

Discrimination, Victimization, and Hazardous Drinking among LGB Adults in the US:

Findings from Population-Based Data

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A growing body of literature documents the negative effects of alcohol consumption on physical and mental health as well as its social harms (Rehm, 2011; Shield, Monteiro, Roerecke, Smith, & Rehm, 2015). These findings are especially concerning considering the rise in alcohol use, high risk drinking, and alcohol use disorders among adults in the United States (Grant et al., 2017). Although the rise in alcohol use appears to be a general trend, there are important subgroup differences that indicate higher degrees of risk (Grant et al., 2017): One such subgroup is lesbian, gay, and bisexual (LGB) people (Corliss, Rosario, Wypij, Fisher, & Austin, 2008; Hughes, McCabe, Wilsnack, West, & Boyd, 2010; McCabe et al., 2009).

Higher rates of alcohol use among LGB people are often explained as a coping mechanism for stress related to their sexual minority status (Mereish et al., 2014), referred to as minority stress (Meyer, 2003). Research has identified minority stressors, such as victimization and discrimination as stressors that are being coped with using alcohol by LGB people (Mereish et al., 2014; Pascoe & Smart Richman, 2009).

Although research has focused on studying the alcohol use of sexual minority people (Corliss et al., 2008; Fish, Hughes, & Russell, 2017; McCabe et al., 2009; Talley, Sher, & Littlefield, 2010), we identified three crucial shortcomings in the current body of science. First, research often uses general, or global, measures of victimization and discrimination, although one would expect – from a minority stress standpoint– that LGB people experience victimization and discrimination related to their marginalized sexual identity and gender identity or expression (SOGIE). Second, there has been limited research comparing the alcohol use among LGB subgroups. This within-group approach would offer more nuanced explanations for LGB people's elevated rates of alcohol use, understanding of the factors that

influence alcohol use among LGB subgroups, and clarity on the differences between traditional (i.e., lesbian, gay, and bisexual) and emergent sexual identities (e.g., queer, pansexual, and same gender loving). Third, previous within-group research has typically relied on non-representative community samples, limiting generalizability (Gillespie & Blackwell, 2009). Therefore, the aim of the present study is to explore within-group differences in hazardous drinking among LGB people, and examine how general as well as SOGIE-based victimization and discrimination might explain these differences. In order to study these associations we will use data from the *Generations Study* (NIH grant number: 5R01HD078526-05), the first nationally-representative dataset of LGB adults in the United States.

Theory

Alcohol use is hypothesized as a coping strategy to stress. According to social learning theory cultural norms dictate whether alcohol use is encouraged and under what circumstances one may consume alcohol. People learn during adolescence how alcohol can reduce stress and develop positive expectancies of alcohol use as a coping mechanism (Maisto, Carey, & Bradizza, 1999). Positive expectancies with alcohol use during adolescence predicted concurrent alcohol use and misuse in adult life, especially for men (Cable & Sacker, 2007; Patrick, Wray-Lake, Finlay, & Maggs, 2009). Further, in adulthood alcohol use has been identified as a means to cope with stress (Britton, 2004; Corbin, Farmer, & Nolen-Hoekesma, 2013). People who are motivated to drink alcohol in order to cope with negative experiences are known to drink more and have a higher risk to develop alcohol dependencies (Cooper, Russell, & George, 1988).

LGB people experience unique stressors related to their sexual orientation, referred to as minority stress (Meyer, 2003). It is hypothesized that these unique stressors compound

everyday sources of stress not unique to sexual minorities (e.g., losing a job) and thus contribute to elevated rates of poor mental health which may result in maladaptive coping strategies, such as alcohol use (Meyer, 2003). Alcohol is often used as maladaptive coping strategy for external/objective stressful events like discrimination and victimization (Mereish et al., 2014; Pascoe & Smart Richman, 2009).

Sexual minority people who experience discrimination are more likely to engage in problematic or hazardous drinking compared to heterosexual people (Hughes, 2011; Woodford, Krentzman, Gattis, & Woodford, 2012). Comparatively, sexual minority adults who do not experience discrimination report similar rates of substance use disorders as their heterosexual peers, especially men (McCabe, Bostwick, Hughes, West, & Boyd, 2010), whereas those who experience sexual orientation-related discrimination are more likely to meet the criteria for a substance use disorder. A different study with older LGB adults found that day-to-day discrimination is positively associated with high-risk drinking for men, but not for women (Bryan, Kim, & Fredriksen-Goldsen, 2017). Higher rates of victimization are also associated with substance abuse for sexual minority women and bisexual men, but not for gay men (all compared to heterosexual people) (Hughes, McCabe, Wilsnack, West, & Boyd, 2010). Studies among women find that sexual-orientation related victimization is associated with greater risks for hazardous drinking (Drabble, Trocki, Hughes, Korcha, & Lown, 2013) and alcohol abuse (Lehavot & Simoni, 2011).

From a minority stress standpoint, one would expect that discrimination and victimization that affects the alcohol use of LGB people relates to their sexual orientation and gender identity or expression (SOGIE). However, research studying the associations between discrimination and victimization and alcohol use among LGB people has not traditionally study different forms of victimization and discrimination. That is, studies often use general or global measures of victimization and discrimination instead of those attributed to specific,

including SOGIE-related, identities, although exceptions exist (e.g., Hughes, 2011; McCabe et al., 2010). This is not to say that discrimination and victimization related to other identities (e.g., age and sex) would not be associated with alcohol-related coping, but we are interested in understanding how SOGIE-specific experiences of discrimination and victimization may directly and uniquely influence alcohol use for sexual minorities. Additionally, focusing on the relationship between SOGIE-related discrimination and victimization will allow us to better test how sexual minority-specific stressors are associated with elevated rates of hazardous drinking.

Within group differences

Research on the alcohol use of LGB people often makes between-group comparisons. That is, the alcohol use of LGB people is compared to that of heterosexual people. For example, one prior study found that LGB people initiate alcohol use earlier in life compared to heterosexual people (Corliss et al., 2008). Sexual minority people also have a higher frequency of alcohol consumption compared to heterosexual people (Talley et al., 2010), and higher odds of alcohol dependence (McCabe et al., 2009). Furthermore, lesbian and bisexual women evidence greater disparities in alcohol consumption relative to heterosexual women than do gay and bisexual men when compared to heterosexual men (Talley et al., 2016; Talley, Hughes, Aranda, Birkett, & Marshal, 2014).

Although between-group comparisons highlight the differences in alcohol use between heterosexual and LGB people, it does not illuminate why LGB people show higher rates of alcohol use. Research that focusses on alcohol use differences among the LGB groups, also referred to as within-group comparisons, is better able to explicate sexual minority-specific explanations of alcohol use (i.e., minority stressors), and could provide a greater understanding of the factors that influence alcohol use among LGB subgroups. However,

research studying within-group differences is scarce. Findings from this work suggest that the alcohol abuse of bisexual women was slightly higher compared to that of lesbian women (Wilsnack et al., 2008), whereas others find similar levels of alcohol use across the LGB subgroups (Gillespie & Blackwell, 2009). We extend this work by exploring LGB subgroups differences, but also the hypothesized mechanisms of alcohol use among LGB people, using US-representative data.

Sex appears to play an important role in differentiating patterns of sexual orientation-related alcohol abuse disparities (Hughes, Wilsnack, & Kantor, 2016). We therefore believe the sex may also provide unique understandings of risk among LGB people. Sex differences in alcohol use in the general population are well established, where men tend to drink more alcohol and experience more alcohol use disorders in comparison to women (Grant et al., 2017). These differences might stem from men being socialized to externalize stress – such as alcohol use – whereas women tend to internalize stress (Cooper et al., 1992; Horwitz & White, 1987). This sex difference is understudied in LGB samples due to the lack of within-group research, although between-group comparisons show that relative to their heterosexual peers, lesbian and bisexual women report higher alcohol use than gay and bisexual men (Plöderl & Tremblay, 2015; Talley et al., 2016, 2014). This could indicate that lesbian and bisexual women evidence similar or higher rates of alcohol use than gay and bisexual males. However, these male-female comparisons are rarely made in the LGB health literature. Such investigations would inform the research and intervention focus to address elevated alcohol abuse in the LGB community.

There is also evidence to suggest that there would be within-group differences in experiences of discrimination and victimization on the basis of sex and sexual identify. For example, gay and bisexual men tend to experience more victimization compared to women, although differences are relatively small (Katz-Wise & Hyde, 2012). Further, bisexual people

might experience different forms or degrees of SOGIE-related discrimination and victimization than lesbian and gay people. Researchers suggest that bisexual people experience dual forms of discrimination. That is, from bias – or biphobia – from both heterosexual and LGB communities (Eisner, 2013). Biphobia stems from beliefs about bisexuality as either a transitory phase, a transitional phase, or denial of one’s “true” sexual orientation instead of being a valid sexual orientation (MacDonald, Jr., 1981). There is ample evidence for the existence of biphobia in both heterosexual and gay communities (Mulick & Wright, 2002; Scherrer, Kazyak, & Schmitz, 2015; Steffens & Wagner, 2004; Yost & Thomas, 2012), although some research found that gay and lesbian people reported more discrimination compared to bisexual men and women (Bostwick, Boyd, Hughes, West, & McCabe, 2010). Thus, within group research enables us to shed light on different experiences of discrimination and victimization.

Thus far most of the research cited looked at traditional sexual minority identities (i.e., lesbian, gay, and bisexual) and its relationship with discrimination, victimization, and alcohol use. This ignores emergent identities like queer, pansexual, and same gender loving and their experiences of discrimination, victimization, and alcohol use (Callis, 2014; Russell, Clarke, & Clary, 2009). Research often does not include these emergent identities as a sexual identity option (Corliss et al., 2008; McCabe et al., 2009; Talley et al., 2014). This inhibits our understanding of both the traditional and the emergent sexual minority identities and associations between discrimination and victimization with alcohol use.

The present study

LGB people evidence elevated rates of alcohol abuse, and this risk is largely attributed to experiences of stigma, discrimination, and victimization (Meyer, 2003; Mereish et al., 2014; Pascoe & Smart Richman, 2009). However, most research studies this association using

global measures of stress, instead of the hypothesized sexual-minority-specific forms of discrimination and victimization (e.g., SOGIE-related stress). Moreover, scholarship on the alcohol use of LGB people largely reflects research that tests heterosexual and sexual minority differences, however within-group comparisons – that is, among LGB people – are uniquely situated to assess sexual-minority-specific mechanisms of alcohol use, experiences of discrimination and victimization related to one's SOGIE. These types of approaches are also able to elucidate within-group differences in the experience of stress and alcohol use, which inform efforts to eliminate sexual orientation-related disparities in alcohol abuse. Therefore, we aim to explore within-group differences in hazardous drinking among LGB people, and examine how general as well as SOGIE-based victimization and discrimination might explain these differences using the first nationally representative sample of LGB adults in the United States.

Given previous research, we expect that, contrary to the general population, sexual minority women will have at least similar levels of alcohol use compared sexual minority men. Further, we will exploratively study differences in experiences of general and SOGIE-related discrimination and victimization, where we might expect that bisexual people experience more (SOGIE-related) victimization and discrimination than lesbian and gay people. Lastly, we expect that people who experience victimization and discrimination to have higher rates of hazardous drinking, especially people who experience SOGIE-related victimization and discrimination.

Methods

Participants

The current study uses the first wave of the *Generations Study* (i.e., *Generations*) (NIH grant number: 5R01HD078526-05). *Generations* is a five-year panel study to examine the

health and well-being in three generations of LGB people who came of age at different historical contexts in the United States. The three cohorts are the Pride cohort (52-59 years), the Visibility cohort (34-41 years), and the Equality cohort (18-25 years).

Generations participants were recruited via the Gallup Daily Tracking Survey between March 28, 2016 – March 30, 2017. The Daily Tracking Survey is a telephone interview of a national probability sample of adults ages 18 and older. Respondents include English and Spanish-speaking individuals from all 50 U.S. states and the District of Columbia. For the Generations study, a 2-step recruitment procedure was used. First, interviewers asked participants ‘I have one final question we are asking only for statistical purposes. Do you, personally, identify as lesbian, gay, bisexual, or transgender?’. In the second step, participants who identified as LGB were invited to participate in the Generations study. Respondents were eligible if they were cisgender, identified as lesbian, gay, bisexual, queer, or same gender loving, were between the ages of 52 – 59, 34 – 41, or 18 – 25, identified as either Black, Latino, or White, had at least a 6th grade education, and spoke English. If eligible and interested in participating in the study, they were emailed or mailed a survey self-administered questionnaire. Respondents were sent \$25 gift certificate if they participated in the study. Prior to the beginning of the survey participants read an information sheet and consented to participation. Consent forms were not collected because of the self-administered nature of the data collection and to ensure respondents' confidentiality. The study protocol was reviewed by the Gallup IRB, the UCLA IRB and the IRBs of collaborating institutions through reliance on UCLA IRB.

In total, Gallup screened 366,644 participants, 3.5% of whom were identified as LGBT and 27.5% of whom were eligible to participate in the Generations Study. Of those eligible, 80% agreed to participate in the survey and 48% completed the baseline survey, although 24 participants were removed from the sample because they identified as

transgender. The final baseline sample was 1,345. In an effort to increase the racial/ethnic diversity of the sample, recruitment for the Generations baseline survey was extended until March 30, 2018 for respondents of Black and Latino race/ethnicity. This yielded in a final sample size of 1,536.

Measures

Dependent variable

Hazardous drinking. We measure scores of hazardous alcohol use with the three item Alcohol Use Disorders Identification Test-Consumption (AUDIT-C), the responses to which produced a score ranging from 0 to 12 (Cronbach's $\alpha = 0.79$). Items were, "How often do you have a drink containing alcohol?" with 5-point Likert style response scale ranging from *Never* = 0 to *4 or more times a week* = 4.; 'How many standard drinks of alcohol do you have on a typical day?' with 6 answer categories ranging from *None* = 0 to *10 or more* = 5; and 'How often do you have six or more drinks on one occasion?' with five answer categories ranging from *Never* = 0 to *Daily or almost daily* = 4. As a recommended scoring procedure, the second item was recoded so that the first two answer categories *None* and *1 or 2* were scored as 0. For men a score of 4 or more indicates hazardous drinking and for women a score of 3 or more.

Independent variables

Discrimination. We used an adapted version of the Everyday Discrimination Scale (Williams, Yu, Jackson, & Anderson, 1997), which measures relatively minor experiences of discrimination or unfair treatment. Participants were asked 'In your day to day life over the past year, how often did any of the following things happen to you?' Participants were presented 9 items asking how often they experienced different forms of discrimination (i.e., being harassed, treated with less respect, or people acting as if they were afraid of you), with

response options *often*, *sometimes*, *rarely*, and *never*. Items were reverse coded and averaged so that higher scores reflected more frequent forms of everyday discrimination. (Range: 1-4; Cronbach's $\alpha = 0.91$). Participants were then asked to indicate why they believed that they had experienced discrimination: Response options included, *age, sex, being transgender, gender expression or appearance, race/ethnicity, income level or education, sexual orientation, physical appearance, religion/spirituality, and disability*. For the purposes of this study we were interested in the independent effect of discrimination attributed to sexual orientation and gender identity or expression (SOGIE). We therefore created a dummy coded variable to indicate whether participants reported that their discriminatory experiences were related to their SOGIE (non-SOGIE discrimination = 0, SOGIE discrimination = 1). Those who did not report an attribution of discrimination were coded as 0.

Victimization. Victimization was measured using Herek's (2009) 6-item Enacted Stigma scale. Participants were asked to indicate how often they had experience different forms of victimization "since the age of 18". Example items include: 'You were hit, beaten, physically attacked, or sexually assaulted' and 'Someone threatened you with violence'. Response options included *Never, Once, Twice, and Three or more times*. Items were summed and averaged to create an overall mean score of victimization (Range: 1-4; Cronbach's $\alpha = 0.83$). Similar to discrimination, participants were asked to attribute their experiences of victimization to social identities. We used this variable to create a dummy coded variable to represent non-SOGIE victimization = 0 and SOGIE victimization = 1.

Covariates

Sex assigned at birth. Participants were asked 'What sex were you assigned at birth, on your original birth certificate?'. Those assigned female at birth were coded as 0 and those assigned male at birth were coded as 1. Twenty-two respondents did not respond to this

question, but were assigned a value based on the sex they reported on the Gallup survey, where respondents were asked ‘I am required to ask, are you male or female?’.

Sexual identity. Sexual identity was measured by the item ‘Which of the following best describes your current sexual orientation?’ Response options included *straight/heterosexual, lesbian, gay, bisexual, queer, same gender loving, and other*. Although the study was designed to sample the LGB population in the United States, eleven respondents identified as heterosexual and were subsequently not included in the current sample. Due to small cell sizes it was not possible to keep emergent identities such as *queer, same gender loving, and other* as separate categories. Four sexual orientation variables were created. First, a three-category sexual identity variable coded as *gay/lesbian = 1, bisexual = 2, and emergent sexual identity = 3*. Second, a two-category sexual identity variable coded as *gay/lesbian = 1, bisexual/ emergent sexual identity = 2*. Third, the three-category sexual identity variable defined by sex coded as *gay male = 1, lesbian female = 2, bisexual male = 3, lesbian female = 4, emergent sexual identity male = 5, and emergent sexual identity female = 6*. Last, the two-category sexual identity variable defined by sex coded as *gay male = 1, lesbian female = 2, bisexual/emergent sexual identity male = 3, lesbian/ emergent sexual identity female = 4*.

Gender identity. Participants were asked “If you had to choose only one of the following terms, which best describes your current gender identity?” with answer options *woman, man, transgender woman/male-to female (MTF), transgender man/female-to male (FTM), and non-binary/genderqueer*. *Woman* and *man* was coded as a binary gender identity (0) and all other option as a non-binary gender identity (1)

Race/ethnicity. Respondents were eligible for the study if they reported a Black, Latino, or White racial identity. To assess this, respondents were first asked “Are you of Hispanic, Latino, or Spanish origin – such as Mexican, Puerto Rican, Cuban, or other Spanish origin?”

with response options *yes* and *no*. They were subsequently asked “Which of the following describes your race? (up to five responses allowed)” with answer categories *White, Black or African American, Asian, American Indian of Alaska Native, and Native Hawaiian or Pacific Islander*. A variable based on this inclusion criterion was used to measure race/ethnicity where *White* = 1, *Black* = 2, and *Hispanic* = 3.

Cohort. As a result of the study design, participants fall into one of three age ranges 52-59 years (pride cohort), 34-41 years (visibility cohort), and 18-25 years (equality cohort).

Annual personal income. Income was measured by asking participants ‘What is your total annual income, before taxes?’ Participants could choose between 12 categories ranging from *under \$720 to \$240,000 and over*. We calculated household income to reflect three categories of income (lower-income, middle-income, and upper-income) that were based on average income compared to national averages for households of three. Those in the lower-income category were defined as households of three earning less than two-thirds the 2016 median household income, the middle-income were those between two-thirds and double the median household income, and upper-income group were at least double the median household income.

RUCA. Using respondents’ zip codes, urbanicity scores were calculated using the USDA Rural-Urban Commuting Area coding system (USDA, 2013).

Analytical approach

First *t*-tests and analyses of variance (ANOVA) were conducted to estimate differences in rates of hazardous drinking, discrimination (SOIGE-related and non-SOIGE-related), and victimization (SOIGE-related and non-SOIGE-related), for sex assigned at birth and four operationalizations of sexual identity. By comparing different operationalisations of sexual identity we will be able to study more precisely if and how the traditional and

emergent sexual identities differ in their rates of hazardous drinking, discrimination and victimization. Next, linear regression analyses were conducted to assess associations between hazardous drinking and minority stress. Based on preliminary findings, we stratified these models by sex and sexual identity to better understand within-group differences in the experience of hazardous drinking. Models were estimated in a step-wise fashion to assess the independent impact of discrimination and victimization and whether attributing these experiences to SOGIE identities altered the associations between these various forms of minority stress and hazardous drinking. All models adjusted for gender identity, race/ethnicity, cohort, annual personal income, and RUCA. All analyses were conducted for those provided valid data for hazardous drinking. Sampling weights were applied to provide representative estimates and multiple imputation was used to account for missing data.

Results

Descriptive Statistics

Table 1 presents the sample characteristics. 46.7% of the participants were assigned male at birth and the sample was diverse with 19.6% identifying as Hispanic and 16.0% identifying as Black. The equality cohort was the largest (44.2%) followed by the pride (31.3%), and the visibility cohort (24.5%). Hazardous drinking was positively skewed, which is expected given that the AUDIT-C is a measure to identify people who are hazardous drinkers or have active alcohol use disorders (Bush, Kivlahan, McDonell, Fihn, & Bradley, 1998). Participants who reported SOGIE-related discrimination ($M = 2.25$, $SD = 0.66$) or victimization ($M = 2.25$, $SD = 0.79$) reported higher levels of discrimination or victimization compared to participants who reported non-SOGIE-related discrimination ($M = 1.72$, $SD = 0.64$) or victimization ($M = 1.80$, $SD = 0.79$). More women identified as bisexual (23.4%) or a emergent sexual identity (9.3%) compared to men (bisexual 9.3%; emergent sexual identity

2.8%). Last, income was equally distributed (lower-income = 30.9%; middle-income = 36.9%; and higher-income = 32.2%).

Bivariate analyses

Table 2 displays the results of the bivariate analyses of hazardous drinking with sex assigned at birth and different operationalizations of sexual identity. Hazardous drinking varied by sex, but not sexual identity, where women ($M = 2.53$, $SD = 2.04$) in our sample drank less than men ($M = 2.87$, $SD = 2.03$), $t(1520) = 6.05$, $p = 0.01$. However, women ($M = 2.53$, $SD = 2.04$) reported more discrimination than men ($M = 2.53$, $SD = 2.04$) ($t(1520) = 6.05$, $p = 0.01$). For our three-category sexual identity variable, bisexual ($M = 2.16$, $SD = 0.67$) people as well as people with an emergent identity ($M = 2.23$, $SD = 0.67$) reported statistically significantly higher rates of discrimination than gay/lesbian people ($M = 1.74$, $SD = 0.64$), $F(2,1484) = 20.48$, $p < 0.01$. This same pattern was also present for our two-category operationalization of sexual identity, $t(1485) = 38.04$, $p < 0.01$. We also noted statistical differences across groups simultaneously defined by sex and sexual identity ($F(5,1481) = 10.07$, $p < 0.01$). Post hoc pairwise comparisons indicated that bisexual women ($M = 2.20$, $SD = 0.65$) and women with an emergent identity ($M = 2.28$, $SD = 0.64$) reported more discrimination than gay men ($M = 1.85$, $SD = 0.76$) and lesbian women ($M = 1.95$, $SD = 0.74$). Last, when comparing groups defined by sex and our two-category operationalization of sexual identity, we noted that gay men and lesbian women experienced less discrimination than women with a bisexual/emergent identity ($M = 2.22$, $SD = 0.65$), $F(3,1483) = 15.47$, $p < 0.01$.

To look further into differences in experiences of discrimination, separate t -tests and ANOVA's were conducted for people who only reported SOGIE-related discrimination and non-SOGIE-related discrimination (see Table 3). Women ($M = 2.49$, $SD = 0.56$) reported more

SOGIE-related discrimination than men ($M= 2.24, SD = 0.73$) in our sample, $t(1513) = 13.10, p < 0.00$. For the three-category sexual identity variable, bisexual ($M= 2.58, SD = 0.53$) and people with an emergent sexual identity ($M= 2.54, SD = 0.54$) reported more SOGIE-related discrimination than gay/lesbian people ($M= 2.23, SD = 0.70$), $F(2,1511) = 11.84, p < 0.00$. This pattern held for the two-category sexual identity as well, $t(1512) = 22.83, p < 0.00$. Differences were also found across groups simultaneously defined by sex and sexual identity, $F(5,1508) = 5.57, p < 0.00$. Post hoc pairwise comparisons indicated that bisexual men ($M= 2.57, SD = 0.54$), bisexual women ($M= 2.58, SD = 0.53$), and women with an emergent identity ($M= 2.58, SD = 0.50$) all reported more SOGIE-related discrimination than gay men ($M= 2.16, SD = 0.75$). When groups were defined by sex and the two-category operationalization of sexual identity, gay men experienced less SOGIE-related discrimination than men ($M= 2.50, SD = 0.59$) and women ($M= 2.58, SD = 0.53$) with a bisexual/emergent identity, $F(3,1510) = 8.64, p < 0.00$. Moving to non-SOGIE-related discrimination, women ($M= 1.94, SD = 0.69$) reported more non-SOGIE-related discrimination than men ($M= 1.66, SD = 0.66$), $t(1496) = 26.31, p < 0.00$. Bisexual ($M= 2.01, SD = 0.66$) and people with an emergent identity ($M= 1.94, SD = 0.65$) reported more non-SOGIE-related discrimination than gay/lesbian people ($M= 1.61, SD = 0.65$) ($F(2,1486) = 27.02, p < 0.00$), which held for the two-category sexual identity variable as well, $t(1487) = 53.97, p < 0.00$. When groups were defined by sex and the three-category operationalization of sexual identity, bisexual men ($M= 1.85, SD = 0.67$) reported more non-SOGIE-related discrimination than gay men ($M= 1.57, SD = 0.61$); bisexual women ($M= 2.06, SD = 0.65$) more than gay men and lesbian women ($M= 2.01, SD = 0.66$); and women with an emergent identity more than gay men, bisexual men, and men with an emergent identity ($M= 1.62, SD = 0.56$), $F(5,1483) = 8.64, p < 0.00$. Last, defining groups by sex and the two-category operationalization of sexual identity, men with a bisexual/emergent identity ($M= 1.82, SD = 0.67$) reported more non-SOGIE-

related discrimination than gay men, as did women with a bisexual/emergent identity ($M=2.04$, $SD = 0.65$) compared to all other groups, $F(3,1485) = 21.08$, $p < 0.00$.

With regard to victimization (see Table 2), people with a bisexual/emergent identity ($M= 2.04$, $SD = 0.81$) reported significantly more victimization than gay/lesbian people ($M = 1.90$, $SD = 0.85$), $t(1511) = 5.81$, $p = 0.02$. No other group differences we noted.

Despite the few group differences found in victimization, we proceeded conducting separate t -tests and ANOVA's for people who only reported SOGIE-related victimization and non-SOGIE-related victimization (see Table 3). People with a bisexual/emergent identity ($M= 2.43$, $SD = 0.84$) reported more SOGIE-related victimization than gay/lesbian people ($M= 2.17$, $SD = 0.79$), $t(1518) = 7.36$, $p < 0.01$. Statically significant differences were found for the sex and the three-category operationalization of sexual identity as well ($F(3,1516) = 2.64$, $p = 0.05$), women with a bisexual/emergent sexual identity ($M= 2.48$, $SD = 0.84$) reported more SOGIE-related victimization compared to gay men ($M= 2.17$, $SD = 0.79$). Further, women ($M= 1.86$, $SD = 0.79$) reported more non-SOGIE-related victimization than men ($M= 1.71$, $SD = 0.81$), $t(1516) = 5.21$, $p = 0.02$. Using the three-category sexual identity variable, we found that bisexual people ($M= 1.93$, $SD = 0.76$) reported more non-SOGIE-related victimization compared to gay/lesbian people ($M= 1.66$, $SD = 0.83$). These findings held for the two-category sexual identity variable as well, $t(1507) = 14.44$, $p < 0.00$. When groups were defined by sex and the three-category operationalization of sexual identity, only bisexual women ($M= 1.95$, $SD = 0.76$) reported more non-SOGIE-related victimization than gay men ($M= 1.62$, $SD = 0.80$), $F(5,1503) = 3.59$, $p < 0.00$. This result held for the operationalization with sex and the two-category sexual identity as well, where women with a bisexual/emergent identity ($M= 1.92$, $SD = 0.75$) reported more non-SOGIE-related victimization than gay men, $F(3,1505) = 3.59$, $p < 0.00$.

Given similar patterns of hazardous drinking, discrimination, and victimization between bisexual and emergent identity subgroups, we combine these groups moving forward.

Correlates of Hazardous Drinking

Some not explicitly hypothesized associations were found in the regression analyses. Focusing on men first, non-binary identity was associated with hazardous drinking among gay people who were assigned male at birth ($b = -1.02, SE = 0.49$), although this was only found in 1 model (see Table 4, Model 3). Among bisexual/emergent identity men, it was found that men in the visibility cohort had higher rates of hazardous drinking compared to men in the equality cohort, both in Model 3 in Table 4 ($b = 1.56, SE = 0.56$) and Table 6 ($b = 1.45, SE = 0.58$).

Among lesbian people who were assigned female at birth, a non-binary identity was consistently associated with hazardous drinking, ($b = -1.38, SE = 0.67; b = -1.42, SE = 0.71$) (See Table 5 and 7, Model 3). Women with a bisexual/emergent identity in the visibility cohort had higher rates of hazardous drinking compared to women in the equality cohort ($b = 0.54, SE = 0.27$) (See Table 5, Model 3). Lastly, in Model 3 in Table 7 women with a bisexual/emergent identity in the high income group had higher rates of hazardous drinking compared to the low income group ($b = 0.80, SE = 0.40$).

Minority Stress and Hazardous Drinking

Among gay men (Table 4, Model 3), higher rates of discrimination were inversely associated with hazardous drinking for gay men ($b = -0.53, SE = 0.17$). However, when accounting for whether or not the discrimination was attributed to one's SOGIE, this

association becomes positive ($b = 0.73$, $SE = 0.24$). In other words, SOGIE-related discrimination was associated with higher rates of hazardous drinking for gay men.

For women with bisexual/emergent identities (see Table 5, Model 3), discrimination was positively associated with hazardous drinking ($b = 0.49$, $SE = 0.19$), whereas SOGIE-related discrimination was inversely, with lower rates of hazardous drinking ($b = -0.57$, $SE = 0.26$), when accounting for reports of discrimination, overall.

There were no statistical associations between victimization and hazardous drinking among gay men, bisexual/emergent men, and lesbian women. However, victimization was positively associated with higher rates of hazardous drinking ($b = 0.48$, $SE = 0.15$) among bisexual/emergent women (See Table 7, Model 3).

Discussion

LGB people are at greater risk for excessive alcohol use and abuse when compared to their heterosexual counterparts (Fish et al., 2017; McCabe et al., 2009; Talley et al., 2010). Minority stressors like discrimination and victimization help to explain sexual-orientation-related disparities in excessive alcohol use and abuse (Hughes, 2011; Hughes et al., 2010; Meyer, 2003). Research has traditionally relied on global measures instead of measures that assess discrimination and victimization attributed to one's sexual orientation and gender identity or expression (SOGIE), although some exceptions exist (e.g., Hughes, 2011; McCabe et al., 2010). Theoretically, the later should provide more nuanced assessments of how minority-specific stressors impact alcohol use among LGB people. We also extend the literature by presenting a within-group design. This approach affords us the ability to assess minority-specific explanations of alcohol use and offers unique perspectives on the factors that influence alcohol use across LGB subgroups. Specifically, we used the first nationally-representative sample of LGB adults in the United States to explore how hazardous drinking

and its correlates vary on the basis of sex and sexual identity among LGB people and whether SOGIE-based discrimination and victimization might help to explain variability in hazardous drinking among LGB people.

First, we set out to explore within-group differences in alcohol use. We found, contrary to our expectations, that sexual minority women had lower rates of hazardous drinking than sexual minority men. These findings are accordance with sex patterns of drinking in the general population (Grant et al., 2017). We also found no significant differences in hazardous drinking between traditional (e.g., gay/lesbian, bisexual) and emergent (e.g., pansexual, queer) sexual identity subgroups. These findings are noteworthy given that research has stressed the greater risk for excessive alcohol use between monosexual and bisexual sexual minority women and men (Plöderl & Tremblay, 2015; Talley et al., 2016, 2014).

Next, we tested whether there were sociodemographic differences in reporting general and SOGIE-related discrimination and victimization. Women experienced more global, SOGIE, and non-SOGIE-related discrimination than men. This is likely related to the intersection of identities, thus being a sexual minority woman makes one extra vulnerable to discrimination through experiences of both homophobia and sexism (Bostwick et al., 2010). Further, people with a bisexual or emergent identity reported more discrimination (regardless of whether it was attribute to SOGIE or not) than lesbian and gay people; however, sex-stratified models showed that these differences were only present among women for global measures of discrimination. Using measures for SOGIE and non-SOGIE-related discrimination yielded differences for both bisexual/emergent identity men (compared to gay men) and women (compared to gay men, lesbian women and bisexual/emergent men). There were also sexual identity differences in victimization, whereby people with bisexual/emergent identity reported greater victimization than those reporting gay/lesbian identities. These

findings held for SOGIE and non-SOGIE-related victimization as well. When simultaneously accounting for sex and sexual identity differences, results also showed that women with a bisexual or emergent identity reported more SOGIE and non-SOGIE-related victimization than gay men. All in all, there seem to be within-group differences in experiences of discrimination, and to a lesser extent of victimization. Most within-group differences were driven by the bisexual group and the bisexual/emergent identity group and when sex was taken in to account especially bisexual and emergent identity women seem to report the most discrimination and victimization. Considering that a majority of the bisexual women in the current sample were in a other-sex relationship, these results might reflect experiences of biphobia or (bi)invisibility from heterosexual environments.

Ultimately, we were interested in exploring how experiences of victimization and discrimination were related to hazardous drinking among LGB people, and whether the attributions of these experiences to one's SOGIE informed these associations. Our findings suggest nuanced differences in the association between minority stress and hazardous drinking on the basis of sex and sexual identity. For gay men overall reports discrimination were inversely associated hazardous drinking, yet SOGIE-related discrimination was positively associated with hazardous drinking. Conversely, for bisexual/emergent identity women we found overall reports of discrimination were positively associated with hazardous drinking, whereas SOGIE-related discrimination was inversely associated. It has been suggested that for the relation between discrimination and mental health the type of discrimination matters and not necessarily the quantity of discrimination (Bostwick et al., 2010). Could this also be true for hazardous drinking? Thus, is SOGIE related discrimination a more severe type of discrimination for gay men and therefore being coped with by alcohol use, while for women with a bisexual/emergent identity other experiences of discrimination (e.g., sexism) are more severe and coped with using alcohol?

Victimization, in general, is a particularly robust predictor for substance abuse across the life course. However, we found relatively few associations between self-report victimization and hazardous drinking. Bisexual/emergent women who reported more victimization had higher rates of hazardous drinking. Because we did not find an association between discrimination and victimization with alcohol use for all sexual minority identities, it might be that not all sexual minority groups use alcohol as a coping mechanism against discrimination and victimization.

Together these findings suggest that discrimination and victimization uniquely contribute to risk for hazardous drinking among sexual minorities, and that these experiences are differentially linked to hazardous drinking across groups defined by sex and sexual identity. It makes us reevaluate which sexual minority groups have an increased risk of hazardous drinking as a reaction to discrimination and victimization, especially gay men and women with a bisexual/emergent identity. It also challenges the view of lesbian and bisexual women being at risk groups of hazardous drinking provided by between-group research. Future studies should further tests unique contributions of sexual minority specific risk factors to hazardous drinking such as internalized homophobia or gender nonconformity in a within-group framework to further tease these group differences apart. Additionally, a notable finding of the present research was how associations between discrimination and hazardous drinking changes when we consider whether one attributes to the experience to their SOGIE. We could only speculate for reasons behind these associations. Research should investigate the mechanisms behind these findings and especially why these differed for different identity groups.

Limitations and future directions

First, although the AUDIT-C is a validated measure, it has mostly been tested in clinical settings (Bradley et al., 2003, 2007; Bush et al., 1998). This raises the question if the AUDIT-C is the best measure to capture hazardous drinking for a non-clinical population-based sample. A measure like this might underestimate the drinking behaviour which, in turn, could have affected the prevalence of higher risk drinking we found in the current study. We therefore recommend for future research to explore these effects with various other measures of risky alcohol use (e.g., heavy drinking as defined by the National Institute on Alcohol Abuse and Alcoholism [7+ drinks a week for women; 14+ drinks a week for men] and criterion for DSM-5 alcohol abuse).

Further, although a national-representative study of LGB people, participants were only eligible for inclusion in the study if they identified as either Black, Latino, or White. As a result of this inclusion criteria some ethnicities were not represented in the present study (e.g., Asian-American, American Indian/Alaska Native). The findings of the present study can therefore only be generalized to these racial/ethnic populations. Future research should focus on understanding how hazardous drinking and its association with minority stress may vary for these other racial/ethnic groups.

In conclusion, the present study could uniquely investigate within-group differences in discrimination and victimization both SOGIE and non SOGIE related) and hazardous drinking using the first national representative sample of LGB adults in the United States. It showed that minority stress affects hazardous drinking differently for sexual minority subgroups and that future research should further tease these associations apart.

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Table 1. Unweighted descriptive statistics

	Mean	SD	Min	Max	N
Hazardous drinking	2.78	2.28	0	12	1521
Discrimination	1.91	0.70	1	4	1496
SOGIE-related	2.25	0.66	1	4	523
Non-SOGIE-related	1.72	0.64	1	4	967
Victimization	1.97	0.82	1	4	1523
SOGIE-related	2.25	0.79	1	4	572
Non-SOGIE-related	1.80	0.79	1	4	945
Sexual identity					
Gay	34.89				
Lesbian	20.39				
Bisexual man	9.25				
Bisexual woman	23.41				
Emergent identity man	2.82				
Emergent identity woman	9.25				
Sex assigned at birth					
Male	46.74				
Female	53.26				
Gender identity					
Binary	93.82				
Non-binary	6.18				
Race					
Black	15.95				
Hispanic	19.6				
White	64.45				
Cohort					
Equality (18-25 years)	44.21				
Visibility (34-41 years)	24.47				
Pride (52-59 years)	31.32				
Income					
Lower-income	30.92				
Middle-income	36.85				
Higher-income	32.23				
RUCA	1.70	1.90	1	10.6	1513

Note: For categorical variables percentages are given

Table 2. Bivariate analyses for sex assigned at birth and different operationalizations of sexual identity with hazardous drinking, everyday discrimination, and victimization.

	Hazardous drinking			Discrimination			Victimization		
	Mean	SD	p	Mean	SD	p	Mean	SD	p
Sex assigned at birth			0.01			<0.01			0.35
Male	2.87	2.03		1.90	0.76		1.94	0.82	
Female	2.53	2.04		2.13	0.69		1.99	0.86	
Sexual identity			0.98			<0.01			0.05
Gay/Lesbian	2.65	2.40		1.89 ^{ab}	0.75		1.90	0.86	
Bisexual	2.68	2.06		2.16 ^a	0.67		2.04	0.79	
Emergent identity	2.67	2.06		2.23 ^b	0.67		2.03	0.84	
Sexual identity			0.84			<0.01			0.02
Gay/Lesbian	2.65	2.40		1.89	0.76		1.90	0.86	
Bisexual/ Emergent identity	2.68	2.07		2.18	0.67		2.04	0.81	
Sex X Sexual identity			0.29			<0.01			0.24
Gay male	2.72	3.36		1.85 ^{cd}	0.76		1.93	0.85	
Lesbian female	2.54	2.45		1.95 ^{ef}	0.74		1.87	0.86	
Bisexual male	3.16	2.66		2.03	0.71		1.96	0.81	
Bisexual female	2.53	2.85		2.20 ^{ce}	0.65		2.06	0.78	
Emergent identity male	3.13	2.81		2.01	0.74		2.09	1.03	
Emergent identity female	2.57	1.86		2.28 ^{df}	0.64		2.02	0.79	
Sex X Sexual identity			0.10			<0.01			0.09
Gay male	2.72	2.36		1.85 ^g	0.76		1.93	0.85	
Lesbian female	2.54	2.44		1.95 ^h	0.74		1.87	0.86	
Bisexual/Emergent identity male	3.16	2.70		2.02	0.72		1.99	0.85	
Bisexual/ Emergent identity female	2.54	1.86		2.22 ^{gh}	0.65		2.05	0.79	

Note: Superscripts denote statistical differences at $p < 0.05$.

Table 3. Bivariate analyses for sex assigned at birth and different operationalizations of sexual identity with hazardous drinking, any SOGIE-related and non-SOGIE discrimination, and any SOGIE-related and non-SOGIE victimization.

	Any SOGIE-related discrimination			Non-SOGIE discrimination			Any SOGIE-related victimization			Non-SOGIE victimization		
	Mean	SD	p	Mean	SD	p	Mean	SD	p	Mean	SD	p
Sex assigned at birth			<0.00			<0.01			0.06			0.02
Male	2.24	0.73		1.66	0.66		2.20	0.82		1.71	0.81	
Female	2.49	0.56		1.94	0.69		2.36	0.82		1.86	0.79	
Sexual identity			<0.00			<0.01			0.02			<0.01
Gay/Lesbian	2.23 ^{ab}	0.70		1.61 ^{hi}	0.65		2.17	0.79		1.66 ^u	0.83	
Bisexual	2.58 ^a	0.53		2.01 ^h	0.66		2.44	0.80		1.93 ^u	0.76	
Emergent identity	2.54 ^b	0.54		1.94 ⁱ	0.65		2.43	0.90		1.80	0.72	
Sexual identity			<0.00			<0.01			0.01			<0.01
Gay/Lesbian	2.23	0.70		1.61	0.65		2.17	0.79		1.66	0.83	
Bisexual/ Emergent identity	2.56	0.54		1.99	0.66		2.43	0.84		1.91	0.75	
Sex X Sexual identity			<0.00			<0.01			0.11			<0.01
Gay male	2.16 ^{cde}	0.75		1.57 ^{jkl}	0.61		2.17	0.79		1.62 ^v	0.80	
Lesbian female	2.34	0.60		1.67 ^m	0.69		2.17	0.80		1.70	0.86	
Bisexual male	2.57 ^c	0.54		1.85 ^{jn}	0.67		2.23	0.84		1.87	0.77	
Bisexual female	2.58 ^d	0.53		2.06 ^{km}	0.65		2.52	0.77		1.95 ^v	0.76	
Emergent identity male	2.38	0.67		1.62 ^o	0.56		2.49	1.07		1.76	0.86	
Emergent identity female	2.58 ^e	0.50		2.01 ^{ln}	0.64		2.41	0.84		1.80	0.69	
Sex X Sexual identity			<0.00			<0.01			0.05			<0.01
Gay male	2.16 ^{fg}	0.75		1.57 ^{pq}	0.61		2.17 ^t	0.79		1.61 ^w	0.80	
Lesbian female	2.35	0.60		1.67 ^r	0.69		2.17	0.80		1.70	0.86	
Bisexual/Emergent identity male	3.50 ^f	0.59		1.82 ^{ps}	0.67		2.31	0.92		1.85	0.79	
Bisexual/ Emergent identity female	2.58 ^g	0.53		2.04 ^{rs}	0.65		2.48 ^t	0.81		1.92 ^w	0.75	

Note: Superscripts denote statistical differences at $p < 0.05$.

Table 4. Regression analyses with hazardous drinking as dependent variable and discrimination and SOGIE discrimination as independent variable for men stratified by sexual orientation.

	Men											
	Gay						Bisexual/Emergent identity					
	Model 1		Model 2		Model 3		Model 1		Model 2		Model 3	
	b	se	b	se	b	se	b	se	b	se	b	se
Intercept	3.33***	0.47	2.44**	0.34	3.43*	0.47	2.50**	0.88	3.55**	0.67	2.30**	0.85
Gender Identity												
Binary (ref)												
Genderqueer/Non-binary	-0.81	0.50	-1.06	0.58	-1.02*	0.49	-0.39	0.65	-0.31	0.67	-0.23	0.65
Race/Ethnicity												
White (ref)												
Black	-0.20	0.30	-0.40	0.29	-0.18	0.30	-0.62	0.60	-0.44	0.62	-0.72	0.61
Latino	-0.21	0.26	-0.28	0.26	-0.33	0.26	-0.22	0.63	-0.25	0.63	-0.22	0.62
Cohort												
Equality (18-25 years) (ref)												
Visibility (34-41 years)	0.10	0.28	0.15	0.27	0.12	0.27	1.48**	0.55	1.33**	0.59	1.56**	0.56
Pride (52-59 years)	0.01	0.28	0.12	0.28	-0.04	0.28	0.06	0.63	-0.24	0.63	0.14	0.64
Income												
Lower-income (ref)												
Middle-income	0.02	0.31	0.18	0.31	0.07	0.31	-0.22	0.56	-0.31	0.60	-0.27	0.58
Higher-income	0.38	0.32	0.57	0.32	0.41	0.33	-0.16	0.60	-0.28	0.62	-0.18	0.60
RUCA	-0.08	0.06	-0.09	0.06	-0.09	0.06	-0.13	0.14	-0.12	0.13	-0.12	0.14
Discrimination	-0.31	0.16			-0.53**	0.17	0.46	0.32			0.62	0.36
SOGIE discrimination (1=any SOGIE)			0.46*	0.22	0.73**	0.24			-0.12	0.53	-0.54	0.60

* $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$

Table 5. Regression analyses with hazardous drinking as dependent variable and discrimination and SOGIE discrimination as independent variable for women stratified by sexual orientation.

	Women											
	Lesbian						Bisexual/Emergent identity					
	Model 1		Model 2		Model 3		Model 1		Model 2		Model 3	
	b	se	b	se	b	se	b	se	b	se	b	se
Intercept	1.42	0.80	2.06***	0.49	1.42	0.80	1.43**	0.42	2.36***	0.24	1.30**	0.43
Gender Identity												
Binary (ref)												
Genderqueer/Non-binary	-1.32*	0.63	-1.56*	0.70	-1.38*	0.67	-0.47	0.29	-0.28	0.29	-0.38	0.29
Race/Ethnicity												
White (ref)												
Black	-0.04	0.46	0.06	0.43	-0.02	0.44	-0.31	0.28	-0.23	0.28	-0.35	0.28
Latino	0.42	0.50	0.56	0.53	0.43	0.50	-0.15	0.27	-0.20	0.27	-0.13	0.27
Cohort												
Equality (18-25 years) (ref)												
Visibility (34-41 years)	0.22	0.47	0.25	0.48	0.21	0.47	0.57*	0.27	0.51	0.27	0.54*	0.27
Pride (52-59 years)	-0.08	0.38	-0.12	0.38	-0.08	0.38	0.73	0.54	0.53	0.55	0.75	0.56
Income												
Lower-income (ref)												
Middle-income	0.67	0.42	0.67	0.42	0.68	0.41	0.17	0.23	0.10	0.23	0.22	0.23
Higher-income	0.35	0.50	0.31	0.48	0.37	0.49	0.63	0.40	0.58	0.40	0.62	0.39
RUCA	-0.04	0.06	-0.04	0.06	-0.04	0.06	0.08	0.05	0.09	0.05	0.08	0.05
Discrimination	0.42	0.32			0.39	0.32	0.36*	0.17			0.49**	0.19
SOGIE discrimination (1=any SOGIE)			0.34	0.36	0.10	0.35			-0.31	0.23	-0.57*	0.26

* $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$

Table 6. Regression analyses with hazardous drinking as dependent variable and victimization and SOGIE victimization as independent variable for men stratified by sexual orientation.

	Men											
	Gay						Bisexual/Emergent identity					
	Model 1		Model 2		Model 3		Model 1		Model 2		Model 3	
	b	se	b	se	b	se	b	se	b	se	b	se
Intercept	2.58***	0.38	2.78***	0.36	2.61***	0.38	3.89***	0.84	3.43***	0.60	3.91***	0.85
Gender Identity												
Binary (ref)												
Genderqueer/Non-binary	-0.89	0.56	-0.85	0.55	-0.83	0.56	-0.30	0.68	-0.39	0.68	-0.36	0.68
Race/Ethnicity												
White (ref)												
Black	-0.36	0.30	-0.32	0.28	-0.35	0.29	-0.46	0.63	-0.41	0.62	-0.45	0.63
Latino	-0.22	0.26	-0.20	0.26	-0.20	0.26	-0.31	0.61	-0.30	0.60	-0.39	0.58
Cohort												
Equality (18-25 years) (ref)												
Visibility (34-41 years)	0.10	0.28	0.14	0.28	0.10	0.28	1.39**	0.59	1.35**	0.58	1.45**	0.58
Pride (52-59 years)	0.09	0.28	0.13	0.28	0.09	0.28	-0.20	0.64	-0.25	0.65	-0.21	0.64
Income												
Lower-income (ref)												
Middle-income	0.12	0.29	0.10	0.30	0.12	0.29	-0.35	0.58	-0.26	0.56	-0.33	0.57
Higher-income	0.53	0.30	0.47	0.32	0.51	0.30	-0.32	0.62	-0.27	0.61	-0.34	0.63
RUCA	-0.09	0.06	-0.08	0.06	-0.09	0.06	-0.12	0.14	-0.13	0.13	-0.13	0.13
Victimization	0.06	0.15			0.11	0.17	-0.18	0.27			-0.24	0.32
SOGIE victimization (1=any SOGIE)			-0.17	0.22	-0.22	0.25			0.31	0.60	0.42	0.66

* $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$

Table 7. Regression analyses with hazardous drinking as dependent variable and victimization and SOGIE victimization as independent variable for women stratified by sexual orientation.

	Women											
	Lesbian						Bisexual/Emergent identity					
	Model 1		Model 2		Model 3		Model 1		Model 2		Model 3	
	b	se	b	se	b	se	b	se	b	se	b	se
Intercept	1.41*	0.61	1.98***	0.48	1.35*	0.59	1.29**	0.39	2.26***	0.24	1.28**	0.39
Gender Identity												
Binary (ref)												
Genderqueer/Non-binary	-1.34	0.69	-1.46*	0.68	-1.42*	0.71	-0.46	0.29	-0.35	0.31	-0.39	0.30
Race/Ethnicity												
White (ref)												
Black	-0.03	0.42	0.11	0.43	0.05	0.41	-0.17	0.27	-0.22	0.28	-0.18	0.27
Latino	0.47	0.51	0.52	0.51	0.46	0.50	-0.06	0.27	-0.20	0.27	-0.05	0.27
Cohort												
Equality (18-25 years) (ref)												
Visibility (34-41 years)	-0.03	0.52	0.29	0.47	0.01	0.53	0.29	0.27	0.53	0.27	0.30	0.27
Pride (52-59 years)	-0.41	0.42	-0.18	0.38	-0.39	0.42	0.37	0.52	0.55	0.54	0.35	0.53
Income												
Lower-income (ref)												
Middle-income	0.66	0.41	0.57	0.43	0.61	0.42	0.22	0.23	0.09	0.23	0.23	0.23
Higher-income	0.42	0.48	0.28	0.47	0.43	0.48	0.79*	0.40	0.59*	0.40	0.80*	0.40
RUCA	-0.03	0.06	-0.02	0.07	-0.02	0.06	0.09	0.05	0.09	0.05	0.09	0.05
Victimization	0.50	0.27			0.42	0.29	0.45**	0.15			0.48**	0.15
SOGIE victimization (1=any SOGIE)			0.63	0.38	0.44	0.40			0.01	0.29	-0.23	0.28

* $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$