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## The impact of sexual self-concept ambiguity on alcohol approach bias and consumption\*

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### Abstract

The current work sought to examine both intra-individual and situational features that can predict heightened alcohol misuse among individuals who report sexual-orientation self-concept ambiguity (SSA). It was hypothesized that situations that evoke the salience of individuals' sexuality will contribute to alcohol misuse among individuals who report heightened SSA. In the first experiment, fifty-nine students were recruited from psychology subject pools at two large state universities. Following a writing manipulation, used to evoke a state of heightened self-focus on an individual's sexuality, participants completed the Alcohol Approach-Avoidance Task, which served as a marker of implicit bias toward alcohol-related cues. In the second experiment, ninety-four women between the ages of 21 and 35 were recruited into a lab-based study. Utilizing procedures similar to the first experiment, we attempted to test our research questions in an ad lib drinking study. Among young adults with greater SSA, situations that induced heightened self-focus were predictive of increased approach bias toward alcohol-related cues and increased consumption of an ostensibly alcoholic beverage. Evidence supported a causal link between the situational salience of sexuality and acute risk of alcohol-approach bias and consumption behavior among those with heightened SSA. Preventive interventions may highlight variation in risk of alcohol misuse based on identity-related risk factors, such as sexual self-concept ambiguity, and drinking motivations.

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Conflict of interest

None.

## Keywords

Addiction; Alcohol; Drinking; Sexual self-concept ambiguity; Identity uncertainty; Experiment

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## 1. Introduction

Individuals with concealable stigmatized identities (CSIs), who possess “socially devalued” group identities not readily apparent to others (Quinn & Earnshaw, 2013), are at-risk for problematic substance involvement. Compared to their heterosexual counterparts, individuals with a bisexual or gay/lesbian CSI report greater alcohol use, tobacco use, and polysubstance use (Garofalo, Wolf, Kessel, Palfrey, & DuRant, 1998; Russell, Driscoll, & Truong, 2002; Ziyadeh et al., 2007) and higher rates of recent alcohol use disorder or other drug use disorder (McCabe, Hughes, Bostwick, West, & Boyd, 2009). According to the widely applied Minority Stress Model (Meyer, 1995; Meyer, 2003), relations between minority stress and mental health outcomes, such as alcohol misuse, are moderated by identity-related characteristics relevant to one’s sexual orientation self-concept, defined as a person’s evaluation of her or his own sexual orientation (Winter, 1988). Despite research showing that individuals who self-identify as anything other than *exclusively heterosexual* are at-risk for alcohol misuse, a relative dearth of studies have attempted to examine identity-related characteristics and situational features that may influence the strength of this robust association. The current experiments are among the first to test whether, among young adults who acknowledge unstable or in-congruent aspects of their sexual orientation, situations that evoke heightened aversive self-focus may contribute to increased motivation for alcohol consumption.

According to Pachankis (2007), among individuals with CSIs, situations in which one’s concealable identity is at the forefront of their mind, or situations involving identity-salience, may be associated with acute feelings of distress. Specifically, individuals with CSIs report greater heightened negative affectivity (i.e., higher anxiety and depression) on a daily basis compared to those with visible stigmas or non-stigmatized identities (Frale, Platt, & Hoey, 1998) and consequently, are argued to be at risk to use alcohol as a means to cope with, or alleviate, this negative affectivity (Talley & Littlefield, 2014). Motivations to drink in order to ameliorate negative affectivity, in general, are common in negative reinforcement models of substance use (Greeley & Oei, 1999; Kraft, 1971).

One structural identity-related characteristic that has been increasingly implicated in exacerbating risk of alcohol misuse among sexual minority persons is *sexual orientation self-concept ambiguity* (SSA). SSA is defined as the extent to which a person acknowledges that dimensions of their sexual orientation self-concept, defined by their sexual identity, sexual attractions, and sexual behaviors, are viewed as inconsistent, ill-defined, or uncertain (Talley & Stevens, 2017). Recent evidence suggests that, among young adults, SSA scale scores are positively associated with reported symptoms reflecting a potential alcohol use disorder (Talley & Stevens, 2017) and drinking to cope motives (Hancock, Talley, Bohanek, Iserman, & Ireland, 2018).

Rather than diffuse tension or negative affect, Hull's (1981) Self-Awareness Theory asserts that alcohol alleviates aversive states of self-focus, specifically, within drinking contexts (Baumeister & Boden, 1994; Hull, Levenson, Young, & Sher, 1983). Hull highlighted that when self-relevant aspects of the environment are salient and applicable, a self-evaluative process is likely to be initiated. Self-awareness inductions can lead to aversive self-focused attention when individuals are confronted with aspects of the self that are deemed unfavorable. Alcohol is believed to disrupt the awareness of unfavorable self-relevant information in drinking contexts (Hull, 1981; Hull et al., 1983). Hull (1981) views alcohol as being consumed, "for its specific effect of inhibiting negative self-reactions" (p. 593). That is, alcohol is not believed to reduce tension directly, but reduce the awareness and encoding of a self-relevant "source of tension." The relief of tension via alcohol consumption, therefore, is explained as being motivated by a cognitive process, representing the strategic avoidance of heightened states of aversive self-focus (Hull, 1981).

Hull's self-awareness theory in the context of Pachankis' (2007) assertion that situational identity-salience contributes to acute feelings of aversive self-focus for individuals with CSIs, leads to the following hypothesis: Participants who report higher levels of SSA, or uncertainty regarding their sexual identity, will be motivated to consume more alcohol in situations that evoke heightened states of aversive self-focus. In an initial study, an approach-avoidance behavioral task (Alcohol-AAT [Fleming & Bartholow, 2014]) was used to measure implicit biases toward alcohol-related cues among participants whose sexual orientation had just been made salient through a writing prompt. The primary experiment extended the test of this hypothesis to an ad lib drinking situation.

## 2. Experiment 1 method

### 2.1. Participants

An initial group of > 2000 undergraduates enrolled in introductory psychology courses completed a set of questionnaires, including various alcohol use and SSA measures. Fifty-nine undergraduate students ( $n = 59$ ) were recruited from this initial sample (see Table 1). Participants received course credit in exchange for participation. The study was described as examining "emotion-laden topics and reaction time." Data were collected across two study sites (Missouri,  $n = 26$ ; Texas,  $n = 33$ ) and the entirety of the sample was collected prior to data analyses. One subject was left out of analyses due to mechanical failure for reaction time data.

### 2.2. Procedure

Assessments of three major facets of sexual orientation (i.e., self-labeled sexual identity, attraction, behavior), drinking motives (Cooper, 1994), and SSA (Talley & Stevens, 2017) were collected as part of a large mass testing survey in exchange for course credit. Eligible participants, who reported consuming at least one sip of an alcoholic beverage in the past three months and who expressed any degree of SSA, as indicated by non-zero SSA scores (Talley & Stevens, 2017) or who reported a non-exclusively-heterosexual identity or any degree of same-sex attraction or behavior in their lifetime, were invited, via email, to attend a lab session.

Upon arrival to the lab, participants completed a brief questionnaire to assess baseline mood (Watson, Clark, & Tellegen, 1988) and demographic information. Participants were then told they would choose a writing prompt, at random, from a bucket with a variety of potential topics. Random assignment was rigged such that all participants assigned to the experimental condition were asked to write about their sexuality (“Describe the feelings that come to mind when you think about your own sexuality” and “Describe how you think your sexuality has developed over time.”), whereas those assigned to the control condition were asked to describe their dorm room or bedroom. These prompts were adopted from other salience manipulations (Greenberg, Pyszczynski, Solomon, Simon, & Breus, 1994). Participants were given 15 min to compose a written response. Independent pilot data of the prompt provided evidence within an independent sample of young adult female participants that the manipulation elicited heightened aversive self-focus ( $n = 21$ ; eta-squared,  $\eta^2 = 0.12$ ; experimental group [ $n = 12$ ] post-writing self-focused affect  $M = 1.67$ ,  $SD = 0.27$ ; control group [ $n = 8$ ] post-writing self-focused affect  $M = 1.06$ ,  $SD = 0.33$ ). Manipulation checks confirmed that all participants wrote about their assigned writing topic. Given pilot data, the writing prompt was expected to evoke a state of heightened self-focus, which we argued would be particularly aversive for persons who reported higher levels of SSA.

Following writing, participants completed the Alcohol Approach Avoidance Task (Alcohol-AAT [Wiers, Rinck, Dictus, & Van den Wildenberg, 2009]), which provides an assessment of implicit approach-avoidance orientation toward various stimuli types (i.e., images of alcoholic beverages, non-alcoholic beverages, and non-consumable liquids). All instructions for the Alcohol-AAT were standardized and provided via computer in a “training module” at the start of the task. Participants were then debriefed and dismissed. Study procedures were approved by human subjects review board at both institutions where data were collected.

### 2.3. Measures

**2.3.1. SSA**—SSA was measured with the *Sexual Orientation Self-Concept Ambiguity* scale (Talley & Stevens, 2017) - higher scores indicate greater acknowledgement that one’s sexual orientation is unreliable, incongruent, or ill-defined ( $M = 1.70$ ,  $SD = 0.57$ ,  $n = 40$ ; Skewness: 0.40; Kurtosis:  $-0.40$ ). Ten items (e.g., “On one day I might have one opinion of my sexual orientation and on another day I might have a different opinion.”) were rated on a Likert-type scale that ranged from 1 (‘Strongly Disagree’) to 4 (‘Strongly Agree’). Internal consistency was good in both samples (Sample 1:  $\alpha = 0.90$ ; Sample 2:  $\alpha = 0.93$ ). Previous work examining measurement invariance suggests that SSA is measured equally well among heterosexual and non-heterosexual participants (Talley & Stevens, 2017). Most of the participants who did not complete the SSA scale ( $n = 19$ ) identified as *exclusively heterosexual* ( $n = 15$ ) and mean imputation was used to assign SSA scores to those with missing data.

**2.3.2. Alcohol-AAT task**—The Alcohol-AAT was developed by Wiers et al. (2009) to measure the strength of implicit/automatic approach-motivational biases for alcohol cues. In this task, participants are asked to respond to a series of images tilted  $3^\circ$  to either the right or left by pushing or pulling a joystick. Format movement assignments were counterbalanced (i.e., 50% of participants pulled right-tilted images and pushed left-tilted images while the

others received the opposite instructions). When the joystick is pulled or pushed, images gradually become larger or smaller, producing a realistic “zooming” sensation.

Although an irrelevant feature of participants’ task, one-third of the images ( $n = 15$ ) are of alcoholic beverages (e.g., Absolut Vodka©), one-third are of nonalcoholic beverages, and one-third are non-consumable liquids with no appetitive value, (e.g., motor oil). The strength of motivational biases (i.e., to approach or avoid) for the three image types was calculated by subtracting the average “pull” reaction time from the average “push” reaction time for each image category, with positive difference score values indicating an approach bias (i.e., faster to pull than to push). Each of the 45 images was presented 4 times in the pull condition and 4 times in the push condition. To adjust estimates for individuals’ differences in reaction times, reaction times were standardized by dividing the difference in average “pull” from “push” reaction times by the overall reaction time for all alcohol-related cues (Wiers, Eberl, Rinck, Becker, & Lindenmeyer, 2011). Evidence of external validity has been established in previous studies using the Alcohol-AAT among individuals with ADD (Wiers et al., 2011) or who are risk for developing AUD (Fleming & Bartholow, 2014; Peeters et al., 2012; Wiers et al., 2009; Wiers, Rinck, Kordts, Houben, & Strack, 2010) who all showed approach biases toward alcohol-related images.

**2.3.3. Covariates**—Analyses adjusted estimates for participants’ self-identified sexual identity (measured on a 5-point, Kinsey-type scale, where 1 = Exclusively heterosexual and 5 = Exclusively homosexual/gay/lesbian), drinking to cope motivations, age and study site. The drinking-to-cope subscale of Cooper’s (1994) drinking motives questionnaire was administered to adjust estimates for the typical frequency with which participants drank alcoholic beverages to reduce or regulate negative emotions (e.g., “Because it helps you when you feel depressed or nervous”). At one study site, one of the four items was left out in error. Responses were made using a six-point Likert-type scale (1 = almost never/never; 6 = almost always/always,  $\alpha = 0.88$ ). At the second site, all four items were included and measured with a five-point Likert-type scale (1 = almost never/never; 5 = almost always/always,  $\alpha = 0.93$ ). At the second site, the four-item measure correlated 0.99 with the three-item version of the scale score used in the first study site. Average scores were created by combining standardized items. Sensitivity analyses suggested that models which included the overlapping three-item set of the drinking-to-cope sub-scale for both study sites resulted in similar patterns of statistically significant effects.

### 3. Experiment 1 results

We examined the hypothesized 2-way interaction between experimental condition and SSA scores in predicting approach bias for alcohol-related cues. Results (Table 2) showed a significant 2-way interaction,  $b = 0.016$ ,  $SE = 0.007$ ,  $p = .03$ , suggesting that individuals who report higher SSA scores (95th percentile in ranked order observations) in the experimental condition tended to have higher alcohol approach bias compared to their counterparts in the control condition,  $b = 0.02$ ,  $SE = 0.007$ ,  $p = .10$ . By contrast, among individuals who reported lower SSA scores (5th percentile), alcohol approach bias was higher in the control condition, compared to their counterparts in the experimental condition,  $b = -0.01$ ,  $SE = 0.003$ ,  $p = .01$ . Taken together, results from this preliminary study are

among the first to suggest opposing effects of exposure to states of aversive self-focus on alcohol approach bias, depending on participants' reported sexual self-concept ambiguity.

### 3.1. Rationale for Experiment 2

The first experiment provided initial support that, when their sexuality was made salient, individuals who acknowledged ambiguity with regard to their sexual orientation tended to show a stronger approach bias toward alcohol cues. Notably, the first experiment utilized an implicit measure of alcohol approach bias. Smaller effect sizes may not be surprising given that the prediction of spontaneous, uncontrolled behaviors, relative to deliberate behavior, often results in less robust statistical effects (Gawronski & De Houwer, 2014). Moreover, the hypothesized mechanism (i.e., aversive self-focus) was assumed and not measured explicitly. Given preliminary support for our hypotheses, we attempted to expand our research question to move beyond implicit measures of alcohol approach motivation and measure the hypothesized mechanism (i.e., aversive self-focus) in the second experiment, which was conceived of as a conceptual replication and extension of the first study that included an ad lib drinking opportunity. Given evidence of greater sexual fluidity among women, relative to men (e.g., Katz-Wise, 2015; Savin-Williams & Diamond, 2000), the second experiment only included women. We hypothesized, similar to the first study, that women who acknowledged ambiguity with regard to their sexual orientation and who reported a heightened feeling of aversive self-focus would consume a larger amount of an ostensibly alcoholic beverage when their sexuality was at the forefront of their mind. In the second experiment, we used participants' self-reported levels of aversive self-focus, rather than experimental condition, to predict in vivo levels of consumption.

## 4. Experiment 2 method

### 4.1. Participants

Participants were 96 women (see Table 1) between the ages of 21 and 35, recruited from campus-wide and community announcements in West Texas for a study on "female social drinkers." Eligible participants must have reported consuming alcohol in the prior 3 months, no history of substance use disorder or treatment-seeking, and no contraindicated health conditions (e.g., liver conditions, substance use disorders, pregnancy). Women in the study reported consuming an average of two or three standard drinks in the past 30 days on a typical drinking occasion. The modal frequency of alcohol consumption for this sample was "once or twice a week."

### 4.2. Procedures

Interested participants were provided with a confidential subject identifier and survey link for pre-screening purposes. All women who completed the pre-screening survey were compensated with a \$5 gift card to [Amazon.com](https://www.amazon.com). The pre-screening survey served to assess SSA scores without arousing suspicion on the true nature of the study and to oversample women who did not identify as *exclusively heterosexual* who acknowledged any degree of same-sex sexual attraction, or who reported any history of same-sex sexual behavior (i.e., to acquire greater variation in SSA scores). Ultimately, any women who expressed any degree of SSA, as indicated by non-zero SSA scores (Talley & Stevens, 2017), as well as any

women who reported a non-exclusively-hetero-sexual identity or any degree of same-sex attraction or behavior in their lifetime were invited to participate.

At the start of the session, participants completed a series of tasks and questionnaires to verify eligibility. In line with the cover story, brief information established that participants would first complete a “verbal fluency” task and then a “taste rating” task. Participants were first asked to write an essay on an ostensibly randomly assigned topic for 15 min, with experimental participants writing about their sexuality and control participants writing about the layout and design of their bedroom. All participants, save one who wrote about the possibility of time travel and was excluded from analysis, wrote about their assigned topic. Different experimenters were used for each task in the study such that the experimenter leading the taste-test portion of the study was blind to the participants’ assigned writing condition.

Prior to the taste-rating task, brief, self-report measures were administered, assessing current mood and typical beer-brand preferences. Because we were interested in whether aversive states of self-focus precipitated the *motivation* to consume alcohol, we elected to use non-alcoholic beer in the taste-testing portion of the study. Each participant was provided with three de-identified 12 oz. bottles of ostensibly alcoholic beer, labeled ‘A’, ‘B’, and ‘C’ respectively. Participants were given 20 min to taste and rate the beer, with extra beer provided when requested. Participants answered questions regarding the taste and appeal of the drinks (Walitzer & Sher, 1990).

A detailed face-to-face debriefing of all hypotheses and deceptive procedures was administered. Manipulation checks verified that all participants were unaware of the rigged sampling of essay topics. One participant’s outcome data (i.e., amount of alcohol consumed) was lost due to experimenter error, resulting in a final sample size of 95 for analysis. Following debriefing, the amount consumed by each participant was determined by measuring the amount of beer left in the bottles subtracted from the initial amount given.

### 4.3. Measures

**4.3.1. Sexual self-concept ambiguity**—This was the same measure used in Experiment 1 ( $\alpha = 0.93$ ;  $M = 1.38$ ,  $SD = 0.42$ ; Skewness: 0.81, Kurtosis:  $-0.75$ ). SSA scores were standardized prior to their inclusion in models.

**4.3.2. Negative state self-focus**—Following the experimental manipulation, participants rated themselves on a number of adjectives from the PANAS-X (Watson & Clark, 1994). Ratings of the following adjectives were averaged to form a composite aversive self-focus measure: Self-Conscious, Embarrassed, Humiliated with self, Indecent, Improper, Ashamed, and Disgusted with Self ( $\alpha = 0.84$ , seven-items).

**4.3.3. Covariates**—Covariates were selected on the basis of being theoretically related to consumption behavior (e.g., trait self-consciousness affect; drinking-to-cope motives) or because they were relevant for alternative explanations of consumption behavior (e.g., age, sexual minority identity status; typical frequency of beer consumption). Covariates included respondent age ( $M = 23.74$ ,  $SD = 3.10$ ) and sexual minority identity status (0 = Exclusively

Heterosexual, 1 = Mostly heterosexual/Bisexual/Mostly lesbian/Exclusively lesbian). Current frequency of beer consumption,  $M = 3.55$ ,  $SD = 0.85$ , was assessed with a single-item that read: “When drinking, how often do you drink beer?” Response options included 1 = Never to 5 = Always. Only three (of 96) participants indicated that they “never” drank beer, whereas the rest of participants indicated that they at least drank beer at least “rarely” and up to and including “always.” Also included in the model, as covariates, were trait-level private self-consciousness (i.e., “dispositional self-awareness” p, 590; Hull, 1981; as measured by Fenigstein, Scheier, & Buss’, 1975 Private Self-Consciousness sub-scale:  $M = 2.61$ ,  $SD = 0.40$ , Range: 1.70–3.80), and reported motivation to consume the three taste-test beers to “forget worries” (i.e., Drinking-to-cope with negative affect;  $M = 1.90$ ,  $SD = 1.01$ , Range: 0–5).

## 5. Experiment 2 results

Multiple linear regression allowed for tests of interaction hypotheses in predicting amount of alcohol consumed, in log-transformed milliliters, during an ad lib drinking situation. Initial general linear models,  $F(1, 93) = 5.80$ ,  $p = .02$ , confirmed that self-reported aversive self-focus increased significantly, from pre- ( $M = 0.12$ ,  $SE = 0.03$ ) to post-test ( $M = 0.17$ ,  $SE = 0.03$ ), after participants wrote about their sexuality, compared to the layout of their bedroom (Pre-session  $M = 0.18$ ,  $SE = 0.03$ ; Post-session  $M = 0.13$ ,  $SE = 0.03$ ). Preliminary analyses also suggested a quadratic relationship between SSA scores and alcohol consumption in an unconditional model with no covariates,  $b = -9.433$ ,  $SE = 4.423$ ,  $p = .033$ , suggesting accelerated, non-linear changes in levels of acute alcohol consumption as SSA scores increased. In other words, it seems that even small elevations in SSA scores can cause increased consumption when experiencing aversive self-focus, and there may not be a linear correspondence between increases in SSA scores and motivated consumption. Ultimately, primary study hypotheses were tested with regression analysis in which a quadratic component was included in interaction terms for SSA scores. In addition to the covariates mentioned previously (age, sexual minority status, current frequency of beer consumption, trait private self-consciousness, drinking to cope motivations), participants’ sexual self-concept ambiguity and self-reported aversive self-focus following the writing task, along with corresponding two-way interaction term (including the quadratic effect between SSA and consumption) were entered into the model (see Table 3). Self-reported levels of aversive self-focus, following the experimental manipulation, were the primary hypothesized moderator purported to predict increases in beverage consumption in the current study (Wiers et al., 2010).

The two-way interaction, which included a quadratic component to account for accelerated rates of beverage consumption across levels of SSA, was found to be statistically significant (SSA\*Aversive self-focus:  $b = 96.69$ ,  $SE = 44.60$ ,  $p = 0.0$ ; SSA\*SSA\*Aversive self-focus:  $b = -29.70$ ,  $SE = 12.69$ ,  $p = 0.02$ ). As shown in Fig. 1, as participants’ levels of SSA increased, women who reported higher levels of negative state self-focus, increased in their ad lib beverage consumption. In comparison, women who reported lower levels of negative state self-focus engaged in similar levels of beverage consumption, regardless of their self-reported SSA. Among women with higher levels of SSA (+1 SD), the greatest beverage consumption



was shown in instances where women reported heightened states of aversive self-focus when asked to write about their sexuality and how it developed over time.

## 6. Discussion

Results from both experiments found that, among young adults with greater sexual orientation self-concept ambiguity, situations that evoke heightened self-focus on sexuality were predictive of increased approach bias toward alcohol cues and consumption of an ostensibly alcoholic beverage. By contrast, alcohol approach bias and consumption levels were not elevated among individuals who were assigned to the control condition, relative to the experimental condition or among those who reported lower levels of aversive self-focus, regardless of their SSA scores. These results are the first experimental findings to show that, among young adults who acknowledge unstable or incongruent aspects of their sexual orientation, situations that evoke heightened aversive self-focus via sexuality salience may contribute to heightened alcohol use.

Results suggest that individuals with SSA may use alcohol as a situational means to regulate negative affect, particularly aversive self-focus, and as a result, they may suffer more negative consequences as a result of their alcohol use. Indeed, previous work (Talley, Brown, Stevens, & Littlefield, 2014) found that individuals who are higher in SSA report a greater number of potential symptoms of alcohol dependence. Taken together, the current report is one of the first studies to provide causal evidence of an identity-related contributor that may lead to increased alcohol consumption among sexual minority individuals who acknowledge SSA. Findings may be used to inform prevention efforts that focus on relieving identity-related distress through adaptive coping strategies (e.g., identity-related affirmations) and reducing perceived discrepancies between sexual identity, behavior, and attraction. In addition, psychoeducational interventions might include information on protective behavioral strategies to use during drinking situations that evoke aversive states of self-consciousness for those with heightened SSA. Finally, treatment of alcohol misuse for young adults navigating sexual identity development might focus on identifying risky situations and reducing maladaptive motives for drinking (e.g., coping, conformity; Dworkin, Cadigan, Hughes, Lee, & Kaysen, 2018).

### 6.1. Limitations

Results must be qualified by limitations of the data and design. First, these studies were run within samples of young adults, who were primarily female and White. Thus, the generalizability of these results may not robustly extend to members of other racial/ethnic groups, age groups, or men. Second, the alcohol used in the experiments was non-alcoholic. Because we were interested in individuals' motivations for drinking, as opposed to the physiological effects of consuming ethanol, we elected to use non-alcoholic (NA) beer (no participant indicated knowledge that NA beer was used). Third, the current study used a rather contrived means to increase the salience of sexuality -asking participants to write about their sexuality for 15 min. Real world settings are unlikely to involve such experiences. Finally, in Experiment 1, we imputed 30% of SSA scores; although sensitively

analyses showed that the primary interaction was replicated when these participants were excluded from analysis, future work is needed to confirm the hypothesized interaction effect.

## 6.2. Concluding remarks

The sexual identity development process, although stressful, can ultimately contribute to positive psychosocial functioning for those who adeptly navigate difficulties with integrating a concealable stigmatized sexual identity within their larger self-concept. Given the suppositions of Meyer's Minority Stress Model (Meyer, 1995; Meyer, 2003), one cannot understate the importance of investigating moderators of identified health disparities in the sexual minority community, Hull's Self-Awareness Theory provides a theoretical mechanism, namely acute aversive self-focus, which may serve as a situational risk factor for alcohol misuse among sexual minority persons who acknowledge ambiguity with regard to their sexual orientation self-concept. Whereas most of the extant empirical evidence supporting the tenets of Meyer's (1995, 2003) Minority Stress Model, thus far, have been correlational (e.g., Livingston, Christianson, & Cochran, 2016), this study provides experimental evidence of a causal link between the situational salience of sexuality and increased risk of alcohol-approach bias and consumption, particularly among those with higher SSA. Findings are pertinent for those seeking to understand the means by which central aspects of the self-concept and ambiguity surrounding one's sexual identity, specifically, can potentiate risk of alcohol-related disparities in sexual minority communities.

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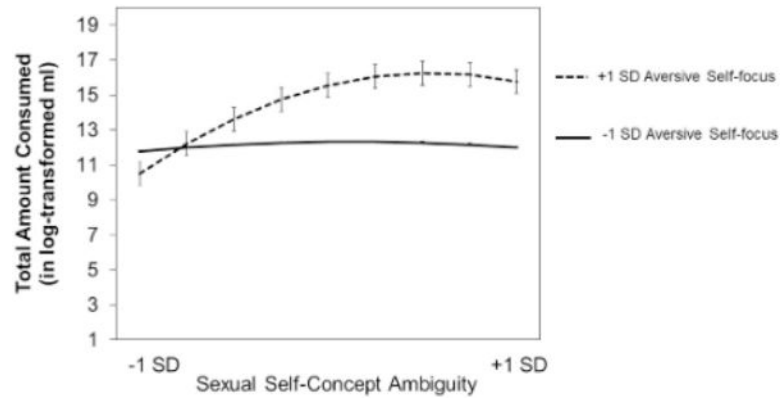
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**HIGHLIGHTS**

- Sexual identity-related characteristics likely contribute to differences in alcohol use.
- Situational salience of sexual self-concept ambiguity exacerbates alcohol misuse.
- Inducing negative self-focus can be aversive for some sexual minority individuals.
- States of negative self-focus can be reduced through alcohol consumption.
- Sexual minority persons drinking to reduce self-focus are at-risk of alcohol misuse.



**Fig. 1.** Two-way interaction between SSA (including a quadratic term) and post-manipulation aversive self-focus in predicting amount of beverage consumed in an ad lib drinking opportunity.

**Table 1**

Sample characteristics for Experiment 1 and 2.

Variable	Experiment 1 (N = 59)		Experiment 2 (N = 96)	
	<i>n</i>	%	<i>n</i>	%
Participant sex <sup>a</sup>				
Female	45	77.6	96	100
Male	12	20.3	0	0
Participant ethnicity/race <sup>b</sup>				
Hispanic/Latinx	11	18.6	24	25.0
White/Caucasian	35	59.3	62	64.6
Native Hawaiian	1	1.7	0	0
Native American	1	1.7	1	1.0
Black/African-American	2	3.4	5	5.2
Asian/Asian-American	2	3.4	4	4.2
Participant sexual identity <sup>c</sup>				
Exclusively heterosexual	33	55.9	46	47.9
Mostly heterosexual	14	23.7	29	30.2
Bisexual	3	5.1	6	6.3
Mostly gay/lesbian	4	6.8	1	1.0
Exclusively gay/lesbian	2	3.4	5	5.2
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Participant age	19.71	3.42	23.74	3.08

Note. Percentages for ethnicity/race may not add up to 100, as options were “select all that apply.”

<sup>a</sup>One participant identified as transgender (retained in analysis) and one did not report gender identification.

<sup>b</sup>Three participants in Experiment 2 chose not to report race/ethnicity

<sup>c</sup>Three and seven participants in Experiments 1 and 2, respectively, did not report current sexual identity (one participant in Experiment 2 reported a “queer” sexual identity).

**Table 2**

General linear model unstandardized regression estimates predicting alcohol-approach bias in Experiment 1.

Parameter	Coefficient	Std. Error	<i>p</i> -value
Intercept	-0.001	0.007	0.864
SSA	-0.011	0.003	< 0.001
Condition	0.001	0.003	0.763
SSA* Condition	0.016	0.007	0.032

*Note.* Model estimates adjusted for study site, participant age, participant sexual identity, participant gender, and drinking-to-cope motivations.

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**Table 3**

General linear model unstandardized regression estimates predicting total beverage consumption (in log-transformed milliliters) from Experiment 2.

Parameter	Coefficient	Std. Error	<i>p</i> -value
Intercept	1.669	11.562	0.885
SSA	14.872	15.500	0.337
SSA*SSA	-4.916	5.083	0.333
Post-Aversive Self-focus	-69.215	34.215	0.042
SSA*Post-Aversive Self-focus	96.686	44.596	0.030
SSA*SSA*Post-Aveisive Self-focus	-29.696	12.694	0.019

*Note.* Model estimates adjusted for participant age, participant sexual identity, typical frequency of beer consumption, trait self-awareness, and drinking-to-cope motivations.