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RESEARCH BRIEF

Prevalence of Social Determinants of Health Among Sexual Minority Women and Men in 2017

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Introduction: Inequities in social determinants of health are plausible contributors to worse health of sexual minorities relative to heterosexuals. Sexual minorities may have higher rates of housing, food, and financial insecurity as adults owing to adverse childhood experiences or policies that induce social disadvantage. This study compares the prevalence of 3 types of social determinants of health among sexual minority and heterosexual adults.

Methods: Data were from the Behavioral Risk Factor Surveillance System 2017 survey of U.S. states that administered the optional Social Determinants of Health module and Sexual Orientation and Gender Identity modules. In August 2019, authors estimated the odds of food, housing, and financial insecurity among sexual minority men and women, compared with heterosexuals.

Results: Sexual minority women and men had higher odds of housing insecurity, housing instability, and food insecurity, but no differences were observed for perceived neighborhood safety. Sexual minority women had higher odds of financial insecurity than their heterosexual peers.

Conclusions: Sexual minorities have more housing and food insecurity than heterosexuals, which may contribute to their risk for poorer health. Future research should address the causes and consequences of these differences.

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INTRODUCTION

Sexual minorities experience worse health than heterosexuals across a number of conditions.[1,2] Inequities in social determinants of health (i.e., the conditions in which people are born, grow, live, work, and age[3]) may contribute to poorer health of sexual minorities. Yet, very little representative research on whether sexual orientation differences in housing, food, and financial insecurity exists.

Housing instability (i.e., moving frequently), particularly when coupled with housing insecurity (i.e., difficulty paying mortgage or rent), has been demonstrated to worsen health.[4,5] Although prior literature has shown higher rates of homelessness and housing instability among sexual minority youth[6,7] and the health effects of homelessness among sexual minority women,[8] no representative studies exist for adults.

Food insecurity (i.e., lack of access to adequate food[9]) has been linked with poor mental health, poor self-rated health, depression, diabetes, and hypertension.[9] One study from a 2012 Gallup poll found that sexual minorities were more likely than their heterosexual peers to report food insecurity.[10]

Financial insecurity or strain (i.e., a person's subjective appraisal of resource inadequacy) is a powerful determinant of poor health.[11] Sexual minorities face differential earnings owing to labor market discrimination and other factors,[12] yet it is unknown if sexual minorities perceive this resource inadequacy differently from their heterosexual peers.

Sexual minorities may be at risk for housing, food, and financial stress as adults because of stigma and

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discrimination based on sexual orientation at multiple levels. For example, at the individual level, internalized homophobia is linked with disordered eating,[13,14] which is comorbid with food insecurity.[15,16] At the interpersonal level, discrimination may occur in the home (e.g., adverse childhood experiences[17] and intimate partner violence[18]), school (e.g., homophobic bullying[19]), and other social environments (e.g., hate crimes[20] and microaggressions[21]).

Institutional discrimination also may contribute to these disparities. Until the 2015 case *Obergefell v. Hodges*,[22] same-sex couples were excluded from marriage, which may have affected eligibility for social safety nets like Medicaid, the Children's Health Insurance Program,[23] Social Security,[24] and the Supplemental Nutrition Program.[25] Sexual minorities may face more housing insecurity because discrimination based on sexual orientation in the mortgage market is still permitted.[26] Before 2011, the Department of Housing and Urban Development allowed the exclusion of sexual minorities,[27] and as of 2019, there are no explicit protections for sexual minorities in the private rental market.[28]

This study fills an important gap in the literature by providing the first representative estimates of the prevalence of 3 types of social determinants of health—food, housing, and financial—among sexual minority and heterosexual adults.

METHODS

Study Sample

Authors used data from the Behavioral Risk Factor Surveillance System 2017 survey downloaded in June 2019. The survey is conducted annually by the Centers for Disease Control and Prevention and contains state-specific data on behavioral and health factors among non-institutionalized adults using landline and cellular survey methods. The representative sample included adults aged ≥18 years residing in 7 states (FL, GA, IA, MA, MN, MS, and PA). These states administered the optional Social Determinants of Health module and Sexual Orientation and Gender Identity module in 2017. Compared with respondents residing in states that did not administer these modules, the population residing in these 7 states were slightly more white, non-Hispanic and less educated (data not shown). Respondents were further excluded if they answered that they did not know or were not sure (1.0%), refused (1.8%), identified as another sexual orientation not listed (0.4%), and retained irrespective of their gender identity.

Measures

Social determinants of health questions were transformed into measures of social risk factors (Table 1), which are adverse conditions associated with poor health.[3] These included food insecure, housing insecure (inability to pay mortgage, rent, or bills), unstable housing (2 or more moves in past year), unsafe neighborhood, and financial insecure (not enough money to make ends meet). Control variables included age, race, ethnicity, education, household income, presence of children in the household, and geographic state of residence.

Statistical Analysis

Authors estimated the unadjusted prevalence of social risk factors and demographics for heterosexual and sexual minority women and men. Authors also calculated the odds of each social risk factor among sexual minorities using heterosexuals as a reference for women and men separately, controlling for age, race, ethnicity, educational attainment, income, presence of children in the household, and state of residence. Results were estimated separately for women and men because of known differences by

Table 1. Social Risk Factors and Sexual Orientation Measures

Variable	Code per response	Questionnaire text
Food insecure	1=Often or sometimes true for either measure, 0 = Never true for both measures	Q1: "The food that I bought just didn't last, and I didn't have money to get more." Was that often, sometimes, or never true for you in the last 12 months? Q2: "I couldn't afford to eat balanced meals." Was that often, sometimes, or never true for you in the last 12 months?
Housing insecure	1=Yes, 0=No	During the last 12 months, was there a time when you were not able to pay your mortgage, rent, or utility bills?
Unstable housing	1=≥2 Moves, 0=<2 Moves	In the last 12 months, how many times have you moved from one home to another?
Perceived unsafe neighborhood	1=Unsafe or extremely unsafe, 0 = Extremely safe or safe	How safe from crime do you consider your neighborhood to be?
Financial insecure	1=Usually do not have enough money to make ends meet, 0=Usually end up with some money left over or have just enough money to make ends meet	In general, how do your finances usually work out at the end of the month?
Sexual minority	1=Lesbian, gay, or bisexual, 0=Straight	Do you consider yourself to be:

Q, question.

gender and sex in the broader population.[29] All estimates and models used survey weights. The analysis was conducted using Stata, version 15 in August 2019.

RESULTS

Among the 71,439 respondents that lived in states that administered both modules, 55,671 identified as heterosexual and 1,848 identified as a sexual minority. Compared with heterosexual women, sexual minorities had a greater prevalence of all social determinants of health (Table 2). Compared with heterosexual men, sexual minority men had a greater prevalence of food insecurity, housing insecurity, and unstable housing.

Results from regression analyses showed that among women and men, sexual minorities had higher odds of housing insecurity, housing instability, and food insecurity, but no differences were observed for perceived neighborhood safety (Figure 1). Sexual minority women, but not men, had higher odds of financial insecurity than their heterosexual peers.

DISCUSSION

In 2017, sexual minority women and men had higher odds of experiencing housing and food insecurity than their heterosexual peers. These differences persist even after accounting for income, family structure, and other factors. This may partially explain poorer physical and mental health observed among sexual minorities in other studies.[30]

Sexual minorities had higher rates of housing instability and insecurity. This may be due to discrimination in

Table 2. Prevalence of Social Risk Factors and Demographics by Sexual Orientation

	Women		Men	
Characteristics	**Sexual minority, weighted proportion (95% CI)**	**Heterosexual, weighted proportion (95% CI)**	**Sexual minority, weighted proportion (95% CI)**	**Heterosexual, weighted proportion (95% CI)**
Unweighted N	999	30,673	849	24,998
Food insecure	37.7 (32.3, 43.1)	23.2 (22.2, 24.1)	32.7 (26.4, 38.9)	19.4 (18.4, 20.4)
Housing insecure	20.0 (15.2, 24.7)	9.7 (9.0, 10.3)	14.9 (10.6, 19.2)	8.0 (7.3, 8.7)
Unstable housing	12.0 (7.6, 16.4)	3.3 (2.9, 3.7)	11.7 (5.8, 17.4)	3.8 (3.3, 4.2)
Unsafe neighborhood	9.0 (6.0, 12.0)	5.1 (4.6, 5.6)	9.1 (3.4, 14.8)	5.5 (4.8, 6.1)
Financial insecure	17.0 (12.3, 21.5)	10.7 (9.9, 11.3)	9.9 (6.5, 13.2)	7.5 (6.8, 8.1)
Age, years				
18–24	29.3 (24.0, 35.2)	9.4 (8.5, 10.2)	26.2 (20.3, 33.0)	11.8 (10.9, 12.7)
25–34	27.3 (22.9, 32.2)	13.6 (12.8, 14.5)	20.1 (16.0, 25.0)	15.5 (14.6, 16.5)
35–44	15.9 (11.8, 21.2)	14.8 (13.9, 15.6)	11.8 (8.5, 15.9)	15.6 (14.6, 16.5)
45–54	12.5 (9.2, 16.8)	17.1 (16.2, 17.9)	15.6 (11.6, 20.6)	16.9 (16.0, 17.9)
55–65	9.2 (6.5, 12.9)	18.8 (17.9, 19.5)	12.8 (9.6, 16.9)	18.2 (17.3, 19.0)
>65	5.7 (4.4, 7.5)	26.4 (25.5, 27.2)	13.5 (10.2, 17.7)	22.0 (21.2, 22.9)
Race/ethnicity				
White, non-Hispanic	65.6 (59.5, 71.1)	69.6 (68.5, 70.1)	63.1 (56.3, 69.5)	69.3 (68.0, 70.5)
Black, non-Hispanic	18.2 (13.5, 24.0)	14.0 (13.3, 14.9)	14.0 (9.0, 21.2)	13.4 (12.4, 14.9)
Hispanic	12.3 (8.7, 17.1)	11.5 (10.6, 12.5)	14.2 (10.0, 19.8)	11.9 (10.9, 13.0)
Other, non-Hispanic	4.0 (2.6, 6.0)	4.8 (4.2, 5.3)	5.4 (4.8, 6.0)	8.6 (5.8, 12.5)
Education				
Less than HS	10.0 (6.7, 14.9)	10.7 (9.9, 11.6)	8.6 (5.7, 12.6)	12.4 (11.5, 13.3)
HS graduate	26.0 (21.3, 31.9)	27.7 (26.7, 28.7)	23.2 (17.8, 29.7)	32.2 (31.0, 33.3)
Some college	38.3 (32.9, 43.9)	32.6 (31.5, 33.7)	36.2 (20.3, 42.4)	29.2 (28.1, 30.3)
College graduate or higher	25.6 (21.1, 30.1)	28.9 (28.0, 29.8)	32.0 (26.9, 37.5)	26.3 (25.3, 27.3)
Child in the household	37.3 (31.7, 42.8)	35.7 (34.6, 36.8)	16.9 (12.3, 21.4)	31.7 (30.5, 32.9)
Household income				
<$25,000	33.0 (27.5, 39.0)	29.3 (28.2, 30.4)	29.0 (22.5, 36.5)	22.3 (21.3, 23.5)
$25,000–$34,999	16.2 (11.2, 22.8)	11.9 (11.1, 12.7)	15.9 (11.7, 21.2)	10.7 (9.8, 11.5)
$35,000–$49,999	13.2 (10.0, 17.3)	13.4 (12.6, 14.2)	13.1 (9.6, 17.7)	14.1 (13.2, 15.1)
$50,000–$74,999	14.1 (10.5, 18.5)	14.4 (13.6, 15.2)	13.3 (9.8, 17.7)	16.0 (15.0, 17.0)
≥$75,000	23.5 (18.9, 28.8)	30.9 (29.8, 32.0)	28.6 (23.2, 34.7)	36.9 (35.6, 38.1)

HS, high school.

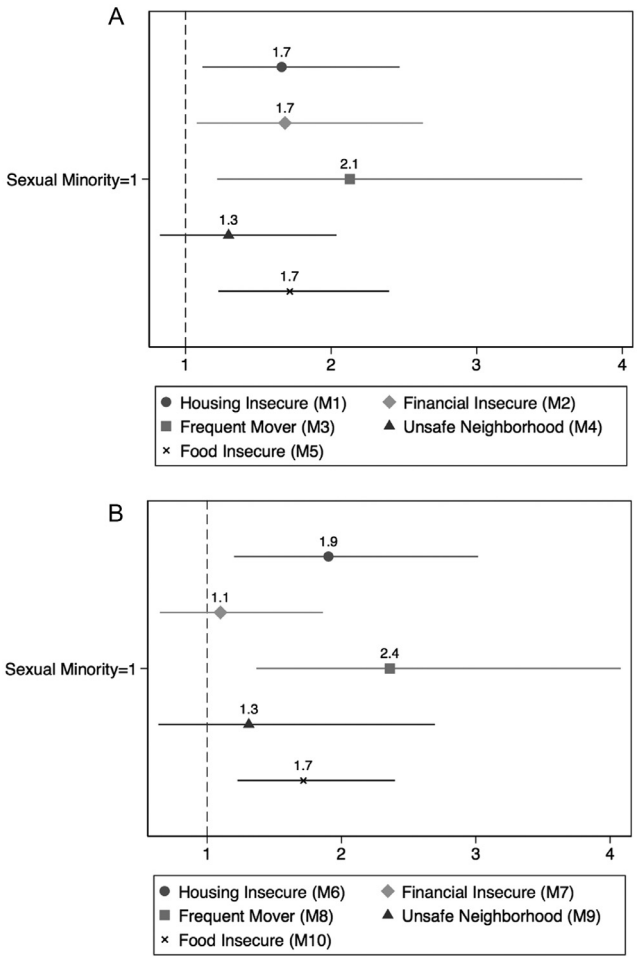

Figure 1. Adjusted odds of social risk factors among sexual minorities compared with heterosexuals for (A) women (n=31,672) and (B) men (n=25,847). All models are adjusted for age, race/ethnicity, state, education, child in the household, and income, and all use survey weights. Reference group is heterosexual. ORs that contain 1 are not statistically significant. M, measure.

the mortgage[31] and rental markets[32] or relationship instability,[33] which has been more common among same-sex couples[34] owing to lack of access to marriage until 2015.

Sexual minorities have higher rates of food insecurity. The cycle of food insecurity may start at a young age; sexual minority youth have a higher exposure to adverse childhood experiences,[35,36] poor mental health, and drug use.[37] More research is needed to understand the role of food insecurity in the health and management of chronic diseases among sexual minorities.

No differences in perceptions of neighborhood safety by sexual orientation were found, although prior research found that sexual minorities had a lower perceived neighborhood cohesiveness than heterosexuals.[38] Sexual minorities, particularly given their higher levels of frequent moving, may prioritize moving to neighborhoods that they perceive as safe.

Sexual minority women, but not men, had higher odds of financial insecurity than heterosexual women, even after adjusting for household income and family structure. This may be because sexual minority women are most likely to be self-employed[9] or because of differences in how finances are perceived.

Limitations

External generalizability may be limited because data are only from 7 states, although state demographics are similar to other states that did not administer these modules. Social desirability bias may differentially impact how respondents answer social determinants of health questions. The study design excludes institutionalized, homeless individuals, which may underestimate disparities if sexual minorities are more likely to be homeless.

CONCLUSIONS

This study sets the stage for future research to identify the causes and consequences of differences in social determinants of health by sexual orientation.

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