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Prevalence, Social Contexts, and Risks for Prepartying Among Ethnically Diverse College Students

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Abstract

Prepartying, also known as pre-gaming, has emerged as a high-risk drinking event among U.S. college students. Research on factors related to prepartying behavior is in its relative infancy. The present study provides prevalence rates for prepartying across ethnic groups and examines how social context (whether prepartying took place with primarily male, female, or coed groups) and demographic factors may influence prepartying behavior. Participants were students from two West Coast universities (N= 2,546) whom identified as White, Asian and Pacific Islander American (APIA), Hispanic/Latino(a), or African American. The percentage of students who reported prepartying at least once in the past month, as well as the frequency and number of drinks consumed for prepartying occasions, varied by ethnic group and sex. A greater proportion of White students (60%) reported prepartying than Hispanic/Latino(a) (52%), African American (44%), and APIA (37%) students, though Hispanic/Latino(a) students who prepartied did so as often and consumed similar amounts of alcohol as White prepartiers. Across all ethnic groups, females who reported prepartying in coed groups consumed significantly more drinks than those...

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Statement 2: Contributors
Andrew Paves, Eric Pedersen, Justin Hummer, and Joseph Labrie have each contributed significantly to, and approve of this final manuscript. Specifically, Andrew Paves oversaw the production of the manuscript, performed the literature review, drafted the Introduction, Methods, and Discussion sections, and contributed to all sections. Eric Pedersen performed the major analyses, wrote the Results section, and created the tables. Justin Hummer assisted with study design and with writing all sections. Dr. LaBrie generated the idea for the study, oversaw its implementation, and edited all sections of the manuscript. All authors helped to interpret findings and provided feedback for each draft.

Statement 3: Conflict of Interest
All authors declare that they have no conflicts of interest.
who prepartied in primarily female groups. Finally, prepartiers within all ethnic groups consumed more drinks per week and experienced a higher number of alcohol-related consequences than non-prepartiers. The results suggest that future research and prevention programs should target prepartying and other high-risk events in at-risk students of ethnically diverse backgrounds and also consider the effects of gender in prepartying contexts on alcohol use.

**Keywords**
Alcohol; Prepartying; Pregaming, Ethnic Demographics; Social Factors, College Students

1. Introduction

Student alcohol use continues to be a significant public health issue on college campuses across the United States. Prepartying, also known as “pre-gaming,” “pre-loading”, or “pre-funking”, has emerged as a popular activity that promotes increased drinking among college students. Prepartying involves drinking alcohol prior to attending an event (e.g., sporting event, party, or concert), where more alcohol may or may not be consumed (Pedersen & LaBrie, 2007). Prepartying is a fairly common practice for college students, with prevalence rates estimated between 64% and 75% among current drinkers (DeJong & DeRicco, 2007; LaBrie & Pedersen, 2008; Pedersen & LaBrie, 2007; Pedersen et al., 2009).

Prepartying provides a setting that can lead to high drinking quantities via rapid consumption while prepartying and/or continued drinking throughout the night (Pedersen & LaBrie, 2007). In an event-level study, student drinkers experienced more alcohol-related consequences and reached nearly double blood alcohol levels (BALs) on drinking days that involved prepartying than on days that did not (LaBrie & Pedersen, 2008). Prepartiers experience more consequences than non-prepartiers and frequent engagement in prepartying is also associated with higher overall levels of drinking and alcohol-related consequences (Kenney, Hummer, & LaBrie, 2010; LaBrie & Pedersen, 2008; Pedersen & LaBrie, 2007).

The literature suggests that prepartying enhances risk overall and on single drinking occasions. Several factors that influence general drinking in college students have yet to be examined in the prepartying context and may provide additional insight into this high-risk drinking behavior. For example, differential rates of drinking have been observed between ethnic groups (e.g., Wechsler et al., 2002). Further, drinking behavior also tends to vary by social context factors such as the gender makeup and size of the drinking group (see Baer, 2002 for review). Thus the current study examines ethnicity and social context and their relationship with prepartying behavior.

1.1. Ethnic Differences in Prepartying

Existing research on prepartying has primarily used convenience samples of mostly White students, or has compared prepartying experiences between White and non-White students (LaBrie, Hummer, Kenney, Lac, & Pedersen, 2011). Prepartying prevalence has not been examined in specific ethnic minority groups. Given the literature on college student drinking overall, there may be ethnic differences in both prepartying prevalence and in prepartying behavior. For example, binge drinking (defined as 4 drinks per occasion for women, and 5 per occasion for men; NIAAA, 2004) can be likened to a proxy for prepartying, as both behaviors typically involve heavier levels of alcohol use and prepartying can easily lead to binge drinking over the course of a single evening. Historically, a greater percentage of White students have reported binge drinking, followed by Hispanic/Latino(a)s; meanwhile, Asian Pacific Islander American (APIA) and African American students typically report less drinking and less frequent binge drinking than other ethnic groups (e.g., O'Malley &
1.2. Prepartying and Overall Drinking Within Ethnic Groups

The current study also compared overall drinking and alcohol-related consequences of prepartiers with non-prepartiers. Regardless of ethnic differences prepartying may predict increased overall drinking within all ethnic groups. We expected that prepartying would increase overall risk for all ethnic groups given previous findings (Kenney, Hummer, & LaBrie, 2010), such that prepartiers would consume more drinks per week and experience more alcohol-related consequences than non-prepartiers. Thus, preparty status would indicate higher-risk drinkers within all ethnic groups. Considering the continued growth of ethnic minority populations on college campuses (U.S. Department of Education, 2009), examining specific high-risk drinking events such as prepartying, may provide further insight as to what may increase the likelihood of problematic drinking among ethnic minority college students.

1.3. Gender Differences and Social Context

The current study also examined how presence of same or opposite sex peers at preparty events relates to drinking behavior. In general, college males tend to drink more than females (see Ham & Hope, 2003 for review). However, gender demographics and other factors in the “social context” (i.e., the social environment where drinking occurs; Thombs et al., 1997) influence students’ drinking behavior as well. Males have reported being drunk more frequently in large co-ed settings and in smaller settings with other males, while social context was not significant for females (Senchak et al., 1998). Additionally, students living in co-ed environments are more likely to binge drink (Wecshler, Dowdall, Davenport, & Castillo, 1995) and experience alcohol-related problems (Harford, Wechsler, & Muthen, 2002).

Prepartying has been found to influence female drinking behavior more so than males (LaBrie & Pedersen, 2008), with females reporting significant increases in BAL and drinks consumed on prepartying days, while reaching similar BALs as males during preparty events. As with overall drinking, it has been suggested that females attempt to match male drinking while prepartying (Pedersen & LaBrie, 2007). The current study evaluated this more directly by examining the number of drinks consumed in different “social contexts,” which for the purpose of this study, refers to whether students prepartied in primarily same-sex (i.e., males preparty with only other male friends; females preparty with other female friends) or coed groups.

1For the present study, the term APIA refers to individuals who self-identify as being of Asian descent, Native Hawaiian, or other Pacific Islander. The term Hispanic/Latino(a) refers to an individual who self identifies as having Mexican, Puerto Rican, Cuban, or other Central and South American backgrounds.
The influence of social context may have differing implications between sexes. Males tend to drink heavily regardless of preparty activity (LaBrie & Pedersen, 2008). Drinking more in co-ed preparty contexts may be a product of facilitating social interactions with members of the opposite sex (Pedersen et al., 2009). Alternatively, drinking more in all male contexts may be a product of conforming to some masculine norms, where heavy drinking is perceived as a sign of masculinity (e.g. Iwamoto et al., 2011). For females, the relatively brief nature of preparty events combined with a co-ed context may provide opportunities to attempt to match the brisker drinking pace of men. Examining the influence of social context may clarify the nature of preparty's risk enhancing effects. In order to provide further insight into important factors that may heighten risk associated with prepartying, the current study also explored how the social context of prepartying related to prepartying behavior within each sex and ethnic group. We hypothesized that males would consume more drinks when prepartying in coed, versus same-sex, social contexts while females would drink similar amounts in both contexts. We expected this pattern to be consistent within all ethnic groups.

2. Method

2.1. Participants

Data were collected from 4,984 students enrolled at two West Coast universities. One is a large, public university with approximately 30,000 undergraduate students (63% of the sample). The other is a mid-sized private university with total enrollment of approximately 6,000 (37% of the sample). Study participants completed a screening survey administered as part of a larger longitudinal intervention study. Of the 11,069 students invited to participate in that study, 45% completed all screening measures (n = 4981). The sample was 60% female (n = 2989) and consisted of 50% Whites, 28% Asian Pacific Islander Americans (APIA), 8% Hispanic/Latino(a)s, 3% African Americans, and 11% who reported Other/Multiracial backgrounds. Mean age for participants was reported as 19.86 (SD = 1.36). Out of the total participants, 2,546 (51.1%) reported engaging in prepartying at least once in the previous 30 days. Only those participants (N = 4351) who identified as White, APIA, Hispanic/Latino(a), or African American/Black were included in analyses of prevalence rates.

2.2. Design and Procedure

The Institutional Review Boards at the participating universities approved the study protocol. Near the start of the Fall 2008 term, students across all class years were randomly selected for recruitment from registrar rosters at both schools. These students received a letter and email invitation to participate in the study. The invitations included the web address to the study survey and a unique identification number. Interested students followed the link to the website and then entered their assigned identification number. The initial screen contained the study consent forms, where students could provide consent electronically. Students who provided consent were then administered the survey. Before completing any questions on alcohol use, participants were first provided with the definition of a standard drink: one half ounce of pure ethyl alcohol, which is contained in one 1.5 ounce shot of 80-proof liquor, one 12-oz beer, or one 4-oz glass of wine. Using the standard drink guideline, students were instructed to report the number of drinks they consumed. All participants were paid $15 for completing the survey.

2.3. Measures

2.3.1. Demographic Items—Participants provided information regarding their age, birth sex, and ethnicity. Using National Institutes of Health (NIH) standards, participants first indicated if they were of Hispanic/Latino ethnicity (yes/no). They were then presented the
option of selecting a racial category in the following question. It was possible for individuals to identify as Hispanic/Latino ethnicity and then also identify as White, African American, or APIA race. For the purposes of this study, we prioritized the categorization of participants based on their racial identity and secondly, based on their Hispanic/Latino(a) ethnic identity. Thus, some participants in our study indicated Hispanic/Latino(a) ethnicity but chose White (4%), APIA (1%), or African-American/Black (6%) for race. These 11% of participants of Hispanic/Latino(a) ethnicity were categorized according to their racial identity, while the remaining 89% were categorized in our study as “Hispanic/Latino(a).” Please see Table 1 for a list of final sample sizes according to ethnic/racial breakdown.

2.3.2. Prepartying Behavior—Prepartying was defined for participants as “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” (Pedersen & LaBrie, 2007, p. 238). The prepartying measure began with the following question: “In the last 30 days, how many days did you engage in prepartying?” If participants reported engaging in the behavior on at least one day, they were asked, “On average, how many drinks did you consume while prepartying (not including drinks consumed after arriving to your planned destination)?” Prepartying students were also asked questions regarding how much they typically drank in gender-specific versus coed prepartying contexts. For example, females were asked: “On average, how many drinks did you consume while prepartying with a group of all females?” and, “On average, how many drinks did you consume while prepartying with a coed group?” Questions were likewise assessed with males using ‘all males’ as the referent.

2.3.3. Overall Alcohol Use—Overall drinking in the past month, including both preparty and non-preparty settings, was assessed with the Daily Drinking Questionnaire (DDQ; Collins, Parks & Marlatt, 1985). Participants were asked to record the number of drinks typically consumed for each day of the week. Weekly drinking was calculated by summing participants’ responses for each day.

2.3.4. Alcohol-Related Consequences—The Rutgers Alcohol Problem Index (RAPI; White & Labouvie, 1989) is a 23-item questionnaire that assessed the frequency which participants experienced particular alcohol-related consequences, such as “Went to work or school high or drunk” and “Had withdrawal symptoms….” Referring to the past month, participants rated each item on a 4-point scale ranging from “never” to “more than 10 times”. Two additional items regarding driving while under the influence (i.e., driving after consuming 2 + drinks; driving after consuming 4+ drinks) were added. Reliability of this measure was $\alpha = 0.92$ in the present sample.

2.4 Analytic Plan

Bivariate analyses were run in SPSS version 17.0 to test hypotheses. Analyses consisted of mean comparisons within and between ethnic categories and within and between sexes. Due to the number of comparisons, we restricted significance to a level of 0.01 to control for family wise error rate. Tukey’s post-hoc tests were run to examine group differences from ANOVA analyses. Prepartying prevalence estimates were run with the full sample, while mean comparisons of prepartying behavior, overall drinking behavior, and alcohol-related consequences contained drinkers only. Due to the small number of drinkers within the African American/Black category, all analyses besides prevalence estimates contained participants from three ethnic categories (APIA, Hispanic/Latino(a), and White). Cohen's $d$ was used to estimate effect sizes where indicated. Effects sizes of 0.2 were considered small, 0.5 were considered medium, and 0.8 were considered large (Cohen, 1988).
3. Results

3.1. Prepartying Prevalence

3.1.2. Prevalence by Ethnic Group—Across all ethnic categories, 52% of participants reported prepartying at least once in the past 30 days, with slightly more males reporting prepartying (53%) than females (50%). Table 1 contains the prevalence rates of prepartying for males and females within the four ethnic categories of Asian/Pacific Islander Americans (APIA), Hispanic/Latino(a)s, Whites, and African Americans/Blacks. The percentage of participants who reported prepartying at least once in the past 30 days varied by ethnic category, $F(3, 4489) = 71.07, p < .001$. A greater percentage of White participants (60% prepartied) reported prepartying than Hispanic/Latino(a) (52%), $t(2906) = 3.18, p < .001$, $d = 0.12$, APIA participants (37%), $t(3972) = 14.50, p < .001$, $d = 0.46$, and African American/Black participants (44%), $t(2641) = 3.63, p < .001$, $d = 0.25$. For descriptive purposes, Table 1 also contains the prevalence rate of prepartying status among participants who reported drinking in the past month, within each ethnic category.

3.1.2. Prevalence by Ethnic Group and Sex—Within each sex, prepartying behavior varied by ethnic category, $F(3, 1804) = 32.07, p < .001$ for males; $F(3, 2681) = 39.86, p < .001$ for females. More White male participants reported prepartying than APIA males, $t(1653) = 9.55, p < .001$, $d = 0.47$, and African American/Black male participants, $t(1080) = 3.28, p < .001$, $d = 0.20$. More Hispanic/Latinos reported prepartying than APIA males, $t(724) = 3.14, p < .001$, $d = 0.23$. Similar to males, more White females reported prepartying than APIA females $t(2317) = 10.92, p < .001$, $d = 0.45$; and more Hispanic/Latinas prepartied than APIA females $t(1122) = 4.40, p < .001$, $d = 0.26$. However, unlike males, White females did not differ in prepartying prevalence from African American/Black females. Within each ethnic group, there were no significant differences in the percentage of male and female participants reporting prepartying behavior.

3.2. Prepartying Behavior in the Past 30 Days - Comparisons by Ethnic Group and Sex

The following analyses only included students who reported prepartying (within the past 30 days) to determine differences in prepartying behavior by sex and ethnic category. A multivariate analysis of variance (MANOVA) with preparty frequency and quantity was run with factors specified as sex and ethnic category (APIA, Hispanic/Latino(a), and White). There were overall effects for sex, Wilk’s $\Lambda = 0.95$, $F(2, 2239) = 55.03, p < .001$, ethnic category, Wilk’s $\Lambda = 0.97$, $F(4, 4478) = 15.72, p < .001$, and sex × ethnic category, Wilk’s $\Lambda = 0.99$, $F(4, 4478) = 2.52, p = 0.04$. Between-subjects comparisons by ethnic categories and sex are presented below.

3.2.1. Prepartying Frequency—For prepartying frequency, males reported more frequent prepartying behavior than females, $F(1, 2240) = 24.24, p < .001$. Comparing by ethnic category, APIA participants reported fewer prepartying days in the past month compared to both Whites, $t(3647) = 14.08, p < .001$, $d = 0.47$, and Hispanic/Latino(a)s, $t(1667) = 6.86, p < .001$, $d = 0.34$. The mean number of prepartying days within ethnicity and by sex is found in Table 2. White male participants prepartied more frequently than APIA males, $t(1530) = 7.59, p < .001$, $d = 0.39$, and Hispanic/Latinos prepartied more frequently than APIA males, $t(655) = 4.02, p < .001$, $d = 0.31$. White females reported more frequent prepartying behavior than APIA females, $t(2115) = 12.41, p < .001$, $d = 0.54$, and Hispanic/Latinas prepartied more frequently than APIA females, $t(1010) = 6.35, p < .001$, $d = 0.40$. There were no observable differences between White males and Hispanic/Latinos; nor were there differences between White females and Hispanic/Latinas.
3.2.2. Prepartying Quantity—Comparisons by sex revealed that all males reported drinking more drinks on average during prepartying than females, \( F(1, 2245) = 108.55, p < .001 \). Between ethnic groups, APIA participants reported consuming fewer drinks during prepartying than White, \( t(2045) = 6.10, p < .001, d = 0.27 \), and Hispanic/Latino(a) participants, \( t(734) = 4.24, p < .001, d = 0.31 \). The mean number of prepartying drinks consumed on average within ethnicity and by sex is found in Table 2. APIA male participants drank less when prepartying than White male participants, \( t(872) = 4.54, p < .001 \), and Hispanic/Latino participants, \( t(290) = 3.18, p < .001, d = 0.27 \). Similarly, APIA female participants drank less when prepartying than White female participants, \( t(1171) = 4.41, p < .001, d = 0.26 \), and Hispanic/Latino participants, \( t(442) = 4.61, p < .001, d = 0.44 \). Again, there were no observable differences between White males and Hispanic/Latinos and between White females and Hispanic/Latinas.

3.3. Comparisons of Overall Drinking and Consequences among Prepartiers and Non-Prepartiers

The following analyses included all students who reported current drinking (within the past 30 days). We compared the overall drinking behavior (drinks per week) and experience of alcohol-related consequences by preparty status (0 = no prepartying behavior in the past month, 1 = prepartying in the past month) within and between each sex and ethnicity. Mean reported behavior can be found in Table 3.

3.3.1. Overall Drinking and Consequences Within Ethnic Groups and Sex—

Within each ethnicity and sex, prepartiers drank at higher levels each week than non-prepartiers. For APIA, both male and female prepartiers drank more drinks per week than their non-prepartying counterparts, \( t(556) = 13.73, p < .001, d = 1.16 \), for males; \( t(782) = 13.89, p < .001, d = 0.99 \), for females. For Hispanic/Latino(a) participants, both male and female prepartiers drank more drinks per week than their non-prepartying counterparts, \( t(92) = 7.05, p < .001, d = 1.47 \), for males; \( t(223) = 11.50, p < .001, d = 1.54 \), for females. For White participants, both male and female prepartiers drank more drinks per week than non-prepartiers, \( t(965) = 25.54, p < .001, d = 1.64 \), for males; \( t(1327) = 26.17, p < .001, d = 1.43 \), for females.

Within each ethnicity and sex, prepartiers also experienced more alcohol-related consequences than non-prepartiers. For APIA, both male and female prepartiers reported more consequences than their non-prepartying counterparts, \( t(553) = 9.75, p < .001, d = 0.83 \), for males; \( t(779) = 10.85, p < .001, d = 0.78 \), for females. For Hispanic/Latino(a) participants, both male and female prepartiers reported more consequences than non-prepartiers, \( t(92) = 6.17, p < .001, d = 1.28 \), for males; \( t(223) = 7.64, p < .001, d = 1.02 \), for females. For White participants, both male and female prepartiers reported more consequences than non-prepartiers, \( t(963) = 16.32, p < .001, d = 1.05 \), for males; \( t(1321) = 18.41, p < .001, d = 1.01 \), for females.

3.3.2. Overall Drinking and Consequences Between Ethnic Groups and Sex—

ANOVA analyses revealed differences in overall drinking levels and consequences among prepartiers between ethnicities and within sex. For males, there was an overall effect for ethnic group on drinks per week, \( F(2, 932) = 18.76, p < .001 \). Tukey’s post hoc tests revealed White prepartiers drank significantly more than APIA prepartiers, \( t(871) = 6.11, p < .001, d = 0.41 \). Similarly, there was an overall effect for women between ethnic groups on drinks per week, \( F(2, 1305) = 34.48, p < .001 \). Tukey’s post hoc tests revealed APIA female prepartiers drank significantly less than White female prepartiers, \( t(1168) = 7.13, p < .001, d = 0.94 \), and Hispanic/Latina prepartiers, \( t(440) = 3.93, p < .001, d = 0.37 \). There were no significant differences in consequences between ethnicities for prepartiers within sex.
3.4. Preparty Contexts

Within each ethnicity, we evaluated the average number of drinks consumed during prepartying with same-sex and coed groups. Typical drinks consumed during prepartying in the past 30 days when in gender-specific groups (i.e., when males prepartied with just men; when females prepartied with just women) and when in coed groups (i.e., when males and females prepartied with males and females together in groups) for male and female participants within each ethnic group can be found in Table 2. A series of paired samples t-tests were run to determine if males and females (overall) drank different quantities when prepartying with different groups, as well as whether these differences existed within specific ethnic categories.

3.4.1. Social Context Drinking Among Males—Overall, males reported drinking similar quantities when drinking in both all-male groups and in coed groups (p = 0.17). When examining drinking within different contexts within each of the three ethnic categories, APIA males, Hispanic/Latinos, and White males did not differ in their reported drinking behavior by context (ps = 0.41, 0.50, 0.09, respectively).

3.4.2. Social Context Drinking Among Females—In contrast to their male counterparts, females reported drinking more drinks when prepartying with coed groups than when drinking with all-female groups, t (1489) = 9.59, p < .001, d = 0.50. This effect was evident when looking at each ethnic category separately. APIA females drank more drinks when prepartying within coed groups than they did when prepartying in all-female groups, t (303) = 5.65, p < .001, d = 0.65. Similarly, Hispanic/Latina participants and White female participants drank more drinks when prepartying within coed groups than they did when prepartying in all-female groups, t (137) = 2.64, p = .009, d = 0.45 for Hispanic/Latinas, t (858) = 7.40, p < .001, d = 0.51 for Whites.

4. Discussion

The present study addressed an important gap in the research literature on prepartying by providing further data on prepartying prevalence and drinking behavior among a large ethnically diverse and representative sample of college students. It established prepartying as a high-risk event among ethnic minority groups and also revealed differential patterns in prepartying behavior. Furthermore, it examined a pertinent environmental factor, social context, and its relationship with preparty drinking. The implications of these findings are discussed below.

4.1 Ethnic Differences in Prepartying

4.1.1 Preparty Prevalence—While prepartying remains a popular activity on college campuses, its prevalence appears to vary across ethnic groups. A greater proportion of White students (60%) reported prepartying than, in descending order, Hispanic/Latino(a) (52%), African American (44%), and APIA (37%) students. This pattern mirrors the general literature on adult and college student binge drinking rates (Bryant & Kim, 2012; Kanny, Liu, & Brewer, 2011; O’Malley & Johnston, 2002; Wechsler et al., 2002). Several factors have been cited for differential alcohol use among ethnicities, including cultural differences in norms, attitudes, and expectancies surrounding alcohol use and biological differences in alcohol metabolism (e.g. Hendershot et al., 2005; Peralta & Steele, 2009; Zamboanga, 2005). A notable exception in the pattern of findings was that there were no differences in prepartying prevalence between White females and African American females. This is inconsistent with previous studies, where African American females were less likely to binge drink and more likely to be abstainers (O’Malley & Johnston, 2002). This may be a product of the smaller sample size or the universities where the research was conducted.
where African Americans are largely underrepresented. Regardless, the differential patterns suggest the need for additional research examining social, psychological, and cultural factors that may contribute to these students’ decision to engage in prepartying.

4.1.2 Prepartying Behavior of Hispanic/Latino(a) Students—When comparing prepartying behavior of Hispanic/Latino(a) and White students, no significant differences were evidenced in the frequency of prepartying nor in the number of drinks consumed while prepartying. The pattern was consistent when comparing males and females across both ethnic groups. This suggests that while fewer Hispanic/Latino(a) students engage in prepartying, those that do preparty, do so in a manner similar to White students. Furthermore, prepartiers of Hispanic/Latino(a) background on average consumed a similar amount of overall drinks per week and experienced a similar number of alcohol-related consequences as White prepartiers.

These results are consistent with research identifying Hispanic/Latino(a) students as a higher-risk group. For example, prevalence rates of binge drinking are reportedly higher for Hispanic/Latino(a) than for other ethnic minority students (O'Malley & Johnston, 2002; Epstein, Botvin, & Diaz, 2000; Center for Disease Control, 1997). In the present study, a similar pattern occurred for prevalence of prepartying. Additionally, Hispanic/Latino(a) students who do binge drink do so more frequently than Whites (Bennet, Miller, & Woodall, 1999). In the current study, Hispanic/Latino(a) prepartiers prepartied as frequently and drank similar amounts as White prepartiers. College-aged Hispanic/Latino(a) students may be vulnerable to developing future alcohol-related problems (e.g., Ma & Shive, 2000). Thus, identifying prepartying as a drinking context that is particularly risk-enhancing for Hispanic/Latino(a) students can be potentially helpful for targeted prevention and intervention efforts.

4.1.3 Prepartying Behavior of APIA Students—APIA students, meanwhile, reported less frequent prepartying and fewer drinks consumed while prepartying than their White and Hispanic/Latino(a) peers. Again, this pattern was consistent comparing both males and females across each group. These findings suggest that APIA students who preparty tend to do so less often and consume less alcohol while prepartying. In terms of overall drinking, APIA males who preparty consumed fewer weekly drinks than White males who preparty. Meanwhile APIA females who preparty consumed fewer weekly drinks than both Hispanic/Latina and White females who preparty. Despite the lower average drinking quantity, however, APIA students who preparty experienced a similar number of alcohol-related consequences as White and Hispanic/Latino(a) prepartiers. This was consistent across sex and suggests that prepartying is associated with experiencing more alcohol-related consequences in a similar manner across all ethnic groups.

Individuals of APIA backgrounds have been perceived as low risk due to historically lower rates of alcohol use and dependence (e.g. Price, Risk, Wong, & Klingele, 2002; Grant et al., 2004; Sakai et al., 2005). Additionally, fewer APIA college students have experienced alcohol-related consequences of all types (not just generally) especially when compared to White students (as reviewed in Perkins, 2002). The current study however, provides evidence for problematic alcohol use among APIAs. Prepartying, although occurring among fewer APIAs, was associated with experiencing a similar number of alcohol-related consequences compared to other ethnic groups. Findings are similar to research where rates of alcohol and substance dependence were lower for APIA adults compared to Whites; with the differences diminished when lifetime abstainers were removed from analyses (Sakai et al., 2005). Taken as a whole, focusing on prepartying and other high-risk events may be effective strategies for prevention and intervention programs targeting at-risk students of APIA backgrounds, who may otherwise be overlooked because of their relatively lower overall drinking rates.
4.2. Prepartying and Overall Drinking Within Ethnic Groups

Within all ethnic groups, prepartying was associated with a greater number of weekly drinks and a greater number of consequences among both males and females. This is consistent with previous research (Kenney, Hummer, & LaBrie, 2010; LaBrie & Pederson, 2008; Pedersen & LaBrie, 2007), and adds to the literature by indicating that prepartiers engage in more drinking overall and experience more problems than non-prepartiers regardless of ethnic group. Since prepartying appears to enhance overall risk, future research can address factors that lead to prepartying and other high-risk drinking behaviors among different ethnic groups.

4.3. Gender Differences and Social Contexts

In a notable extension of previous research, results indicate that for females, prepartying behavior varies as a function of social context. Male prepartiers consumed similar amounts of alcohol in coed and all-male contexts. Females on the other hand, consumed more alcohol in coed contexts than in all-female contexts, a pattern observed across White, Hispanic/Latino(a), and APIA prepartiers. The findings contrasted with a previous study where social context of drinking events was not significant for females, while large co-ed contexts and smaller all-male contexts predicted increased drinking for males (Senchak et al., 1998). The current study did not assess size of the social context which may account for the non-significant finding for males. Results are consistent with the general literature which suggests that heavier drinking college women tend to match the drinking habits of college men (Harford, Wechsler, & Muthen, 2002).

These results may reflect attempts by females to match BALs of their male counterparts when prepartying, as suggested in focus group research with young women (Young, Morales, McCabe, Boyd, & D'Arcy, 2005). Women may also be intrinsically motivated to drink more in a coed context because of a pursuit for intimate relationships and positive attention from their male peers. Recent research suggests that college women may be drinking, in part, to match overinflated perceptions of how much their male friend and potential dating partners want them to drink (LaBrie, Cail, Hummer, Lac, & Neighbors, 2009). Similarly, women's increased drinking in coed vs. same-sex groups may be socially facilitated by males who encourage women to drink more to increase the likelihood of a sexual encounter. One of the primary reasons that students, particularly males, have reported for prepartying is to facilitate social and sexual interactions with peers of the opposite sex (DeJong & DeRicco, 2007; Grazian, 2007; Pedersen et al., 2009). Whether internally motivated, externally motivated, or a combination of both, women's increased prepartying behaviors in the presence of men requires further exploration and attention, particularly in light of analyses suggesting a heightened risk for women in prepartying contexts.

4.4. Limitations and Future Directions

While the present study is a significant contribution to our understanding of important ethnic differences in high-risk drinking contexts, it should be reviewed in light of several limitations. An important caveat of the findings is that the study sample contained a relatively small number of African American students. Therefore, these students were not included in analyses examining prepartying behavior between ethnic groups. This is certainly an important avenue for future research, considering the disproportionate risk observed in other ethnic minority students. Furthermore, the comparisons of prepartying behavior did not control for overall drinking. This may limit the extent to which conclusions can be reached regarding ethnic-specific influence on prepartying behavior. Although it may be that heavier overall drinking better accounts for some of the observed differences between ethnicities, ethnic minority students do still engage in this high-risk behavior and
experience consequences from the behavior. Including discussions of the risks of associated with prepartying with both White and ethnic minority students still appears to be important.

Categorizing individuals to one specific ethnic category is a challenge in research. In order to provide meaningful between group analyses, we used the NIH definitions of race and ethnicity to attempt to best capture one’s identification. While no single participant was included in more than one category, some participants who identified as Hispanic/Latino(a) ethnicity were instead included in the three other racial categories based on their racial identities. In addition, individuals with APIA and Hispanic/Latino(a) backgrounds were aggregated into single categories rather than specific subgroups (e.g. Chinese, Korean, Mexican, Puerto Rican, etc.). This may have masked differences in prepartying behavior between subgroups, as differences in general drinking have been observed among subgroups (e.g. Lum et al., 2009). This is important to address in future research given that these broad categories encompass diverse cultures and histories. The study also did not address cultural and biological factors related to general drinking behavior in these populations (e.g., Hendershot et al., 2005; Zamboanga, Rafaella, & Horton, 2006; Kimbro, 2009).

Interpretation of these findings could be enhanced by assessing variables such as acculturation, parent or peer influence, and genetic predisposition in relation to prepartying.

The social context findings are also limited in that the frequency of prepartying in different social contexts was not assessed. Further, the findings for social context did not include sexual orientation as a factor due to the small number of LBGT students in the sample (less than 4%). Motivations for prepartying behavior in different social contexts likely differ for students who identify as LBGT.

Another potential limitation was that this study only assessed drinking while prepartying and overall weekly drinking. There was no event-level assessment of drinking during and after prepartying. Such an assessment would provide additional information into how prepartying may lead to heavier drinking in a single day or evening for different ethnic groups. While White, Hispanic/Latino(a), and APIA prepartiers experienced a similar number of alcohol-related consequences overall, the findings could be further enhanced by examining the types of consequences experienced (e.g. hangover, getting into fights, etc.). Finally, all outcomes were assessed by retrospective self-report and may not be reflective of actual prepartying behavior. This limitation is tempered by efforts to ensure that surveys were confidential, thereby conforming to methods considered valid and reliable in evaluating alcohol use and behavior (Maisto, Connors, & Allen, 1995).

4.5. Conclusions

Despite these limitations, the current findings shed light on the collegiate high risk drinking context of prepartying. They particularly give insight into prepartying in APIA and Hispanic/Latino(a) students who are populating college campuses at increasingly higher rates. While fewer of these students engaged in prepartying than White students, Hispanic/Latino(a)s who preparty did so more frequently and consumed a similar amount of drinks as White students. Furthermore, prepartiers in all three ethnic groups experienced a similar number of alcohol-related consequences. Thus, prepartying increased overall risk across ethnic groups. This suggests that ethnic-specific interventions aimed at harm reduction may be warranted for APIA and Hispanic/Latino(a) students and a helpful way to reduce risk in increasingly diverse student bodies. Further, the findings highlight the importance of whom one preparties with, particularly for female students. Females drink more when prepartying when they are in coed groups than when they are in same sex groups. This result adds evidence to a growing body of research that female students’ drinking may be unduly influenced by perceptions of what males want and by trying to appear attractive to men with which they are drinking (LaBrie et al., 2009; Young et al., 2005), thus increasing risk for
heavier drinking. Taken as a whole, the current study both extends the literature on prepartying and affirms the need for further research into understanding and reducing the risk associated with this high-risk drinking context.

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References


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Highlights

1. Compared prepartying behavior by ethnic group and social context.
2. A higher portion of White students prepartied compared to other ethnic groups.
3. Hispanic/Latino(a) prepartiers did so as frequently and drank similar amounts.
4. Females drank more when prepartying in coed contexts than all-female contexts.
5. Across ethnicity, prepartiers reported greater overall drinking and consequences.
Table 1
Prevalence rates of prepartying among all participants by sex within ethnic category

<table>
<thead>
<tr>
<th>Ethnic Category</th>
<th>Sex</th>
<th>Percentage reporting prepartying</th>
<th>Percentage of drinkers reporting prepartying</th>
</tr>
</thead>
<tbody>
<tr>
<td>APIA</td>
<td>Male ($n = 580$)</td>
<td>38%</td>
<td>41%</td>
</tr>
<tr>
<td>N = 1399</td>
<td>Female ($n = 819$)</td>
<td>36%</td>
<td>39%</td>
</tr>
<tr>
<td>Hispanic/Latino(a)</td>
<td>Male ($n =113$)</td>
<td>53%</td>
<td>66%</td>
</tr>
<tr>
<td>N = 381</td>
<td>Female ($n = 268$)</td>
<td>51%</td>
<td>61%</td>
</tr>
<tr>
<td>White</td>
<td>Male ($n = 1012$)</td>
<td>62%</td>
<td>67%</td>
</tr>
<tr>
<td>N = 2444</td>
<td>Female ($n = 1432$)</td>
<td>59%</td>
<td>65%</td>
</tr>
<tr>
<td>African American/Black</td>
<td>Male ($n = 35$)</td>
<td>34%</td>
<td>46%</td>
</tr>
<tr>
<td>N = 127</td>
<td>Female ($n = 92$)</td>
<td>48%</td>
<td>64%</td>
</tr>
</tbody>
</table>
Table 2

Prepartying behavior reported in the past month (30 days) among drinkers by sex within ethnic category

<table>
<thead>
<tr>
<th>Ethnic Category</th>
<th>Sex</th>
<th>Preparty days</th>
<th>I Preparty average drinks (general)</th>
<th>I Preparty average drinks (in same sex groups)</th>
<th>I Preparty average drinks (in coed groups)</th>
</tr>
</thead>
<tbody>
<tr>
<td>APIA</td>
<td>Male (n=229)</td>
<td>4.49 (4.07)</td>
<td>3.48 (2.18)</td>
<td>2.68 (2.96)</td>
<td>3.77 (3.12)</td>
</tr>
<tr>
<td></td>
<td>Female (n=304)</td>
<td>3.06 (2.67)</td>
<td>2.55 (1.50)</td>
<td>2.34 (1.47)</td>
<td>2.76 (1.79)</td>
</tr>
<tr>
<td>Hispanic/Latino(a)</td>
<td>Male (n=63)</td>
<td>5.44 (4.22)</td>
<td>4.40 (2.11)</td>
<td>4.52 (2.60)</td>
<td>4.35 (2.38)</td>
</tr>
<tr>
<td></td>
<td>Female (n=138)</td>
<td>4.36 (3.15)</td>
<td>3.22 (2.06)</td>
<td>3.08 (1.52)</td>
<td>3.32 (1.61)</td>
</tr>
<tr>
<td>White</td>
<td>Male (n=645)</td>
<td>5.16 (3.81)</td>
<td>4.19 (1.94)</td>
<td>4.37 (2.35)</td>
<td>4.27 (2.25)</td>
</tr>
<tr>
<td></td>
<td>Female (n=867)</td>
<td>4.48 (3.45)</td>
<td>3.00 (1.38)</td>
<td>2.74 (1.48)</td>
<td>3.09 (1.65)</td>
</tr>
</tbody>
</table>

Note: APIA = Asian/Pacific Islander American.

I = prepartiers only.

a For preparty days and preparty average drinks different superscripts within each column represent significant differences between ethnicities within sex.

b For preparty days and preparty average drinks different superscripts within each column represent significant differences between ethnicities within sex.

c For preparty average drinks (in same sex groups) and preparty average drinks (in coed groups) represent different superscripts within each row represent significant differences between ethnicities within sex.

d For preparty average drinks (in same sex groups) and preparty average drinks (in coed groups) represent different superscripts within each row represent significant differences between ethnicities within sex.
Overall Drinks Per Week and Alcohol-Related Consequences by Preparty Status

<table>
<thead>
<tr>
<th>Ethnic Category</th>
<th>Sex</th>
<th>DDQ</th>
<th>RAPI</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Non-Prepartiers</td>
<td>Prepartiers</td>
</tr>
<tr>
<td>APIA</td>
<td>Male (n = 558)</td>
<td>1.55 (3.30)</td>
<td>11.16 (10.25)</td>
</tr>
<tr>
<td></td>
<td>Female (n = 784)</td>
<td>1.16 (2.25)</td>
<td>5.54 (5.19)</td>
</tr>
<tr>
<td>Hispanic/Latino(a)</td>
<td>Male (n = 95)</td>
<td>2.63 (3.91)</td>
<td>14.69 (12.34)</td>
</tr>
<tr>
<td></td>
<td>Female (n = 225)</td>
<td>1.57 (1.79)</td>
<td>8.21 (6.39)</td>
</tr>
<tr>
<td>White</td>
<td>Male (n = 967)</td>
<td>2.66 (5.00)</td>
<td>16.60 (11.92)</td>
</tr>
<tr>
<td></td>
<td>Female (n = 1329)</td>
<td>1.93 (3.00)</td>
<td>9.20 (7.07)</td>
</tr>
</tbody>
</table>

Note: analyses include current drinkers only

*For total weekly drinks and total consequences different superscripts within each row represent significant differences between preparty status within ethnicities and sex

*For total weekly drinks and total consequences different superscripts within each row represent significant differences between preparty status within ethnicities and sex

*For total weekly drinks and total consequences different superscripts within each column represent significant differences between ethnicities within preparty status and sex

*For total weekly drinks and total consequences different superscripts within each column represent significant differences between ethnicities within preparty status and sex