

# Intersecting Identities and Substance Use Problems: Sexual Orientation, Gender, Race, and Lifetime Substance Use Problems

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**ABSTRACT. Objective:** Research has documented that sexual minorities are at greater risk for substance use than heterosexuals. However, there are limited studies and mixed findings when investigating these health disparities among racial and ethnic minority samples. We used an intersectionality framework to examine disparities in lifetime substance use problems between heterosexual and sexual minority men and women and within sexual minority groups among a racially diverse sample. **Method:** A nonprobability sample of heterosexual ( $n = 1,091$ ) and sexual minority ( $n = 1,465$ ) patients from an urban community health center ranged in age from 18 to 72 years. Participants completed a brief patient survey and reported demographic information and history of lifetime substance use problems. Logistic regressions analyses were used to examine interactions between and among sexual orientation, gender, and race. **Results:** We found a significant three-way interaction among

sexual orientation, gender, and race. Sexual minorities had a greater risk of self-reported lifetime substance use problems than heterosexuals, with nuanced gender and racial differences. Of greatest note, sexual minority women of color had greater risks than heterosexual women of color and than White sexual minority women. Sexual minority men of color did not differ in their risk when compared with heterosexual men of color, and they had lower risk than White sexual minority men. **Conclusions:** The results of this study demonstrate that an intersectionality framework is crucial to clearly identify lifetime substance use disparities between racially diverse sexual minority and heterosexual men and women. Future research, treatment, and policy should use intersectionality approaches when addressing substance use disparities. (*J. Stud. Alcohol Drugs*, 75, 179–188, 2014)

LESBIAN, GAY, AND BISEXUAL (LGB) individuals (i.e., sexual minorities) are at an increased risk for substance use, chemical dependency, and substance use problems compared with heterosexuals (Cochran and Mays, 2009; Cochran et al., 2003; Conron et al., 2010; King et al., 2008; Lipsky et al., 2012). Although this literature has been important in documenting these disparities and bringing national attention to this issue, more research is needed to better understand these disparities while considering the nuances of multiple intersecting identities. In fact, research suggests there is heterogeneity in the prevalence and types of substance use and dependence disparities depending on varying social identities, such as gender and race (Cochran and Mays, 2009; Cochran et al., 2007; Hughes et al., 2002; McCabe et al., 2009).

Substance use disparities vary among sexual minority men and women compared with heterosexual counterparts.

The literature has documented more significant risk for sexual minority women when compared with heterosexual women (Burgard et al., 2005; Cochran and Mays, 2000; Drabble et al., 2005; Hughes et al., 2010), whereas studies including men have found smaller and varying risks for sexual minority men when compared with heterosexual men (Drabble et al., 2005; McCabe et al., 2005, 2009). These empirical findings accentuate the need for examining the intersections of gender and sexual orientation in substance use disparities research. It is also noteworthy that most of these studies used predominately White samples and some considered race by simply controlling for it, limiting their findings and with no explicit discussion to how being White intersects for sexual minority men and women. Thus, more research with racially diverse samples is needed.

There has been limited research on substance use disparities comparing sexual minorities with heterosexuals within racial/ethnic minority groups. Researchers have found that sexual minority women of color are at greater risk than heterosexual women of color, whereas sexual minority men of color are at comparable or less risk than heterosexual men of color. For instance, Latina sexual minority American women are more likely to have a substance abuse problem (based on criteria from the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition* [DSM-IV]; American Psychiatric Association, 1994) than do their

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heterosexual counterparts, whereas Latino sexual minority American men are less likely to have DSM-IV substance abuse problems than do their heterosexual counterparts (Cochran et al., 2007). Also, Hispanic lesbians and/or bisexual women have higher risks of disparities in smoking and drinking than do heterosexual Hispanic women (Kim and Fredriksen-Goldsen, 2012). In addition, Black lesbian women are more likely to have alcohol and other drug problems than Black heterosexual women (Hughes et al., 2002). It is unclear why differences exist between sexual minority men and women of color in their substance use risk when compared with their heterosexual counterparts. Theoretically grounded studies that accentuate and interpret the complex intersections of these identities may help inform these differences.

The literature comparing sexual minorities of color with White sexual minorities is also limited and has mixed findings. White and Latino sexual minorities do not differ in their rates of substance use disorders, whereas Black sexual minorities have lower rates of substance use disorders than White sexual minorities (Meyer et al., 2008a). In contrast, some researchers have found that Black and Latina sexual minority women do not significantly vary in their lifetime substance use problem rates when compared with White sexual minority women (Hughes et al., 2006; Parks and Hughes, 2005). These mixed results underscore the need to conduct more research to investigate the complex intersections of sexual orientation, gender, and race in substance use disparities. In addition, these results further demonstrate the importance of using theoretical frameworks that accentuate intersections of identity to better understand and interpret these potential mixed findings.

#### *Theoretical explanations: Minority stress and an intersectionality perspective*

The minority stress model posits that unique identity stressors (e.g., discrimination) have deleterious effects on health (Meyer, 2003). Specific to substance use, sexual minorities' experiences with discrimination are related to higher rates of DSM-IV-based substance use disorders (Mays and Cochran, 2001). Considering the theory's focus on identity stressors, being a member of multiple disadvantaged groups (e.g., gender, racial, and sexual minorities) might imply more negative mental health outcomes because of marginalization and stress related to minority identities (i.e., additive stress; Balsam et al., 2004; Greene, 1994, 2000; Hatzenbuehler, 2009). This could be understood as an additive approach, in which the addition of multiple minority identity stressors would have additive negative health results. However, an additive stress approach to identity has had mixed results as aforementioned in the review of the literature (e.g., Hughes et al., 2006; Meyer et al., 2008a; Parks and Hughes, 2005). It can also be problematic, because it could involve ranking

of some identities as more important than other identities without understanding their complex intersections (e.g., considering race to be more important than sexual orientation when it is the only statistically significant predictor in an analysis). Thus, other conceptual frameworks are needed in substance use disparities research.

An intersectionality framework might provide a useful lens to examine substance use disparities. Intersectionality can be used to conceptualize how multiple social identities intersect at the individual level and interact within varying contexts to reflect interlocking structural systems of privilege and oppression (Bowleg, 2012; Collins, 2000; Crenshaw, 1995; Warner, 2008). Rooted in Black feminist thinking, Collins (2000) described intersectionality within a matrix of domination, in which intersecting social positions provide both opportunities and oppressions. Thus, identity is not the additive sum of several social positions; individuals' social identities are mutually interacting with and concurrently influencing each other within varying contexts (Bowleg, 2008; Warner, 2008). As such, intersectionality theory underscores a limitation in an additive approach and emphasizes the unique intersections of multiple identities. These assertions might help explain mixed findings wherein some individuals from marginalized groups do not have higher health risks compared with privileged groups.

Applying an intersectionality framework to substance use disparities is complicated because this framework was not initially intended to explain health outcomes, and it has methodological limitations (Bowleg, 2012). For instance, there is a dearth of research guidelines, especially in quantitative research (Bowleg, 2008, 2012; Cole, 2009; McCall, 2005). Thus, quantitative approaches to intersectionality theory are needed to further test the theory as well as to advance the substance use disparities literature. This is especially important because an intersectionality framework has many fruitful applications to health research. It highlights the intersection of multiple identities with interlocking systems of oppression and privilege, and it accentuates the experiences of individuals from multiple minority identities (Bowleg, 2012).

Despite intersectionality's methodological complications, some intersectionality research approaches permit researchers to use social categories (e.g., race, gender) to explicate the complex relationships within inequality rooted in varying social positions (McCall, 2005). Comparing social categories serves as a provisional method to understand inequalities (e.g., health disparities) despite their imperfect classification in capturing individuals' identities (McCall, 2005). Consistent with this approach, we applied an intersectionality framework to inform substance use disparities research. We used the intersections of gender, race, and sexual orientation to form social categories to provisionally represent individuals' intersecting identities within larger structural systems of privilege or power.

### *Purpose of the present study*

Utilizing an intersectionality research approach, this study aimed to support and extend the literature on gender, sexual, and racial minority health disparities. We first examined disparities between sexual minorities and heterosexuals and then examined disparities within sexual minorities. For analyses between sexual minorities and heterosexuals, we applied an intersectionality framework by first testing a three-way interaction of three identities (i.e., gender, race, and sexual orientation) in predicting substance use problems among our entire sample. We then ran follow-up analyses to unpack this complex interaction by examining the intersection of gender with these sexual orientation comparisons (e.g., compared sexual minority men with heterosexual men) and then by testing the intersection of race with sexual orientation and gender (e.g., compared sexual minority women of color with heterosexual women of color). For analyses within sexual minorities, we first tested a two-way interaction of gender and race to predict substance use problems. We then ran follow-up analyses to unpack these interactions (e.g., compared sexual minority men of color with White sexual minority men).

For all analyses, we accounted for age, income, and education because research has documented relationships between these factors and substance use. Although age and socioeconomic status are important social identities that have unique intersections, we were specifically interested in how sexual orientation, gender, and race intersect in relation to substance use disparities. Similar to other quantitative intersectionality research testing statistical interactions of identities in predicting health (e.g., Veenstra, 2011), we considered this analytic approach to be intersectional rather than additive because it does not allow for ranking of identities.

Traditional positivist approaches to research (i.e., quantitative approach) can be contradictory to the core tenets of intersectionality (Bowleg, 2008). Thus, it can be inconsistent with intersectionality theory to presume patterns of substance use risk because each interlocking system of oppression is unique to each set of intersecting social identities. Nonetheless, to balance theory with existing research findings, we attempted to make some tentative hypotheses.

*Between sexual orientation group comparisons.* We hypothesized that there would be a significant interaction among gender, race, and sexual orientation; specifically, we hypothesized that each intersection of multiple identities would render unique substance use problems risks. Overall, we hypothesized that sexual minorities would report higher rates of lifetime substance use problems than heterosexuals because of overall sexual minority stress and disadvantaged social position. We also hypothesized that sexual minority men would report higher rates of substance use problems than heterosexual men; we expected similar patterns for sexual minority women.

We had several hypotheses for the three-way identity interaction because of the multiple complex intersecting identities involved in the analyses. For the analyses involving White participants and to be consistent with previous studies using predominantly White samples (e.g., Cochran and Mays, 2009), we hypothesized that White sexual minority men and women would have higher substance use problem risks than White heterosexual men and women. We expected some differing relationships for comparisons among racial minorities.

Congruent with the literature comparing sexual minority men and women of color with heterosexual men and women of color (e.g., Cochran et al., 2007), we expected that sexual minority men of color would report rates of substance use problems similar to those of heterosexual men of color. We also hypothesized that sexual minority women of color would report higher substance use problem risk than would heterosexual women of color. From an intersectionality perspective, we presumed that sexual minority men are not at risk because of privileges that may be associated with their gender. We also conjectured that sexual minority women are at greater risk because of multiplicative and intersecting axes of oppressions associated with all their minority identities.

*Within-sexual minority group comparisons.* For the within-sexual minority comparisons, we hypothesized that there would be a significant interaction between gender and race. Because of mixed findings in the literature (e.g., Hughes et al., 2006; Meyer et al., 2008a; Parks and Hughes, 2005), we did not make empirically informed direct hypotheses about whether sexual minority men and women of color would have higher risks than White sexual minority men and women. Therefore, we allowed the data to illuminate how the unique intersections of identity might relate to varying substance use problem risks, and we used an intersectionality interpretive lens to make meaning of all our findings.

### **Method**

Data were obtained from a survey conducted with patients at an urban community health center in a New England city. The health center serves the general community and has a focus on sexual and gender minorities. From 2001 to 2003, patients were invited to participate in the study while they waited for their health care appointments. Participants completed a 25-item questionnaire to report their demographics, clinical history, and experience at the health center. The survey took about 2–6 minutes to complete.

A total of 3,103 health center patients completed the survey. For this analysis, 2,626 of the total participants remained after we removed those who responded “not sure/undecided” or “prefer not to say” when reporting their sexual orientation. Racial/ethnic minorities who identified as Asian/Pacific Islander, Native American, Multiracial, and “Other” as well as individuals who identified as transgender also

TABLE 1. Descriptive statistics

Variable	Substance use problems		Total sample ( <i>N</i> = 2,556) % ( <i>n</i> )
	No ( <i>n</i> = 2,116) % ( <i>n</i> )	Yes ( <i>n</i> = 440) % ( <i>n</i> )	
Gender			
Female	87.3 (737)	12.7 (107)	33.0 (844)
Male	80.5 (1,379)	19.5 (333)	67.0 (1,712)
Race/ethnicity			
Black, non-Hispanic	79.4 (131)	20.6 (34)	6.5 (165)
Hispanic/Latina(o)	91.3 (167)	8.7 (16)	7.2 (183)
White, non-Hispanic	82.3 (1,818)	17.7 (390)	86.4 (2,208)
Sexual orientation			
Lesbian/gay	77.7 (1,034)	22.3 (296)	52.0 (1,330)
Bisexual	80.7 (109)	19.3 (26)	5.3 (135)
Heterosexual/straight	89.2 (973)	10.8 (118)	42.7 (1,091)
Education			
High school or less	77.5 (220)	22.5 (64)	11.2 (284)
Some college or higher	83.4 (1,888)	16.6 (375)	88.8 (2,263)
Individual/family income <sup>a</sup>			
<\$20,000	73.5 (374)	26.5 (135)	21.2 (509)
≥\$20,000	84.8 (1,608)	15.2 (289)	57.5 (1,897)

<sup>a</sup>In U.S. dollars.

were not included in the analyses because of their overall small sample sizes as well as very small cell sizes (i.e., less than five participants per cell for the respective analyses). Last, upon data cleaning, 31 participants were removed for not having any data for the substance use problems measure, bringing the final sample size to 2,556. The sample comprised 1,091 heterosexuals and 1,465 sexual minorities. Participants ranged in age from 18 to 72 years ( $M = 32.92$ ,  $SD = 10.37$ ) and were mostly male (67.0%) and White (86.4%). Participant demographics for the final sample are presented in Table 1.

### Measures

**Demographics.** Several demographic indicators were asked of participants; educational level, gender, income, race, and sexual orientation were most relevant to the study. Participants were asked to report their highest level of education from the following response options: some high school or less, high school/General Educational Development (GED) credential, some college, college graduate, or postgraduate/professional degree. They were asked to identify their gender with the following response options: male, female, or transgender. Participants had the following categories to report their family income: Less than U.S. \$20,000; \$20,000–\$34,999; \$35,000–\$49,999; and more than \$50,000. They were asked to identify their race/ethnicity with the following response options: Asian/Pacific Islander, Black (non-Hispanic), Hispanic/Latina(o); Native American, White (non-Hispanic), Multiracial, and Other. Only participants who identified as Black, Hispanic/Latina(o), and White were included in the study. The participants also were asked to identify their sexual orientation

with the following response options: Homosexual (Gay/Lesbian), Heterosexual (Straight), Bisexual, Not sure/Undecided, and Prefer not to say. As mentioned, only gay, lesbian, heterosexual, and bisexual individuals were included in this study.

**Lifetime substance use problem.** A self-reported lifetime substance use problem was measured with the following item: “In your lifetime, have you ever felt you had a problem with substance use?” Participants responded as *no* or *yes*, which were coded as 0 or 1, respectively. This measure is similar to indicators of lifetime substance use problems examined in the extant literature (Hughes et al., 2006). Demonstrating convergent validity of this measure, a previous study using the same item and data set found that lifetime substance use problems were associated with higher odds of suicidality as well as with reports of victimization (Mereish et al., 2014).

### Data analysis

Only participants with completed data for all used measures were included in the analyses. Consistent with prior studies (Meyer et al., 2008b; Poteat et al., 2011), participants identifying as Black or Hispanic/Latino(a) were collapsed into one group for racial and ethnic comparisons because they potentially share a common experience of racial/ethnic individual (e.g., racist slights) and structural forms (e.g., unequal access to health care, education, employment) of discrimination when compared with White individuals and also because of small sample sizes for each group when conducting comparisons within sexual minorities.

For all analyses, the reference groups reflecting majority or privileged social identities (i.e., heterosexual, White,

male) were coded as 0; the target groups reflecting minority or oppressed social identities (i.e., sexual minority, racial/ethnic minority, female) were coded as 1. Education was coded as 0 for participants with some college or higher and 1 for a high school or GED degree or lower. In addition, income was coded as 0 for participants who reported an income of \$20,000 and higher, and 1 for lower than \$20,000.

Descriptive and regression analyses were conducted using PASW Version 18.0 (SPSS Inc., Chicago, IL). Fourteen multiple logistic regressions analyses were used to examine differences between and among gender, racial, and sexual orientation groups while accounting for age, education, and income. The first regression tested a three-way interaction among sexual orientation, gender, and race for the entire sample. With lifetime substance use problems as the outcome variable, we entered the control variables (i.e., age, income, education) and main effects (i.e., gender, race, sexual orientation) on the first regression step, their two-way interactions (e.g., Gender × Race) on the second step, and the three-way interaction (i.e., Gender × Race × Sexual Orientation) on the third step. Nine follow-up regressions compared sexual minorities and heterosexuals to better examine the three-way interaction.

For the within-sexual minority comparisons, we first conducted a regression to test a two-way interaction between gender and race among the sexual minority sample. We entered the control variables and main effects on the first step and the interaction of gender and race on the second step to predict lifetime substance use problems. Three follow-up regressions compared sexual minorities of color with White sexual minorities on reported lifetime substance use. The adjusted odds ratio (AOR) represents the odds of a lifetime substance use problem occurring for the minority or oppressed groups relative to the majority or privileged groups. The AORs and 95% confidence intervals (CIs) are reported in Tables 2 through 6.

**Results**

As hypothesized, we found a significant three-way interaction among sexual orientation, gender, and race for the entire sample (Table 2); however, there was a wide range in the 95% confidence interval. Thus, odds of a lifetime substance use problem were related to participants' intersections of all three identities. This three-way interaction provides support for an intersectionality approach, wherein levels of substance use problems are specifically related to the particular intersection of participants' race, gender, and sexual orientation. To interpret the extent to which substance use problems were predicted differently by these unique intersecting social identity groups, we ran follow-up regressions. The reference groups in these analyses were majority or privileged social identities (e.g., heterosexual, male).

TABLE 2. Test of the interaction of gender, race/ethnicity, and sexual orientation for the entire sample (N = 2,556) in predicting substance use problems

Predictors	Substance use problems AOR [95% CI]
Step 1: Predictors and controls	
Age	1.04 [1.03, 1.05]***
Education	1.39 [0.99, 1.96]
Income	2.18 [1.70, 2.81]***
Sexual orientation	1.69 [1.30, 2.21]***
Race	0.94 [0.66, 1.32]
Gender	0.77 [0.59, 1.00]†
Step 2: Two-way interactions	
Age	1.04 [1.03, 1.05]***
Education	1.38 [0.99, 1.95]
Income	2.23 [1.73, 2.86]***
Sexual orientation	1.45 [1.05, 2.02]*
Race	0.93 [0.49, 1.75]
Gender	0.48 [0.30, 0.76]**
Sexual Orientation × Gender	1.85 [1.08, 3.19]*
Sexual Orientation × Race	0.75 [0.37, 1.54]
Race × Gender	1.85 [0.89, 3.87]
Step 3: Three-way interaction	
Age	1.04 [1.03, 1.05]***
Education	1.40 [1.00, 1.97]
Income	2.23 [1.74, 2.87]***
Sexual orientation	1.56 [1.11, 2.19]*
Race	1.31 [0.66, 2.59]
Gender	0.56 [0.35, 0.90]*
Sexual Orientation × Gender	1.46 [0.81, 2.62]
Sexual Orientation × Race	0.44 [0.18, 1.05]
Race × Gender	0.84 [0.28, 2.46]
Sexual Orientation × Race × Gender	4.45 [1.04, 19.13]*

Notes: Reference groups were majority or privileged social identities (i.e., heterosexual, White, male; coded as 0), and target groups were minority or oppressed social identities (i.e., sexual minority, racial/ethnic minority, female; coded as 1). AOR = adjusted odds ratio; CI = confidence interval. †p = .05; \*p < .05; \*\*p < .01; \*\*\*p < .001.

As reported in Table 3, we first examined basic main effect differences (e.g., differences between sexual minorities and heterosexuals), and then we used an intersectional lens to examine the two-way interaction of gender and sexual orientation (e.g., differences between sexual minority women and heterosexual women). We found that odds of lifetime substance use problems were higher for sexual minorities than for heterosexuals among the full sample (AOR = 1.80). When intersecting gender into this analysis, we found that the odds were also higher for sexual minority men than for heterosexual men (AOR = 1.54) and for sexual minority women than for heterosexual women (AOR = 2.24).

We then examined the three-way interaction by conducting these analyses intersected with race, and we found mixed results. As reported in Table 4, we found that odds of substance use problems were higher for White sexual minorities than for White heterosexuals (AOR = 1.96), for White sexual minority men than for White heterosexual men (AOR = 1.79), and for White sexual minority women than for White heterosexual women (AOR = 2.05). In contrast, statistically significant differences in substance use problems were not found for the overall comparison of sexual minorities of

TABLE 3. Odds of lifetime substance use problems based on the intersections of sexual orientation and gender for the entire sample

Predictors	Substance use problems AOR [95% CI]
Model 1: Full sample	
Age	1.04 [1.03, 1.05]***
Education	1.42 [1.01, 1.99]*
Income	2.15 [1.68, 2.77]***
Identity: Heterosexuals ( <i>n</i> = 1,091) vs. sexual minority ( <i>n</i> = 1,465)	1.80 [1.39, 2.33]***
Model 2: Men	
Age	1.03 [1.02, 1.05]***
Education	1.45 [1.00, 2.11]
Income	2.18 [1.63, 2.92]***
Identity: Heterosexual ( <i>n</i> = 573) vs. sexual minority ( <i>n</i> = 1,139)	1.54 [1.12, 2.11]***
Model 3: Women	
Age	1.07 [1.05, 1.10]***
Education	0.95 [0.41, 2.19]
Income	2.58 [1.56, 4.28]***
Identity: Heterosexual ( <i>n</i> = 518) vs. sexual minority ( <i>n</i> = 326)	2.24 [1.40, 3.57]**

Notes: Reference groups were majority or privileged social identities (i.e., heterosexual, male; coded as 0), and target groups were minority or oppressed social identities (i.e., sexual minority, female; coded as 1). AOR = adjusted odds ratio; CI = confidence interval.

\**p* < .05; \*\**p* < .01; \*\*\**p* < .001.

color with heterosexuals of color and not for sexual minority men of color with heterosexual men of color. An alarming difference was found wherein sexual minority women of color had much higher odds of substance use problems than heterosexual women of color (AOR = 4.52); however, it is important to note that there is a wide range in the 95% confidence interval (1.40 to 14.64).

As hypothesized, we found a significant interaction between gender and race for sexual minorities (Table 5); however, there is a wide range in the 95% confidence interval. This interaction provides support for an intersectionality approach, such that levels of substance use problems were related to the intersection of sexual minority participants' race and gender. To interpret the extent to which substance use problems were predicted differently by these intersecting gender and race social identity groups (e.g., understand how White sexual minority men differ from sexual minority men of color), we ran follow-up regressions. The reference groups in these analyses were majority or privileged social identities (e.g., White, male).

As reported in Table 6, we first examined racial differences (i.e., White sexual minorities compared with sexual minorities of color) and then unpacked the two-way identity interaction of gender and race (e.g., White sexual minority men compared with sexual minority men of color) in predicting the odds of substance use problems among sexual minorities. We found that White sexual minorities and sexual minorities of color did not significantly differ from each other in their rates of self-reported substance use problems. We also found that sexual minority men of color had lower odds

TABLE 4. Odds of lifetime substance use problems based on the intersections of sexual orientation, gender, and race/ethnicity for the entire sample

Predictors	Substance use problems AOR [95% CI]
Model 1: White sample	
Age	1.04 [1.03, 1.05]***
Education	1.28 [0.87, 1.88]
Income	2.33 [1.78, 3.05]***
Identity: Heterosexuals ( <i>n</i> = 921) vs. sexual minority ( <i>n</i> = 1,324)	1.96 [1.48, 2.61]***
Model 2: White men	
Age	1.03 [1.01, 1.04]***
Education	1.25 [0.82, 1.91]
Income	2.43 [1.78, 3.31]***
Identity: Heterosexuals ( <i>n</i> = 480) vs. sexual minority ( <i>n</i> = 1,012)	1.79 [1.26, 2.53]**
Model 3: White women	
Age	1.07 [1.05, 1.10]***
Education	0.88 [0.31, 2.45]
Income	2.64 [1.50, 4.62]**
Identity: Heterosexuals ( <i>n</i> = 425) vs. sexual minority ( <i>n</i> = 291)	2.05 [1.22, 3.44]**
Model 4: Racial/ethnic minority sample	
Age	1.06 [1.03, 1.10]***
Education	2.08 [1.00, 4.35]
Income	1.29 [0.64, 2.62]
Identity: Heterosexuals ( <i>n</i> = 187) vs. sexual minority ( <i>n</i> = 163)	1.21 [0.62, 2.34]
Model 5: Racial/ethnic minority men	
Age	1.07 [1.02, 1.11]**
Education	3.08 [1.27, 7.50]*
Income	1.05 [0.41, 2.66]
Identity: Heterosexuals ( <i>n</i> = 93) vs. sexual minority ( <i>n</i> = 127)	0.65 [0.27, 1.56]
Model 6: Racial/ethnic minority women	
Age	1.08 [1.03, 1.14]**
Education	0.97 [0.21, 4.57]
Income	2.34 [0.70, 7.78]
Identity: Heterosexuals ( <i>n</i> = 93) vs. sexual minority ( <i>n</i> = 35)	4.52 [1.40, 14.64]*

Notes: Reference groups were majority or privileged social identities (i.e., heterosexual, White, male; coded as 0), and target groups were minority or oppressed social identities (i.e., sexual minority, racial/ethnic minority, female; coded as 1). AOR = adjusted odds ratio; CI = confidence interval.  
\**p* < .05; \*\**p* < .01; \*\*\**p* < .001.

of substance use problems than did White sexual minority men (AOR = 0.55). However, sexual minority women of color had marginally higher odds of substance use problems than did White sexual minority women (AOR = 2.41).

## Discussion

Examining health disparities among racial and ethnic minorities as well as sexual minorities is a public health priority, as emphasized in recent federal reports (e.g., *Healthy People 2020*, U.S. Department of Health and Human Services, 2010; Institute of Medicine, 2011). With these priorities as a backdrop, our findings underscore several important issues in substance use health disparities research. Our findings indicate that substance use disparities are more nuanced and complex when intersecting gendered and racial levels of analysis. Our results demonstrate the importance

TABLE 5. Test of interactions of gender and race/ethnicity for sexual minorities in predicting substance use problems

Predictors	Substance use problems AOR [95% CI]
Step 1: Predictors and controls	
Age	1.03 [1.02, 1.04]***
Education	1.46 [0.96, 2.22]
Income	2.31 [1.70, 3.14]***
Race	0.77 [0.49, 1.20]
Gender	0.90 [0.65, 1.25]
Step 2: Two-way interaction	
Age	1.03 [1.02, 1.04]***
Education	1.49 [0.98, 2.27]
Income	2.32 [1.71, 3.16]***
Race	0.55 [0.32, 0.95]*
Gender	0.78 [0.55, 1.11]
Race × Gender	3.70 [1.39, 9.83]**

Notes: Reference groups were majority or privileged social identities (i.e., White, male; coded as 0), and target groups were minority or oppressed social identities (i.e., racial/ethnic minority, female; coded as 1). AOR = adjusted odds ratio; CI = confidence interval. \**p* < .05; \*\**p* < .01; \*\*\**p* < .001.

of including multiple intersecting social identities in health disparities research, because aggregating social categories of groups may obscure some crucial differences or similarities. Considering these nuanced results, researchers, clinicians, and health center administrators should understand and address the unique subgroups of sexual minorities that they are aiming to engage in their work. Concomitantly, culturally sensitive approaches and programs should be implemented in ways that are appropriate for each subgroup of sexual minorities.

Overall, sexual minorities had significantly greater risk of lifetime substance use problems than heterosexuals across the aggregated sample of sexual minorities and among White racial group comparisons. These findings support the extant substance use disparities literature (Cochran and Mays, 2009; Conron et al., 2010; King et al., 2008; Lipsky et al., 2012; McCabe et al., 2009), wherein sexual minorities are at greater risk. These findings are important because they demonstrate the continued need for future research and clinical interventions that address these disparities. Nonetheless, as our results demonstrated, this research might be limited in its generalization to varying racial minority groups within sexual minority communities.

Substance use disparities are more nuanced and complex within racial and gendered subgroups. The study's results underscore that aggregating large groups (e.g., sexual minorities, racial minorities) might provide some precarious findings that might not appropriately generalize to all individuals within these larger groups. For instance, in this study, sexual minorities of color did not differ in their odds of substance use problems when compared with White sexual minorities; however, these results were not accurate in capturing the unique experiences of sexual minority men and women among each group, specifically sexual minority

TABLE 6. Odds of lifetime substance use problems based on the intersections of gender and race/ethnicity for sexual minorities (*n* = 1,465)

Predictors	Substance use problems AOR [95% CI]
Model 1: Sexual minority sample	
Age	1.03 [1.02, 1.04]***
Education	1.47 [0.99, 2.24]
Income	2.30 [1.69, 3.13]***
Identity: White ( <i>n</i> = 1,303) vs. racial/ethnic minority ( <i>n</i> = 162)	0.77 [0.49, 1.20]
Model 2: Sexual minority men	
Age	1.02 [1.01, 1.04]**
Education	1.42 [0.90, 2.24]
Income	2.21 [1.57, 3.13]***
Identity: White ( <i>n</i> = 1,012) vs. racial/ethnic minority ( <i>n</i> = 127)	0.55 [0.32, 0.94]*
Model 3: Sexual minority women	
Age	1.08 [1.04, 1.12]***
Education	2.29 [0.74, 7.16]
Income	3.48 [1.70, 7.09]**
Identity: White ( <i>n</i> = 291) vs. racial/ethnic minority ( <i>n</i> = 35)	2.41 [1.02, 5.72]†

Notes: Racial or ethnic minority are participants who identified as Black American and/or Hispanic/Latino American. Reference groups were majority or privileged social identities (i.e., White; coded as 0), and target groups were minority or oppressed social identities (i.e., racial/ethnic minority; coded as 1). AOR = adjusted odds ratio; CI = confidence interval. †*p* = .05; \**p* < .05; \*\**p* < .01; \*\*\**p* < .001.

men and women of color. These nuances are consistent with intersectionality theory, wherein unique intersections of social identities render varying privileges and oppressions, which might be related to differing health outcomes.

White sexual minority men and women's substance use problem risk was consistent with the broader sexual minority substance use disparities literature. Because we used social individual-level categories (i.e., gender, race, sexual orientation) as provisional categories for structural interlocking forms of oppression (i.e., sexism, heterosexism), we conceptualized sexual minority identification to represent a salient system of oppression because of ongoing overt structural heterosexism (e.g., lack of universal civil rights such as same-sex marriage, adoption, partner benefits) for sexual minorities. More specifically, White individuals obtain individual-level and structural forms of privilege associated with their race; concurrently, White sexual minorities experience oppression associated with their sexual orientation. As such, it is plausible that because of heterosexist oppression, White sexual minorities might face greater risk of lifetime substance use problems than do White heterosexuals. These disparities were especially prevalent for White sexual minority women, potentially because of the interlocking systems of sexism with heterosexism. It is plausible that White sexual minority men were at higher risk than White heterosexual men as a result of overall heterosexist oppression salient to their sexual minority identity. In addition, despite their male privilege, research has demonstrated that traditional masculine norms are related to risky health behaviors (e.g., sub-

stance use) for sexual minority men among a predominantly White sample (Hamilton and Mahalik, 2009). Thus, although they may have male privilege, there are costs associated with masculinity in a heterosexist society.

Furthermore, our results contribute to the substance use disparities research by demonstrating that sexual minority men of color did not significantly differ in their risk of substance use problems from heterosexual men of color, and they had lower odds of substance use problems than did White sexual minority men. These results might provide some potential support for a resilience approach as reported in the literature (Bowleg, 2013; Bowleg et al., 2003; Meyer, 2010; Moradi et al., 2010). Sexual minority men of color might have developed coping resources to help them better cope with minority stressors related to their race and sexual orientation, and, as such, they may be resilient against higher odds of substance use. From an intersectionality perspective, the intersections of their sexual orientation, gender, and race might have provided sexual minority men of color with unique positions of privilege (i.e., being a man) that might promote their resilience, despite their positions of oppression (i.e., being a racial and sexual minority). However, future research should assess other mental and behavioral health outcomes to examine with greater complexity their overall domains of disparities and resilience in relation to their oppressed social positions.

In contrast to sexual minority men of color, sexual minority women of color had potentially alarming odds of lifetime substance use problems. These results are congruent with some of the extant research findings (e.g., Cochran et al., 2007; Hughes et al., 2006; Parks and Hughes, 2005). Our findings indicated that Black and Latina American sexual minority women were four times more likely to have substance use problems than were heterosexual women from within their own racial group, and they were twice as likely as were White lesbian women.

From an intersectionality perspective, these women are at the axes of multiple interlocking systems of oppression (e.g., heterosexism, racism, sexism; Bowleg et al., 2003; Collins, 2000; Greene, 2000), in which they have to endure individual, cultural, and structural levels of discrimination (e.g., denial of access to health care resources). Because of these marginalized positions, sexual minority women of color might turn to substance use as a way to cope with negative oppressive stressors related to their marginalized social positions and lack of access to quality care. Future research is needed to better examine their unique experiences of multiple minority stressors and how these stressors may be intersectional in their harmful effects. It is also important to examine other domains of health where these women might report resilience. Nonetheless, these results are crucial to address on various levels to ensure that sexual minority women of color are adequately understood and provided with appropriate clinical and health services.

The present study has some limitations that are worth noting. We used a convenience sample of participants who were patients of a community health center, which is known for its mission to serve the general population and sexual and gender minorities. The results are not generalizable to other patients in other health care settings. We also tested the intersections of identity by conducting statistical interaction analyses; although we found significant three- and two-way interactions, this is methodologically limited (e.g., power, sample size) in appropriately capturing the complex intersectionality of identities (Cole, 2009). In addition, the data set is cross-sectional in nature; thus, our interpretations of the relationships between the examined social groups and substance use problems are limited, and we also cannot determine causality. Future research should examine how these social identities, reported experiences of concomitant oppression, and substance use problems are related. Moreover, we included only participants who identified their sexual orientation identity; additional measures of sexual orientation such as attraction and behavior would be important to consider because health risks vary depending on how sexual orientation is measured (e.g., Bostwick et al., 2010).

Furthermore, the substance use problems measure in the study was limited because it was a self-report dichotomous item. Future studies should use clinical measures to more comprehensively assess lifetime substance problems (e.g., types of substances) and their duration (e.g., current or past problems). Because of the small sample size of bisexual participants, the present study aggregated bisexual individuals with lesbians and gay men. Future research should examine these unique groups' experiences, as they have different rates of substance use (Institute of Medicine, 2011). Similarly, only Black Americans and Latino(a) Americans were included in our racial and ethnic minority group; thus, the findings of this study are limited to these two racial and ethnic groups and cannot be generalized to other racial and ethnic minority groups. Concomitantly, although aggregating Black and Latino Americans into one group was conducted based on conceptual reasons and previous studies, we acknowledge the study's limitations in understanding the unique intersectional and sociocultural experiences of each racial/ethnic group. Moreover, gender minorities were not included in this study; future research needs to examine the unique experiences of transgender individuals within racially diverse samples (Institute of Medicine, 2011). Finally, the complexity of the participants' intersecting identities was simplified into basic categories; more complex measures of intersectional identities should be used in future research (e.g., Narváez et al., 2009; Stirratt et al., 2008).

The present study responds to calls for research examining racial, ethnic, and sexual minority health disparities (Institute of Medicine, 2011; U.S. Department of Health and Human Services, 2010). To advance health disparities research, researchers should consider utilizing an inter-



sectionality framework to illuminate the unique disparities facing their respective populations. Aggregating samples might obscure some important nuances, such as increased risk or resilience among subgroups within sexual minorities. Although intersectionality research approaches using provisional categories of social groups are limited in capturing individuals' complex intersectional identities (McCall, 2005), they are important to illuminating structural inequalities such as health disparities. These research efforts are crucial to informing and advancing policies, culturally appropriate clinical services, and prevention programs in ameliorating sexual minorities' risk of substance use problems.

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