

# Alcohol Expectancies, Heavy Drinking, and Indicators of Alcohol Use Disorders in a Community-Based Sample of Lesbian and Bisexual Women

Jessica N. Fish, PhD<sup>1,2</sup> and Tonda L. Hughes, PhD, RN, FAAN<sup>3</sup>

## Abstract

**Purpose:** The aim of this study was to examine the associations among alcohol expectancies, heavy episodic drinking (HED), and indicators of alcohol abuse and dependence in a community sample of lesbian and bisexual women.

**Methods:** We used adjusted logistic regression models to assess associations between alcohol expectancies and alcohol-related outcomes.

**Results:** Drinking expectancies were positively related to outcomes. Expectancies of “forgetting worries when depressed” were positively related to HED, whereas expectancies of increased aggression and ability to express anger were positively related to indicators of alcohol abuse and dependence. Associations did not differ by sexual identity or race/ethnicity.

**Conclusion:** These findings suggest that alcohol expectancies are an important factor in determining risk for alcohol misuse/abuse among lesbian and bisexual women that could inform prevention, intervention, and treatment efforts.

**Keywords:** alcohol abuse, alcohol dependence, alcohol expectancies, alcohol use, LGB, sexual minority

## Introduction

ALCOHOL USE, MISUSE/ABUSE, and alcohol use disorders are more prevalent in lesbian, gay, and bisexual (LGB; sexual minority) populations than among heterosexuals and this is particularly true in comparisons of sexual minority and heterosexual women.<sup>1</sup> Elevated rates of heavy/hazardous drinking among sexual minority women (SMW; lesbian, bisexual) are particularly concerning given that women are more likely than men to experience alcohol-related morbidity and mortality at similar rates of use.<sup>2,3</sup> Research has documented social-cognitive factors that influence alcohol use, including drinking expectancies, attitudes, and motives in the general population;<sup>4</sup> however, the relationship of these factors to alcohol use and alcohol use disorders among SMW is not well understood.

Rooted in social learning theory, alcohol expectancies reflect the idea that a person’s positive (e.g., “I would feel calm”) and negative (e.g., “It would make me sick”) expectations about drinking alcohol are an important factor in determining their alcohol use behavior.<sup>5</sup> Positive alcohol expectancies, for example,

have been linked to drinking greater quantities of alcohol, larger increases in alcohol use from adolescence to adulthood, and higher likelihood of alcohol abuse by middle age.<sup>6</sup> Research also demonstrates the differential impact of specific expectancies on alcohol use/misuse. Coping expectancies and motives, for example, are a particularly salient predictor of alcohol use/misuse relative to enhancement and disinhibition (e.g., “feelings of freedom”) expectancies.<sup>7-9</sup> Limited research finds that SMW report more positive alcohol expectancies than heterosexual women<sup>10</sup> and that alcohol expectancies mediate sexual orientation differences in drinking behavior.<sup>8</sup> Hatzenbuehler et al.,<sup>8</sup> for example, found that SMW had more positive alcohol expectancies than heterosexual women and this accounted for their differences in heavy drinking. Others have found that drinking expectancies related to tension reduction increased risk for alcohol use and alcohol-related problems among SMW (and men).<sup>11</sup>

Given the implications for focused prevention and intervention strategies, the current study examined the associations among alcohol use expectancies, heavy episodic drinking (HED), and past-year symptoms of alcohol abuse and alcohol

<sup>1</sup>Population Research Center, University of Texas at Austin, Austin, Texas.

<sup>2</sup>Department of Human Development and Family Sciences, University of Texas at Austin, Austin, Texas.

<sup>3</sup>School of Nursing, Columbia University, New York, New York.

dependence in an age- and ethnically diverse community sample of lesbian and bisexual women. Studies have also noted elevated risk for heavy alcohol use among bisexual women relative to lesbian women<sup>12,13</sup> and (in the general population) among White women relative to racial/ethnic minority women.<sup>14</sup> Therefore, we also examined potential differences in the link between alcohol expectancies and drinking outcomes by sexual identity (lesbian vs. bisexual) and by race/ethnicity (White, Black, Hispanic, and other). Finally, given differences across various alcohol expectancies (e.g., coping vs. enhancement), we assessed associations between each independent expectancy item in addition to average alcohol expectancy scores.

## Methods

### Data source and sample

Data are from Wave 3 of the Chicago Health and Life Experiences of Women (CHLEW) study, an 18-year three-wave longitudinal study of adult SMW. Data collection began in the greater Chicago metropolitan area in 2000–2001 using a broad range of recruitment strategies (e.g., advertisements in local newspapers, on Internet listservs, and flyers posted in churches and bookstores) to obtain an age and racially/ethnically diverse sample of 447 English-speaking women, aged 18 and older. Only lesbian women were eligible to participate in Wave 1. Despite the fact that women who identified as bisexual in the screening interview were excluded, in the actual Wave 1 interview 11 women identified as bisexual. In Wave 2, conducted in 2004–2005 ( $N=384$  women; response rate = 86%), 21 women identified as bisexual. In Wave 3 we retained 353 women (response rate = 79%) from the original cohort. In addition, we used a modified version of respondent driven sampling to recruit a supplemental sample of younger women (ages 18–25), Black and Hispanic women, and bisexual-identified women ( $N=373$ ). The total Wave 3 sample included 353 women from the original cohort and 373 from the supplemental cohort, for a total sample size of 726. Data were collected in face-to-face interviews by trained female interviewers. All Wave 1 interviews were conducted in person; in Waves 2 and 3 some interviews (e.g., with participants who had moved outside of Chicago or Illinois) were conducted via Skype or telephone. Given that Wave 3 had the largest and most diverse sample, the current analytic sample includes lesbian and bisexual women who participated in Wave 3 and provided valid data on alcohol expectancy items ( $N=698$ ). Sample characteristics are displayed in Table 1.

The original study was approved by the University of Illinois at Chicago's Institutional Review Board, and the current study was deemed exempt by the University of Texas Institutional Review Board given the use of deidentified secondary data.

### Measures

Drinking expectancies were assessed using an 11-item scale adapted from Mulford and Miller<sup>15</sup> and used in a 27-year longitudinal study of women's drinking in the general population.<sup>16,17</sup> Participants were read the following, "Drinking affects people in many different ways. We would like to learn about what effects drinking may have for you. When you drink how true would you say each of these statements is for you?" Examples included: "You feel less shy or

more self-confident," "It helps you go to sleep," and "You become more aggressive toward other people." Response options ranged from *never true* = 1 to *usually true* = 3. Responses were summed and averaged. Preliminary analysis of the scale items showed adequate model fit (confirmatory factor analysis:  $\chi^2=9.88$ ,  $df=5$ ,  $P=0.079$ , CFI=0.995, RMSEA=0.038) and reliability ( $\alpha=0.86$ ) for the current sample. Inter-item correlations of the 11 items from the Drinking Expectancies Scale are shown in Table 2.

HED was measured using participant reports of how often they consumed six or more drinks on one occasion in the previous 12 months. Response options ranged from never to five times a week or more. Similar to previous studies documenting sexual orientation disparities in alcohol use,<sup>18</sup> items were recoded to reflect *no* = 0 or *at least one* = 1 episode of HED in the previous 12 months.

Participants met the study criteria for past-year alcohol abuse if they endorsed one or more of the DSM-IV symptoms of alcohol abuse (e.g., failure to fulfill work, school, or home obligations, or legal problems). For indicators of past-year alcohol dependence, participants had to endorse three or more DSM-IV symptoms (e.g., tolerance, withdrawal, and persistent desire to cut down on drinking).

To adjust for known factors influencing alcohol use among SMW,<sup>1</sup> covariates included sexual identity (lesbian, bisexual), race/ethnicity (White, Black, Hispanic/Latina, other), age (coded as continuous from 18 to 69), education (less than high school, high school, some college, and college graduate or higher), income (<\$15,000, ≥\$15,000 and <\$40,000, ≥\$40,000 and <\$75,000, and ≥\$75,000), relationship status (living with partner in a committed relationship, in a committed relationship but not living with partner, and not in a committed relationship), whether participants had children (yes, no), and whether they had children living in the home (yes, no).

### Analytic approach

First, we tested whether mean level drinking expectancies varied by sociodemographic variables. Next, logistic regression models (adjusted for sexual identity, age, race/ethnicity, education, income, relationship status, and parental status) tested associations between drinking expectancies and HED, as well as indicators of alcohol abuse and dependence. We then assessed whether the association between alcohol expectancies and alcohol-related outcomes varied by sexual identity or race/ethnicity using moderation analyses. In an attempt to better understand the association of specific drinking expectancies on the study outcomes, we also ran adjusted logistic regression models with the alcohol expectancy items disaggregated. All models utilized multiple imputations to account for missing data.

## Results

Table 1 summarizes demographic characteristics and mean differences in drinking expectancies. Bisexual women reported higher drinking expectancy scores than lesbian women; there were no differences by race/ethnicity. Drinking expectancies also differed by age, education, income, and relationship status. There were no differences based on having children or children living in the home. Women who reported past-year HED and women who indicated past-year alcohol abuse and dependence reported higher drinking expectancy scores than women who

TABLE 1. DEMOGRAPHIC CHARACTERISTICS AND FREQUENCIES OF ALCOHOL USE OUTCOMES, CHICAGO HEALTH AND LIFE EXPERIENCES OF WOMEN STUDY (N=698)

	n (%)	Drinking expectancies	
		M	95% CI
Sexual identity <sup>a</sup>			
Lesbian	517 (74.07)	1.74	1.70–1.79
Bisexual	181 (25.93)	1.96	1.89–2.04
Race/Ethnicity			
White, non-Hispanic	261 (37.39)	1.76	1.70–1.82
Black, non-Hispanic	251 (35.96)	1.83	1.77–1.90
Hispanic	162 (23.21)	1.85	1.78–1.93
Other	24 (3.44)	1.62	1.41–1.82
Age <sup>a</sup>			
18–25	142 (20.34)	1.98	1.90–2.07
26–35	156 (22.35)	1.82	1.75–1.90
36–45	146 (20.92)	1.78	1.69–1.86
46–55	148 (21.20)	1.76	1.67–1.84
56 and older	106 (15.19)	1.62	1.53–1.72
Education <sup>a</sup>			
<High school	86 (12.34)	1.94	1.84–2.05
High school	56 (8.03)	2.07	1.93–2.20
Some college	216 (30.99)	1.84	1.77–1.93
College graduate	339 (48.64)	1.70	1.65–1.76
Income <sup>a</sup>			
<\$15,000	204 (30.58)	1.90	1.83–1.97
≥\$15,000 and <\$40,000	141 (21.14)	1.87	1.78–1.95
≥\$40,000 and <\$75,000	158 (23.69)	1.77	1.69–1.85
≥\$75,000	164 (24.59)	1.66	1.58–1.74
Relationship status <sup>a</sup>			
Living with partner	267 (38.42)	1.72	1.66–1.78
Not living with partner	156 (22.45)	1.86	1.78–1.94
Not in committed relationship	272 (39.14)	1.84	1.78–1.91
Ever had children			
No	429 (61.46)	1.81	1.77–1.86
Yes	269 (38.54)	1.77	1.68–1.85
Children living in the home			
No	556 (79.77)	1.83	1.78–1.88
Yes	141 (20.23)	1.76	1.70–1.83
Heavy episodic drinking <sup>a</sup>			
No	427 (61.26)	1.67	1.63–1.72
Yes	270 (38.74)	1.99	1.93–2.05
Alcohol abuse <sup>a</sup>			
No	614 (88.22)	1.75	1.71–1.79
Yes	82 (11.78)	2.18	2.08–2.89
Alcohol dependence <sup>a</sup>			
No	622 (89.63)	1.76	1.72–1.80
Yes	72 (10.37)	2.15	2.04–2.26

Overall sample size varies across frequencies due to missing data.

<sup>a</sup>Groups differ significantly ( $P < 0.05$ ) on drinking expectancy mean score.

did not. Tetrachoric correlations (not shown in table) indicated strong positive correlations between HED and indicators of alcohol abuse,  $r_t = 0.629$ , and dependence,  $r_t = 0.660$ , and between indicators of alcohol abuse and dependence,  $r_t = 0.736$ .

Logistic regression models testing the association between drinking expectancies and HED, alcohol abuse, and alcohol dependence adjusted for sexual identity, age, race/ethnicity, education, income, relationship status, and parental status are displayed in Table 3. Results indicate that alcohol expectancies were strongly and positively related to all three alcohol-

related outcomes. Specifically, for a one unit increase in alcohol expectancies, lesbian and bisexual women were 3.26 times as likely to report HED, 5.21 times as likely to meet study criteria for alcohol abuse, and 4.21 times as likely to meet study criteria for alcohol dependence.

Results from moderation analyses indicated that the association between alcohol expectancies and alcohol-related outcomes did not vary by sexual identity or race/ethnicity. Post hoc sensitivity assessments with “other” race (excluded due to small sample size;  $n = 27$ ) also showed no significant

TABLE 2. INTER-ITEM CORRELATIONS OF THE DRINKING EXPECTANCIES SCALE

	1	2	3	4	5	6	7	8	9	10
1. More self-confident	—									
2. Helps me get to sleep	0.278	—								
3. Less inhibited about sex	0.497	0.211	—							
4. Forget worries when depressed	0.397	0.299	0.349	—						
5. Sexual activity more pleasurable	0.263	0.228	0.322	0.374	—					
6. Easier to speak mind when angry	0.319	0.304	0.323	0.442	0.387	—				
7. Feel closer to person sharing drinks	0.354	0.230	0.337	0.444	0.245	0.391	—			
8. Easier to be open with other people	0.492	0.304	0.400	0.517	0.325	0.540	0.488	—		
9. Don't worry what other people want	0.456	0.253	0.381	0.460	0.268	0.492	0.421	0.596	—	
10. Feel more sexually attractive	0.359	0.244	0.380	0.406	0.434	0.445	0.403	0.475	0.464	—
11. More aggressive toward others	0.215	0.225	0.243	0.275	0.271	0.362	0.227	0.295	0.300	0.325

All correlations are significant at  $P < 0.001$ .

moderating effects by sexual identity or race/ethnicity (data available upon request).

Analyses testing the association of the individual drinking expectancy items and alcohol-related outcomes (Table 4) indicated that participants' expectancies that alcohol would "cheer [them] up or help [them] forget [their] worries when [they] feel depressed" were most strongly related to past-year HED,

aOR = 1.43, 95% CI = 1.08–1.90,  $P = 0.012$ . Two drinking expectancies were also significantly related to both indicators of alcohol abuse and dependence: alcohol was expected to make it "easier for [them] to really speak [their] mind when [they] are feeling angry or upset" (aOR = 1.68, 95% CI = 1.11–2.55,  $P = 0.014$  for alcohol abuse, aOR = 1.67, 95% CI = 1.08–2.58,  $P = 0.022$  for alcohol dependence)

TABLE 3. ADJUSTED ODDS RATIOS OF DRINKING EXPECTANCIES PREDICTING STUDY OUTCOMES, CHICAGO HEALTH AND LIFE EXPERIENCES OF WOMEN STUDY (N=698)

	Heavy episodic drinking			DSM-IV alcohol abuse			DSM-IV alcohol dependence		
	aOR	95% CI	P	aOR	95% CI	P	aOR	95% CI	P
Drinking expectancies (total)	3.26***	2.24–4.75	<0.001	5.21***	2.91–9.33	<0.001	4.21***	2.34–7.57	<0.001
Sexual identity									
Lesbian (Ref)									
Bisexual	0.79	0.53–1.20	0.276	1.19	0.69–2.05	0.538	0.87	0.48–1.57	0.651
Age	0.95***	0.93–0.96	<0.001	0.96**	0.94–0.98	0.001	0.98	0.95–1.00	0.064
Race/Ethnicity									
White, non-Hispanic (Ref)									
Black, non-Hispanic	0.89	0.56–1.42	0.626	0.81	0.40–1.63	0.552	2.75*	1.24–6.09	0.013
Hispanic	1.20	0.75–1.93	0.453	0.77	0.38–1.58	0.478	1.78	0.76–4.14	0.183
Other	0.48	0.15–1.49	0.202	1.53	0.36–6.49	0.565	1.69	0.22–12.84	0.613
Education									
High school (Ref)									
<High school	0.92	0.43–1.98	0.829	2.24	0.86–5.83	0.098	1.65	0.70–3.91	0.256
Some college	0.65	0.36–1.18	0.158	0.72	0.32–1.62	0.428	0.48	0.22–1.04	0.064
College graduate	0.70	0.37–1.31	0.261	0.67	0.27–1.65	0.388	0.55	0.23–1.31	0.176
Income									
<\$15,000 (Ref)									
≥\$15,000 and <\$40,000	0.90	0.54–1.51	0.703	1.49	0.72–3.08	0.283	1.04	0.49–2.19	0.919
≥\$40,000 and <\$75,000	1.95*	1.14–3.32	0.015	1.18	0.54–2.59	0.673	0.79	0.35–1.81	0.578
≥\$75,000	0.98	0.52–1.85	0.950	1.36	0.51–3.65	0.539	1.03	0.36–2.97	0.950
Relationship status									
Living with partner (Ref)									
Not living with partner	0.98	0.60–1.61	0.950	1.62	0.76–3.44	0.208	2.03	0.91–4.53	0.083
Not in committed relationship	1.28	0.84–1.97	0.255	2.26*	1.15–4.45	0.018	2.31*	1.11–4.83	0.026
Parental status									
Children living in the home (yes)	0.56*	0.33–0.95	0.031	0.61	0.26–1.42	0.251	0.62	0.28–1.36	0.230
Ever had kids (yes)	1.02	0.63–1.64	0.945	0.71	0.34–1.50	0.373	1.03	0.51–2.12	0.926

\* $P < 0.05$ , \*\* $P < 0.01$ , \*\*\* $P < 0.001$ .

Ref, referent category.

TABLE 4. ADJUSTED ODDS RATIOS OF INDIVIDUAL DRINKING EXPECTANCY ITEMS PREDICTING PAST-YEAR DRINKING OUTCOMES, CHICAGO HEALTH AND LIFE EXPERIENCES OF WOMEN STUDY (N=698)

	<i>Heavy episodic drinking</i>			<i>DSM-IV alcohol abuse</i>			<i>DSM-IV alcohol dependence</i>		
	<i>aOR</i>	<i>95% CI</i>	<i>P</i>	<i>aOR</i>	<i>95% CI</i>	<i>P</i>	<i>aOR</i>	<i>95% CI</i>	<i>P</i>
Drinking expectancy items									
More self-confident	0.91	0.68–1.21	0.511	1.18	0.75–1.88	0.471	1.37	0.89–2.11	0.157
Helps me get to sleep	0.97	0.76–1.24	0.817	1.16	0.83–1.63	0.383	1.37	0.97–1.95	0.077
Less inhibited about sex	1.03	0.78–1.35	0.859	1.39	0.94–2.05	0.098	0.73	0.49–1.08	0.113
Forget worries when depressed	1.43*	1.08–1.90	0.012	1.39	0.91–2.13	0.127	1.34	0.88–2.05	0.178
Sexual activity more pleasurable	1.14	0.85–1.52	0.380	0.82	0.54–1.26	0.366	0.97	0.64–1.47	0.901
Easier to speak mind when angry	1.27	0.96–1.69	0.099	1.68*	1.11–2.55	0.014	1.67*	1.08–2.58	0.022
Feel closer to person sharing drinks	1.27	0.96–1.68	0.095	1.05	0.69–1.60	0.817	1.11	0.73–1.67	0.629
Easier to be open with other people	0.92	0.66–1.28	0.630	0.91	0.55–1.52	0.730	0.89	0.54–1.48	0.661
Don't worry what other people want	1.20	0.90–1.59	0.225	1.12	0.72–1.73	0.623	1.16	0.75–1.79	0.497
Feel more sexually attractive	1.07	0.79–1.45	0.673	0.64*	0.41–0.99	0.044	0.85	0.55–1.30	0.446
More aggressive toward others	1.19	0.89–1.61	0.246	2.25***	1.54–3.30	<0.001	1.67**	1.14–2.45	0.009
Sexual identity									
Lesbian (Ref)									
Bisexual	0.80	0.52–1.23	0.305	1.38	0.77–2.47	0.282	0.90	0.48–1.67	0.733
Age	0.95***	0.93–0.96	<0.001	0.96**	0.93–0.98	0.001	0.98	0.95–1.00	0.088
Race/Ethnicity									
White, non-Hispanic (Ref)									
Black, non-Hispanic	0.88	0.54–1.43	0.610	0.79	0.38–1.67	0.540	2.31*	1.01–5.28	0.046
Hispanic	1.15	0.70–1.88	0.584	0.64	0.29–1.39	0.262	1.33	0.55–3.24	0.526
Other	0.46	0.15–1.44	0.185	1.32	0.30–5.80	0.713	1.34	0.17–10.28	0.779
Education									
High school (Ref)									
<High school	0.90	0.41–1.97	0.794	2.40	0.87–6.63	0.091	1.77	0.71–4.40	0.217
Some college	0.66	0.36–1.21	0.184	0.62	0.26–1.49	0.288	0.50	0.22–1.12	0.092
College graduate	0.75	0.40–1.44	0.392	0.61	0.23–1.60	0.316	0.65	0.26–1.63	0.360
Income									
<\$15,000 (Ref)									
≥\$15,000 and <\$40,000	0.90	0.53–1.52	0.693	1.51	0.69–3.30	0.297	1.04	0.48–2.28	0.914
≥\$40,000 and <\$75,000	1.96*	1.14–3.37	0.015	1.28	0.56–2.91	0.555	0.84	0.36–1.96	0.682
≥\$75,000	1.02	0.53–1.94	0.961	1.62	0.56–4.66	0.372	1.13	0.38–3.36	0.832
Relationship status									
Living with partner (Ref)									
Not living with partner	0.93	0.56–1.53	0.769	1.63	0.74–3.61	0.228	2.19	0.95–5.07	0.067
Not in committed relationship	1.28	0.82–1.97	0.274	2.36*	1.16–4.79	0.018	2.62*	1.22–5.62	0.014
Parental status									
Children living in the home (yes)	0.51*	0.30–0.88	0.016	0.62	0.25–1.52	0.296	0.60	0.26–1.39	0.236
Ever had children (yes)	1.06	0.65–1.73	0.804	0.60	0.27–1.35	0.221	1.02	0.48–2.15	0.967

\* $P < 0.05$ , \*\* $P < 0.01$ , \*\*\* $P < 0.001$ .

and make them “more aggressive toward other people” (aOR = 2.25, 95% CI = 1.54–3.30,  $P < 0.001$  for alcohol abuse, aOR = 1.67, 95% CI = 1.14–2.45,  $P = 0.009$  for alcohol dependence). Women who expected to feel more sexually attractive when drinking were less likely to endorse indicators of alcohol abuse, aOR = 0.64, 95% CI = 0.41–0.99,  $P = 0.044$ .

**Discussion**

Efforts to eliminate alcohol-related sexual orientation disparities require understanding of the modifiable social-cognitive factors associated with alcohol use among sexual minorities. In the current study, drinking expectancies were significantly and positively related to HED, alcohol abuse, and alcohol dependence; for each one-unit increase in alcohol expectancies, lesbian and bisexual women were more than five times as likely to meet DSM-IV criteria for alcohol abuse.

Despite some evidence that bisexual women are more likely to report heavy drinking,<sup>12,13</sup> in our sample the association between drinking expectancies and outcomes was similar for lesbian and bisexual women. Furthermore, unlike findings from the general population in which White women are more likely to drink and drink more frequently than women of color,<sup>14</sup> research on alcohol use among SMW typically finds few racial/ethnic differences.<sup>12,19</sup> In the current study we found that drinking expectancies and their association with alcohol-related outcomes did not differ by race/ethnicity. Given the lack of racial/ethnic differences in drinking expectancies among lesbian and bisexual women in our sample, there may be something specific to the experience of SMW (e.g., anti-LGB discrimination, bar culture) that influences drinking expectancies in ways that drive risk for heavy alcohol use and alcohol use disorders. Overall, our findings suggest that the process by which alcohol expectancies are related to negative alcohol-related outcomes

may operate similarly for SMW, regardless of sexual identity (lesbian or bisexual) or race/ethnicity and, therefore, may be an important focus for prevention and intervention efforts with this population. Future work on the differences in drinking expectancies between heterosexual women and SMW may help further clarify the role of drinking expectancies in sexual orientation-related drinking disparities.

In line with previous research on stress reduction and alcohol use among heterosexual and sexual minority populations,<sup>4,9,11,20</sup> our findings indicate that lesbian and bisexual women who expected that drinking alcohol would help them “forget their worries when depressed” were more likely to engage in HED. The findings also showed that lesbian and bisexual women who indicated that they were more likely to “speak their mind when they were angry” or “be more aggressive toward others” when drinking were at heightened risk for alcohol abuse and dependence. The relationship between aggression and alcohol abuse and dependence has not been addressed in the literature on alcohol use among SMW. In fact, there are few studies that have investigated aggression more generally among sexual minorities. Mohr found, for example, that experiences with anti-LGB prejudice and discrimination contributed to feelings of fear and anger.<sup>21</sup> Others have found that repressed anger mediates the association between minority stress (i.e., anti-LGB discrimination, harassment) and poor psychological outcomes,<sup>22</sup> suggesting that anger may exacerbate poor mental health. These findings, coupled with work linking minority stress to substance use and intimate partner violence,<sup>23</sup> emphasize the need to understand the relationships between anger and alcohol use among SMW. Findings could inform prevention and treatment efforts, such as the promotion of healthier ways of expressing anger.

In a review of substance use patterns and treatment outcomes for LGB populations, Green and Feinstein<sup>24</sup> noted that substance use expectancies and norms may be different for heterosexual and LGB populations and, thus, may be a particularly salient factor in treatment efforts. Furthermore, studies using general population samples document the impact of changing alcohol expectancies on positive treatment outcomes and posttreatment abstinence.<sup>25</sup> Given our findings, prevention and treatment efforts specifically tailored to address alcohol expectancies may be particularly helpful in decreasing unhealthy use of alcohol and alcohol use disorders among SMW.

### Limitations

This study has several limitations. Although diverse in age and race/ethnicity, the sample was recruited in the greater Chicago metropolitan area, and thus, findings may not be generalizable to SMW in other parts of the country. Although studies have documented the longitudinal effects of drinking expectancies on alcohol use behavior,<sup>6,8</sup> this study is cross sectional. Therefore, we were unable to make inferences about whether alcohol expectancies contributed to the development of alcohol use disorders or if they were formed as a result of heavy alcohol use. More research is needed on the association between alcohol expectancies and other social-cognitive factors that contribute to excessive alcohol use and alcohol use disorders among SMW. Findings from population-based longitudinal studies will help to elucidate the

temporal order of these effects and whether these findings are generalizable to the larger population of SMW.

### Conclusions

We found compelling preliminary evidence that drinking expectancies are associated with HED and indicators of DSM-IV diagnostic criteria for alcohol abuse and dependence. These results highlight the relationship between specific drinking expectancies (i.e., forgetting worries and communicating anger) and the study outcomes. Researchers should continue to investigate associations between alcohol expectancies and alcohol use among lesbian and bisexual women to help inform prevention, intervention, and treatment efforts.

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### Disclaimer

The content is solely the responsibility of the authors and does not necessarily represent the official views of the National Institutes of Health.

### Author Disclosure Statement

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Address correspondence to:

Jessica N. Fish, PhD

Population Research Center

Department of Human Development and Family Sciences

University of Texas at Austin

305 E. 23rd Street, Stop G1800

Austin, TX 78712

E-mail: jessica.fish@utexas.edu