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## Knowing Where They're Going: Destination-Specific Pregaming Behaviors in a Multiethnic Sample of College Students

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### Abstract

**Objectives**—To examine how legal age status, gender, and self-reported reasons for pregameing are linked to pregameing for two common drinking contexts: a bar and a Greek party.

**Method**—Participants who reported pregameing at least once a month ( $n = 2888$  students aged 18–25 years) were recruited from 30 colleges/universities across the United States.

**Results**—Many students pregameed for social reasons regardless of pregameing destination. Multivariate analyses indicated that legal age students were more likely than underage students to pregame before going to a bar, whereas the opposite was true with respect to pregameing for a Greek party. Women were more likely than men to pregame before going to a bar or a Greek party, whereas men reported higher levels of consumption while pregameing for these destinations compared with women.

**Conclusions**—The present findings suggest areas for targeted intervention efforts and promising avenues for research on context-specific pregameing behaviors among college students.

### Keywords

pregameing; alcohol use; context; college students

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Problematic alcohol use among college students has been a concern on college campuses across the United States for some time (Ham & Hope, 2003; Wechsler et al., 2002). Recently, attention has been directed toward college students' involvement in a number of risky drinking practices such as pregameing. Pregameing (also known as preloading, pre-bar, pre-drinking, pre-partying) is defined as drinking before attending a social event such as

going to a bar, party, concert, or sporting event. Pregaming is quite common across college campuses, with studies showing prevalence rates at or near 70% in the general college student population (Read, Merrill, & Bytschkow, 2010).

Pregaming typically involves drinking large amounts of alcohol within a short time frame (Read et al., 2010). In fact, research suggests that a typical instance of pregame might last approximately an hour and a half and involve the consumption of an average of nearly four drinks for men and over three drinks for women during that time (Pedersen & LaBrie, 2007). Given the high quantity of alcohol consumption in a short period of time, it is not surprising that pregame has been associated with high blood alcohol concentrations (BACs), with both men and women reporting consumption patterns that would result in BACs close to or higher than the legal intoxication limit (0.08) prior to going out to a social event, where even more alcohol is likely to be consumed (LaBrie & Pedersen, 2008; Pedersen & LaBrie, 2007). On average, college men report drinking another four drinks after pregame, whereas women report drinking another two and a half drinks (Pedersen & LaBrie, 2007). Typical alcohol consumption also tends to be higher among students who pregame than students who do not pregame (Read et al., 2010). As a result, it is not surprising that pregame has been associated with a number of negative consequences including, but not limited to: hangovers, blackouts, passing out, missing days of school or work, fighting, and drunk driving (Borsari et al., 2007; LaBrie, Hummer, Kenney, Lac, & Pedersen, 2011; Pedersen & LaBrie, 2007; Zamboanga, Schwartz, Ham, Borsari, & Van Tyne, 2010).

Given the prevalence and problems associated with pregame, as well as the limited research literature on this risky drinking practice, investigations into pregame behaviors and students' reasons for pregame are needed. The purpose of this exploratory study was therefore to further our understanding of pregame among college students by examining the associations of student demographics (legal age, status, and gender) and drinking attitudes (reasons for pregame) with pregame behaviors before two common social events (going out to a bar and attending a Greek party) where drinking occurs among college students (e.g., Paschall & Saltz, 2007). Such findings may help not only to advance the literature on pregame, but also to inform prevention and intervention efforts.

## Demographics and Pregaming

Recent studies have investigated whether demographic characteristics, such as age and gender, might place students at elevated risk for engaging in pregame or for consuming high amounts of alcohol while pregame. Research is somewhat conflicting as to whether gender affects pregame behaviors. Bachrach, Merrill, Bytschkow, and Read (2012) found that college men pregame more frequently than college women. In other studies, Read et al. (2010) and Borsari et al. (2007) found that college men and women were equally likely to pregame. However, Read et al. (2010) found that although men consumed more drinks than women, women had higher BACs (which is possible due to sex differences in alcohol metabolism) while pregame.

In another study, LaBrie and Pedersen (2008) found that women, not men, reported a significantly greater amount of drinks consumed as well as elevated BACs on pregame days compared to nonpregame days. Although differences in the way in which levels of alcohol consumption were assessed (e.g., self-reports of total drinks consumed vs. BACs) may account for the inconsistent findings regarding gender and pregame behaviors, it is possible that consideration of the context for which students pregame could provide additional insight on this issue. For example, consumption of alcohol in a convivial context such as a bar or a Greek party can potentially place women at risk for negative social outcomes (e.g., unwanted sexual advances), which may not be the case for men. Women,

especially in comparison to men, may also elect to be mindful of their alcohol consumption when pregameing for particular social destinations that pose potential risks. Thus, it is conceivable that college men and women might pregame differently before attending a bar or a Greek party.

With respect to age, researchers have considered whether pregameing behaviors might differ between underage and legal age drinkers. Pregameing might be more prevalent among underage students due to their limited ability to purchase alcohol at their intended destination for legal reasons. Thus, the function of pregameing may be for underage students to reach their desired intoxication level prior to attending a social event. However, research into the pregameing behaviors of legal and underage students is mixed. On the one hand, Read et al. (2010) found that legal age and underage students were equally likely to have reported pregameing in the two months prior to assessment, and Pedersen, LaBrie, and Kilmer (2009) found that legal age and underage students did not differ in terms of frequency of pregameing in the last month or in the amount of alcohol consumed while pregameing. Conversely, other studies suggest that, compared with legal drinkers, underage students might be more likely to report pregameing on a greater number of days per month (Read et al., 2010), consume more drinks while pregameing (Paschall & Saltz, 2007; Read et al., 2010), and achieve higher BACs while pregameing (Pedersen et al., 2009; Read et al., 2010).

Altogether, the age and gender of college students might not only influence the likelihood that they pregame, but also the way in which they pregame (e.g., quantity of alcohol consumed while pregameing), and their reasons for doing so (e.g., for financial and legal reasons).

## Reasons for Pregameing

Motivational models of alcohol use can be used as a conceptual framework for understanding an individual's reasons for participating in drinking behaviors (Cox & Klinger, 1988; Read, Wood, Kahler, Maddock, & Palfai, 2003). According to these models, individuals not only consume alcohol to attain certain effects, but their drinking behaviors will also vary depending on their reasons for consumption (Cooper, 1994). In addition to the traditional motives investigated within the alcohol literature (i.e., social, enhancement, conformity, and coping motives; Cooper, 1994), research suggests that students have unique reasons for pregameing (e.g., Bachrach et al., 2012; LaBrie, Hummer, Pedersen, Lac, & Chithambo, 2012; Pedersen et al., 2009; Read et al., 2010; Wells, Graham, & Purcell, 2009). For example, Read et al. (2010) found that among the pregameers in their college student sample, many reported the following reasons for pregameing: "to save money" (85%), "to get a buzz before going out" (72%), and because "it makes going out more fun" (63%). Such reasons may be due, in part, to the specific destination that students are pregameing for, which could involve issues regarding alcohol availability (e.g., "Barriers to Consumption"; LaBrie et al., 2012). Students might pregame heavily if they are planning to attend a bar where alcohol availability might be limited for legal (i.e., underage student) or financial (e.g., expensive drinks) reasons. Students might not pregame if they plan to attend a Greek party, where alcohol availability may not be expected to be limited for these reasons. Conversely, some students might pregame heavily for a Greek party because of a fear that all of the alcohol will have been consumed by the time they arrive (e.g., Pedersen et al., 2009) or because of normative perceptions around others arriving already intoxicated (Pedersen & LaBrie, 2008).

Given that going to a bar or a Greek party constitutes attendance at a social event, students might pregame for these events to enhance their own sociability and increase their

opportunity to socialize, bond with peers, or meet potential romantic partners. Although a bar environment and a Greek party share a common “social” theme, they differ in that bars are typically situated in a local business setting, whereas Greek parties often take place in a residential setting. The latter can facilitate immediate opportunities for students to interact with potential sexual partners in a more private setting. Moreover, alcohol inebriation may also be socially acceptable at a Greek party (Borsari & Carey, 1999; Borsari, Hustad, & Capone, 2009). Indeed, not only has attendance at Greek parties been linked to high levels of alcohol intoxication regardless of Greek membership (e.g., Glindemann & Geller, 2003), but also research has found that, on average, college students consume more drinks before going to a Greek party compared with other settings (e.g., dorm party, bar/restaurant, off-campus event; Paschall & Saltz, 2007). In contrast, visible alcohol intoxication may be inadvisable at a bar setting, where such behaviors can cause one to be denied service or ejected from the bar, or possibly even arrested for public intoxication. In short, it is conceivable that students might endorse different reasons for pregameing depending on their next drinking destination.

## Study Aims

In the present exploratory study, we sought to advance our understanding of destination-specific pregameing attitudes and behaviors among college students by examining four primary research questions in a large multiethnic sample of college/university students from across the United States. First, we explored what proportion of students reported pregameing the last time they attended (a) a bar and (b) a Greek party, and how much alcohol, on average, these students consumed on these occasions. We focused on these two social destinations given their unique characteristics and because they are among the most common social events where college student drinking occurs (e.g., Paschall & Saltz, 2007). Given the lack of research on destination-specific pregameing behaviors, our first research question was exploratory; we did not advance any hypotheses.

Second, we examined whether legal age status and gender predicted the likelihood of pregameing for (a) bars and (b) Greek parties. Third, among students who reported pregameing before attending bars and/or Greek parties, we tested whether the aforementioned variables also predicted the amount of alcohol consumed while pregameing for these destinations. Given the mixed findings on the effect of legal age status and gender on pregameing behaviors, we did not advance any hypotheses regarding these associations.

Finally, we investigated students’ primary reason (e.g., legal reasons, social reasons, coping reasons) for pregameing before attending (a) a bar and (b) a Greek party, and whether endorsement of these reasons differed depending on a student’s legal age status. Given that both bars and Greek parties embody a convivial drinking context, we did not expect to find any differences between underage and legal age drinkers in their endorsement of social and enhancement reasons for pregameing before attending these social destinations. However, given that legal age drinkers can purchase alcohol at a bar, we hypothesized that more underage students would endorse legal reasons for pregameing for a bar than legal age students. Moreover, in light of the cost of purchasing drinks at a bar, we hypothesized that more legal age drinkers would endorse financial reasons for pregameing before attending a bar than underage drinkers. We did not expect legal age and underage drinkers to differentially endorse financial and legal reasons for pregameing before attending a Greek party. Given the lack of research regarding destination-specific pregameing, we did not advance any hypotheses regarding students’ endorsement of intoxication (i.e., drinking to get drunk quickly), conformity, or coping reasons for pregameing for a bar or a Greek party.

## Method

### Participants and Procedures

Participants were drawn from a larger sample of 10,320 students (aged 18 years or older) from 30 U.S. colleges and universities. We intentionally sampled from several minority-serving universities to approximate the ethnic distribution of U.S. college students as a whole. For the purpose of this study, we restricted the sample<sup>1</sup> to traditionally aged college students (aged 18–25 years) who reported that they pregame at least once a month ( $n = 2,888$ ; approximately 28% of the full sample, mean age = 19.8; 69% younger than 21 years of age; 71% women; 73% White, 9% Asian, 6% Black, 11% Hispanic, 1% Middle Eastern). The overrepresentation of women in our study sample is in line with the disproportionate representation of women among U.S. college students in general (Marklein, 2010).

As part of their participation in the larger study from which the present data were taken, students completed an online survey that included demographic questions, measures of pregame attitudes and behaviors, and other scales not analyzed for the present article. At each school site, students received a printed, e-mailed, or online announcement directing them to the study website. Students received course credit or other incentives (e.g., were entered into a drawing for a prize) in exchange for their participation. The survey took 1 to 2 hours to complete. Students provided their e-mail addresses and student identification numbers solely for crediting purposes; this information was kept separate from the data and was not linked with participants' responses. Each participating college/university's institutional review board approved the study protocols.

### Pregaming Measures

Students reported how often they drink alcohol before going to a party, club, or other social setting using a 7-point scale, ranging from 1 (*less than once a month*) to 7 (*daily or nearly daily*). We used students' responses to this question to select our data analytic sample (i.e., those who reported that they pregame at least once a month). We also asked students to indicate whether they drank before the last time they attended (a) a bar and (b) Greek party and, if so, how many drinks they consumed before arriving at each location.

Finally, students selected from the following options the reason that best describes why they drink before (a) going to a bar and (b) going to a Greek party: conformity ("to fit in with a group I like"); social ("to be sociable"); enhancement ("because it improves parties and celebrations"); coping ("to forget about my problems"); intoxication ("to 'jumpstart' the party; to get drunk fast"); financial ("it helps cut down on cost"); legal ("I'm under the legal drinking age"); and other. With the exception of intoxication, financial, and legal reasons, we chose the other reasons (conformity, social, enhancement, and coping) based on the subscales of the Drinking Motives Questionnaire-Revised (DMQ-R; Cooper, 1994) and provided students with an example item (in parentheses) taken directly from the DMQ-R. Prior studies have found that college students cite monetary (i.e., to save money) and legal (i.e., being under the legal drinking age) reasons for pregameing; thus, we included financial and legal reasons as part of the response choices for our study participants (Pedersen et al., 2009; Read et al., 2010). We also added intoxication to distinguish it from enhancement, the latter of which can encompass a sense of euphoria and heightened conviviality without feeling completely "drunk."

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<sup>1</sup>Of the 10,320 students, 364 (4%) students did not report their age and 452 (4%) students were outside the 18–25 years of age range; thus, 9,504 (92%) of the total sample were between 18 and 25 years of age. From this sample, we excluded those who did not report their typical alcohol consumption ( $n = 251$ ) or the frequency of their pregameing behavior ( $n = 1827$ ). We also excluded students who indicated that they never pregame ( $n = 2909$ ) or that they pregame less than once a month ( $n = 1476$ ), and anyone who did not respond to any of the questions of interest about pregameing for a bar or Greek party ( $n = 153$ ).



## Results

### Sample Description

The mean frequency of pregaming was 3.53 (standard deviation [*SD*]= 1.12, where 3 = two to three times a month and 4 = once a week); 19% of participants reported that they pregame once a month, 36% pregame two to three times a month, 21% pregame once a week, 21% pregame two to three times a week, 2% pregame four to five times a week, and 1% pregame daily or nearly daily.

We also estimated unconditional multilevel models to ascertain the amount of variability attributable to between-site differences—that is, the extent to which multilevel nesting (students within universities) would need to be controlled in further analysis (Raudenbush & Bryk, 2002). Results indicated that 4% of the variability in the likelihood of pregaming for bars and 5% of the variability in the likelihood of pregaming for Greek parties were attributable to differences between universities. As a result, in multivariate analyses with pregaming for bars or Greek parties as the dependent variables, we controlled for site by creating dummy codes for all but one of the sites and entering these dummy-coded variables as additional predictors.

However, unconditional multilevel models examining the *reasons* for pregaming indicated that with respect to pregaming before going to a bar, less than 2% of variability in all of the reasons was accounted for by between-site differences. This was also true of pregaming before going to a Greek party. We therefore did not control for site in the models that examined reasons for drinking.

### Research Question 1. What proportion of students reported pregaming the last time they attended (a) a bar and (b) a Greek party, and how much alcohol, on average, did these students consume on this occasion?

As can be seen in Table 1, 1631 (56%) students in the sample reported pregaming the last time they attended a bar, while 1278 (44%) reported pregaming the last time they attended a Greek party. Of those students who reported pregaming, 771 (27%) pregame for both bars and Greek parties, 860 (30%) pregame for a bar only, and 507 (18%) pregame for a Greek party only. Significantly more participants pregame for a bar only than for a Greek party only,  $\chi^2(1, n = 2249) = 32.28, p < .001$ , McNemar  $\chi^2 = 0.02$ . One participant reported consuming 45 drinks the last time he or she pregame for a bar, while another reported consuming 76 drinks the last time he or she pregame for a Greek party. Because consumption of this amount of alcohol would be fatal and represent impossible values, these participants were excluded from analyses in which the outcome of interest was amount of alcohol consumed. The average number of drinks<sup>2</sup> consumed when pregaming was 3.51 (*SD* = 2.15, range = 1–25) for a bar and 4.00 (*SD* = 2.42, range = 1–23) for a Greek party.

<sup>2</sup>Because of the structure of the data, we were unable to directly test whether or not the mean number of drinks consumed when pregaming for a Greek party versus a bar (as presented in Table 1) is significantly different from one another. Specifically, some participants reported pregaming for both contexts, while others reported pregaming for only a bar or only a Greek party. As the closest approximation to this analysis, we conducted a paired-samples *t* test to investigate whether the average number of drinks consumed when pregaming for a Greek party versus pregaming for a bar was significantly different among those who reported pregaming for both settings (*n* = 757 participants, 26% of the total sample). This subset of participants reported significantly more alcohol consumption when pregaming for a Greek party than for a bar, ( $M_{\text{Greek}} = 4.13$ ), ( $M_{\text{bar}} = 3.71$ ),  $t(756) = 5.87, p < .001$ . Caution should be used when interpreting these results because they are not likely to be reflective of the overall sample.

## Research Question 2. Do legal age status and gender predict the likelihood of pregameing for (a) bars and (b) Greek parties?

Hierarchical logistic regressions were conducted to assess the effect of legal age status and gender on likelihood of pregameing for each context, controlling for college or university site (as described previously), ethnicity (i.e., by creating dummy codes for each of the race/ethnicity categories and entering these dummy-coded variables into the first step of the regressions), and typical quantity and frequency of alcohol consumption (as indexed by the Alcohol Use Disorders Identification Test consumption subscale; Saunders, Aasland, Babor, De La Fuente, & Grant, 1993).

In the logistic regression for pregameing for a bar, the covariates explained 12% (Nagelkerke  $R^2$ ) of the variance in likelihood of pregameing for a bar, and correctly classified 64% of cases,  $\chi^2(35, N = 2737) = 253.63, p < .001$ . Typical quantity and frequency of alcohol consumption significantly predicted likelihood of pregameing for a bar,  $\beta = 0.19, p < .001$ , odds ratio [OR] = 1.20, 95% confidence interval [CI] = 1.16–1.25, while ethnicity was not associated with likelihood of pregameing for a bar,  $\beta_s = -0.20-0.55, p_s = .45-.98$ , ORs = 0.82–1.74. The addition of gender and legal age status in the final model explained an additional 2% (Nagelkerke  $R^2$ ) of the variance in likelihood of pregameing for a bar, and correctly classified 66% of cases,  $\chi^2(37, N = 2737) = 301.00, p < .001$ . Legal age status was a predictor of pregameing for a bar, with students of legal age 1.78 times more likely to pregame for a bar than underage students,  $\beta = 0.58, p < .001$ , 95% CI = 1.48–2.15. In addition, women were 2.89 times more likely to pregame for a bar than men,  $\beta = -0.35, p < .001$ , OR = 0.71, 95% CI = 0.58–0.86.

For the logistic regression predicting pregameing before going to a Greek party, the covariates accounted for 20% (Nagelkerke  $R^2$ ) of the variance in pregameing, and correctly classified 67% of cases,  $\chi^2(35, N = 2260) = 368.71, p < .001$ . Typical quantity and frequency of alcohol consumption significantly predicted likelihood of pregameing for a Greek party,  $\beta = 0.18, p < .001$ , OR = 1.20, 95% CI = 1.15–1.26, while ethnicity was not associated with pregameing for a Greek party,  $\beta_s = -0.86-0.09, p_s = .17-.90$ , ORs = 0.42–0.91. The addition of gender and legal age status in the final model explained an additional 3% (Nagelkerke  $R^2$ ) of the variance in pregameing for a Greek party, and correctly classified 67% of cases,  $\chi^2(37, N = 2260) = 416.69, p < .001$ . Gender was a predictor of pregameing for a Greek party, with women 1.88 times more likely to pregame for a Greek party than men,  $\beta = -0.53, p < .001$ , OR = 0.59, 95% CI = 0.47–0.73. Students under the legal drinking age were 1.66 times more likely to pregame for a Greek party than legal age students,  $\beta = -0.51, p < .001$ , OR = 0.61, 95% CI = 0.47–0.73.

## Research Question 3. Among students who reported pregameing before attending bars and Greek parties, do legal age status and gender predict the amount of alcohol consumed while pregameing for these destinations?

To examine this research question, two hierarchical multiple regressions were conducted, controlling for college or university site, ethnicity, and typical quantity and frequency of alcohol consumption at Step 1, with legal age status and gender entered as predictors at Step 2 among those in the subsample who reported pregameing for a bar or Greek party. Preliminary analyses indicated that multicollinearity was not a problem and that the assumptions of normality, linearity, and homoscedasticity were not violated. Cases with Mahalanobis distances (which assesses how much a case is a multivariate outlier) greater than or equal to 69.35 for pregameing for a bar and 67.99 for pregameing for a Greek party were identified and removed from analyses. However, results were not affected when these cases were removed; thus, these cases were retained in analyses pertaining to this research question.



When considering pregameing for a bar, covariates at Step 1 accounted for 26% of the variance,  $F(35, 1545) = 15.64, p < .001$ . Typical quantity and frequency of alcohol consumption was associated with drinking more alcohol when pregameing for a bar,  $\beta = 0.46, p < .001$ . Ethnicity was not associated with alcohol consumed while pregameing for a bar,  $\beta_s = -1.02-0.21, p_s = .17-.80$ . On Step 2, legal age status and gender explained an additional 5% of the variance in alcohol consumption when pregameing for a bar,  $\Delta R^2 = .05, \Delta F(2, 1543) = 59.89, p < .001$ . The final model indicated that underage drinkers ( $\beta = -0.83, p < .001$ ) and men ( $\beta = 0.89, p < .001$ ) consumed more alcohol when pregameing for a bar relative to legal age drinkers and women.

When pregameing for a Greek party was the dependent variable, covariates accounted for 26% of the variance,  $F(34, 1192) = 12.29, p < .001$ . Typical quantity and frequency of alcohol consumption was associated with consuming more drinks when pregameing for a Greek party,  $\beta = 0.48, p < .001$ . Ethnicity was not related to alcohol consumed when pregameing for a Greek party,  $\beta_s = -0.38-0.29, p_s = .62-.94$ . Similar to pregameing for a bar, legal age status and gender explained an additional 7% of the variance in alcohol consumption,  $\Delta R^2 = .07, \Delta F(2, 1190) = 58.05, p < .001$ , when pregameing for a Greek party. Underage students ( $\beta = -.52, p < .001$ ) and men ( $\beta = 1.52, p < .001$ ) consumed more alcohol when pregameing for a Greek party compared to legal age students and women.

**Research Question 4. What is a student's primary reason (e.g., legal, social, and coping reasons) for pregameing before attending (a) a bar and (b) a Greek party, and does this reason differ depending on a student's legal age status?**

Among students who reported pregameing for a bar, the top three reasons were social (32%), financial (28%), and legal (15%; see Table 1). Among those who reported pregameing for a Greek party, the top three reasons were social (46%), enhancement (22%), and intoxication (21%).

Omnibus chi-square tests were conducted to examine the associations of gender and legal age status with reasons for pregameing for both a bar and a Greek party. For pregameing for a bar, we found significant legal age status differences,  $\chi^2(7, n = 2574) = 453.72, p < .001$ , in the proportion of students who endorsed certain reasons for pregameing for this destination. For pregameing for a Greek party, we also found significant legal age status differences,  $\chi^2(7, n = 1841) = 75.23, p < .001$ , in the proportion of students who endorsed certain reasons for pregameing for this destination.

Planned comparisons, using chi-square tests for independence with Yates' continuity correction, were conducted to investigate the associations of legal age status with each of the top three reasons reported for pregameing for each setting. A Bonferroni correction was applied to the alpha level ( $\alpha = .008$ ) to control for Type I error inflation due to conducting six comparisons per setting.

For pregameing for a bar, no legal age status differences were found in the proportion of students reporting social reasons for pregameing for this destination,  $\chi^2(1, n = 2574) = 3.80, p = .05$ . Compared with legal age students, a higher proportion of underage students reported legal reasons,  $\chi^2(1, n = 2574) = 240.62, p < .001$ , and financial reasons,  $\chi^2(1, n = 2574) = 318.89, p < .001$ .

For pregameing for a Greek party, no significant differences were found in planned comparisons across legal age status for social,  $\chi^2(1, n = 1841) = 0.70, p = .40$ , or intoxication reasons for pregameing,  $\chi^2(1, n = 1841) = 1.62, p = .20$ ; however, compared with legal age students, underage students were more likely to report enhancement reasons for pregameing for a Greek party,  $\chi^2(1, n = 1841) = 9.13, p = .003$ .

## Discussion

Pregaming is highly prevalent on college campuses: nearly a third of the students we surveyed reported pregaming at least once in the past month. Despite the high prevalence of pregaming, little is known about how college student demographics, reasons for pregaming, and pregaming behaviors might vary depending on the students' destination venue. The present study examined college students' destination-specific pregaming in hopes of advancing researchers' and mental health professionals' understanding of this important topic.

Regarding destination-specific differences in pregaming, a slightly higher proportion of students in our sample of current pregamers reported that they pregame before the most recent occasion when they went to a bar (56%) compared to a Greek party (44%). As far as the average amount of alcohol consumed while pregaming for these destinations is concerned, visual inspection of the means showed a modest difference (bar = 3.51 drinks vs. Greek party = 4.00), though this difference was not tested statistically because of the independent and dependent nature of the samples. These drink consumption averages while pregaming are comparable to those found in prior research (Pedersen & LaBrie, 2007). The implications of the difference of half a drink between a bar and a Greek party in regards to personal risk will depend on a variety of individual factors, such as gender, weight, time taken to consume the alcohol, and previous number of drinks consumed.

Regardless of the amount, arriving at a bar or Greek party having already consumed alcohol poses potential health risks. First, students who have consumed alcohol while pregaming (and might be intoxicated) are then traveling to another social destination on foot, using public transportation, or by car, which in turn puts them and/or other students at risk for harm (Borsari et al., 2007). Second, attendance at Greek parties is already associated with high levels of intoxication (e.g., Glindemann & Geller, 2003). Therefore, arriving at a Greek party having already consumed alcohol can increase students' vulnerability to negative social (e.g., unwanted sexual advances, altercations) and health outcomes (e.g., unplanned sex, alcohol poisoning) at an already high risk social destination (e.g., Bersamin, Saltz, Paschall, & Zamboanga, 2012; Cashin, Presley, & Meilman, 1998; Wechsler, Kuh, & Davenport, 1996).

### Predictors of Pregaming for a Bar and a Greek Party

Although prior research has found that men and women are just as likely to pregame (Borsari et al., 2007; Read et al., 2010), we found that women were more likely to pregame before going to a bar or a Greek party. Results also showed that compared with women, men consumed more alcohol while pregaming for a bar and a Greek party. These effects were found while controlling for college/university site, ethnicity, and typical alcohol consumption. The latter of the aforementioned results are consistent with prior studies, which found that men tend to consume more alcohol than women while pregaming (e.g., Pedersen & LaBrie, 2007; Read et al., 2010). However, we did not assess BACs, and so it remains unclear whether BACs in the present sample were also higher for men than women when pregaming. Because of the inherent biological differences between men and women, differences in the number of drinks consumed between genders (with men consuming a greater number of drinks) may actually relate to similar intoxication levels.

The reasons for our finding that women were more likely than men to pregame for both destinations are not entirely clear. Although we did not measure how much alcohol was consumed after arrival at these settings, it is possible that the women in our sample pregame for a bar and a Greek party so they can avoid drinking more alcohol when they arrive at these social destinations, and/or exert some degree of control over their drinking (e.g.,

“Situational Control”; LaBrie et al., 2012). Elevated alcohol consumption at a bar or at a Greek party, especially in the presence of others, may make women feel and/or appear vulnerable in these settings, which may not be the case for men.

Other research has suggested that additional elements of the social context in which pregameing occurs might contribute to gender differences in pregameing behavior. For instance, one recent study indicated that college women who pregameed in coed groups consumed higher levels of alcohol while pregameing compared with women who pregameed in primarily same-sex groups (Paves, Pedersen, Hummer, & LaBrie, 2012). Whether the latter findings hold true as a function of the specific destination that students pregame for is an important future research inquiry. As such, future research on college pregameing could examine *how much* alcohol is being consumed, *where* the consumption is taking place, and *whom* the students are with (e.g., friends who might serve as protectors or instigators, mixed gender peer group, a romantic partner, an acquaintance) while pregameing activities are taking place.

In terms of age differences, some prior research has found no differences in pregameing as a function of legal age status (e.g., Read et al., 2010), whereas other work suggested that legal age students were less likely to pregame (Paschall & Saltz, 2007). Our results indicated that being of legal drinking age was predictive of the likelihood that students would pregame for a bar, whereas being underage was predictive of the likelihood that students would pregame for a Greek party. Perhaps these differences reflect students’ tendencies to attend these drinking destinations given their legal age status (e.g., legal age college students would more likely go to a bar than underage students). Interestingly, among students who pregameed for a bar or Greek party, underage students consumed more alcohol when pregameing for both destinations than legal age students. This finding is consistent with prior research indicating that underage students might be more likely to consume more drinks while pregameing than legal age students (Read et al., 2010). Because alcohol is more difficult and risky for underage students to obtain at a bar, increased alcohol consumption while pregameing for a bar may serve as an attractive option for this group, as it allows them to be “buzzed” or intoxicated in a setting in which their access to alcohol is limited.

It is unclear why underage students are more likely to (a) pregame for a Greek party and (b) consume higher amounts of alcohol while pregameing for this destination than legal age students. It is possible that arriving intoxicated at a Greek party is less of an issue for legal age student drinkers due to the greater perceived availability of alcohol at such parties. It is important to note that students have also reported the fear of running out of alcohol at parties as an additional reason for pregameing (Pedersen et al., 2009). Underage students, who generally have a more difficult time accessing/purchasing alcohol than legal age students, may therefore pregame to reach their desired intoxication level in case alcohol will not be available for them at the party or at local establishments (e.g., a bar, a liquor store) within the vicinity of the party. Another possibility is that the novelty of being extremely intoxicated at Greek parties has subsided for legal age students who have already attended several years of Greek parties and thus may feel less need to drink in advance for such a party.

### **Pregameing Before a Bar and a Greek Party: Primary Reason and Legal-Age Status**

Overall, a high proportion of students endorsed social reasons as the primary reason for pregameing for both a bar and a Greek party. As expected, no significant legal age status differences were found in the proportion of students who reported pregameing for a bar for social reasons. These results are consistent with the alcohol use literature that suggests that adolescents and young adults endorse social motives as a major reason for drinking (Kuntsche, Knibbe, Gmel, & Engels, 2005).

Financial and legal reasons were highly endorsed as the primary reason for pregaming before going to a bar. Consistent with our hypothesis, a significantly higher proportion of underage students reported legal reasons for pregaming before going to a bar than legal age students. This is not surprising, given that underage students are not legally able to purchase alcohol at a bar. Contrary to our hypothesis, a higher proportion of underage (vs. legal age) students reported financial reasons for pregaming before a bar. The possibility remains that underage students have ways of obtaining alcohol (e.g., asking someone who is of legal age to purchase alcohol or going to a bar that has “loose rules” about carding college age students) at a bar, otherwise they would not pregame for this destination for financial reasons. Perhaps our findings highlight the importance of enforcing the legal drinking age at bars and identifying those engaging in unlawful purchase of alcohol for minors.

Finally, enhancement and intoxication reasons were highly endorsed as the primary reason for pregaming before going to a Greek party. No significant differences were found in the proportion of students who endorsed social and intoxication reasons for pregaming for a Greek party across legal age status. However, compared with legal age students, underage students were more likely to report enhancement reasons for pregaming for a Greek party. Thus, compared with legal age students, underage students may pregame before a Greek party to enhance the effects of alcohol. It is possible that compared with legal age students (who may have already attended several years of Greek parties), attendance at Greek parties may be perceived as a novel social experience for underage students; thus, they may be inclined to pregame for a Greek party in an effort to enhance their overall experience at this social destination.

Altogether, this is the first study (to our knowledge) to link specific reasons for pregaming to a particular social destination. Pregaming destination is also an important consideration regarding the amount of drinks consumed while pregaming (with the caveat that the differences observed between destinations were modest). Considering the pregaming destination may help explain some of the discrepancies in the current and limited literature on pregaming.

### Implications for Intervention and Prevention

The present findings have some noteworthy clinical implications. Given that well over half of the college students in our data analytic sample reported they pregame for a bar and over 40% pregame for a Greek party, there are a large number of students who would likely benefit from interventions that target pregaming. Although a variety of interventions for reducing risky and problematic alcohol use (e.g., brief motivational interventions) exist for college students (e.g., Seigers & Carey, 2010; Larimer & Cronce, 2007), a focus on context-specific drinking behaviors such as pregaming may be missing. Our studies, and others, suggest that incorporating detailed assessment and discussion of pregaming into efforts to reduce hazardous drinking on campus is important and may increase students' awareness of the health risks involved in pregaming.

Given the present findings, interventions addressing pregaming behavior could be tailored to address the student's destination-specific pregaming attitudes and behaviors. For example, because underage students appear to have different reasons for pregaming for a bar than do legal age students, psychoeducational and motivational interviewing components might differentially target these motives for pregaming as a function of the student's age.

The implications of the present findings for environmental strategies to reduce pregaming are more complex. Specifically, one promising strategy to limit drinking in bars is to raise drink prices; indeed, high costs of drinks have been linked to lower intoxication levels at college bars (O'Mara et al., 2009). However, our results suggest that (a) almost half (48%)

of legal age students have primarily financial reasons for pregaming before a bar and (b) underage students can somehow find a way to purchase alcohol at a bar; thus, it is possible that raising drink prices *might* lead to an increase in pregaming. In other words, the higher drink prices might result in students consuming *more* prior to going to bars, thus increasing the risk to themselves and others. Therefore, increased drink prices in bars might give rise to increased pregaming, *unless* accompanied by other environmental strategies such as DUI checkpoints, reducing alcohol outlet density, enforcing the 21-year-old alcohol purchasing age, and monitoring of both on-campus and off-campus parties (see Saltz, Paschall, McGaffigan, & Nygaard, 2010). Such environmental strategies to reduce risk may also be tailored to address pregaming, focusing on transit points for those intoxicated students that are going to bars as well as Greek parties (e.g., DUI checkpoints at entrances and exits of campus, bike and foot patrols on campus, police cooperation to monitor and manage off-campus parties).

### Limitations and Future Research Directions

The present results should be interpreted in light of several important limitations. First, we used self-report data without collateral verification. Students may therefore have provided underestimates or overestimates of their pregaming attitudes and behaviors. Second, the cross-sectional study design that we used precludes any inferences of causality or conclusions about the direction of the associations between study variables. Third, we assessed alcohol consumption while pregaming but did not obtain the information (e.g., body weight and time spent drinking during pregaming) necessary to estimate students' BACs while pregaming. This information is important to understand students' intoxication levels prior to going out for the evening. For example, a heavy male student who pregames with three beers in an hour prior to going out may be much less impaired compared with a small female student who consumes three drinks within the same amount of time.

Fourth, we focused specifically on pregaming for a Greek party and although attendance at a Greek party represents a high-risk, college-drinking context, our findings may not extend to pregaming for parties in general. Fifth, we asked participants to choose their primary reason for pregaming for a bar and a Greek party by providing them with labels for each motive (e.g., social, intoxication, financial), rather than having them indicate preference for single items later categorized into distinct motives as in the DMQ (Cooper, 1994), which may have biased the results. Moreover, college students can simultaneously endorse many reasons for alcohol consumption and pregaming; thus, future research should incorporate multi-item scales (e.g., Bachrach et al., 2012; LaBrie et al., 2012) to examine motives for pregaming. Sixth, because we did not assess consequences of drinking, we were not able to link destination-specific pregaming behaviors to negative alcohol-related consequences. However, previous work (e.g., Borsari et al., 2007; Kenney, Hummer, & Labrie, 2010; Pedersen & LaBrie, 2007; Zamboanga et al., 2010; Zamboanga et al., 2011) has clearly established a positive association between this quick-natured, risky drinking practice and subsequent negative consequences.

Finally, our study is preliminary in nature and our methods (e.g., asking only about pregaming on two recent occasions) did not allow for a thorough investigation of pregaming behavior. Future research should examine pregaming behaviors more comprehensively and assess whether pregaming destination serves as a moderator of pregaming attitudes and behaviors.

Despite these limitations, the present study suggests that pregaming and its demographic and motivational correlates may differ depending on the specific type of social event to which college students are headed. Research on destination-specific pregaming attitudes and behaviors remains quite limited, despite the prevalence of pregaming and the negative health



consequences associated with this type of risky drinking practice. We hope that the present study will encourage more research designed to inform alcohol prevention and intervention efforts that are aimed at helping to reduce problematic alcohol use among college students.

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**Table 1**  
Descriptive Statistics for Participants Aged 18–25 Years Reporting Pregaming in the Past Month (n = 2888)

Variable	Bar				Greek party					
	Total	Older than 21	Younger than 21	Total	Over 21	Under 21	Men	Women		
Pregamed for this destination the last time they were there	1631	617 (38%)	1014 (62%)	450 (28%)	1177 (72%)	1278	303 (24%)	975 (76%)	325 (25%)	946 (74%)
Mean number of drinks consumed while pregameing for this destination	3.51	3.02	3.81	4.57	3.10	4.00	3.51	4.16	5.58	3.46
<b>Main reason for pregameing for this destination:</b>										
Social	519 (32%)	179 (29%)	340 (34%)	133 (30%)	384 (33%)	590 (46%)	147 (49%)	443 (46%)	134 (41%)	455 (48%)
Financial	460 (28%)	296 (48%)	164 (16%)	146 (33%)	313 (27%)	46 (4%)	19 (6%)	27 (3%)	12 (4%)	34 (4%)
Legal	249 (15%)	3 (1%)	246 (24%)	49 (11%)	200 (17%)	38 (3%)	3 (1%)	34 (4%)	3 (1%)	35 (4%)
Enhancement	205 (13%)	61 (10%)	144 (14%)	57 (13%)	147 (13%)	279 (22%)	57 (19%)	222 (23%)	74 (23%)	202 (21%)
Intoxication	125 (8%)	42 (7%)	83 (8%)	33 (7%)	92 (8%)	266 (21%)	63 (21%)	203 (21%)	84 (26%)	181 (19%)
Conformity	17 (1%)	6 (1%)	11 (1%)	9 (2%)	8 (1%)	12 (1%)	2 (1%)	10 (1%)	4 (1%)	8 (1%)
Coping	25 (2%)	10 (2%)	15 (2%)	11 (2%)	14 (1%)	11 (1%)	2 (1%)	9 (1%)	3 (1%)	8 (1%)

Note. Some participants did not complete the motives measures (i.e., “Main reason for pregameing for this destination”) because they did not endorse pregameing for the Greek party or bar settings. The motives measures were tied specifically to pregameing for two settings; therefore, it was not appropriate for the subset of students who do not pregame for one of these two settings to complete the motives measure for that setting.