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Do Protective Behavioral Strategies Mediate the Effect of Preparty Motives on Event-Level Preparty Alcohol Use?

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Abstract

Background—Research suggests that protective behavioral strategies (PBS) serve as one mechanism through which drinking motives can influence alcohol use. Whether these findings generalize to preparty drinking has yet to be examined.

Objectives—The current study attempts to fill this gap in the literature by examining three types of PBS (Limiting/Stopping Drinking, Manner of Drinking, and Serious Harm Reduction) as mediators of the relationship between preparty-specific drinking motives (e.g., Interpersonal Enhancement, Intimate Pursuit, Situational Control, and Barriers to Consumption) and event-level preparty drinking.

Methods—Participants were 986 college students from two universities taking part in a larger alcohol intervention study who reported on the amount of alcohol they consumed during a recent preparty occasion.

Results—After controlling for general drinking motives, campus affiliation, and gender, Manner of Drinking PBS (e.g., avoiding drinking games and consuming shots of liquor) were found to mediate the relationship between preparty-specific motives and event-level preparty drinking.

Conclusions/ Importance—The findings demonstrate that PBS may be helpful to assuage the strong association between preparty drinking motives and preparty drinking. The findings also point to several areas for further exploration, including the identification of PBS which are specific to prepartying.

Keywords

preparty; pregaming; preparty motives; protective behavioral strategies; college alcohol use; drinking

Approximately 64% of college students report having prepartied before an event, results which suggest that prepartying is a popular activity on college campuses (Pedersen & LaBrie, 2007; Read, Merrill, & Bytschkow, 2010). Prepartying (or pregaming, preloading, front-loading, and pre-funking) is commonly defined as the consumption of alcohol prior to attending a social function where drinking may or may not take place (Fairlie, Maggs, &

Declaration of interest

All authors declare that they have no conflicts of interest.

Lanza, 2015). When prepartying, individuals generally report consuming large quantities of alcohol over a brief period of time (Borsari et al., 2007; Hughes, Anderson, Morleo, & Bellis, 2008; Kenney, Hummer, & LaBrie, 2010). Thus, it is not surprising that prepartying is associated with greater alcohol consumption and alcohol-related consequences than when drinking on nights when not prepartying (Hughes et al., 2008; Labhart, Graham, Wells, & Kuntsche, 2013). To reduce alcohol use and alcohol-related consequences, researchers have investigated whether the use of protective behavioral strategies (PBS; e.g., alternating between alcoholic and non-alcoholic drinks or avoiding drinking games) are associated with the consumption of less alcohol in non-preparty contexts (LaBrie, Lac, Kenney, & Mirza, 2011; Larimer et al., 2007; Martens, Ferrier, & Cimini, 2007). The current study seeks to extend this line of research by examining PBS as a mediator of the relationship between preparty motives and alcohol use within preparty contexts.

There is a vast array of research which has focused on better understanding the relationship between general drinking motives and subsequent alcohol use. (Kuntsche, Knibbe, Gmel, & Engels, 2005; Kuntsche, Stewart, & Cooper, 2008; Read, Wood, Kahler, Maddock, & Palfai, 2003). Overall, past research suggests that individuals are motivated to drink for a variety of reasons (see Kuntsche et al., 2005 for a review), and based on Cooper's (1994) research, motives have been commonly grouped into four main types: social, enhancement, coping, and conformity motivations. In a seminal examination of the predictive relationship between general drinking motives and alcohol use, Cooper (1994) reported that each of these four drinking motives contributed independently to the prediction of both the frequency and quantity of alcohol use. Although general drinking motives provide a foundation upon which to posit that drinking motives would be related to preparty alcohol use, there is growing recognition that context-specific motives to drink (i.e., preparty-specific motives) may serve as better predictors of alcohol use within specific drinking contexts (Napper, Kenney, Montes, Leslie, & LaBrie, in press).

Recently, researchers have begun to investigate individuals' motives for prepartying and have developed scales to measure these specific preparty motives (Bachrach, Merrill, Bytschkow, & Read, 2012; LaBrie, Hummer, Pedersen, Lac, & Chithambo, 2012; Pedersen & LaBrie, 2007). According to LaBrie and colleagues (2012), college students were found to preparty for four distinct reasons: interpersonal enhancement, or beliefs that alcohol will serve as a social lubricant; situational control, or the desire to drink in a setting where one can easily control drink type and amount; intimate pursuit, or beliefs that being drunk will increase the chances of meeting a potential dating partner; and barriers to consumption, or beliefs that obtaining alcohol at the event will be difficult (i.e., because it will be scarce or because an individual is under 21). Each of the four distinct reasons for prepartying has been found to be positively correlated to frequency and quantity of preparty drinking (LaBrie et al., 2012).

Using a different measure of preparty motives, Bachrach and colleagues (2012) reported that preparty-specific motives were predictive of the frequency and quantity of preparty drinking over and above general drinking motives. Specifically, higher Inebriation/Fun (e.g., to have fun) and Instrumental (e.g., because there will not be alcohol at the event) subscales scores were found to be predictive of increased preparty frequency (i.e., how frequently one

preparties) and preparty quantity (i.e., how much one drinks when prepartying). However, higher Social Ease (e.g., to feel less anxious at the event) subscale scores were not found to be predictive of preparty frequency or quantity of preparty drinking, but were found to be predictive of increased reporting of alcohol-related consequences. Moreover, all preparty motives as conceptualized by Bachrach and colleagues were found to be directly or indirectly predictive of alcohol-related consequences. Bachrach et al.'s findings suggest that efforts to reduce preparty frequency and quantity of alcohol consumption can be directed at reducing specific preparty motives. Taken together, preparty-specific drinking motives are important predictors of preparty frequency, quantity, and consequences, and studies which control for general drinking motives can provide valuable insight into the unique influence preparty motives have on preparty drinking (Bachrach et al., 2012; Napper et al., in press).

One mechanism through which drinking motives have been found to influence alcohol consumption is through individuals' use of PBS. Three main types of PBS have been identified: limiting/stopping drinking (e.g., alternating alcoholic and nonalcoholic drinks, deciding not to exceed a certain set number of drinks), changing the manner in which one drinks (e.g., avoiding drinking games, sipping rather than 'chugging'), and promoting serious harm reduction (e.g., using a designated driver, knowing where your drink has been). The use of these strategies has been associated with reductions in drinking (Martens, 2005). For example, Martens and colleagues (2007) reported that PBS mediated the relationship between positively reinforcing motives and alcohol use. Specifically, Martens and colleagues suggested that heightened motivation to drink may correspond to decreases in behaviors that reduce alcohol consumption such as the use of PBS. Further, LaBrie et al. (2011) also reported that PBS mediated the relationship between drinking motives and alcohol use. Specifically, heightened general drinking motives were associated with decreased use of PBS, with decreased use of PBS associated with increased alcohol use. Because subscales of drinking motives and PBS strategies were aggregated into composites, it is unclear whether distinct drinking motives were predictive of specific PBS. Research is needed to determine if the general conceptual findings reported in Martens et al. and LaBrie et al.'s studies generalize to prepartying, and if distinct preparty motives are predictive of specific PBS. The current study sets out to examine whether PBS mediate the relationship between preparty motives and preparty drinking after controlling for general drinking motives, campus affiliation, and gender. It is hypothesized that: (1) increased preparty motives would be predictive of increased preparty drinking (Bachrach et al., 2012), (2) increased use of PBS would be predictive of decreased preparty drinking (LaBrie et al., 2011) and (3) PBS would mediate the relationship between preparty motives and preparty drinking.

Method

Participants

Participants were undergraduate college students ($N = 986$) from two west coast universities who were recruited to take part in a larger alcohol intervention study. Data used in the current study were collected using screening and baseline surveys before participants were randomly assigned into intervention conditions. The sample was representative of all undergraduate academic standings (e.g., freshmen through seniors) and fell within typical

range with respect to age (18-24 years old; $M = 20.11$; $SD = 1.35$). The majority of participants in the sample were female (64.0%), college seniors (39%), and 21 years of age (28%). The sample racial composition was 67.6% White, 12.5% Asian, 2.5% African-American, 11.8% Multiracial, and 5.6% identified as another race. In terms of ethnicity, 12.0% of participants were Hispanic/Latino with 88.0% reporting that they were not Hispanic/Latino.

Design and Procedures

A total of 6,000 students were invited to take part in the study via e-mail (3,000 students from each of the two universities). At the end of the first month of the Fall term, students were randomly selected from registrar rosters for recruitment. After providing consent, participants completed an online screening survey ($N = 2,689$). Participants who reported engaging in heavy episodic drinking (HED) at least once in the past month (five drinks in a row for men and four drinks in row for women, respectively) were invited to complete an additional baseline survey ($n = 1,494$). Of the eligible participants, a majority completed the baseline survey ($n = 1,367$; 91.5%). Of the participants who completed the baseline survey, only participants who reported prepartying at least once in the past month were selected ($n = 986$). All participants who completed the baseline assessment received a nominal cash stipend for their participation. All procedures were approved by the respective universities' Institutional Review Board.

Measures

Preparty Alcohol Use—Prepartying was defined as, “pre-partying (a.k.a. pre-funking or pre-gaming) is the consumption of alcohol prior to attending an event or activity (e.g., party, bar, concert) at which more alcohol may or may not be consumed.” After prepartying was defined, event-level preparty alcohol use was assessed by asking participants the following concerning the last time they prepartied, “How many drinks did you consume while prepartying (before going out)?”

General Drinking Motives—The 20-item Drinking Motives Questionnaire-Revised (Cooper, 1994) was administered to assess general motives to drink. Participants were asked how often they consumed alcohol for each of the 20 reasons in the questionnaire within the past 30 days. Subscale items were summed to create four composite measures: Enhancement motives ($\alpha = .87$, five items), social motives ($\alpha = .89$, five items), coping motives ($\alpha = .88$, five items), conformity motives ($\alpha = .90$, five items). Example items include how often participants drank: (1) because it gives them a pleasant feeling, (2) to better enjoy social gatherings, (3) to alleviate personal problems, and (4) in order to not feel left out. Participants responded using a five-point scale with response options that ranged from 1 (*almost never/never*) to 5 (*almost always/always*).

Preparty motives—The 16-item Preparty Motives Inventory (LaBrie et al., 2012) was administered to assess specific motives to preparty over the past year. Subscale items were summed to create four composite measures: Interpersonal Enhancement ($\alpha = .88$, six items), Situational Control ($\alpha = .75$, four items), Intimate Pursuit ($\alpha = .82$, three items), and Barriers to Consumption ($\alpha = .77$, three items). Example items include: (1) to pump myself

up to go out, (2) so I don't have to drink at the place where I am going, (3) to meet a potential dating partner once I go out, and (4) because I am underage and cannot purchase alcohol at the destination venue. Participants were presented with a list of reasons for prepartying and were asked to consider how often they personally prepartied for each reason. Participants responded using a five-point scale with response options that ranged from 1 (*almost never/never*) to 5 (*almost always/always*).

Protective Behavioral Strategies—The 15-item Protective Behavioral Strategies Scale (Martens et al., 2005) was administered to assess cognitive-behavioral strategies that individuals have ever used to reduce heavy drinking and negative alcohol-related consequences. Subscale items were summed to create four composite measures: Limiting/Stopping Drinking ($\alpha = .77$, seven items), Manner of Drinking ($\alpha = .62$, five items), and Serious Harm Reduction ($\alpha = .68$, three items). Example items include: (1) determine not to exceed a set number of drinks, (2) drink slowly, rather than gulp or chug, and (3) use [of] a designated driver. Participants were asked to “indicate the degree to which [they] engage[d] in the following behaviors when using alcohol or ‘partying’.” Participants responded using a five-point scale ranging from 1 (*never*) to 5 (*always*).

Analytic Strategy

Our central hypotheses were tested using PROCESS, a statistical software program in SPSS. PROCESS is a conditional process modeling program which “utilizes an ordinary least squares - or logistic based path analytical framework to test for direct and indirect effects” (Hayes, 2012; Jensen, King, Carcioppolo, & Davis, 2012, p. 9). In the current study, an ordinary least squares path analytical framework was employed to test all direct and indirect effects. Thus, all effects (e.g., direct and indirect) were examined using PROCESS. Univariate outliers were winsorized to reduce the influence of extreme scores, and outliers were recoded to one unit higher than the most extreme value not considered an outlier (Tabachnick & Fidell, 2001). Specifically, less than 2% of participants' responses pertaining to the measurement of intimate pursuit preparty motives and event-level preparty alcohol use were recoded. After controlling for the effects of gender (dichotomous), campus affiliation (dichotomous), and general drinking motives¹ (continuous) on preparty alcohol use, each model contained one preparty motive subscale as a predictor (continuous), three PBS subscales as mediators (continuous), and preparty alcohol use as the outcome variable (continuous). Due to listwise deletion in the mediational analyses, only data from 980 participants were analyzed.

Results

Gender stratified bivariate correlations by data collection site can be found in Table 1 and Table 2. On average, participants reported consuming 4.01 ($SD = 2.06$) drinks when prepartying, and gender differences were observed on many of the study's main variables. In addition, means and standard deviations associated with key study variables can be found in Table 3. In terms of the regression analyses, preparty motives related to Interpersonal

¹Each DMQ-R subscale was added individually into the model as a covariate (e.g., enhancement, social, coping, conformity).

Enhancement ($B = -.23$, $t(978) = -6.92$, $p < .001$) and Intimate Pursuit ($B = -.19$, $t(978) = -6.00$, $p < .001$) were associated with decreased use of Manner of Drinking PBS. Similarly, preparty motives related to Barriers to Consumption ($B = -.14$, $t(978) = -4.69$, $p < .001$) were also found to be associated with decreased use of Manner of Drinking PBS [but not Situational Control motives ($B = .04$, $t(978) = 1.21$, $p = .23$), which were found to be significantly and positively associated with Limiting/Stopping Drinking ($B = .24$, $t(978) = 7.69$, $p < .001$) and Serious Harm Reduction PBS ($B = .14$, $t(978) = 4.49$, $p < .001$)]. The predictive relationship between preparty motives and other PBS can be found in Table 4. The extent to which preparty motives and PBS are predictive of event-level preparty alcohol use can be found in Table 5. Across all models, an increase in any one of the four preparty motives was predictive of increased event-level preparty drinking (See Table 5). Moreover, increased use of Manner of Drinking PBS was predictive of decreased event-level preparty alcohol use. In terms of the mediating role of PBS, Manner of Drinking PBS was found to mediate the relationship between preparty motives related to Interpersonal Enhancement, Intimate Pursuit, and Barriers to Consumption and event-level preparty drinking (See Table 6).

Discussion

The current study found that preparty motives were uniquely associated with event-level preparty drinking even after controlling for general drinking motives, campus affiliation, and gender. Furthermore, consistent with previous findings (LaBrie et al., 2011), manner of drinking PBS mediated the relationship between preparty motives and event-level preparty drinking. In support of the hypotheses, increased motivation to preparty for interpersonal enhancement, situational control, intimate pursuit, or barriers to consumption reasons was predictive of increased preparty drinking, and increased use of manner of drinking PBS was predictive of decreased preparty drinking. The associations and predictive quality of preparty motives and PBS in relation to preparty drinking reported in the current study are consistent with findings in the existing literature (e.g., Bachrach et al., 2012; LaBrie et al., 2011; Martens et al., 2007) and provide preliminary support that results from the general drinking literature generalize to preparty drinking.

As hypothesized, manner of drinking PBS mediated the relationship between most preparty motives (except for situational control motives) and event-level preparty drinking. Participants with higher scores related to prepartying for interpersonal enhancement, intimate pursuit, and barriers to consumption were found to be less likely to report employing cognitive-behavioral protective strategies such as avoiding drinking games and taking shots of liquor, both of which could potentially contribute to the consumption of large quantities of alcohol when prepartying (Hughes et al., 2008; Kenney et al., 2010; Pedersen & LaBrie, 2007; Wells, Graham, & Purcell, 2009). Thus, it is not surprising that an increase in these motives to preparty was accompanied by decreased use of manner of drinking PBS, as increased motivation to preparty for interpersonal enhancement, intimate pursuit, and barriers to consumption reasons is likely to engender increased engagement in activities like playing drinking games and taking shots that often take place when prepartying, making it difficult to employ specific PBS. The results of the current study also corroborate past

research findings which suggest that PBS mediate the relationship between drinking motives and alcohol use (LaBrie et al., 2011; Martens et al., 2007).

Interestingly, PBS was not found to mediate the relationship between situational control preparty motives and preparty alcohol use. However, situational control motives did significantly and positively predict the use of protective behavioral strategies related to limiting/stopping drinking and serious harm reduction. People who preparty for situational control reasons may be motivated to ensure their drinks are made properly and are not tampered with; thus, this behavior may represent a type of protective behavioral strategy aimed at reducing harm. The finding that this motive positively predicted PBS use and also positively predicted prepartying drinking is noteworthy. It could be that participants high in situational control motives drink more while prepartying but less at the actual event because they view preparty drinking as safer or less likely to lead to serious harm. Future studies may wish to examine this possibility.

For students strongly motivated to engage in prepartying for interpersonal enhancement, intimate pursuit, and barriers to consumption reasons, interventions could attempt to reduce students' motivation to preparty. Although increased motivation to preparty for situational control reasons was found to be predictive of specific PBS use in the current study, not enough evidence is available to suggest that interventions should attempt to increase any particular preparty motive at this time. The results from the current study also indicate that PBS-based skills training which focus on increasing students' use of PBS may be particularly effective in reducing alcohol consumption and alcohol-related consequences when prepartying. Providing information about PBS to college students has been incorporated into many multi-component interventions to reduce alcohol use and alcohol-related consequences (e.g., Kypri et al., 2009; Murphy et al., 2012). The PBS component within these multi-component interventions could be tailored to increase students' use of PBS in specific drinking contexts such as prepartying. With calls to address preparty drinking when college students first arrive on campus (Kenney et al., 2010), interventions that focus on decreasing students' motivation to preparty and educating students on how to effectively use PBS when prepartying may prove effective at reducing preparty drinking and alcohol-related consequences.

Moreover, findings from studies analyzing event-level data have been found to be discordant with similar studies which have used more global measures suggesting that both data types uniquely add to our understanding of the relationship between preparty motives and preparty alcohol use and the extent to which PBS mediates this relationship (LaBrie et al., 2011; Lewis et al., 2012). Because of the paucity of event-level research examining the relationship between preparty motives and preparty alcohol use, additional event-level studies examining these constructs are needed.

Study Limitations and Future Directions

This study is limited in several ways. Because data in the current study was principally collected to assess the efficacy of an alcohol intervention, all event-level preparty constructs were measured retrospectively. Thus, some participants may be referencing a recent event (i.e., last night) while others may be referring to an experience that occurred in the more

distant past (i.e., up to 30 days). This introduces a number of potential biases for which we are unable to control.

While the motives and alcohol use assessed in the current study were specific to prepartying, participants were not told to report their use of PBS during a specific preparty event but were instructed to report their use of PBS whenever they had consumed alcohol. There also may be PBS that students use when they preparty that researchers have yet to identify and which may be particularly helpful in predicting preparty drinking. Future research may want to explore the use of specific PBS when prepartying. In addition, the cross-sectional data does not allow for causal inferences. Because the conceptual models infer causality such that changes in preparty motives were posited to influence the use of PBS which, in turn, was posited to influence preparty alcohol use, the use of cross-sectional data greatly limits these inferences. Future investigations should collect longitudinal data to better investigate these relationships. Moreover, the outcome variable was alcohol consumed when prepartying rather than total alcohol consumed on the night in which prepartying occurred. Previous research has shown that preparty alcohol consumption is closely related to the number of drinks consumed during the rest of the evening after the preparty event (LaBrie & Pederson, 2008). However, our finding that situational control motives are positively related to protective behavioral strategy use while other preparty motives are negatively related to PBS use suggests that individuals who preparty so that they can control their alcohol consumption more closely may actually be at a lower risk for problematic drinking and alcohol-related consequences later in the night. As previously noted, more research is needed to examine this possibility.

Summary

In sum, the results from the current study suggest that manner of drinking PBS mediate the relationship between interpersonal enhancement, intimate pursuit, and barriers to consumption preparty motives and preparty drinking. With respect to interpersonal enhancement, intimate pursuit, and barriers to consumption motives, an increase in motivation to preparty was found to be predictive of decreased use of PBS related to the manner in which students drank, with decreased use of these PBS predictive of increased event-level preparty drinking. The results also provide additional support for models that posit a link between motives and actual behavior (Cox & Klinger, 1988). These findings are important because they highlight opportunities to intervene on behalf of college students to reduce drinking in high risk contexts such as prepartying. What remains unclear is whether event-level preparty motives are predictive of event-level preparty alcohol use and the extent to which students use PBS when prepartying. Future investigations should examine preparty motives, PBS, and preparty alcohol use at the event-level within a more heterogeneous group of college student drinkers to more thoroughly elucidate and document the relationships between preparty motives, PBS, and preparty alcohol consumption.

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Figure 1.

Graphical representation of Model 1 with Interpersonal Enhancement preparty motive serving as the predictor, protective behavioral strategies as mediators, and preparty alcohol use as the outcome variable after controlling for gender, university affiliation, and general drinking motives. The only difference between models is the predictor variable (e.g., Interpersonal Enhancement, Intimate Pursuit, Situational Control, and Barriers to Consumption). Path coefficients for each respective model can be found in Table 3 and Table 4, with the evaluation of indirect effects found in Table 5. * $p < .05$, ** $p < .001$.

Table 1

Correlation Matrix of Key Study Variables: University A

Variables	1	2	3	4	5	6	7	8	9	10	11	12
1. Preparty Alcohol Use	-	.22**	.24**	.14*	.25**	-.04	-.30**	.02	.11	.12*	.11	.03
2. Interpersonal Enhancement	.15*	-	.47**	.39**	.43**	-.09	-.32**	-.04	.37**	.28**	.23**	.31**
3. Intimate Pursuit	.16*	.55**	-	.21*	.30**	-.02	-.21**	.15**	.23**	.10	.23**	-.07
4. Situational Control	.17*	.22**	.30**	-	.50**	.27**	-.02	.08	.11*	.23**	.08	.16**
5. Barriers to Consumption	.20*	.39**	.40**	.44**	-	.01	-.27**	.02	.19**	.23**	.17**	.17**
6. PBSS - Limiting/Stopping	.02	-.10	.02	.31**	.05	-	.49**	.30**	-.08	-.11	-.15*	-.01
7. PBSS - Manner of Drinking	-.27**	-.28*	-.27**	.04	-.19**	.40**	-	.22**	-.19**	-.15**	-.29**	-.13*
8. PBSS - Harm Reduction	-.01	-.07	-.02	.12	-.01	.29**	.25**	-	-.02	-.23*	-.08	-.10
9. DMQR - Social	.17*	.42**	.38**	.08	.24**	-.10	-.32**	-.07	-	.32**	.53**	.24
10. DMQR - Coping	-.02	.30**	.26**	.31**	.23**	-.01	-.08	-.11	.22**	-	.28*	.39*
11. DMQR - Enhancement	.09	.31**	.33**	.07	.23**	-.17	.26**	-.25**	.53**	.34**	-	.13*
12. DMQR - Conformity	.20	.15*	.34**	.22**	.05	.03	-.05	-.12	.11	.48	.20**	-

Notes: PBSS = Protective Behavioral Strategies Scale. DMQR = Drinking Motives Questionnaire-Revised. Zero-order correlations of study variables for women (above the diagonal) and men (below the diagonal).

* $p < .05$,

** $p < .01$.

Table 2

Correlation Matrix of Key Study Variables: University B

Variables	1	2	3	4	5	6	7	8	9	10	11	12
1. Preparty Alcohol Use	-	.18**	.16**	.12*	.18**	-.25**	-.34**	-.13**	.06	.02	.18**	-.03
2. Interpersonal Enhancement	.20**	-	.47**	.30**	.44**	-.16**	-.31**	-.06	.47**	.44**	.36**	.24**
3. Intimate Pursuit	.21**	.56**	-	.17**	.26**	-.07	-.29	-.22**	.21**	.35**	.28**	.23**
4. Situational Control	-.03	.25**	.22*	-	.50**	.20**	-.04	.18**	.13*	.16**	.15**	.04
5. Barriers to Consumption	.23**	.43**	.31**	.46**	-	-.12*	-.22**	.01	.21**	.21**	.24**	.04
6. PBSS - Limiting/Stopping	-.23**	-.10	-.11	.06	.05	-	.51**	.36**	-.15	-.06	-.12*	.02
7. PBSS - Manner of Drinking	-.32**	-.25**	-.28*	.09	-.19**	.40**	-	.31**	-.14*	-.16*	-.22**	-.11*
8. PBSS - Harm Reduction	-.07	-.09	-.20*	.06	-.01	.24**	.30**	-	-.07	-.18*	-.07	-.08
9. DMQR - Social	.18*	.44**	.30*	.09	.24**	-.23**	-.28**	-.06	-	.39**	.65**	.08
10. DMQR - Coping	.05	.19*	.22**	.01	.23**	-.08	-.09	-.25**	.21**	-	.34**	.35
11. DMQR - Enhancement	.24**	.35**	.21**	-.05	.23**	-.11	-.28**	.02	.56**	.15	-	.04
12. DMQR - Conformity	.10	.26**	.23**	.08	.05	.01	-.07	-.19	.14	.48**	.20**	-

Notes: PBSS = Protective Behavioral Strategies Scale. DMQR = Drinking Motives Questionnaire-Revised. Zero-order correlations of study variables for women (above the diagonal) and men (below the diagonal).

* $p < .05$,

** $p < .01$.

Table 3
Summary of Sample Size, Means and Standard Deviations of Key Study Variables among Males and Females

Variables	Males (N=359)		Females (N = 627)		<i>t</i> (984)	<i>Cohen's d</i>
	<i>M</i>	<i>(SD)</i>	<i>M</i>	<i>(SD)</i>		
Preparty Alcohol Use	4.70	(2.36)	3.62	(1.74)	8.21**	.54
Interpersonal Enhancement	3.00	(1.00)	2.97	(1.00)	.42	.03
Intimate Pursuit	1.96	(.95)	1.52	(.72)	8.27**	.54
Situational Control	2.09	(.85)	2.44	(1.00)	-5.73**	.37
Barriers to Consumption	2.44	(1.05)	2.66	(1.17)	-2.87*	.20
PBSS – Limit/Stop Drinking	17.08	(3.20)	19.47	(5.24)	-7.00**	.52
PBSS – Manner of Drinking	13.16	(3.21)	14.19	(3.36)	-4.75**	.31
PBSS – Harm Reduction	11.98	(2.26)	13.41	(1.80)	-10.99**	.72

Note. PBSS = Protective Behavioral Strategies Scale.

* $p < .05$,

** $p < .001$.

Table 4

Predictive Relationship Between Preparty Motives and Protective Behavioral Strategies

Predictors	PBSS Limit/Stop Drinking		PBSS Manner of Drink		PBSS Harm Reduction	
	<i>B</i> (SE)	<i>t</i>	<i>B</i> (SE)	<i>t</i>	<i>B</i> (SE)	<i>t</i>
M1: Interpersonal Enhancement	-.07(.04)	-2.18 [*]	-.23(.03)	-6.92 ^{**}	-.01(.03)	-.08
M2: Intimate Pursuit	-.02(.03)	-.72	-.19(.03)	-6.00 ^{**}	-.11(.03)	-3.38 [*]
M3: Situational Control	.24(.03)	7.69 ^{**}	.04(.03)	1.21	.14(.03)	4.49 ^{**}
M4: Barriers to Consumption	.01(.03)	.17	-.14(.03)	-4.69 ^{**}	.06(.03)	1.84

Notes. M1 stands for model 1, M2 for model 2, M3 for model 3, and M4 for model 4. PBSS = Protective Behavioral Strategies Scale. *B* represents the unstandardized path coefficient in the model. *SE* represents the standard error. PROCESS was used to test the direct effects.

^{*} $p < .05$,

^{**} $p < .001$.

Table 5

Predictive Relationship Between Key Study Variables and Preparty Alcohol Use

	Preparty Alcohol Use							
	Model 1	Model 2	Model 3	Model 4				
	<i>B</i> (SE)	<i>t</i>	<i>B</i> (SE)	<i>t</i>	<i>B</i> (SE)	<i>t</i>	<i>B</i> (SE)	<i>t</i>
Predictors								
M1: Interpersonal Enhancement	.27 (.07)	3.76*						
M2: Intimate Pursuit		.28 (.07)	7.27**					
M3: Situational Control			.22 (.06)	3.30*				
M4: Barriers to Consumption					.33 (.07)	5.00**		
Mediators								
PBSS Limit/Stop Drinking	-.01 (.07)	-.19	-.04 (.07)	-.48	-.06 (.08)	-.87	-.03 (.07)	-.42
PBSS Manner of Drink	-.54 (.08)	-7.21**	-.54 (.07)	-7.27**	-.58 (.07)	-7.87**	-.53 (.07)	-7.22**
PBSS Harm Reduction	.02 (.07)	.35	.06 (.07)	.88	.02 (.07)	.24	.01 (.07)	.11
Total Effects	.40 (.07)	5.49**	.38 (.07)	5.63**	.18 (.07)	2.76*	.40 (.07)	6.11**
Constant	4.27 (.33)	12.86**	4.05 (.31)	13.06**	3.96 (.30)	12.79**	4.15 (.31)	13.33**

Notes. M1 stands for model 1, M2 for model 2, M3 for model 3, and M4 for model 4. PBSS = Protective Behavioral Strategies Scale. *B* represents the unstandardized path coefficient in the model. SE represents the standard error. PROCESS was used to test the direct effects.

* $p < .05$,

** $p < .001$.

Table 6

Bootstrap Coefficients, Standard Errors, and Confidence Intervals for Mediation Tests

	PBSS Limit/Stop Drink		PBSS Manner of Drink		PBSS Harm Reduction	
	<i>B</i> (SE)	95% CI	<i>B</i> (SE)	95% CI	<i>B</i> (SE)	95% CI
Model 1: Interpersonal Enhancement	.01 (.01)	(-.01, .02)	.13 (.03)	(.08, .19)*	-.01 (.01)	(-.01, .01)
Model 2: Intimate Pursuit	.01 (.01)	(-.01, .01)	.10 (.02)	(.05, .15)*	-.01 (.01)	(-.03, .01)
Model 3: Situational Control	-.01 (.02)	(-.05, .02)	-.02 (.02)	(-.06, .02)	.01 (.01)	(-.02, .02)
Model 4: Barriers to Consumption	-.01 (.01)	(-.01, .01)	.08 (.02)	(.04, .12)*	.01 (.01)	(-.01, .01)

Notes. Asterisk denotes a significant indirect effect. Confidence intervals (CI) were estimated using 5,000 bootstrap samples with 95% CI. Bootstrapping reveals, for example, that use of PBS related to manner of drinking reliably mediated the relationship between Interpersonal Enhancement, Intimate Pursuit, and Barriers to Consumption preparty motives and preparty alcohol use as the confidence interval for each was found not to overlap zero. PBSS = Protective Behavioral Strategies Scale. *B* represents the unstandardized path coefficient in the model. *SE* represents the standard error. PROCESS was used to test indirect effects.