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Mental and Physical Health among Homeless Sexual and Gender Minorities in a Major Urban US City

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ABSTRACT *Sexual and gender minorities have been shown to have greater rates of mental health, substance use disorders, and specific types of health problems compared to heterosexuals. Among the homeless population in several US urban areas, sexual and gender minorities are overrepresented but few studies have examined the mental and physical health status of homeless sexual and gender minorities, with studies on homeless gender minorities being particularly hard to find. Using survey data obtained from the city and county of San Francisco (2015 Homeless Survey), this study examined differences in causes of homelessness, physical and mental health problems, and domestic violence among homeless sexual and gender minorities and their heterosexual and cisgender (i.e., non-transgender) counterparts, respectively. Lesbians and bisexual women, and gay and bisexual men did not differ from their cisgender heterosexual counterparts. Cisgender men who identified as queer or "other" in response to sexual orientation questions had higher rates of psychiatric problems and posttraumatic stress disorder, while cisgender women who identified as queer or "other" had higher rates of psychiatric problems and drug and alcohol use. Transgender men who were homeless were found to be particularly at risk for physical health problems, mental health problems, and domestic violence or abuse. Transgender women were more likely to report posttraumatic stress disorder. This study suggests that transgender men and cisgender sexual minority men and women who identify as queer or "other" are groups among the homeless that may benefit from increased outreach and services.*

KEYWORDS *Sexual minority, Gender minority, Homelessness, Mental health, Physical health, Substance use*

Sexual and gender minorities (i.e., non-heterosexual or transgender individuals, respectively) are at greater risk for physical and mental health problems compared to heterosexuals or cisgender (non-transgender) individuals.[1–4] Specifically, sexual minorities appear to have higher rates of mental health disorders than heterosexual individuals,[4] including substance use disorders,[5] as well as greater rates of health-related distress[2] including risk for or actual cardiovascular disease.[6] These disparities are largely thought to be a consequence of the higher rates of stigma, discrimination, and victimization experienced by these groups,

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which in turn forms the basis for the primary explanatory model for these findings, the minority stress model.[7,8]

Among the homeless population in the USA sexual and gender minorities appear to be overrepresented. For instance, estimates have suggested that sexual and gender minorities comprise between 22.4 and 40 % of homeless youth.[9,10] Reasons for this increased risk of homelessness can include family conflict,[11] disapproval of sexual orientation,[12,13] or stressful experiences such as childhood sexual abuse.[14] The reason that sexual minority individuals become homeless may in turn be related to their experiences later on, for example, young sexual minority men who were kicked out of their homes were more likely to have daily marijuana use or to have experienced recent homelessness.[12] Previous studies on homeless sexual and gender minorities have focused primarily on the sexual minority population, and among that population primarily on homeless youth with only a few including gender minorities, because surveys collecting information about gender identity have been limited. Studies examining reasons for becoming homeless among the general adult population have found typical reasons for homelessness include disruptive experiences in childhood as well as mental health and substance use.[15] Among older adults within the general adult population, reduced social capital and conflict with family members or a desire to remain independent of family were also likely to be predictors of homelessness, while stressful life events were not related to homelessness.[16] While there appear to be some commonalities between reasons for becoming homeless among sexual minority youth and the general adult population (e.g., disruptive childhood experiences), it is unknown how homeless sexual and gender minority adults may differ from their heterosexual counterparts in their paths to homelessness.

As part of an already stigmatized group, gender and sexual minorities who are also homeless are likely at even greater risk for physical and mental health problems. When considering the general adult population experiencing homelessness, high proportions (~30 %) of both health problems and heavy alcohol use have been observed,[17] and this in turn is related to factors indicative of problematic health systems such as high rates of emergency department use.[18] Previous research has shown that homeless sexual minority youth are at greater risk for physical and mental health problems such as depression or suicidal ideation, and substance use compared to their homeless heterosexual counterparts.[19] Given that most research in this area has been on homeless sexual minority youth, it is unknown how the adult homeless sexual and gender minority population may differ from the existing research on the general population of adults who have experienced homelessness. Previous research with homeless sexual minority youth indicate that they are at greater risk for victimization than their heterosexual counterparts, experiencing more discrimination,[19] and verbal or physical abuse within the home by parents or partners;[20] thus, this may correspond to poorer physical and mental health for homeless sexual and gender minority adults.

The purpose of this study is to identify differences in reasons for becoming homeless, physical and mental health problems, and current experiences of domestic violence between sexual and gender minorities relative to heterosexual or cisgender counterparts, respectively. In contrast to previous studies, which have primarily focused on homeless youth, this study includes primarily homeless adults. This study also includes gender minority people who are homeless, while most previous studies have focused only on homeless sexual minority individuals. This study explores differences in reasons for becoming homeless including economic, alcohol or drug

use, eviction, and family conflict. We anticipate that, in accordance with previous studies, sexual and gender minority people will report higher rates of family/domestic reasons for becoming homeless, and will report higher rates of physical and mental health problems and current domestic violence or abuse.

METHOD

Procedure

The data used in this study were collected as part of San Francisco's biennial homeless survey, obtained from the San Francisco's Human Services Agency. Data were deidentified, and IRB approval was granted to conduct these analyses. The data were originally collected as follows: San Francisco, working with Applied Survey Research recruited 483 volunteers to conduct a point-in-time population count for the homeless population in SF. During one night in January from 8 PM to midnight, volunteers counted the number of homeless individuals who were on the streets through the entire city of SF, and shelters reported the number of homeless individuals in the shelters during that evening. Volunteers also performed a separate youth count at an earlier time, between 5 PM and 9 PM, to capture this age group. This count estimated 7529 homeless individuals in San Francisco, which led the survey team to aim for a follow-up survey sample of 1000 individuals to achieve a confidence interval of ±3 % (based on a 95 % confidence level) on representativeness of survey data to the general homeless population in San Francisco.[21]

Following the homeless street count, in February 2015, a survey was given to 1027 homeless individuals, including those residing on the streets or staying in a shelter. The survey was given by homeless individuals who were recruited and trained as survey workers, who were given specific training about data collection including issues of participant confidentiality and were selected due to their potential to reach difficult to reach subgroups such as youth and minority ethnic groups. The survey collectors were compensated $5 for each completed survey they returned. Survey collectors were instructed to give the survey to every third person that they encountered who might be eligible, in order to increase the randomness with which participants were selected. Participants completing the survey were given a pair of new socks as an incentive. The survey was self-report, and participants had the choice to refuse answering any questions.[21]

For this analysis, we utilized demographic data and questions related to reasons for becoming homeless, mental health conditions, physical health conditions, and use of health services. Demographic information included age, Hispanic/Latino ethnicity, race, sexual orientation, and gender identity. Sexual orientation was asked with the question "Do you consider yourself…?" with response options of "Straight," "Lesbian," "Bisexual," "Gay," "Queer," or "other." Gender identity was measured by the question "What is your gender?" followed by response options of "Male," "Female," "Transgender male to female," "Transgender female to male," or "other." Reasons for homelessness were asked separately, but have been collapsed here into categories, and included whether the reasons were domestic (i.e., family argument, violence within the family, and divorce/separation/breakup), economic (i.e., lost job, eviction, foreclosure, or landlord raised rent), mental health related (i.e., alcohol/drug use or mental health issues), or physical health related (i.e., illness or medical problems or hospitalization or treatment). Participants were asked to identify the primary reason for homelessness, with some participants endorsing

more than one primary reason for homelessness. Additional reasons for becoming homeless that were not considered here included incarceration, aging out of foster care, and unknown reasons, as they did not fit with the other categories and had low rates of frequency of endorsement (7.5, 0.9, and 6.8 %, respectively). Health questions queried if the individual experiences "any chronic health problem or medical condition (diabetes, cancer)"; "any psychiatric or emotional conditions" with examples given of "depression, schizophrenia"; "posttraumatic stress disorder (PTSD)"; "drug or alcohol abuse (including prescription drugs not prescribed for you)"; and current "home/domestic violence or abuse." Participants had the option of answering "yes" they had the above condition, "no," or "refuse" to answer.

Participants were included in this analysis if they specified a gender or sexual orientation for the relevant analyses. This excluded eight individuals who did not respond to the question about gender and ten individuals who did not respond to the question about sexual orientation. Individuals who selected "other" gender were also omitted from analysis because of the small sample size ($n = 8$). Individuals who did not endorse a race were grouped with "other" race ($n = 73$), and participants who selected multiple races were categorized as "multiracial." Respondents who selected multiple sexual orientations were categorized with individuals who selected queer or "other" with 9 participants endorsing more than one sexual orientation. For given outcomes, individuals were included in analyses if they responded that they had or did not have a condition; thus, those who refused to answer for a specific condition were omitted from that particular analysis.

Analysis

All models examining the relationship between sexual orientation and outcome variables were run separately by sex, including only cisgender (i.e., non-transgender) individuals. Models examining the relationship between transgender status and outcome variables were run separately by gender. ANOVA or chi-squared tests were used to evaluate whether age, race, ethnicity, reasons for becoming homeless, and whether this was the first episode of homelessness differed across sexual minority status. ANOVA and Fisher's exact tests were used to examine these same variables across transgender status; as expected cell sizes were small enough to warrant Fisher's exact test for analyses that included transgender men. Logistic regression models were used to investigate the relationship between sexual orientation and gender identity and the following outcome variables: a chronic health condition, psychiatric or emotional conditions, PTSD, drug or alcohol abuse, current domestic violence, covarying age, Hispanic/Latino ethnicity, and race.

RESULTS

Participants

Altogether, 1027 individuals completed the survey. Among the 620 cisgender men in analyses examining sexual orientation, most endorsed a "straight" sexual orientation ($n = 521$, 84.0 %), while 44 cisgender men (7.1 %) reported gay sexual orientation, 22 (3.5 %) reported bisexual orientation, and 33 (5.3 %) reported queer or "other" sexual orientation. Among the 336 cisgender women in analyses by sexual orientation, 193 (57.4 %) reported "straight" sexual orientation, 56 (16.7 %) reported lesbian orientation, 66 (19.6 %) reported bisexual orientation, and 21 (6.3 %) reported queer or other sexual orientation. Of the 1027 individuals,

only 8 were under the age of 18 (ranging from 16.5 to 17.9 years), and of those 8, only 2 were sexual or gender minority, both of these 2 reporting cisgender bisexual identity. Demographics for cisgender participants are shown in Table 1. In analyses comparing individuals on gender identity, of the 639 men, 16 (2.5 %) were transgender and of the 372 women, 33 (8.9 %) were transgender. Demographics for cisgender and transgender participants are shown in Table 2.

Age differed by sexual orientation for cisgender men (F [3] = 12.31, $p < .001$) and women (F [3] = 12.34, $p < .001$), with a similar pattern observed among both cisgender men and women, with straight individuals being the oldest on average, gay and lesbian individuals being the second oldest, bisexual individuals being the second youngest group, and those who endorsed queer or other sexual orientation being the youngest. Cisgender men were older than transgender men (F [1] = 3.87, $p = .049$) by around 7 years, but there was no difference between cisgender and transgender women (F [1] = 0.10, $p = .752$). There were no detectable differences in proportions of race and ethnicity for cisgender men or women by sexual orientation, nor for men and women by cisgender/transgender status.

Analyses

No differences were found in perceived causes of homelessness between sexual minority and heterosexual individuals, nor was there a difference in whether or not this was the first episode of homelessness for any of the groups. Among cisgender men, those who endorsed queer or "other" sexual orientation had 2.68 times the odds of having a psychiatric condition (corresponding to observed percentages of 57.7 % for queer or "other" cisgender men and 33.1 % for heterosexual cisgender men), and 3.47 times the odds of reporting current posttraumatic stress disorder when compared to heterosexual counterparts (corresponding to observed percentages of 53.9 % for queer or "other" cisgender men and 26.6 % for heterosexual cisgender men). Full results including adjusted odds ratios ($_{adj}$ORs) and 95 % confidence intervals (CIs) for analyses by sexual orientation among cisgender men and women are shown in Table 3. There were no other differences by sexual orientation among cisgender men.

Cisgender women who endorsed a queer or "other" sexual orientation had 5.16 times the odds of a psychiatric condition (corresponding to observed percentages of 66.7 % for queer/other cisgender women and 39.4 % for heterosexual cisgender women) and 6.33 times the odds of drug and alcohol abuse (corresponding to observed percentages of 70.0 % for queer/other cisgender women and 33.7 % for heterosexual cisgender women). Notably, 11 American Indian/Alaskan Native respondents were dropped from analyses with the outcome for domestic violence among cisgender women, as among the 11 cisgender women who reported solely American Indian/Alaskan Native race, there was no current reported domestic violence, leading to perfect prediction of this outcome. No other differences by sexual orientation among cisgender women were found.

Among men, when comparisons were made between cisgender and transgender men, transgender men had 3.82 times the odds of a chronic health condition (corresponding to observed percentages of 50.0 % for transgender men and 30.2 % for cisgender men), 3.78 times the odds of a psychiatric condition (corresponding to observed percentages of 66.7 % for transgender men and 34.9 % for cisgender men), and 3.92 times the odds of posttraumatic stress disorder (corresponding to observed percentages of 62.5 % for transgender men and 28.1 % for cisgender men). Transgender men were also at greater risk than cisgender men for current

TABLE 1 Demographics of cisgender homeless respondents in San Francisco, by sexual orientation

	Cisgender men ($n = 620$)					Cisgender women ($n = 336$)				
	Straight ($n = 521$)	Gay ($n = 44$)	Bisexual ($n = 22$)	Queer/other ($n = 33$)	p	Straight ($n = 193$)	Lesbian ($n = 56$)	Bisexual ($n = 66$)	Queer/other ($n = 21$)	p
Age (M, SD)	45.1, 13.9	38.9, 13.9	36.5, 15.0	32.7, 12.8	***	41.5, 12.7	34.6, 10.8	33.7, 12.6	31, 8.7	***
Race (%)					ns					ns
Asian American/Pacific Islander	2.9 %	6.8 %	4.6 %	3.0 %		6.2 %	7.1 %	9.1 %	0.0 %	
Black/African American	32.8 %	22.7 %	18.2 %	27.3 %		32.1 %	46.4 %	34.9 %	61.9 %	
Multiracial	6.1 %	6.8 %	0.0 %	12.1 %		6.2 %	1.8 %	10.6 %	9.5 %	
Alaskan Native/American Indian	4.0 %	2.3 %	0.0 %	0.0 %		5.2 %	1.8 %	1.5 %	0.0 %	
Other race/not specified	18.0 %	13.6 %	18.2 %	15.2 %		16.1 %	16.1 %	16.7 %	23.8 %	
White	36.1 %	47.7 %	59.1 %	42.4 %		34.2 %	26.8 %	27.3 %	4.8 %	
Ethnicity (%)					ns					ns
Hispanic/Latino	17.1 %	20.5 %	27.3 %	24.2 %		16.6 %	19.6 %	19.7 %	14.3 %	
Causes of homelessness (%)										
Economic	38.8 %	43.2 %	31.8 %	42.4 %	ns	35.2 %	42.9 %	33.3 %	47.6 %	ns
Domestic	21.7 %	27.3 %	31.8 %	18.2 %	ns	33.7 %	17.9 %	27.3 %	19.1 %	ns
Mental health problems	24.4 %	11.4 %	22.7 %	9.1 %	ns	19.2 %	17.9 %	16.7 %	14.3 %	ns
Physical health problems	9.2 %	6.8 %	4.6 %	9.1 %	ns	7.8 %	10.7 %	10.6 %	0.0 %	ns
First time homeless	28.7 %	36.4 %	27.3 %	18.2 %	ns	33.3 %	37.5 %	39.4 %	14.3 %	ns
Current conditions (%)										
Chronic health condition	30.0 %	27.8 %	26.3 %	38.5 %		28.7 %	23.4 %	22.2 %	36.4 %	
Psychiatric condition	33.1 %	35.1 %	45.0 %	57.7 %		39.4 %	40.8 %	43.6 %	66.7 %	
Posttraumatic stress disorder	26.6 %	34.2 %	21.1 %	53.9 %		28.6 %	26.5 %	20.0 %	20.0 %	
Drug or alcohol abuse	46.2 %	35.1 %	33.3 %	40.0 %		33.7 %	38.0 %	19.6 %	70.0 %	
Current domestic violence/abuse	4.7 %	12.2 %	5.0 %	4.2 %		12.6 %	12.8 %	17.0 %	25.0 %	

Percentages are based on the proportion of individuals who answered the specific items
ns = no significant difference
$p < .001$

TABLE 2 Demographics for homeless respondents in San Francisco, separately by gender, by cisgender and transgender status

	Men ($N = 639$)			Women ($N = 372$)		
	Cisgender ($n = 623$)	Transgender ($n = 16$)	p	Cisgender ($n = 339$)	Transgender ($n = 33$)	p
Age (M, SD)	43.7, 14.3	36.6, 12.8	*	38.2, 12.7	37.4, 14.7	ns
Race (%)			ns			ns
Asian American/Pacific Islander	3.2 %	0.0 %		6.5 %	15.2 %	
Black/African American	31.3 %	18.8 %		36.6 %	18.2 %	
Multiracial	6.3 %	0.0 %		6.5 %	12.1 %	
Native American/Alaskan Native	3.5 %	6.3 %		3.5 %	6.1 %	
Other race/not specified	17.7 %	18.8 %		16.8 %	24.2 %	
White	38.0 %	56.3 %		30.1 %	24.2 %	
Ethnicity (%)						
Hispanic/Latino	18.0 %	25.0 %	ns	17.4 %	21.2 %	ns
Causes of homelessness (%)						
Economic	38.8 %	31.3 %	ns	36.6 %	21.2 %	ns
Domestic	22.2 %	12.5 %	ns	28.9 %	36.4 %	ns
Mental health problems	22.8 %	12.5 %	ns	18.0 %	21.2 %	ns
Physical health problems	9.0 %	0.0 %	ns	8.3 %	9.1 %	ns
First time homeless	28.7 %	25.0 %	ns	34.0 %	30.3 %	ns
Current conditions (%)						
Chronic health condition	30.2 %	50.0 %		26.7 %	31.8 %	
Psychiatric condition	34.9 %	66.7 %		41.4 %	42.3 %	
Posttraumatic stress disorder	28.1 %	62.5 %		26.4 %	54.2 %	
Drug or alcohol abuse	44.7 %	28.6 %		33.0 %	39.1 %	
Current domestic violence/abuse	5.3 %	30.8 %		14.3 %	13.6 %	

Percentages are based on the proportion of individuals who answered the specific items
ns = no significant difference
*$p < .05$

domestic violence, with over 10 times the odds of current domestic violence (corresponding to observed percentages of 30.8 % for transgender men and 5.3 % for cisgender men). When compared to cisgender women, transgender women had 3.31 times the odds of posttraumatic stress disorder (corresponding to observed percentages of 54.2 % for transgender women and 26.4 % for cisgender women), but there were no other differences between transgender and cisgender women (Table 4).

DISCUSSION

This study sought to examine differences in reasons for homelessness, as well as self-reported physical and mental health problems and differences in current domestic violence and abuse between sexual and gender minorities and their heterosexual or cisgender counterparts. We did not find any differences in reasons for homelessness by sexual orientation nor transgender identity. We did,

TABLE 3 Results of logistic regression analyses ($_{adj}$ORs and 95% CIs) run separately by sex for cisgender individuals, examining the relationship between sexual orientation and physical and mental health conditions and domestic violence among homeless respondents, with straight as reference, adjusted for age, race, and ethnicity

	Cisgender men			Cisgender women		
	Gay (*n*=44)	Bisexual (*n* = 22)	Queer/ other (*n* = 33)	Lesbian (*n* = 56)	Bisexual (*n* = 66)	Queer/ other (*n* = 21)
Chronic health condition	1.01, 0.46 –2.23	1.18, 0.40 –3.50	2.30, 0.97 –5.44	1.03, 0.46 –2.32	0.94, 0.43 –2.05	2.67, 0.67 –10.63
Psychiatric condition	1.00, 0.49 –2.04	1.75, 0.70 –4.40	2.68, 1.17 –6.14*	1.53, 0.76 –3.05	1.40, 0.71 –2.74	5.16, 1.09 –24.48*
Posttraumatic stress disorder	1.33, 0.65 –2.73	0.65, 0.21 –2.02	3.47, 1.51 –7.99**	1.08, 0.51 –2.29	0.60, 0.27 –1.32	0.57, 0.10 –3.24
Drug or alcohol abuse	0.66, 0.32 –1.35	0.65, 0.25 –1.68	0.96, 0.41 –2.25	1.71, 0.85 –3.46	0.60, 0.27 –1.34	6.33, 1.43 –27.94*
Current domestic violence/ abuse	2.61, 0.89 –7.66	1.08, 0.13 –8.79	0.97, 0.12 –8.02	1.00, 0.34 –2.95	1.52, 0.59 –3.89	2.98, 0.65 –13.77

*p<.05, **p<.01

however, find differences in physical and mental health problems, domestic violence, and abuse for sexual and gender minorities.

First, it is important to note the proportion of sexual and gender minorities in this study. Among all men, 15.8 % were sexual minority and 2.5 % were gender minority. Among all women, the proportion of sexual and gender minority individuals was even higher, with 38.4 % of women endorsing a sexual minority identity, and 8.9 % endorsing gender minority identity. This means that nearly half of the homeless women surveyed were either sexual or gender minority, which is far greater than any population

TABLE 4 Results of logistic regression analyses ($_{adj}$ORs and 95% CIs) run separately by gender, examining the relationship transgender status and physical and mental health conditions and domestic violence among homeless respondents, with cisgender as reference, adjusted for age, race, and ethnicity

	Men	Women
	Transgender	Transgender
Chronic health condition	3.82, 1.18–12.42*	1.41, 0.52–3.79
Psychiatric condition	3.78, 1.25–11.44*	0.90, 0.37–2.17
Posttraumatic stress disorder	3.92, 1.37–11.19*	3.31, 1.34–8.16**
Drug or alcohol abuse	0.55, 0.17– 1.79	1.20, 0.49–2.96
Current domestic violence/abuse	10.62, 2.88–39.14***	0.97, 0.26–3.53

* p<.05, ** p<.01, ***p<.001

estimates of sexual and gender minority women for the nation, estimated at 3.8 %,[22] or for San Francisco, estimated at 6.2 %.[23] This suggests that the sexual and gender minority population should be an important focus for program development among the homeless and that more research needs to be done in this area. The specific paths to homelessness among sexual and gender minority women are unknown, but areas for future investigation may include potential contributors including poorer economic standing, victimization, and lower rates of family support networks.

We did not replicate the higher rates of family or domestic reasons for homelessness among sexual minorities that have been seen in previous studies among sexual minority adolescents.[11,12,14] It is possible that the paths to homelessness for an older population of sexual and gender minorities are more similar to those for older heterosexual and cisgender individuals, or that if they differ, these differences were not captured in our measures of reasons for becoming homeless.

The results examining the relationship between sexual orientation and physical and mental health problems differed across both sex and sexual minority identities. There were, however, and somewhat surprisingly, no detectable differences between gay or bisexual and heterosexual men, nor between lesbian or bisexual women and heterosexual women. This finding was unexpected given the general consensus in the literature that LGBT individuals report higher rates of mental health disorders, in particular, than their heterosexual counterparts. One possible reason for this finding could be that the self-report general measures used in this study were too insensitive to detect differences. Alternatively, elevated rates of mental and physical illness among all individuals who are homeless may have put heterosexual men and women in the same range as lesbian, gay, and bisexual men and women thereby obscuring the differences. Following this line of reasoning, stress due to poverty may obscure the effects of minority stress. Other less likely scenarios include the notion that homeless gay, lesbian, and bisexual men and women are not as vulnerable to the minority stressors that have been noted to be related to physical and mental health among the general population of gay and bisexual men and women,[8] or that they are specifically not as vulnerable to these stressors in San Francisco. San Francisco has been noted as an environment that has been at the forefront of the gay rights movement[24]; thus, health disparities observed in the general population and attributed to minority stress may not be as detectable among sexual minority adults in San Francisco.

Within our study, there were 54 cisgender people who endorsed queer or "other" sexual orientations. Unlike sexual minorities who identified as gay, lesbian, or bisexual, this group appeared to be at elevated risk for mental health problems. Specifically, among cisgender men, individuals who endorsed queer or "other" sexual orientation had higher rates of psychiatric problems and posttraumatic stress disorder. Among cisgender women, those who endorsed queer or "other" sexual orientations evidenced higher rates of both psychiatric problems and drug or alcohol abuse. Previous literature has highlighted that bisexual women had more mental health problems than lesbian or heterosexual women,[25] something not found in our study, yet few studies offer queer or other sexual orientation as an option. It is possible that offering additional options for sexual orientation categories (e.g., queer or "other") will allow us to tease apart nuances in sexual orientation and associated health disparities. Our findings highlight the importance of incorporating additional options for sexual orientation, beyond lesbian, gay, or bisexual. Interestingly, while individuals who endorsed queer or "other" sexual orientations evidenced differences in mental health problems, they did not more frequently endorse psychiatric problems as their reason for becoming homeless. It is possible that individuals

endorsing queer or "other" sexual orientations became homeless for reasons not documented within this study. Alternatively, this group may experience unique risk for mental health vulnerabilities once they become homeless, or may not associate their homelessness with their mental health when there may in fact be a relationship. While age was covaried within models, it is worth noting that those endorsing queer or "other" sexual orientations were younger than the rest of the homeless population, and thus may represent a unique group with unique needs and paths to homelessness. The specific paths to homelessness and mental health problems among individuals endorsing queer or "other" sexual orientations may be an area for future research.

One group that emerged as particularly at risk for both physical and mental health problems are transgender men. Compared to cisgender men, transgender men had over three times the odds of chronic health conditions, psychiatric conditions, and posttraumatic stress disorder. They also had over ten times the odds of experiencing current domestic violence or abuse. There has been little research on the experiences of transgender men, but our study indicates that this group may be particularly vulnerable among the homeless population. Like individuals endorsing queer or "other" sexual orientations, transgender men were also substantially younger than their cisgender counterparts. One area for future research that could not be ascertained within this study includes the timing of the onset of physical and mental health conditions among this population. Additionally, future research may want to consider whether or not this group is at greater risk for violence that may contribute to health and mental health after becoming homeless. This study warrants additional outreach for and research on transgender men who are homeless or unstably housed. While there have been specific programs to provide shelter space for transgender women alongside cisgender women in San Francisco,[26] it is unknown if transgender men have unique challenges in accessing safe shelter spaces or other resources. Notably, after this survey was conducted, San Francisco opened the first homeless shelter specifically for sexual and gender minority adults in the USA,[27] but with only 24 beds, expanded services are likely needed.

Among our sample, transgender women were at greater risk for posttraumatic stress disorder, a finding that is not surprising in light of the high rates of trauma and victimization experienced by transgender women.[28,29] What is notable, is that in contrast to previous studies done with transgender populations,[28,30] transgender women within our sample did not endorse differences on other health, mental health, and domestic violence outcomes. Homeless transgender women in other communities likely face more challenges then in San Francisco, so studies examining other communities are warranted.

Limitations

There are several limitations of our study. First, our study took place in San Francisco, which represents a unique environment for sexual and gender minorities; thus, our results may not be generalizable to other locations. The measures used in our study also had limitations, primarily due to the need for brevity due to the methodology. Physical and mental health problems were self-reported rather than based on defined clinical criteria. Additionally, transgender identity was assessed using response options of transgender male to female, and transgender female to male, which does not represent the state of the art "two-step method" in assessing gender identity.[31] Also, given that responses were recorded by community members, there may have been underreporting of mental and physical health problems due to

concerns about confidentiality. Also, while sample sizes were adequate to detect meaningful differences in many cases, differences could have been missed due to small sample sizes among sexual and gender minority subgroups. While this approach of examining sexual and gender minority subgroups separately may sacrifice statistical power, it also allows us to examine meaningful differences that can occur among specific sexual and gender minority subgroupings. Despite these limitations, the work done by Applied Survey Research was exceptional in reaching an extremely difficult to reach population.

CONCLUSIONS

Our study found that sexual and gender minority populations are overrepresented among the homeless, particularly among women in San Francisco. Transgender men who are homeless were found to be particularly at risk for physical health, mental health, and domestic violence or abuse, and cisgender individuals who identified their sexual orientation as queer or "other" had higher rates of psychiatric problems. Lesbian, gay, and bisexual men and women did not differ from cisgender heterosexual counterparts. Our results suggest homeless programming and research should be attentive to issues of sexual orientation and transgender identity.

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