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Bar patronage and motivational predictors of drinking in the San Francisco Bay Area: Gender and sexual identity differences

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Abstract

Prior research has found differences in heavier drinking by both gender and sexual orientation. Heavier drinking and alcohol-related problems appear to be higher in sexual minority populations, particularly among women. It has been suggested that differences may be explained in part by socializing in bars and other public drinking venues. This paper explores bar patronage, alcohol consumption, alcohol-related problems, and reasons for going to bars in relation to both gender and sexual orientation based on two different samples: respondents from a random digit dial (RDD) probability study of 1,043 households in Northern California and 569 individuals who were surveyed exiting from 25 different bars in the same three counties that constituted the RDD sample. Bar patrons, in most instances, regardless of gender or sexual identity were at much higher risk of excessive consumption and related problems and consequences. On several key variables, women from the bar patron sample exceeded the problem rates of men in the general population. Bisexual women and men were elevated on a majority of the alcohol measures relative to heterosexuals. Measures of heavier drinking and alcohol-related problems were also elevated among lesbians compared to heterosexual women. Lesbian and gay respondents were less likely to endorse various motives as being important to their bar patronage. Finally, two of the bar motive variables, sensation seeking and mood change motives, were particularly predictive of heavier drinking and alcohol-related problems. Social motives did not predict problems. The findings suggest that bar patrons constitute a population of individuals who require special attention in prevention and intervention that should be tailored to their interests while taking into consideration their unique motivational needs.

Keywords

alcohol consumption; alcohol problems; motivation; gender; sexual orientation; public drinking; bars

Introduction

Early studies of alcohol and drug use in the gay community, using opportunistic samples in social settings such as bars, found high rates of alcoholism and addiction in lesbian and gay communities (Lewis, Saghir & Robins 1982; Fifield 1975; Saghir et al. 1970a; Saghir et al. 1970b). However, these early studies were limited by methodological problems, such as biased sampling, small sample sizes, and lack of comparison groups. More recently, studies using

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national or regional population-based samples have generally found lower abstention rates and significantly greater odds for alcohol abuse or symptoms of alcohol dependence among sexual minority women compared to heterosexual women, but little or no difference among men (Midanik et al. 2006; Burgard, Cochran & Mays 2005; Drabble, Trocki & Midanik, 2005; Scheer et al., 2003; Sandfort et al. 2001; Stall et al. 2001; Cochran et al. 2000; Cochran & Mays 2000; Diamant et al. 2000). Lesbians and bisexual women may also be more likely than heterosexuals to report past treatment or be recovering alcoholics (Drabble, Trocki & Midanik 2005; Cochran et al., 2000; Hughes et al. 2000; Bloomfield, 1993).

Some national population based studies found elevated risks for alcohol dependence among sexual minority women and men, which did not reach significance (Cochran, Sullivan & Mays, 2003; Gilman et al. 2001). Another study of Latino and Asian American sexual minority adults found no differences in lifetime or past year alcohol dependency measures, but significantly higher reports of past year drug use disorders among women and lower reports of past year substance abuse disorders among men (Cochran et al. 2007). Although few studies disaggregate bisexual women from lesbians, there is some indication that risks for heavier drinking, other drug use, and alcohol and drug related problems may be particularly high among bisexual women (Burgard, Cochran & Mays 2005; McCabe, Hughes & Bostwick 2005; McCabe, Hughes & Boyd 2004; Eisenberg & Wechsler 2003; Scheer et al. 2003; Jorm et al. 2002).

Bar patronage and use of other drinking contexts has been assumed to be an important factor in accounting for higher rates of alcohol and other drug use and problems among sexual minority populations (Rotello, 1997; McKirnan & Peterson, 1989; Israelstam & Lambert, 1984; Fifield 1975). However, only a few studies have examined the specific risks that may be associated with drinking contexts or motivations for drinking in sexual minority populations.

Public drinking contexts

Bars, pubs, clubs and other public drinking contexts have long been identified as places with high concentrations of heavy drinkers (Clark 1988). Heavier drinking in bar contexts appears to be common for both women and men (Kypri et al. 2007). Survey research examining bar-going and drinking behavior among sexual minority populations also suggests that bar-going is strongly associated with heavier alcohol consumption and alcohol problems among both women and men (Greenwood et al. 2001; Stall et al. 2001; Heffernan 1998; McKirnan & Peterson, 1989; McKirnan & Peterson 1988). McKirnan and Peterson (1988) found that heavier substance use and problems among gay men were predicted by stress and other specific vulnerabilities, including reliance on bars as a social resource and stress reduction expectancies of alcohol. Heffernan (1998) found that bar orientation (reliance on bars as a primary social setting) among lesbians was predictive of problematic substance use, while other factors, such as perceived stress and social resources, were not significant. These studies, however, did not include comparable information on heterosexuals.

Research based on the National Alcohol Survey comparing alcohol consumption in drinking contexts among heterosexual and sexual minorities found that relationships between bar patronage and heavier drinking may be more complex than originally theorized. After controlling for demographic variables, gay men, lesbians, and heterosexually identified women with same-sex partners spend more time in bars than their exclusively heterosexual counterparts; however, lesbians and gay men were not more likely to drink heavily in bars (Trocki, Drabble & Midanik 2005). Bisexual women and heterosexual women with same-sex partners drank more alcohol at bars than women who were exclusively heterosexual or homosexual. Thus, while greater bar patronage matched some common assumptions about gay men and lesbians, drinking patterns within these settings varied across sexual minority groups, particularly among women. This study did not examine motivations for bar-going.

Several recent qualitative studies have underscored the importance and the complexity of drinking contexts in the development of social networks among sexual minority women. These studies generally suggest that involvement in drinking contexts, such as bars and social events, serve as entry points into the lesbian community and may facilitate lesbian identity development and creation of social networks (Gruskin et al. 2006; Parks 1999). Parks (1999) found that experiences of stress, alcohol expectancies, and immersion in drinking contexts varied over time in relationship to lesbian identity development and connection to lesbian identified groups, cultural norms, and institutions. Alcohol-related problems tended to be higher earlier in the lesbian identity development process and then decreased as lesbians developed a stronger social network and as identity conflict was resolved. Gruskin et al. (2006) found that bars were perceived by lesbian interviewees as a safe place to congregate and a nexus for connecting with culture, community, and chosen family. This need for connection was an important counterbalance to stress associated with experiences of discrimination or lack of acceptance in other familial or community contexts. Interviewees also emphasized the role of bar attendance in supporting lesbian identity development, dealing with stress, and developing and maintaining social networks. Bar-attendance was also associated with a number of negative consequences or "health tradeoffs," such as binge drinking or drug use to cope with social discomfort.

The survey and qualitative studies described above affirm that bars are critical drinking venues for understanding the complexities of trajectories to substance abuse. There is a need for substance use/abuse research that looks more closely at person/environment interactions rather than seeing drinkers and drug users in isolation (Sykes, Rowley & Schaefer 1993).

Drinking Motivations

Psychological motives for drinking appear to be strong predictors of alcohol use and specific motivations, such as coping motivations (drinking to avoid negative feelings) and enhancement motivations (drinking to increase positive affect), appear to be predictive of heavier drinking and drinking problems among both adolescents and adults (Kuntsche et al. 2007; Kuntsche et al. 2005; Ham & Hope 2003; Cooper et al. 1995; Cooper 1994). Although social motives appear to be associated with greater likelihood for alcohol consumption, they do not appear to increase alcohol-related problems (Ham & Hope, 2003; Cooper 1994). There are also some gender differences that have been found in drinking motivations, with coping motivations more likely to predict consumption and problems in men (Rutledge & Sher 2001). However, a disproportionate number of the articles on drinking motivations use adolescent or college samples, so less is known about adult populations.

To our knowledge, only one study to date has examined drinking motives among sexual minority women. Based on survey data from a large Midwestern university, the study compared bisexual identified women to two control groups: heterosexual identified women who reported any lifetime same-sex sexual behavior and heterosexual women who reported only opposite sex behavior (Bostwick et al. 2007). There were no significant differences in problem measures and few differences in motivations. Stress and coping motivations for drinking did not differ between groups and only four of 18 motivations were significantly different: bisexual women were more likely to drink to facilitate sexual opportunities, because they liked the taste, to make it easier to talk to members of the same sex, and other reasons for drinking. It is not possible to determine, based on the study design, whether motivations for bar-going were similar to motivations for drinking in general.

The overall aim of this study was to explore how motivational and contextual factors interact with or predict substance use among sexual minority groups as well as heterosexuals. The research questions include the following:

1. Do lesbians, gay men, and bisexuals spend more time in bars or drink more there relative to heterosexuals, in a bar sample? …in a household sample?
2. Do lesbians, gay men, and bisexuals have more alcohol-related problems relative to each other and to heterosexuals in a bar sample? …in a household sample?
3. Are the motivations for spending time in bars the same or different across these groups in the bar patron sample? …in a household sample?
4. To what degree is sexual minority status an independent predictor of patronage, consumption and problems when taking into account demographic and motivational factors?

Methods

The data for this paper are drawn from two different sources. In both surveys, the age span was limited to respondents aged 18-40 years.

The General Population Survey—The first source of data consists of people (n=1,043) sampled through a probability survey collected in 2002-2003 in three San Francisco Bay Area counties (San Francisco, Alameda and Contra Costa). These data were collected in the same time-frame and by the same field agency as the National Alcohol Survey; however, these regional data have not been included in the main data set in papers looking at other aspects of lesbian, gay, and bisexual substance use patterns (Drabble, Trocki & Midanik 2005; Trocki, Drabble & Midanik 2005). Sampling was accomplished using a Random Digit Dialing (RDD) approach with sample numbers pre-screened to increase the likelihood of obtaining working, non-business numbers. The last birthday technique was used to identify the individual in the household to be interviewed. If this individual was not available, multiple callbacks were made (in practice limited by the survey period, but usually up to 30). The final response rate for the regional survey was 67 percent.

The Bar Patron Survey—The second source were individuals (n=569) sampled as they exited from 25 different bars in the same three counties in the San Francisco Bay Area. Bar selection consisted of creating an exhaustive list of all bars in the chosen geographical areas (San Francisco, Alameda and Contra Costa Counties) through the use of key informants, eight focus groups, and on-line lists. Several visits were made to 105 venues and detailed field notes and observational checklists were completed. Twenty-five of these bars were selected as sites for the patron sample. Data collection for the Bar Patron Survey itself took place over a six month time period beginning in early summer and lasting through early winter 2004. An average of 20 people was sampled at each bar although some bars resulted in a smaller yield and others with more than 20 respondents. People from larger bars were sampled at a higher rate to reflect patron densities. Fifty-six percent of the respondents who were given a questionnaire completed it. Most (74%) filled them out on the spot and the remainder mailed them in. A monetary incentive was given in the form of a $25 gift card that was mailed to the respondent's home. All questionnaires were checked for data quality. Questionnaires of poor quality were eliminated from the data base.

Variables

Demographics—These include: gender, age, ethnicity, relationship status, education and sexual identity (heterosexual, bisexual and homosexual). Age is used in these analyses as both a continuous variable and a three-group categorical variable (18-24, 25-30, and 31 or more years old). Relationship status was combined into two categories: married or living with a partner versus all others. Ethnicity was subdivided into White, Black, Hispanic, and Other.

Level of education was divided into two categories: those with a high school education or less and those with some college or more.

Alcohol-related variables—The two bar variables consisted of (1) frequency of bar patronage and (2) average quantity of alcohol consumed at each bar visit. Frequency of patronage was assessed by asking respondents how often they went to bars, taverns, or cocktail lounges during the year preceding the survey interview. This was then dichotomized into visiting bars once a month or more versus all less frequent (or never) categories. This was based on previous experience which showed that there was a steep increase in risky behavior and heavier substance use in the 1+ per month category (Clark 1988). Average amount of drinking in bars was then assessed by asking respondents how many drinks they typically drank when they were at a bar or tavern. This variable included all types of alcohol. The quantity of drinking in the bar context was recoded into two categories: drinking 4+ on an occasion versus drinking less than four drinks.

Heavy episodic drinking was constructed from a series of drinking items that have been included in the National Alcohol Survey since the 1970s. This is a quantity/frequency variable that has been dichotomized into drinking 5 or more drinks (4 or more for women) on an occasion at least once per week as opposed to all lower drinking patterns.

Two dichotomous problem variables were included: (1) having had 3 or more lifetime dependency symptoms and (2) having had 2 or more lifetime negative alcohol-related consequences. The alcohol dependency symptoms included such items as: increased tolerance of alcohol, increased desire for alcohol, impaired control over drinking, symptoms of withdrawal, and/or increased social disruption. Negative consequences of drinking was based on a series of items that explored whether the individual had ever had health, financial, legal, employment, relationship, or other negative consequences as a result of drinking.

Bar motivation variables—The bar motivation scale was created for a broad study of public drinking venues because we needed to understand more about how bar environments may influence substance use. These items were created for this survey and were based on material we obtained in eight different focus groups (n=82 individuals including bar patrons and bartenders) and interviews with key informants, as well as many hours of observation in bars. There were 18 items in all that were prefaced with the following statement: *For each statement below, please select a response indicating how important or unimportant each reason is for you to go to bars*. Each item had four response possibilities with a numeric score of 0 to 3: not at all important (0), not very important, somewhat important, and very important (3). A factor analysis reduced this to four scales. Item clusters were named by the key items: social motivation (e.g. I go to bars to be with my friends and socialize), sensation seeking motivation (e.g. I go to bars because I like noise and action around me), entertainment motivation (e.g. I go to bars to play pool, video games or darts) and, finally, mood change motivation (e.g. I go to bars to reduce the stress and frustrations of everyday life). Scales were created by summing the items and dividing by the number of items in each scale. These scales have similarities to drinking motivation scales (Cox & Klinger 1988; Cooper 1994). It should be noted, however, that the items were different, the referent was different (context versus drinking), and previous studies on motives have mainly been done with adolescents and college students.

Statistical analysis procedures—In the results presented below, bivariate analyses used chi-square statistics for categorical variables and analysis of variance for means. Final multivariate analyses are logistic regression. All analyses were done using SPSS Version 15.

Results

Key demographics of the samples

The regional version of the National Alcohol Survey had a total of 1,043 respondents, and of these 997 of the respondents divulged their sexual orientation. Overall, 10 percent of that sample self-identified as homosexual or bisexual (male n=36 and female n=50). The Bar Patron sample had 523 respondents for whom sexual identity data were available. Of these, 24 percent of the women (n=52) and 36 percent of the men (n=117) self-identified as bisexual or homosexual. Table 1 shows distributions for education, relationship status, and ethnicity by sexual orientation in each of the samples. Few differences in demographics by sexual orientation were significant. Both samples are well educated with 75 percent on average having post-high school education, although this percentage was significantly lower among bisexual men in the bar patron sample. Lesbian and bisexual women in the regional sample were less likely to be in a partnered relationship than heterosexual women.

Bar-going and Alcohol Consumption in Bars

Tables 2 summarizes bivariate relationships examining whether lesbian, gay, and bisexual individuals go to bars more and drink more within bars than heterosexual respondents. First, the bar frequency variable showed (as one would expect) that people who were sampled as they exited from bars were more likely to go to bars once a month or more (79% of women and 84% of men) and the regional sample less likely to go (women 40% and men 53%). Bar patronage in the San Francisco Bay Area household population tends to be heavier than patronage in the general population of the United States. We previously published the national data (Trocki, Drabble & Midanik 2005) but that was for the full age range of 18-90 whereas our regional samples have an upper age limit of 40. When restricting the age range to 18-40 for the national survey, 24 percent of heterosexual women in the national sample went to bars once a month or more, as opposed to 38 percent of heterosexual women in the Bay Area. For heterosexual men, 38 percent went to bars once a month or more in the national sample and 53 percent in the regional sample. The only group for which bar patronage did not exceed the national statistics was for lesbian subgroup where it was equal: 49 percent in the national sample and 50 percent in the regional sample.

Lesbians in the household sample went to bars more than heterosexual women, but those in the bar sample did not. Bisexual women in both samples patronized bars more than heterosexual women. Gay men patronized bars at the highest rates regardless of sample, but this difference approached (but did not reach) significance in the regional sample. There were strong sample variations for consumption of 4+ drinks on average per bar visit (8% of the women and 23% of men in the regional sample drank that amount versus 46% of women and 57% of men in the bar sample). However, the lesbian women and gay men did not differ much from the heterosexual groups on heavier drinking in bars while bisexual women and men were more likely to consume 4+ drinks on a typical bar visit than the other groups.

Since the drinking levels of lesbians and gays in the bar sample were lower than heterosexuals, we decided to see if type of bar (gay versus straight) was having an impact. Most of the lesbian and gay groups (85%) were sampled outside of gay/lesbian bars whereas most heterosexuals were sampled outside of “straight” bars (97%). Among the bisexuals, the sample was almost evenly divided with 44 percent having been sampled at lesbian/gay bars. To see whether type of bar could have an influence on why gays and lesbians seem to drink less, we examined average amount of drinking in each type of bar by the declared sexual identity of the respondents (analysis not shown). On the whole, homosexuals drank less in bars by almost a whole drink (2.5 versus 3.4 among heterosexuals). However, the amount drunk by heterosexuals in gay bars (3.3 versus 3.6 in straight bars) and homosexuals in straight bars (2.5

versus 2.8 in gay bars) did not differ much relative to bars that were concordant with sexual identity. Bisexuals who were sampled outside of straight bars, however, drank more (5.1 drinks) compared to those sampled outside of lesbian/gay bars (3.1).

Heavier Drinking and Alcohol-Related Problems

Heavier alcohol consumption and problem variables are summarized in Table 2. Heavier alcohol consumption was significantly higher (13%) among lesbians compared to heterosexual women (1.8%) in the regional household sample. Heavier drinking was higher among bisexual men and women in both samples; however, this pattern was stronger for women.

Alcohol dependency symptoms were considerably higher in the bar sample (40% versus 13% in the household sample). It is interesting that women and men in the bar sample were nearly equal in the proportion experiencing dependence symptoms (38% of women and 43% of men versus 9% of women and 18% of men in the household sample). Dependency symptoms were high across sexual orientation groups in the bar sample and differences were not significant among women or among men. By contrast, among women in the regional sample, dependence symptoms were significantly higher among both lesbians and bisexual women. The percentage of bisexual men reporting dependency symptoms in the regional household was also significantly higher than the proportion of other men reporting dependency symptoms.

Finally, lifetime alcohol-related negative consequences were more common for women in the bar sample versus the regional sample (11% vs. 5%), but the differences were not as extreme for men (24% versus 20%). Bisexual and lesbian women were approximately twice as likely to report lifetime consequences compared to heterosexual women in both samples, however, this difference did not reach significance. Bisexual men in the household sample reported the highest proportion of consequences and this difference was significant in comparison with other men.

In summary, bisexual men and women were elevated on virtually all the general alcohol measures relative to heterosexuals. Lesbians in the household sample also had higher proportions of heavier drinking and dependency symptoms.

Motivations for bar patronage

Table 3 shows the mean scores for each of the four bar motive scales (0-3 range). A 2×2×3 analysis of variance was done for the two samples, two genders, and the three sexual identity groups. Overall, the bar sample had higher scores on each of the four bar motive factors relative to the household sample except for entertainment, where there were no significant differences between the samples. There were particularly large differences between the bar patrons and the regional sample on the sensation seeking motive (F for sample=40.42, <.001) and the mood change motive (F for sample=37.81, p<.001) with the bar sample scoring higher.

The sexual identity groups (especially lesbian women and gay men) differed on each of the motives except for the social motive where their scores were similar to the heterosexual group. The lesbian group in both samples had the lowest scores on sensation seeking; while gay and bisexual men had higher scores than the heterosexual men on sensation seeking. For the entertainment variable, both the lesbian and gay groups had the lowest scores with the bisexual group similar to the heterosexual group. Finally, on the mood change motive, the scores for heterosexual and homosexual groups were nearly the same and lower than for the bisexual group; significant differences were primarily generated by the bisexual group. There were also some gender differences with men higher than women on sensation seeking motives (F=17.92, p<.001) and women higher than men on social motives (F=6.95, p<.01).

Thus, to answer the third research question, lesbian and gay respondents tend to attribute less importance to each of the motives than heterosexual respondents. On the other hand, the bisexual respondents tended to give higher ratings on most of the motivation items.

Sexual Minority Status as Independent Predictor

Multivariate analyses were conducted on the combined NAS/Bar Patron samples but separately for gender on each of the 5 outcome variables to examine the role of sexual identity and motives for going to bars while adjusting for other demographic variables. The odds ratios in Tables 4 and 5 reflect the final step with all OR s adjusted for all other variables. For the bar patronage variable for women, sexual minority identity tended to predict patronage in the bisexual and homosexual groups but these differences only attained significance among bisexual women. Social motives and sensation seeking motives tended to predict more frequent bar patronage among women. For men, however, only social motives entered the model for bar patronage frequency.

For the outcome of heavier drinking (4+) in bars, the bar venue sample was more likely to drink more even when adjusting for other variables. Gay men were less likely to drink heavily in bars. As for motives, both men and women drank more heavily in bars if they scored higher on mood change motives and women if they scored higher on sensation-seeking motives.

The odds for heavier drinking were significantly higher for bisexual women and approached significance for the lesbian group. No differences by sexual orientation among men were found. The bar sample variable was not significant among women. However, for men there was actually a protective effect–being in the bar sample, surprisingly, was associated with less heavy drinking for men. Finally, entertainment motives were associated with heavier drinking for women and there was only a trend for mood change motives for men.

Having 3 or more alcohol dependence symptoms was not related to sexual orientation identity. The bar venue sample was much more likely to have had lifetime symptoms of alcohol dependence. Sensation-seeking motives predicted lifetime symptoms for women and mood change motives predicted those symptoms for both men and women.

The odds for reporting two or more negative consequences related to drinking were significantly higher among lesbians compared to heterosexual women. Among women, mood change motives and entertainment motives (trend for this latter) predicted negative consequences. Mood change motives also predicted more consequences for men.

Thus, to answer the fourth question, there were some analyses where bisexuality and homosexuality were associated with bar patronage, heavy drinking or alcohol-related problem variables even when potential confounding demographic differences were controlled for. Lesbian and bisexual women were more likely to be heavy drinkers and lesbians more likely to have 2 or more alcohol-related consequences. Gay men were more likely to patronize bars but they were significantly less likely to drink 4 or more drinks at a time in bars relative to heterosexual men.

Discussion

While these somewhat complex data cover two different samples, three different sexual identity groups and two genders, we emerge with a relatively coherent story that adds material to and refines on-going discussions of bar patronage and alcohol-related problems among sexual minorities, as well as among heterosexuals.

The use of the two different samples, bar patrons and the general population, permits us to explicitly take into account the bar environment. It is immediately obvious that bar patrons, in most instances, regardless of gender or sexual identity, are at much higher risk of excessive consumption and related problems and consequences. On several key variables women from the bar patron sample exceed the problem rates of men in the general population and are very close to the rates of the male bar patrons. This is particularly true of usual consumption in bars and dependence symptoms. This suggests that bar patrons constitute a population of individuals (especially women) who require special attention in prevention and intervention that should be tailored to their interests and take advantage of the context.

Our findings are generally consistent with recent population-based studies, which have shown that heavier alcohol consumption and alcohol-related problems seem to be more prevalent among bisexual and lesbian women relative to heterosexual women while differences among men by sexual orientation are less consistent. Our study found that the odds of heavier drinking was significantly higher among bisexual women and elevated among lesbians; the odds of reporting negative consequences was significantly higher among lesbians and elevated among bisexuals. Dependency symptoms were also elevated among lesbian and bisexual women, although these differences did not reach significance when controlling for demographic variables as well as sample (bar patron versus household), and bar patronage motives. Furthermore, in our study, while men tended to have higher levels of consumption and problems than women, they did not usually differ as a function of sexual identity categories.

Since the unique aspect of this study was the inclusion of bar motivation scales, most of the following discussion will be devoted to considering what more can be learned about the motives that sexual minorities as well as heterosexual individuals endorse, and whether these motives are predictive of substance use patterns.

The premise for creating the bar motives scale was that substance use is uniquely associated with a synergy of person, group, and environment. In order to identify some of the regularities and consistencies in the person, group and environment we need to know how these factors mutually influence one another and, in turn, how this leads to heavier drinking. We wanted to understand the phenomena of how people come to attach themselves to certain kinds of groups, how they select themselves into certain kinds of contexts, and why they behave in certain ways within those settings. Bars, pubs and clubs constitute important venues within which to accomplish this because they are publicly accessible. A considerable amount of drinking and drug use occurs in bar environments (Kypri et al. 2007; Trocki, Drabble & Midanik 2005; Clark 1988), yet we know little about what goes on there and whether there are independent effects generated by the context itself. Thus one approach was to find out what people liked (or did not like) about bars by creating the bar motives scale.

The use of bar context motivational items, which were developed through focus groups, observations, and interviews with key informants, was a novel construct first introduced in this overall study of bar environments. After performing factor analyses, we found that the resulting bar item clusters emerged along lines similar to those in drinking motivation scales (Rutledge & Sher 2001; Stewart, Zvolensky & Eifert 2001; Simons, Correia & Carey 2000; Cooper 1994; Glynn et al. 1983). For instance, the sensation scale is similar to enhancement motivations or regulation of positive affect. The mood change scale corresponds to coping or negative affect relief. A third scale, social motives, is the same in both typologies. Drinking motivation studies (which have most often been done with adolescents) have also included a conformity scale, which does not apply in this case. Alternatively, the bar context exploratory work generated an entertainment motive.

Most of the bar motives scales worked well in predicting bar patronage, drinking, and problems. In the logistic regression analyses of frequent bar patronage itself, the social motive predominated, but only for women. Overall, women had higher scores on social motives relative to men; this is the only scale on which that happened. With respect to lesbian, gay, and bisexual groups, there were no significant differences on social motives by sexual identity, although there was a trend for the gay/lesbian group to have the lowest mean scores on social motives even though the majority of gay men are frequent bar patrons. Although we did conduct focus groups with both bar patrons and bartenders from different populations groups including three groups that were sexual minority groups, it may be that social motives for bar patronage among gay men were not tapped into by the measure that was used for this study. The social motive predicted neither drinking nor alcohol problems in the other logistic regressions in Tables 4 and 5. It appears that bar patronage for social reasons, to meet new people, to hang out with friends, and generally socialize is not a particularly dangerous motive, neither a risk nor a protective factor. This fits with research done by Cooper (1994) as well as others (Rutledge & Sher 2001;Stewart, Zvolensky & Eifert 2001;Simons, Correia & Carey 2000;Glynn et al. 1983) who have found that socially motivated drinking is not associated with alcohol-related problems although it sometimes predicts consumption.

In contrast, the sensation seeking motive was more problematic (especially for women) and is associated with heavier drinking in bars, alcohol dependence, as well as frequent patronage of bars. This motive did not predict any negative alcohol-related behaviors for men. Paradoxically, the men had higher scores on this motive. Sensation seeking was also the motivation that most strongly distinguished between the household sample and the bar sample. A need for stimulation as a marker of attraction to bars is one that is currently being explored in relation to basic physiological markers such as electrodermal response and heart rate (Trocki et al. Under review). Bar patrons are typically lower on these measures. This suggests that attraction to noisy, busy generally stimulating environments might be associated with physical underarousal and such attraction may be at a visceral rather than cognitive level. Finally, with respect to sexual orientation, lesbians and gay men were significantly lower than heterosexuals on this motive. In contrast, bisexuals, both men and women, had somewhat elevated scores relative to the heterosexual and homosexual respondents. Seeking stimulation within bar environments may represent a particular risk for women and bisexuals of both genders.

The entertainment motive, like the sensation seeking motive, may be a particular risk for women. Among women it was strongly associated with heavy drinking, and there was a trend association with alcohol consequences. As with the sensation seeking motive, lesbian and gay respondents were significantly lower on this motive than heterosexual or bisexual identity groups.

Using bars to elevate one's mood (or, coping with negative affect) appeared to be a problematic motivation for both men and women on multiple alcohol-related analyses. This is consistent with the literature. In many previous studies, coping motives for drinking were particularly associated with dependence and consequences (Rutledge & Sher 2001; Stewart, Zvolensky & Eifert 2001; Simons, Correia & Carey 2000; Cooper 1994; Glynn et al. 1983). Several studies have found enhancement (e.g. sensation seeking) to be more strongly associated with consumption, and coping (e.g. mood change/escape) with problems and consequences, although it was not the case here. Many such studies, however, do not disaggregate based on gender. It could be that sensation seeking is more problematic for women but coping motivations apply to both. It is notable that mood change, like sensation seeking, strongly differentiated the household sample from the bar sample with the latter having more elevated scores.

In summary, we find that the presumed causal pathway of stress leading to bar patronage, which in turn leads to drinking among lesbian, gay and bisexual populations is not entirely supported by these data; and the assumption that the lesbian, gay and bisexual populations drink more heavily or have more problems has limited support. Gay men are particularly frequent bar patrons but are less likely to drink or have alcohol-related problems. Bisexual women and men clearly have excess consumption, dependence symptoms and consequences although these subsamples were very small. There is some evidence that point to elevated risks for substance abuse and some mental health problems among bisexuals (Balsam et al. 2005; Burgard, Cochran & Mays 2005; Diamant & Wold 2003; Jorm et al. 2002; Gruskin et al. 2001), but studies to date yield mixed results and most research on sexual minorities continue to merge bisexuals with lesbians and gay men in analyses. For these reasons it is important to disaggregate bisexuals from homosexuals in research studies because incorrect conclusions may be drawn for combined samples.

These results emphasize the affect regulation underpinnings of substance abuse. The association of alcohol problems/consumption with enhancement/sensation seeking motives suggests that a fundamental problem may be up/down emotional regulation. This can lead people to external factors (psychoactive substances, stimulating environments and even social interactions) to help them self regulate. Sensation seeking is strongly and directly related to many alcohol consumption problems (Zuckerman 2007). Helping people to control emotional states should be an essential aspect of treatment programs and interventions aimed at individuals at risk.

One of the study limitations in the regional population was the small number of lesbian, gay, and bisexual respondents. Although the percentages of respondents who provided information on sexual-behavior and/or sexual-orientation identity questions were comparable to or better than other surveys, the number of respondents reporting homosexual or bisexual behavior or identity in population-based surveys such as this tends to be small. It is possible that some of the outcome variables in which alcohol consumption or problems were elevated but did not reach significance may have done so if we had greater power to detect differences. A related limitation of this study is insufficient data to provide conclusive explanations about our study findings, with sufficient numbers of study participants to explore other possible stressors or other meanings respondents attach to various drinking contexts.

Several limitations also need to be considered with the bar sample. Although the design allowed for sampling of patrons from a diverse array of bars, it is not possible to know if the sample is representative of all bar patrons in the region. Many of the interviews took place on busier nights at bars and, consequently, respondents who patronize bars regularly or intermittently during less busy times may not be represented. We also do not have demographic or other information that would allow us to know how the study respondents may have differed from eligible individuals exiting bars who elected not to participate in the study. Finally, we do not know how many respondents may have been reluctant to disclose sexual minority status and, if so, how those respondents may have been similar or different in drinking behaviors and motivations for bar patronage compared with study participants who were comfortable sharing their sexual orientation.

In spite of these limitations, this study included analysis of data from a large representative sample from a region in California with a sizable sexual minority population. The study also included a wide cross section of patrons from bars serving different populations, including bars welcoming of or targeted to sexual minority patrons, which allowed us to compare sexual minorities and heterosexuals in the same sample. By exploring variables related to drinking behavior, alcohol-related problems, and bar motivations in the same sample and through numbers sufficient to allow examination of differences by gender and sexual orientation, this

study contributes to an emerging literature understanding similarities and differences in both the motivations and drinking behaviors in bar contexts among lesbians, gay men, bisexuals, and heterosexuals. We sought to examine these contexts in particular in relation to sexual minority and non-minority women who seem to be vulnerable to heightened risks in such environments. Women who are not sexual minorities also have unique bar environment risks. An understanding of the interactions between social groupings, individual factors such as motivation, and use of drinking contexts can lead to improvements in prevention, intervention and treatment of substance abuse.

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Table 1

Demographic characteristics of the sample

		WOMEN				MEN			
	Sample	**Heterosexual**	**Bisexual**	**Lesbian**	**AllWomen**	**Heterosexual**	**Bisexual**	**Gay**	**All Men**
GROUP SIZE	NAS Local	(n=500)	(n=27)	(n=23)	(n=550)	(n=411)	(n=6)	(n=30)	(n=447)
	Bar Patron	(n=177)	(n=17)	(n=25)	(n=219)	(n=195)	(n=22)	(n=87)	(n=304)
% Education >HS	NAS Local	73.3	85.2	82.6	74.3	75	50	83.3	75.2
	Bar Patron	82.2	72.7	60	79.7	78.6	47.1	73.4	74.9*
% Not Married/Partnered	NAS Local	45.1	63	69.6	47.0*	55.7	66.7	66.7	56.6
	Bar Patron	77.3	62.5	65.2	74.9	82.5	90	75.9	81.1
% White	NAS Local	52.8	81.5	69.6	54.9	58.2	66.7	70	59.1
	Bar Patron	52.5	94.1	52	55.7	62.1	45.5	69	62.8

, p <.10,

* p <.05,

** p<.01,

*** p<.001

Table 2

Bar patronage, alcohol consumption and alcohol-related problem variables

		WOMEN				MEN			
	Sample	**Heterosexual**	**Bisexual**	**Lesbian**	**All Women**	**Heterosexual**	**Bisexual**	**Gay**	**AllMen**
% Bar Going 1+ time per month	NAS Local	37.6	69.6	50	40.0**	52.7	50	61.5	53.3
	Bar Patron	80.2	88.2	64	79.0	81.5	81.8	92	84.5′
% Bar Drink 4+ on occasion	NAS Local	7.7	5.3	15	8.1	22.5	50	22.7	22.8
	Bar Patron	40.7	64.7	31.8	41.8′	58.5	83.3	38	54.3***
% Freq. Heavy Drinking	NAS Local	1.8	7.4	13	2.5***	17.1	33.3	10	16.9
	Bar Patron	6.3	29.4	0	7.3***	12.4	22.7	5.8	11.3*
% 3+ dep. symptoms	NAS Local	7.8	22.2	17.4	8.9**	17.8	66.7	10	17.9**
	Bar Patron	39.5	52.9	28	39.3*	43.6	63.6	41.4	44.3*
% 2+ Consequences	NAS Local	4.8	11.1	8.7	5.3	19.5	83.3	13.3	19.9***
	Bar Patron	9	17.6	20	11.0	26.2	31.8	19.5	24.7

′ p <.10,

* p <.05,

** p<.01,

*** p<.001

Table 3

Mean scores on bar motives by gender and sexual identity (range 0-3)

		WOMEN				MEN			
Bar Motives	**Sample**	**Heterosexual**	**Bisexual**	**Lesbian**	**All Women**	**Heterosexual**	**Bisexual**	**Gay**	**All Men**
Social Reasons	NAS Local	1.57	1.59	1.54	1.57	1.58	1.29	1.57	1.57
	Bar Patron	1.64	1.67	1.63	1.65	1.6	1.58	1.52	1.58
Sensation Seeking	NAS Local	1.17	1.24	1.1	1.17	1.23	1.4	1.33	1.24
	Bar Patron	1.42	1.46	1.27	1.41	1.49	1.54	1.48	1.49
Mood Change	NAS Local	1.12	1.14	1.06	1.12	1.13	1.17	1.1	1.13
	Bar Patron	1.31	1.29	1.18	1.29	1.32	1.38	1.22	1.29
Entertainment	NAS Local	1.18	1.17	1.18	1.18	1.37	1.33	1.17	1.37
	Bar Patron	1.26	1.35	1.18	1.26	1.27	1.3	1.13	1.23

Analysis of Variance results (Fs) for Table 3

Motive	**Sex Orientation**	**Gender**	**Sample**	**SO × Gender**	**SO × Samp**	**Gender × Samp**	**SO × Samp × Gender**
Social Reasons	2.10	6.95**	8.38**	2.49′	2.06	.11	2.18
Sensation Seeking	3.14	17.93***	40.42***	4.13*	1.95	.17	.17
Mood Change	6.57***	1.69	37.81***	.39	.94	.13	.09
Entertainment	6.20***	1.33	.11	2.52′	.45	4.21*	.64

′ p <.10,

* p <.05,

** p<.01,

*** p<.001

Table 4

Multiple logistic regression for bar patronage and bar drinking

	Bar Patronage 1+ Mo.		Average Drinks at Bar 4+	
	Female	**Male**	**Female**	**Male**
Sexual Orientation (ref=heterosexual) Bisexual Homosexual	3.0 (1.2, 8.5)* 1.9 (0.8, 4.1)	1.1 (0.4, 3.3) 2.0 (1.1, 3.8)*	1.0 (0.4, 2.7) 1.5 (0.5, 4.4)	1.8 (0.5, 5.9)0.5 (0.3, 0.8)*
Sample (ref = NAS local)	5.4 (3.2, 9.4)***	3.9 (2.4, 6.4)***	5.4 (3.0, 9.7)***	3.0 (1.9, 4.8)***
Social Bar Motives	2.0 (1.6, 2.6)***	1.7 (1.4, 2.2)***	1.1 (0.8, 1.6)	1.1 (0.8, 1.4)
Sensation Seeking Motives	1.4 (1.1, 1.9)*	1.0 (0.8, 1.3)	1.5 (1.1, 2.2)*	1.3 (1.0, 1.7)
Entertainment Motives	0.8 (0.5, 1.3)	1.1 (0.7, 1.7)	0.7 (0.4, 1.2)	0.7 (0.5, 1.1)
Mood change Motives	1.3 (0.9, 1.8)	1.3 (0.9, 1.7)	1.4 (1.0, 2.0)′	1.5 (1.1, 1.9)**

Adjusted for age, education, race/ethnicity, and relationship status

′ p <.10,

* p <.05,

** p<.01,

*** p<.001

Table 5

Multiple logistic regression heavy episodic drinking, dependence symptoms, and alcohol-related negative consequences

	Heavy Drinking		3+ dependence symptoms		2+ Lifetime Alcohol Consequences	
	Female	**Male**	**Female**	**Male**	**Female**	**Male**
Sexual Orientation (ref=heterosexual)Bisexual Homosexual	3.5 (1.1, 10.9)*3.5 (1.0, 13.7)′	1.0 (0.3, 3.4)0.6 (0.3, 1.5)	1.8 (0.8, 4.2)1.5 (0.6, 3.6)	2.1 (0.8, 5.6)0.8 (0.5, 1.4)	2.0 (0.7, 5.7)3.1 (1.2, 8.5)*	1.8 (0.7, 4.8)0.6 (0.3, 1.1)
Sample (ref = NAS local)	1.0 (0.4, 2.5)	0.3 (0.2, 0.6)***	4.0 (2.4, 6.6)***	2.4 (1.5, 3.7)***	1.2 (0.6, 2.5)	0.9 (0.5, 1.3)
Social Bar Motives	0.9 (0.5, 1.6)	1.1 (0.8, 1.5)	1.2 (0.9, 1.6)	0.9 (0.7, 1.5)	0.9 (0.6, 1.4)	1.0 (0.8, 1.3)
Sensation Seeking Motives	1.3 (0.7, 2.4)	1.3 (0.9, 1.7)	1.4 (1.1, 2.0)*	1.1 (0.8, 1.4)	1.3 (0.9, 2.1)	1.2 (0.9, 1.6)
Entertainment Motives	2.5 (1.1, 6.0)*	1.1 (0.7, 1.9)	1.4 (0.9, 2.2)	1.1 (0.7, 1.5)	1.7 (0.9, 3.2)′	1.1 (0.7, 1.7)
Mood change Motives	1.4 (0.8, 2.5)	1.3 (1.0, 1.9)′	1.4 (1.1, 1.9)*	1.8 (1.4, 2.3)***	1.6 (1.0, 2.4)*	1.4 (1.0, 1.8)*

Adjusted for age, education, race/ethnicity, and relationship status

′ p <.10,

* p <.05,

** p<.01,

*** p<.001