted proportions, 95% confidence intervals (CI), and weighted multivariable logistic regression models to generate adjusted odds ratios (AOR), adjusted for statistically significant sociodemographic variables, such as age and birth place for men and age and marital status for women. Analyses were conducted separately for sexual minority males and females.

Results

Sociodemographic characteristics

Table 1 shows sociodemographic characteristics of the participants. Of 271 sexual minority men who were included in this study, 144 (57.4%) reported having ever experienced any discrimination because they were LGB. Of 306 sexual minority women who were included in this study, 125 (42.9%) reported having ever experienced any discrimination.

Lifetime mental health disorders and substance use disorders

Table 2 presents weighted prevalence estimates for lifetime mental health disorders and substance use disorders, stratified by gender.

Among sexual minority men, those who reported having ever experienced discrimination based on sexual orientation were more likely to report any lifetime drug use disorder (41.9% vs. 15.5%; $P<0.001$), cannabis use disorder (35.1% vs. 10.7%; $P<0.001$), and other drug use disorder (19.1% vs. 5.2%; $P=0.01$) than gay or bisexual men who never experienced discrimination based on sexual orientation. However, sexual minority men who reported having ever experienced discrimination based on sexual orientation were less likely to report panic disorder without agoraphobia (13.3% vs. 15.4%; $P<0.001$) than sexual minority men who never experienced discrimination based on sexual orientation.

Sexual minority women who reported having ever experienced discrimination based on sexual orientation were more likely to report lifetime major depressive episode (56.9% vs. 40.6%; $P=0.02$), any anxiety disorder (62.4% vs. 41.0%; $P<0.01$), panic disorder without agoraphobia (26.0% vs. 12.3%; $P=0.02$), specific phobia (40.4% vs. 25.2%; $P=0.02$), and generalized anxiety disorder (26.5% vs. 13.5%; $P=0.02$).

Table 3 provides the AOR and 95% CI from multivariable logistic regression analyses comparing sexual minority respondents who reported having ever experienced discrimination based on sexual orientation and those who reported having never experienced discrimination based on sexual orientation, controlling for sociodemographics that had significant bivariate associations (age and place of birth for men, age and marital status for women).

Sexual minority men who reported having ever experienced discrimination based on sexual orientation had higher odds of any lifetime drug use disorder (AOR 3.57, 95% CI 1.73–7.36) and cannabis use disorder (AOR 4.05, 95% CI 1.74–9.41) compared to sexual minority men who reported having never experienced discrimination (Table 3). Sexual minority men who reported having ever experienced discrimination based on sexual orientation also had higher odds of panic disorder with agoraphobia (AOR 24.90, 95% CI 2.47–251.48) compared to sexual minority men who reported having never experienced discrimination. However, it is important to note that the CI are wide.

Sexual minority women who reported having ever experienced discrimination based on sexual orientation had higher odds of lifetime any mood disorder (AOR 1.97, 95% CI 1.07–3.62), major depressive episode (AOR 2.47, 95% CI 1.35–4.54), any anxiety disorder (AOR 2.68, 95% CI 1.45–4.94), panic disorder without agoraphobia (AOR 2.59, 95% CI 1.22–5.51), panic disorder with agoraphobia (AOR 4.19, 95% CI 1.34–13.12), specific phobia (AOR 2.15, 95% CI 1.19–3.87), and generalized anxiety disorder (AOR 2.46, 95% CI 1.21–5.03) compared to sexual minority women who never experienced discrimination (Table 3).

Discussion

To our knowledge, this is one of the first studies to examine whether associations between discrimination, mental health, and substance use disorders are differentially patterned by gender among sexual minority adults. This analysis allows us to have a more nuanced examination of patterns of association between EOD and specific behavioral health outcomes in sexual minority populations.

Consistent with our predictions, a sizable proportion of male (57.4%) and female participants (42.9%) reported discrimination based on sexual identity and, in accordance with the minority stress model,[6,7] this was associated with significantly higher odds of having a diagnosable mental health or substance use disorder. It is important to note that not all participants in our sample reported experiencing discrimination due to being LGB. The relatively high proportion of those who did not report LGB discrimination (42.6% of male participants; 57.1% of female participants) was unexpected and warrants further research.

A body of research has previously found that many members of disadvantaged groups tend to minimize the belief that they are targets for discrimination.[26,27] However, this study cannot determine whether participants truly did not experience discrimination due to their sexual identity, minimized their perceptions of discrimination, or underreported exposure to discrimination in the survey.

Our findings are consistent with the gender liability model of internalizing–externalizing disorders.[20] Although previous research has documented gender differences in the population prevalence of internalizing and externalizing disorders,[17,28] our research brings attention to the role of gender in the health consequences of homophobic or heteronormative discrimination. We found that sexual minority women who reported experiencing discrimination had greater levels of internalizing (mental health) problems, whereas sexual minority men who reported experiencing discrimination had greater levels of externalizing (substance use) problems. Although the minority stress model makes reference to within-group factors, such as gender, which might affect how sexual minority individuals respond to discrimination, there are few known studies that

Table 1. Sociodemographic Characteristics of Sexual Minority Participants by Discrimination Experience: NESARC Wave 2 (2004–2005)

	Sexual minority men (n = 271)			*Sexual minority women (n = 306)*		
	Never experienced discrimination (n = 127, 42.6%)	*Ever experienced discrimination (n = 144, 57.4%)*		*Never experienced discrimination (n = 181, 57.1%)*	*Ever experienced discrimination (n = 125, 42.9%)*	
	% (95% CI) or mean ± SE	*% (95% CI) or mean ± SE*	P	*% (95% CI) or mean ± SE*	*% (95% CI) or mean ± SE*	P
Age (at Wave 1)	44.8 ± 0.13	40.6 ± 1.29	0.04	36.5 ± 1.19	35.4 ± 1.18	0.54
Race/ethnicity			0.26			0.61
White, non-Hispanic	76.6 (67.4–83.9)	73.9 (64.1–81.7)		67.8 (58.4–76.0)	72.2 (60.9–81.3)	
Black, non-Hispanic	7.4 (3.5–14.9)	7.9 (4.1–14.9)		15.8 (10.4–23.4)	10.5 (6.0–17.6)	
Other, non-Hispanic	2.5 (0.7–7.9)	8.4 (3.6–18.4)		6.7 (3.4–12.9)	8.7 (3.1–22.3)	
Hispanic	13.5 (8.1–21.6)	9.8 (5.3–17.3)		9.6 (6.0–15.2)	8.6 (4.5–15.8)	
Marital status			0.20			<0.01
Married	12.6 (7.0–21.8)	6.8 (2.7–16.1)		25.7 (18.0–35.3)	7.5 (3.4–15.6)	
Living with partner	8.8 (4.0–18.1)	19.6 (10.4–33.8)		6.4 (3.0–13.2)	11.9 (6.4–21.2)	
Widowed/divorced/ separated	17.9 (11.0–27.8)	12.0 (6.3–21.7)		22.3 (15.5–30.9)	17.9 (11.5–26.9)	
Never married	60.7 (50.5–70.0)	61.6 (49.7–72.2)		45.7 (37.2–54.4)	62.7 (52.6–71.9)	
Born in United States			0.02			0.41
Yes	86.0 (76.5–92.0)	96.6 (89.9–98.9)		95.9 (91.5–98.0)	92.8 (79.3–97.7)	
No	14.0 (8.0–23.5)	3.4 (1.1–10.1)		4.1 (2.0–8.5)	7.2 (2.3–20.7)	
Employment			0.24			0.23
Employed—full time	59.8 (48.6–70.0)	61.1 (49.4–71.7)		61.7 (52.9–69.8)	70.8 (57.3–81.4)	
Employed—part time	10.3 (4.5–22.1)	18.5 (11.3–28.7)		16.7 (10.9–24.6)	13.3 (5.8–27.7)	
Unemployed/retired	24.8 (16.4–35.6)	15.5 (9.0–25.3)		16.2 (11.0–23.3)	7.2 (3.2–15.4)	
Disabled	5.1 (2.6–9.7)	5.0 (2.5–9.4)		5.4 (2.9–10.1)	8.8 (4.1–17.7)	
Highest level of education			0.55			0.37
Less than high school	3.9 (1.6–9.2)	1.4 (0.3–5.5)		9.9 (5.9–16.1)	7.6 (3.1–17.4)	
High school or GED	19.9 (12.5–30.0)	16.4 (9.7–26.4)		20.6 (13.7–29.9)	11.8 (6.5–20.5)	
Some college	31.8 (15.7–34.1)	33.8 (24.7–44.2)		35.9 (26.5–46.5)	41.2 (30.5–52.9)	
Completed college	23.7 (15.7–34.1)	31.1 (21.5–42.7)		19.7 (13.4–28.1)	27.0 (18.1–38.2)	
Completed master's or higher	20.7 (13.3–30.9)	17.4 (11.6–25.3)		13.9 (8.9–21.1)	12.4 (7.7–19.4)	
Total family income past year			0.80			0.54
<$ 20,000	24.9 (17.3–34.3)	26.5 (17.9–37.3)		26.3 (19.3–34.6)	22.2 (13.7–34.0)	
≥$ 20,000	75.1 (65.7–82.7)	73.6 (62.7–82.1)		73.7 (65.4–80.7)	77.8 (66.0–86.3)	
Any health insurance at any time past year[a]			0.40			0.67
Yes	83.1 (71.9–90.4)	87.9 (78.6–93.5)		84.6 (77.5–89.8)	86.8 (76.2–93.1)	
No	16.9 (9.6–28.2)	12.1 (6.5–21.4)		15.4 (10.2–22.5)	13.2 (6.9–23.8)	
Private health insurance at any time past year			0.95			0.24
Yes	69.5 (59.1–78.2)	70.0 (58.7–79.2)		63.3 (55.2–70.8)	70.8 (59.2–80.2)	
No	30.5 (21.8–40.9)	30.1 (20.8–41.3)		36.7 (29.2–44.9)	29.2 (19.8–40.8)	

[a]Any insurance includes Medicare, Medi-gap, Medicaid, TRICARE/CHAMPUS/CHAMPVA/VA or other military healthcare, private health insurance, government-/state-sponsored health insurance, long term, and any other health insurance plan.

%, weighted; CI, confidence intervals; GED, graduate equivalency degree; NESARC, National Epidemiologic Survey on Alcohol and Related Conditions.

directly examine whether associations between discrimination and health outcomes are differentially patterned among sexual minority women and men.[1,8,29]

Research on the role of gender in coping with stress has been reviewed previously.[30–32] Empirical evidence suggests that women tend to have stronger psychological and physiological responses to stress compared with men.[33] Women also are often socialized to use emotion-focused strategies when coping with stress such as distracting, whereas men are socialized to use more problem-focused strategies.[34,35] Although the pattern of internalizing problems among women who experienced discrimination is consistent with emotion-focused coping, prior studies have also found that emotion-focused coping is positively associated with substance use, which was not found in our study.[36,37]

Gender differences are particularly well-documented in the association between stress and alcohol use, such that men are more likely to consume alcohol to cope with stress[38]

TABLE 2. PREVALENCE OF LIFETIME MENTAL HEALTH DISORDERS AND SUBSTANCE USE DISORDERS AMONG SEXUAL MINORITY MEN AND WOMEN: NESARC WAVE 2 (2004–2005)

	Sexual minority men			*Sexual minority women*		
	Never experienced discrimination (n = 127)	*Ever experienced discrimination (n = 144)*		*Never experienced discrimination (n = 181)*	*Ever experienced discrimination (n = 125)*	
	% (95% CI)	*% (95% CI)*	P	*% (95% CI)*	*% (95% CI)*	P
Lifetime mental health disorders						
Any mood disorder			0.12			0.11
Yes	33.4 (22.6–46.2)	46.3 (36.2–56.7)		47.5 (39.4–55.7)	58.7 (47.5–69.1)	
No	66.6 (53.8–77.4)	53.7 (43.4–63.8)		52.5 (4.3–60.6)	41.3 (31.0–52.6)	
Major depressive episode			0.22			0.02
Yes	31.6 (21.5–43.8)	41.4 (31.3–52.3)		40.6 (32.8–49.0)	56.9 (45.6–67.5)	
No	68.4 (56.2–78.5)	58.6 (47.7–68.7)		59.4 (51.0–67.2)	43.1 (32.5–54.4)	
Manic episode			0.61			0.43
Yes	8.4 (3.7–17.9)	10.6 (6.2–17.6)		9.2 (5.7–14.6)	12.2 (7.0–20.6)	
No	91.6 (82.1–96.3)	89.4 (82.4–93.8)		90.8 (85.4–94.3)	87.8 (79.4–93.0)	
Dysthymic episode			0.29			0.11
Yes	7.2 (3.3–15.1)	11.7 (7.3–18.2)		10.8 (6.3–17.8)	19.1 (11.8–29.3)	
No	92.8 (85.0–96.7)	88.3 (81.8–92.7)		89.2 (82.2–93.7)	80.9 (70.7–88.2)	
Hypomanic episode			0.05			0.35
Yes	1.7 (0.6–5.1)	6.2 (2.5–14.8)		10.0 (5.74–17.1)	5.3 (1.4–18.5)	
No	98.3 (94.9–99.4)	93.8 (85.2–97.5)		90.0 (82.9–94.3)	94.7 (81.5–98.6)	
Any anxiety disorder			0.87			<0.01
Yes	39.8 (29.6–50.9)	41.0 (30.6–52.3)		41.0 (33.0–49.5)	62.4 (51.5–72.7)	
No	60.2 (49.1–70.4)	59.0 (47.7–69.4)		59.0 (50.5–67.0)	37.6 (27.8–48.5)	
Panic disorder without agoraphobia			<0.001			0.02
Yes	15.4 (8.7–25.8)	13.3 (8.0–21.3)		12.3 (7.2–20.3)	26.0 (16.5–38.5)	
No	84.6 (74.2–91.3)	86.7 (78.7–92.0)		87.7 (79.7–92.8)	74.0 (61.5–83.6)	
Panic disorder with agoraphobia			<0.001			0.07
Yes	0.2 (<0.01–1.7)	5.1 (2.2–11.4)		3.8 (1.5–9.1)	10.8 (4.9–22.1)	
No	99.8 (98.3–100.0)	94.9 (88.6–97.8)		96.2 (90.9–98.5)	89.2 (77.9–95.1)	
Agoraphobia without history of panic disorder			0.34			0.40
Yes	1.0 (0.2–4.4)	2.4 (0.6–8.8)		0.5 (<0.01–3.4)	1.4 (0.2–9.6)	
No	99.0 (95.6–99.8)	97.6 (91.2–99.4)		99.6 (96.6–99.9)	98.6 (90.4–99.8)	
Social phobia			0.12			0.25
Yes	8.5 (4.2–16.7)	16.2 (9.7–25.6)		12.2 (8.1–18.0)	17.2 (10.6–26.7)	
No	91.5 (83.3–95.8)	83.8 (74.4–90.3)		87.8 (82.0–91.9)	82.8 (73.3–89.4)	
Specific phobia			0.80			0.02
Yes	20.5 (13.4–30.0)	21.8 (15.7–29.5)		25.2 (18.9–32.7)	40.4 (30.0–51.7)	
No	79.5 (70.0–86.6)	78.2 (70.5–84.3)		74.8 (67.3–81.1)	59.7 (48.4–70.0)	
Posttraumatic stress disorder			0.12			0.88
Yes	7.8 (3.5–16.7)	15.7 (10.3–23.3)		22.3 (15.6–30.8)	23.7 (15.3–34.9)	
No	92.2 (83.3–96.5)	84.3 (76.7–89.7)		77.7 (69.2–84.4)	76.3 (65.2–84.7)	
Generalized anxiety disorder			0.66			0.02
Yes	14.0 (7.6–24.5)	16.4 (10.5–24.7)		13.5 (8.6–20.6)	26.5 (17.7–37.7)	
No	86.0 (75.5–92.4)	83.6 (75.3–89.5)		86.5 (79.4–91.4)	73.5 (62.3–82.3)	
Lifetime substance use disorders						
Alcohol use disorder			0.20			0.90
Yes	51.6 (40.9–62.1)	60.7 (50.3–70.2)		56.1 (47.4–64.5)	55.3 (44.1–66.1)	
No	48.4 (38.0–59.1)	39.3 (29.8–49.7)		43.9 (35.5–52.6)	44.7 (33.9–55.9)	
Nicotine dependence			0.89			0.34
Yes	33.5 (24.3–44.2)	32.6 (23.7–42.9)		35.3 (27.0–44.5)	42.3 (31.8–53.5)	
No	66.5 (55.9–75.7)	67.4 (57.1–76.3)		64.7 (55.5–73.0)	57.7 (46.5–68.2)	

(*continued*)

TABLE 2. (CONTINUED)

	Sexual minority men			*Sexual minority women*		
	Never experienced discrimination (n = 127)	*Ever experienced discrimination (n = 144)*		*Never experienced discrimination (n = 181)*	*Ever experienced discrimination (n = 125)*	
	% (95% CI)	*% (95% CI)*	P	*% (95% CI)*	*% (95% CI)*	P
Any drug use disorder[a]			<0.001			0.98
Yes	15.5 (9.6–24.0)	41.9 (32.1–52.4)		33.2 (25.2–42.3)	33.4 (23.3–45.2)	
No	84.6 (76.0–90.5)	58.1 (47.6–67.9)		66.8 (57.7–74.8)	66.6 (54.8–76.7)	
Any prescription drug use disorder[b]			0.14			0.88
Yes	8.6 (4.1–17.3)	16.2 (9.9–25.4)		13.0 (7.6–21.4)	12.2 (5.9–23.5)	
No	91.4 (82.7–96.0)	83.8 (74.6–90.1)		87.0 (78.6–92.4)	87.8 (76.5–94.1)	
Cannabis use disorder			<0.001			0.95
Yes	10.7 (5.8–18.7)	35.1 (25.1–46.5)		25.3 (18.2–34.1)	25.7 (17.1–36.7)	
No	89.3 (81.3–94.2)	64.9 (53.5–74.9)		74.7 (65.9–81.8)	74.3 (63.3–82.9)	
Other drug use disorder[c]			0.01			0.38
Yes	5.2 (1.9–13.6)	19.1 (12.0–28.9)		13.5 (8.5–20.9)	18.4 (9.9–31.6)	
No	94.8 (86.4–98.1)	80.9 (71.1–88.0)		86.5 (79.1–91.5)	81.6 (68.4–90.1)	

[a]Any drug use disorder includes sedatives, tranquilizers, opioids, amphetamine, cannabis, hallucinogen, cocaine, inhalants/solvents, heroin, and other drug use disorder.
[b]Any prescription drug use disorder includes sedatives, tranquilizers, opioids, and amphetamine use disorder.
[c]Other drug use disorder includes hallucinogen, cocaine, inhalants/solvents, heroin, and other drug use disorder.
%, weighted.

TABLE 3. ADJUSTED MULTIPLE REGRESSIONS COMPARING LIFETIME MENTAL HEALTH DISORDERS AND SUBSTANCE USE DISORDERS IN EVER EXPERIENCED DISCRIMINATION VERSUS NEVER EXPERIENCED DISCRIMINATION, BY GENDER: NESARC WAVE 2 (2004–2005)

	Ever experienced discrimination					
	Men[a]			*Women*[b]		
	AOR	*95% CI*	P	*AOR*	*95% CI*	P
Lifetime mental health disorders						
Any mood disorder	1.54	0.78–3.04	0.20	1.97	1.07–3.62	0.03
Major depressive episode	1.39	0.70–2.76	0.33	2.47	1.35–4.54	<0.01
Manic episode	1.35	0.48–3.82	0.55	1.45	0.60–3.53	0.40
Dysthymic episode	1.73	0.60–5.01	0.30	2.20	0.96–5.06	0.06
Hypomanic episode	2.96	0.73–12.06	0.12	0.56	0.14–2.31	0.41
Any anxiety disorder	0.98	0.51–1.88	0.95	2.68	1.45–4.94	<0.01
Panic disorder without agoraphobia	0.81	0.35–1.86	0.61	2.59	1.22–5.51	0.02
Panic disorder with agoraphobia	24.90	2.47–251.48	<0.01	4.19	1.34–13.12	0.02
Agoraphobia without history of panic disorder	2.70	0.39–18.60	0.27	2.65	0.15–45.73	0.49
Social phobia	1.91	0.74–4.92	0.17	1.81	0.85–3.87	0.12
Specific phobia	1.17	0.57–2.38	0.65	2.15	1.19–3.87	0.01
Posttraumatic stress disorder	2.04	0.73–5.74	0.17	1.36	0.67–2.79	0.38
Generalized anxiety disorder	1.20	0.53–2.73	0.65	2.46	1.21–5.03	0.02
Lifetime substance use disorders						
Alcohol use disorder	1.35	0.73–2.51	0.33	0.79	0.44–1.42	0.42
Nicotine dependence	0.89	0.47–1.70	0.72	1.50	0.82–2.76	0.18
Any drug use disorder[c]	3.57	1.73–7.36	<0.01	1.00	0.51–1.94	0.99
Any prescription drug use disorder[d]	1.79	0.65–4.93	0.25	0.93	0.34–2.57	0.89
Cannabis use disorder	4.05	1.74–9.41	<0.01	0.99	0.51–1.91	0.98
Other drug use disorder[e]	3.50	0.99–12.37	0.05	1.54	0.64–3.72	0.33

Never experienced discrimination as reference.
[a]Adjusted for age and birth place.
[b]Adjusted for age and marital status.
[c]Any drug use disorder includes sedatives, tranquilizers, opioids, amphetamine, cannabis, hallucinogen, cocaine, inhalants/solvents, heroin, and other drug use disorder.
[d]Any prescription drug use disorder includes sedatives, tranquilizers, opioids, and amphetamine use disorder.
[e]Other drug use disorder includes hallucinogen, cocaine, inhalants/solvents, heroin, and other drug use disorder.
AOR, adjusted odds ratios.

and to hold positive expectations about the benefits of alcohol for dealing with stress.[39] These gender differences in stress and coping can help us understand the different patterns of association between discrimination and mental health versus substance use for sexual minority women and men. An area of exploration that extends from this literature is the possibility that different counseling strategies are necessary to confer adaptive coping patterns for sexual minority women versus men who struggle with chronic exposure to discrimination.

Further research is needed to understand the role of coping in the pathway between experiences of discrimination and internalizing or externalizing problems and the role of gender differences in coping strategies.

Limitations

There are some important limitations to this research. The measure of discrimination might have lacked sensitivity or breadth regarding variety of types of discrimination due to sexual minority status. In our analyses, we dichotomized discrimination and included lifetime discrimination, which limited the variability of the discrimination covariate in our regression models. Importantly, only sex was assessed in the study, which limits our ability to draw conclusions about the diversity of LGB people, which is particularly important as evidence suggests that transgender and gender nonconforming people experience high levels of discrimination.[40]

In addition, proximal stressors, such as internalized heterosexism and concealment were not assessed in the study. While these study findings provide important insights into the differential patterns of the associations between discrimination and mental health and substance use, future research is warranted to better understand the more proximal stressors to guide clinical interventions and practice. Substance use and mental health disorders relied on self-report, which is subject to social desirability, and could impact the prevalence of each of the outcomes.

We observed wide CI for some outcome variables, which are likely due to low counts for those outcomes (e.g., panic disorder with agoraphobia). Given the small number of individuals who identified as a sexual minority, we were unable to make comparisons based on important aspects of sexual identity such as those who identified as bisexual or by those who identified as a racial/ethnic minority. Sample weights were not created specifically for this subsample of LGB participants; thus, the development of sampling weights for sexual minority people represents an important area for future research.[41] Finally, this is a cross-sectional study in which we looked at lifetime disorders and discrimination, including lifetime experiences, so temporal ordering cannot be determined.

Conclusion

This research provides evidence for differential patterns by which gender is associated with discrimination and health within sexual minority populations. The findings align with conceptual principles articulated in the minority stress model and the liability model of gender differences in behavioral and psychological disorders.[6,20] These results indicate a need to develop public health programs addressing sexual minority populations that take a nuanced view of the role of gender as a contributing factor for health problems among LGB people. Further research is necessary to understand the social and psychological pathways by which discrimination can contribute to differential health outcomes for sexual minority men versus sexual minority women, and interventions that build from a more complex understanding about the diversity within sexual minority populations must be developed and evaluated. More sensitive measures of discrimination due to sexual minority status are also needed to characterize the typologies, prevalence, and health correlates of discrimination among LGB people.

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