Trouble Brewing
Pregaming Among High School and Incoming College Students

ABSTRACT
Pregaming (a.k.a., “prepartying,” “pre-funking,” or “predrinking”) consists of drinking before going to a social function or gathering where alcohol may or may not be served. Existing research suggests that pregaming in high school and pre-college (i.e., the period between high school graduation and the start of college) is widespread. Moreover, pregaming prevalence appears to rapidly increase after students graduate from high school and transition into college. Thus, the purpose of this brief review is threefold: (a) to summarize the existing (albeit limited) research on pregaming among high school students and incoming college freshmen, (b) to present an overview of the risk factors that have been identified for participation in pregaming, and (c) to discuss the implications for practice that may be particularly relevant for school-employed/affiliated nurses as well as health practitioners who work in college settings. [Journal of Psychosocial Nursing and Mental Health Services, 51(10), 14-17.]

Byron L. Zamboanga, PhD; Cara C. Tomaso; Amie L. Haas, PhD; Janine V. Olthuis, BA; Sarah Borish, MEd; and Brian Borsari, PhD
Pregaming (a.k.a., “preparty-ing,” “pre-funking,” or “predrink-ing”) consists of drinking before going to a social function or gathering where alcohol may or may not be served (Borsari et al., 2007). Individuals pregame for a variety of reasons, which can include, but are not limited to, waiting for an event to start, a desire for rapid intoxication, anticipated alcohol access issues (e.g., due to cost reasons or limited availability), and/or safety reasons (e.g., greater awareness of the contents of one’s drink). Although this behavior has been occurring for decades (formerly known as “anticipatory drinking,” Straus & Bacon, 1953, p. 113), only recently has pregaming become of interest due to its association with high-risk drinking, negative drinking outcomes (Barnett, Orchowski, Read, & Kahler, 2013; Wahl, Sonntag, Roehrig, Kriston, & Berner, 2013; Zamboanga et al., 2011), and increased quantity and frequency of regular drinking upon college entry (Haas, Smith, & Kagan, 2013). Although the overwhelming majority of studies on pregaming have been conducted with students who have already entered college, this behavior is also an active part of many adolescents’ drinking repertoire prior to beginning college (Haas, Smith, Kagan, & Jacob, 2012; Kenney, Hummer, & LaBrie, 2010; Zamboanga et al., 2011). As such, pregaming is often a problem “inherited” by colleges rather than “acquired” during college, thereby highlighting the need to understand the demographic and motivational roots of pregaming among high school students.

Existing research suggests that pregaming in high school and pre-college (i.e., the period between high school graduation and the start of college) is widespread (Table A, available in the online version of this article). In one study, 45% of college freshmen retrospectively reported pregaming during the last few months of high school (Kenney et al., 2010). Another cross-sectional study with high school students found that approximately 40% of students who drink also pregame (Zamboanga et al., 2011). Similarly, a large-scale cross-sectional study with 9th and 10th grade German students found that 33% of the sample reported pregaming (Wahl et al., 2013).

Pregaming prevalence appears to rapidly increase upon high school graduation: 65% of entering college students who previously used alcohol pregamed in the 3 months between high school graduation and college entry (Haas et al., 2012), making the time between high school graduation and the start of college a high-risk transition period (Fromme, Corbin, & Kruse, 2008; Sher & Rutledge, 2007). Furthermore, pregaming has been shown to escalate as college-bound high school students settle into college life. Haas et al. (2013) sampled 708 incoming freshmen who reported prior alcohol use and found that 60% of them pregamed during the 3 months between the end of high school and the beginning of college; however, by 8 to 9 weeks into the semester, this percentage jumped to nearly 80%. In another study, Barnett et al. (2013) reported pregaming prevalence rates of approximately 75% through the freshmen and sophomore years of college. Altogether, these studies suggest that pregaming is widespread among high school students and becomes increasingly prevalent as students transition and adjust to college life.

**WHO’S AT RISK?**

Although the research on pregaming among current high school students remains sparse, a few risk factors have been identified, including being male (Wahl et al., 2013; Zamboanga et al., 2011) and older (Zamboanga et al., 2011). Haas et al.’s (2012) study with incoming college freshmen also identified being male and Greek-affiliated (i.e., either rushing or pledging) as risk factors for pregaming prior to college entry. It is important to note, however, that a different pattern seems to emerge as college students settle into their freshmen year. Among college freshmen and sophomores, Barnett et al. (2013) found that women, ethnic minority students, and freshmen were more likely to pregame on days that they consumed alcohol compared to men, White students, and sophomores. However, men became more inebriated and sophomores consumed more alcohol on the days that they pregamed.

There are also a number of psychological factors associated with pregaming among high school and incoming college students, including the intention to get drunk, alcohol outcome expectancies (i.e., a person’s anticipated effects of alcohol use), and personality factors. Drinking with the intention to get drunk is more common in high school students who pregame compared to their non-pregaming peers (Wahl et al., 2013). Zamboanga et al. (2011) did not find any associations between pregaming and general alcohol expectancies and drinking motives among high school students. However, greater positive alcohol expectancies have been linked to pregaming in both entering freshmen (Haas et al., 2012) and students who initiate pregaming upon college entry (Haas et al., 2013). Finally, fun seeking and goal directiveness personality tendencies were found to be associated with pregaming prior to college (Haas et al., 2013). Collectively, these studies suggest that there are psychological factors associated with students’ risk for pregaming, some of which are more amenable to intervention (e.g., reducing positive expectancies via expectancy challenge procedures [Scott-Sheldon, Terry, Carey, Garey, & Carey, 2012]) than others (e.g., fun seeking).
WHAT EVENTS ARE ASSOCIATED WITH PREGAMING?

Students pregame prior to many different types of events. For instance, in one study, a large proportion of high school student drinkers reported that they pregame for parties (82%) and night sporting events (66%), with some students also reporting pregaming for prom (24%) and overnight school trips (6%) (Zamboanga et al., 2011). Wahl et al.’s (2013) study with German 9th and 10th graders indicated that they pregamed before attending private parties (79%); pubs, bars, and discotheques (77%); concerts (36%); the cinema (20%); and sports events (20%).

PREGAMING AND NEGATIVE ALCOHOL-RELATED CONSEQUENCES

Pregaming puts many high school and college students at risk for consuming large quantities of alcohol, as this behavior typically results in even more drinking at their next destination (Pedersen & LaBrie, 2007). Not surprisingly then, negative alcohol-related consequences commonly occur as a product of pregaming (Barnett et al., 2013; Haas et al., 2012; Wahl et al., 2013; Zamboanga et al., 2011) and include problems that result from high blood alcohol concentrations (BACs), including blackouts, vomiting, and severe hangovers. Pregamers are also more likely to report getting into physical fights while drinking compared to non-pregamers (Barnett et al., 2013; Wahl et al., 2013). Retrospective reports have found that students who pregamed during the last few months of high school experienced more alcohol-related consequences (as indexed by the Alcohol Use Disorders Identification Test [Saunders, Aasland, Babor, de la Fuente, & Grant, 1993]) in the first month of college than those who did not pregame (Kenney et al., 2010). In addition, high school students who pregame also participate frequently in other high-risk drinking activities (e.g., drinking games), thus elevating their potential risk for experiencing negative alcohol-related consequences (Zamboanga et al., 2011).

IMPLICATIONS FOR PRACTICE

The existing, although limited, research on pregaming behaviors among high school and incoming college students has a number of implications for practice. These implications may be particularly relevant for school-employed/affiliated nurses as well as health practitioners who work in college settings.

In our work with college and high school students, we have found that many students do not include drinks consumed during pregaming when asked to recollect/report how much they have consumed over the course of an evening. Therefore, health professionals who work with these student populations should assess not only quantity and frequency of overall drinking, but also specifically query pregaming consumption (e.g., “How many drinks do you consume while pregaming?”; “How often do you pregame?”; “Do you drink after you pregame?”). Research with college samples has shown that students reach substantially higher BACs at drinking events involving pregaming (Borsari et al., 2007).

Similarly, health professionals who administer alcohol screening measures should be aware of potential high-risk groups (i.e., males, older teens, and college students in general) and assess specific reasons for pregaming in these populations (Bachrach, Merrill, Bytschkow, & Read, 2012; LaBrie, Hummer, Pedersen, Lac, & Chithambo, 2012). Motives specific to pregaming have been found to be different from drinking motives in general and, when identified, may represent another point of intervention for health professionals.

Information about pregaming prevalence, frequency, and associated alcohol consumption quantity could also be used to create brief, personalized, motivationally focused interventions that alert students to the risks associated with pregaming. These interventions may be particularly effective when an individual seeks medical attention after recently experiencing negative drinking consequences, as this represents a “teachable moment” when the individual may be more receptive to behavior change and where motivational interviewing methods may be easily employed.

Emerging research has indicated that simple, cost-effective interventions such as social norms campaigns can help reduce pregaming prevalence in entering freshmen (Haas & Glider, 2013). Given the high prevalence of pregaming in high school and incoming college students, health care professionals who work with school districts and/or have influence on campus alcohol prevention programming may want...
to consider implementing these kinds of interventions on high school campuses as a way of reducing the prevalence and riskiness of this practice.

Given that a number of high school students pregame for parties and school-sponsored events (e.g., prom, sporting events), school nurses could work collaboratively with school personnel to establish environmental strategies that reduce risky pregame behaviors or post-pregame alcohol consumption. These strategies might include check points for intoxicated students that are going to proms, parties, or school-affiliated sports events (i.e., driving under the influence checkpoints at sporting events and proms; bike and foot patrols on school grounds; cooperation with local authorities to help monitor off-campus parties).

**CONCLUSION**

Research clearly demonstrates that (a) many high school students pregame prior to entering college; (b) pregame is motivated by a number of reasons; and (c) this behavior is associated with many adverse effects. Health professionals who work with these populations should assess pregame behaviors (occurrence, quantity/frequency, and motives) as part of their regular alcohol use screenings, as well as identify when pregame may be a causative factor in an adolescent’s experience of alcohol-related negative consequences. This information is invaluable on both the individual (i.e., working with specific patients) and community levels in coordinating and implementing the prevention and intervention efforts outlined in this review.

**REFERENCES**


Dr. Zamboanga is Associate Professor and Ms. Tomas is undergraduate student, Smith College, Northampton, Massachusetts; Dr. Haas is Associate Professor and Ms. Borish is doctoral student, Pacific Graduate School of Psychology, Palo Alto University, Palo Alto, California; Ms. Othluis is doctoral candidate, Dalhousie University, Halifax, Nova Scotia, Canada; and Dr. Borsari is Associate Professor (Research), Brown School of Public Health and Center for Alcohol and Addiction Studies, Brown University, Providence, Rhode Island.

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Address correspondence to Byron L. Zamboanga, PhD, Associate Professor, Smith College, 44 College Lane, Bass Hall, Northampton, MA 01063; e-mail: bzamboan@smith.edu.

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### Table A. Summary of Studies Examining Pregaming among High School Students and Incoming College Students

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<thead>
<tr>
<th>Citation</th>
<th>Sample Description and Prevalence</th>
<th>Method of Assessing Pregaming Behavior</th>
<th>Key Findings</th>
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<tbody>
<tr>
<td>Zamboanga, Borsari, Ham, Olthuis, Van Tyne, &amp; Casner (2011)</td>
<td>• N = 233 high school students ages 14 through 18 who both consumed alcohol and pregamed in the past 30 days&lt;br&gt;• Approximately 40% of students reported pregaming in the past 30 days</td>
<td>• Students reported how many times they pregamed on a 6-point scale over the past month (1 = one time . . . 6 = six times or more).</td>
<td>• Being older, reporting high levels of hazardous alcohol use, and high frequency of drinking games participation predicted higher odds of reporting pregaming behaviors.</td>
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<td>Wahl, Sonntag, Roehrig, Kriston, &amp; Berner (2012)</td>
<td>• N = 757 9th and 10th grade German students (~1/3 of the sample reported predrinking, and of these predrinkers, ~1/3 reported predrinking rarely, ~1/3 reported predrinking occasionally, and ~1/3 reported predrinking often or always)</td>
<td>• Students who said they sometimes drank were asked, “Do you normally drink alcohol before going out?” and selected one of the following options: hardly ever, seldom, sometimes, often, or (almost) always.</td>
<td>• Boys were more likely to pregame than girls.</td>
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<td>Weisler, Wahl, Lucius-Hoene, &amp; Berner (2013)</td>
<td>• N = 33 German adolescents and young adults ages 15-22 who currently use alcohol</td>
<td>• Participants were divided into eight discussion groups which lasted between 10-30 minutes. Adolescents were asked about their attitudes toward public alcohol consumption and a typical evening of drinking and related pregaming behaviors.</td>
<td>• Participants described what a typical evening of pregaming would look like, including how they locate convenient places to drink, how they procure alcohol and what types of drinks they typically have, and how pregaming fits into the chronology of the rest of the evening.</td>
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• Each group had its own pregaming ritual; control (e.g., learning one’s limits with respect to alcohol consumption, escaping parental monitoring) and the ability to deal with age-specific challenges emerged as two major themes of the discussions.

• Participants identified wanting to save money, celebration of group cohesion, and reducing or eliminating negative emotions as reasons for pregaming.
Table A continued.

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| Kenney, Hummer, & LaBrie (2010) | • N = 477 incoming college freshmen who reported drinking on at least one occasion in the past year  
• 45% of students reported prepartying during high school                                          | • After being prompted to “think back over [their] last months of high school,” students were asked, (1) “How many days per month did you typically preparty?” ,  
(2) “How many drinks did you typically consume when you prepartied?” , and (3) “On occasions when you prepartied, how many drinks did you typically consume overall (including drinks consumed during and after prepartying)?” | • Compared to non-prepartiers, prepartiers consumed more alcohol during their last months of high school.  
• Prepartying during high school was associated with heavier alcohol consumption and increased negative alcohol-related consequences during the first month of college.  
• The number of average weekly drinks did not increase for prepartiers from high school to college, however it did increase for non-prepartiers. |
| Haas, Smith, Kagan, & Jacob (2012) | • N = 1,171 incoming college freshmen who reported prior alcohol use (participants were surveyed during orientation activities)  
• 65% of students reported pregaming 3 months prior to college entry                                     | • Pregaming frequency was assessed by asking students the percentage of times they pregamed in relation to their overall drinking frequency during the three months prior to college entry; responses were coded on a 7-point scale, such that (0) = NA/I don’t drink, (1) = Never, but I DO drink, (2) = Very rarely (less than 10% of the times I drink), (3) = Occasionally (more than 10% but less than 50% of the times I drink), (4) = About half the time I drink, (5) = Most of the time (over 50% but not every time), and (6) = Every time I drink.  
• Students also reported the typical number of drinks they consume while pregaming and the average amount of time spent predrinking; these variables were used to estimate pregaming BACs. | • Pregaming was predictive of negative alcohol-related problems, even after controlling for overall alcohol consumption and demographics.  
• Heavy alcohol use, high frequency of drinking games participation, and the endorsement of expectancies stating that alcohol will make one attractive or woozy were associated with high frequency of pregaming.  
• Gender, ethnicity, and Greek affiliation did not moderate the associations between pregaming and negative alcohol-related problems. |
### Studies Conducted with Current College Freshmen and Sophomores

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<td>Haas, Kagan, &amp; Smith (2013)</td>
<td>N = 708 incoming college freshmen who reported alcohol use (measured during orientation and then 8-9 weeks after the beginning of the semester)</td>
<td>Pregaming frequency was assessed by asking students the percentage of times they pregamed in relation to their overall drinking frequency during the past summer and during the fall semester; responses were coded on a 7-point scale, such that (0) = NA/I don’t drink, (1) = Never, but I DO drink, (2) = Very rarely (less than 10% of the times I drink), (3) = Occasionally (more than 10% but less than 50% of the times I drink), (4) = About half the time I drink, (5) = Most of the time (over 50% but not every time), and (6) = Every time I drink.</td>
<td>Not only was there an approximate 20% increase in pregaming prevalence over the first 8 to 9 weeks of college, but students also consumed more drinks (and therefore reached higher BACs) per pregaming occasion after the first several weeks of college.</td>
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<td>61.7% of students reported pregaming in baseline surveys, and 79.9% reported pregaming in follow-up surveys</td>
<td>Students also reported the typical number of drinks they consume while pregaming and the average amount of time spent predrinking; these variables were used to estimate pregaming BACs.</td>
<td>8 to 9 weeks after the beginning of the semester, students were more likely to pregame on drinking occasions than they were before college started (21% vs. 40% of all drinking occasions).</td>
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<td>Barnett, Orchowski, Read, &amp; Kahler (2013)</td>
<td>N = 750 college students from multiple universities who filled out surveys throughout their freshmen and sophomore years</td>
<td>For every biweekly assessment, students were shown a past-week calendar grid and were asked, “Did you pregame on this day?”</td>
<td>The increased levels of intoxication associated with drinking on days when pregaming occurred was directly accounted for by the increased number of drinks consumed on pregaming days (and not by the rapid consumption of drinks associated with pregaming).</td>
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<td>Pregaming was reported by 3 out 4 drinkers</td>
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<td>Freshmen were more likely to pregame on drinking days than sophomores.</td>
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<td>Pregaming was more common during the fall semester, in the early weeks of the semester, and on the weekends (especially on Fridays).</td>
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<td>Hustad, Mastroleo, Urwin, Zeman, LaSalle, &amp; Borsari (2013)</td>
<td>N = 354 students who violated their campus’s alcohol policy (50% freshmen)</td>
<td>Students reported (1) the number of days they pregamed or tailgated, (2) the number of drinks consumed on typical pregaming and tailgating occasions, and (3) the duration of typical pregaming and tailgating occasions, all over the past 30 days.</td>
<td>Students who pregamed consumed alcohol more frequently, reached higher BACs, reported experiencing more alcohol-related consequences, and endorsed more positive alcohol beliefs than non-pregamers.</td>
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<td>43.5% of students reported pregaming, and 37.6% of students reported both pregaming and tailgating</td>
<td>Note: In this study, tailgating was defined as “the consumption of alcohol prior to and in the same general vicinity of a concert or sporting event (e.g., a football game).”</td>
<td>Students who pregamed and tailgated drank alcohol more frequently, engaged in heavy drinking more frequently, reached higher BACs, endorsed more descriptive norms of peer drinking, reported more positive beliefs about drinking in college, and engaged in pregaming more frequently than participants who only reported pregaming, suggesting that students who pregame and tailgate are at even more risk than those who only pregame.</td>
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