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### Partying Before the Party Gets Started: The Effects of Descriptive Norms on Pregaming Behavior

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## Partying Before the Party Gets Started: The Effects of Descriptive Norms on Pregaming Behavior

Jerry M. Burger, Christina T. LaSalvia, Lauren A. Hendricks,  
Tara Mehdipour, and Elise M. Neudeck

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Pregaming (consuming several alcoholic drinks prior to going to a bar or party) has become a common practice on many college campuses. We propose that students often rely on descriptive norms when making decisions about pregameing. In Study 1, we provided undergraduate students with norm information indicating that relatively few college students regularly engage in pregameing behavior. Female students receiving this information engaged in pregameing significantly less often the following week than female students who received no norm information. The rate of pregameing among male students was not affected by the norm information. The effect of norm information on pregameing was replicated in Study 2 using only female students. In addition, providing information about gender-specific norms had a greater impact on pregameing behavior than presenting norm data for the general student body only. The findings indicate that descriptive norms play an important role in pregameing behavior and suggest avenues for intervention programs.

Alcohol problems are widespread on college campuses (Dawson, Grant, Stinson, & Chou, 2004; Mitka, 2009). Episodes of binge drinking are common, and a large percentage of students meet the diagnostic criteria for alcohol abuse or alcohol dependence. The problems associated with excessive drinking among college students include physical injuries, assaults, and death. College administrators have responded to this situation with a wide variety of prevention programs. However, a recent development on college campuses called pregameing (also known as prepartying) has added to the challenge. Pregaming involves getting together with a small group of friends to drink alcohol shortly before going to a party or bar where more alcohol is consumed. Typically several pregameing drinks are consumed in a short period. The advantages of pregameing are said to be financial (less expensive than bars) and practical (parties often run out of liquor or are ended before one can drink excessively). Although nationwide data are not available, a survey of students at one college found

that 64% had engaged in pregameing and that students pregameed 45% of the time before they went out to drink (Pedersen & LaBrie, 2007). Another study found that 31% of the students enrolled in a mandatory program for violations of the campus alcohol policy had engaged in pregameing on the night of their violation (Borsari et al., 2007).

Although many factors no doubt contribute to this behavior, we propose that theory and research on social norms provide a good starting point for understanding pregameing and for generating effective intervention strategies. Specifically, researchers have identified two types of social norms (Cialdini, Reno, & Kallgren, 1990; Reno, Cialdini, & Kallgren, 1993). *Injunctive norms* represent generally recognized societal standards of behavior. People are motivated to follow injunctive norms out of a general sense that normative actions are rewarded and that violations of societal standards are punished. *Descriptive norms* are our perceptions of how people (or people like us) typically behave in a given situation. Individuals rely on descriptive norms to guide their behavior out of a belief in collective wisdom. That is, if most people act a certain way, it must be an efficient or rewarding course of action.

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We should note that descriptive norms are based on perceptions of how others act, and, for a number of reasons, these perceptions are often distorted.

Past research has found that social norms play a role in other kinds of drinking behavior among college students. Much of this research has looked at descriptive norms for binge drinking. Investigators find that how much students drink is highly correlated with their perceptions of how much other students drink (Neighbors, Lee, Lewis, Fossos, & Larimer, 2007; Sher, Bartholow, & Nanda, 2001). Moreover, students typically overestimate the descriptive norms for college student drinking (Borsari & Carey, 2003; Neighbors, Oster-Aaland, Bergstrom, & Lewis, 2006; Perkins, Haines, & Rice, 2005). This gap between how often students binge drink and how often they believe the typical student engages in binge drinking creates the possibility of an ever-present motivation for excessive alcohol consumption.

Research on descriptive norms and binge drinking also suggests an avenue for intervention. Although results are not entirely consistent (Schultz, Nolan, Cialdini, Goldstein, & Griskevicius, 2007), several studies find descriptive norm feedback can be an effective part of an intervention program (DeJong et al., 2006; LaBrie, Hummer, Neighbors, & Pedersen, 2008; Neighbors, Lee, Lewis, Fossos, & Walter, 2009). These investigations typically present accurate information about the amount and/or frequency of binge drinking among college students as part of a larger intervention strategy. Because actual norms tend to be lower than perceived norms, the new information is said to lead to a reduction in binge drinking.

However, overt binge drinking and pregaming also differ in some important ways. First, because pregaming is a fairly recent phenomenon, the injunctive norms for it are relatively unclear. In the absence of clear injunctive norms, students may be more likely to rely on descriptive norm information to guide their behavior. Second, unlike binge drinking, which is often on display at large campus parties and social gatherings, pregaming typically takes place in a private setting among a small number of friends. As a result, opportunities to obtain descriptive norm data are limited, and for many students, perceptions about how many students pregame or how much the average student pregames may be highly inaccurate. For these reasons, we anticipated that presenting college students with seemingly reliable descriptive norm information would be an especially powerful way to alter their pregaming behavior.

Research also suggests that the relationship between descriptive norms and drinking behavior among college students is complicated by gender. One meta-analysis found that, compared to men, female students perceive larger discrepancies between how much other students drink and their own drinking behavior (Borsari & Carey,

2003). Another investigation found that women were particularly sensitive to perceived descriptive norms for their own gender (Lewis & Neighbors, 2004). That is, the women's perception of how much other female students drink was a stronger predictor of their own drinking behavior than was the men's perception of how much other male students drink. The reasons for these gender differences are not well understood, but some investigators point to women's greater attention to interpersonal relations and greater concern to maintain harmonious relationships (LaBrie, Cail, Hummer, Lac, & Neighbors, 2009). Indeed, studies find that students' perception of their friends' approval or disapproval can be a strong predictor of drinking behavior (Chawla, Neighbors, Logan, Lewis, & Fossos, 2009). It may also be the case that the injunctive norms for drinking are less clear for women than they are for men (Suls & Green, 2003). As a result, women may be more dependent on descriptive norm information when making choices about drinking. Consistent with this observation, one study found that female students significantly overestimated the amount of alcohol consumption that college men want to see in college women (LaBrie et al., 2009).

## STUDY 1

The goals of Study 1 were threefold. First, given the well-established link between descriptive norms and binge drinking among college students, it is reasonable to suggest that perceived descriptive norms would also play a role in pregaming. We predicted that college students' perceptions of pregaming norms would be positively related to their own pregaming behavior. Second, we expected that descriptive norm feedback would be a powerful way to alter college students' pregaming behavior. We predicted that students provided with information indicating that pregaming is not common would reduce the frequency of their own pregaming. Previous research using descriptive norm feedback to change binge drinking has typically included elaborate feedback procedures, which often are embedded within a larger intervention program. In contrast, given the absence of other sources of norm information, we predicted that a simple, one-time presentation of descriptive norm data would be powerful enough to produce a change in students' pregaming behavior. Using this single intervention strategy also allows us to isolate the effect of descriptive norm feedback on subsequent behavior. Third, we anticipated that the effects of this descriptive norm feedback might be different for male and female students. Specifically, we expected female students to have a stronger reaction to the information than male students. This prediction is in line with the

notion that women rely more heavily on descriptive norms than men do when making decisions about drinking.

## Method

**Participants.** One hundred eleven undergraduates (66 women, 45 men) participated in the study in exchange for class credit. One male participant was dropped from the study because he failed to return for the second session, leaving 66 women and 44 men in the final sample.

**Procedure.** Participants signed up to take part in two sessions exactly 1 week apart. Upon arrival to the Week 1 session, participants were randomly assigned to either the norm information condition or the control condition. At that point, participants in one of the conditions remained in the room with one experimenter, whereas participants in the other condition were led by a second experimenter to a nearby room.

After separating the two groups of participants, the experimenters distributed a short questionnaire. Participants were encouraged to read the instructions carefully before answering the questions. They were also instructed to put no identifying information on the questionnaire other than their responses to the items asking for their gender and age. We anticipated that the absence of any identifying information would encourage participants to give honest and accurate answers.

The instructions for the questionnaire explained that the purpose of the study was to examine pregameing behavior among college students. The questionnaire then defined pregameing as “alcoholic beverages consumed prior to going out to a party or to bars. This behavior typically occurs in one’s room or residence with a small group of friends.” Participants in the norm information condition then read the following sentence: “Although pregameing is often perceived to be common among students, studies find that only 27% of SCU students regularly engage in this behavior.” In truth, the 27% figure was not based on real data. Rather, we selected the figure because research on pregameing at other institutions suggested that the figure would be below the actual pregameing level yet would be high enough to appear credible.

Three questions relevant for later analyses were included on the nine-item questionnaire.<sup>1</sup> Participants were asked to indicate the number of drinks, if any, they usually consumed while pregameing. In addition,

<sup>1</sup>The additional items on the questionnaire for both studies included questions asking about general demographic data and questions asking about perceptions of alcohol consumption generally among students.

participants were asked how many drinks they thought their friends usually consumed while pregameing and how many drinks they thought the average student at the university usually consumed while pregameing. After the completed questionnaires were collected, participants were instructed to return to this same room the following week. This procedure allowed us to identify which condition participants had been randomly assigned to when they returned the next week without relying on names or other personal information.

When participants returned the next week, they were given a second questionnaire to complete. The experimenter again told participants that, with the exception of the item asking for their gender, they were not to put any identifying information on the questionnaire. The bulk of the questionnaire was divided into three sections. Each section asked participants about their pregameing behavior on the previous Wednesday, Friday, and Saturday nights. These three nights were chosen because of a widely recognized tradition that these are the three “party nights” for undergraduates at the university. Participants responded to the same three questions within each of these sections. They were asked whether they went to a party or bar that night; whether they engaged in pregameing (defined as drinking before going out); and how many drinks, if any, they consumed before going out.

## Results

We first looked at participants’ pregameing behavior and their perceptions of other students’ pregameing behavior. To eliminate the effect of the norm information, we examined only the responses from participants who were randomly assigned to the control condition, and who therefore answered the questionnaire items without reading any information about the typical students’ pregameing behavior.<sup>2</sup> As shown in Table 1, the students perceived that their friends and the average student at the university consumed more drinks during pregameing than they did,  $t(47) = 5.97$ ,  $p = .001$ , and  $t(52) = 6.58$ ,  $p = .001$ , respectively. No gender differences were found on any of these measures, although male students reported a nonsignificant tendency to consume more drinks during pregameing than did female students,  $t(60) = 1.86$ ,  $p = .07$ .

<sup>2</sup>We compared the two conditions on their responses to the Week 1 questionnaire items. The control condition ( $M = 2.47$ ) and norm condition ( $M = 2.58$ ) did not differ in the number of pregameing drinks they reported consuming,  $F(1, 110) = .06$ ,  $p = .81$ . Compared to the control condition, norm condition participants tended to report lower perceptions for the number of drinks their friends ( $M = 4.02$  vs. 4.30) and the average student ( $M = 3.94$  vs. 4.31) consumed when pregameing, but these differences fell short of statistical significance,  $F(1, 96) = .35$ ,  $p = .55$ , and  $F(1, 104) = 2.48$ ,  $p = .12$ , respectively.

TABLE 1  
Mean Number of Pregaming Drinks and Perception of Others'  
Pregaming Drinking—Study 1

	<i>Self</i>	<i>Friends</i>	<i>Average Student</i>
Female	2.05 (1.97)	4.15 (2.22)	4.16 (1.72)
Male	3.17 (2.76)	4.55 (2.58)	4.57 (2.27)
Combined	2.47 (2.31)	4.30 (2.32)	4.31 (1.90)

Note. Standard deviations are in parentheses.

We found strong positive correlations between participants' perceptions of their friends' pregaming behavior and their own behavior,  $r(53) = .71, p = .001$ . We also found a strong positive correlation between participants' perception of how much the typical student at the university consumed while pregaming and their own amount of pregaming,  $r(58) = .54, p = .001$ . The same pattern of correlations was found for female students,  $r(33) = .61, p = .001$ , and  $r(37) = .45, p = .005$ , respectively, and male students,  $r(20) = .85, p = .001$ , and  $r(21) = .61, p = .003$ , respectively.

To determine the effect of our descriptive norm intervention, we examined the number of nights out of three that participants had engaged in pregaming during the week between experimental sessions. An initial 2 (condition)  $\times$  2 (gender) analysis of variance found no significant effect for condition,  $F(1, 106) = 1.04, p = .31$ , or gender,  $F(1, 106) = .08, p = .77$ . Moreover, the interaction fell short of statistical significance,  $F(1, 106) = 2.25, p = .14$ . We then examined the effect of the manipulation separately for female and male participants. As shown in Table 2, female students who received the norm information engaged in pregaming significantly less often the following week than did female students who did not receive this information,  $t(64) = 2.08, p = .04, d = .51$ . However, no difference was found between the conditions for the male students,  $t(42) = 0.29, p = .77$ .

We also looked at the average number of drinks that students reported consuming when they pregamed on the three selected nights. Again, no significant main effect for condition,  $F(1, 106) = .001, p = .97$ , or gender,

TABLE 2  
Means for Pregaming Behavior Measures—Study 1

	<i>Control Condition</i>	<i>Norm Condition</i>
Female students		
No. of nights pregaming	1.08 (.94)	0.64 (.68)
Pregaming drinks per night	2.29 (2.35)	2.73 (3.12)
Male students		
No. of nights pregaming	0.87 (.87)	0.95 (1.02)
Pregaming drinks per night	3.04 (2.89)	2.63 (2.72)

Note. Standard deviations are in parentheses.

$F(1, 106) = .37, p = .54$ , was found, and the interaction was also not significant,  $F(1, 106) = .62, p = .43$ . As shown in the table, as compared to female students in the control condition, female students in the norm information condition did not lower the number of drinks they consumed on these occasions,  $t(64) = 0.65, p = .52$ . The male students also showed no significant difference between the conditions on this measure,  $t(42) = .48, p = .63$ .

## Discussion

The findings suggest that descriptive norms play an important role in pregaming behavior among college students. The number of drinks students consumed while pregaming was highly correlated with the average number of drinks they perceived other students consumed while pregaming. This correlation was even stronger when we compared the students' behavior with how many pregaming drinks they believed their friends consumed. Of course, because these data are correlational, they do not tell us about the direction of causality. For example, the findings could be affected by a tendency for students to seek out friends who share their level of interest in pregaming. It also may be the case that the data reflect the often-demonstrated effect for individuals to see their behavior as normative, that is, the false consensus effect (Marks & Miller, 1987). Nonetheless, the findings also are consistent with the notion that students rely on their perceptions of descriptive norms when making decisions about pregaming.

A stronger case that students rely on descriptive norms to guide their predrinking behavior can be found in the intervention data. Female students led to believe that pregaming behavior was relatively uncommon among college students significantly reduced the number of times they engaged in pregaming during the subsequent week. The women in this condition engaged in pregaming 40.7% less often that week than did women who received no descriptive norm information.

In contrast to the female students, providing norm information had no effect on the number of nights male students engaged in pregaming. This gender difference is consistent with the suggestion that women are more likely than men to rely on descriptive norm information to guide their drinking behavior. It may also be the case that the injunctive norms for women's drinking behavior generally are more ambiguous than they are for men. That is, women may receive inconsistent messages about the appropriateness of drinking and/or excessive drinking for female college students. As a result, female students may be more likely than men to make decisions about drinking based on their perceptions of what other students—particularly other women students—do.

It is also noteworthy that our norm intervention affected the number of times female students engaged in pregaming but did not affect the number of drinks they consumed when they did pregame. This difference could reflect the fact that the norm information we provided was concerned with how often students pregame (i.e., the percentage of students who regularly engage in pregaming) rather than how much student consume when pregaming. We can speculate that providing norm information about the number of drinks typically consumed while pregaming would be more likely than frequency data to affect the amount of alcohol students consume when pregaming.

## STUDY 2

Study 2 was designed to replicate the findings from Study 1 and to examine three questions not addressed in that investigation. First, we looked at the effect of norm information specific to gender. Study 1 found that women students altered their pregaming behavior when presented with norms that combined data for men and women students. However, researchers find that individuals often rely on norm information about a relevant subset of people more than they rely on information about people in general (Goldstein, Cialdini, & Griskevicius, 2008; Rimal, Lapinski, Cook, & Real, 2005). That is, it may be more useful for female students to know how other female students typically act than to know how all students act. Second, we were interested in the effect our norm manipulation might have on the amount of alcohol students consume when they go to a party or bar after they have been pregaming. Although we had no prediction for this variable, knowing how our intervention affects the number of drinks students consume later in the evening could be useful information for administrators interested in curbing binge drinking. Third, the questionnaire used in Study 1 asked students how many drinks they consumed while pregaming and how many drinks they believed others consumed while pregaming. In Study 2, we also asked students how *often* they pregame and their perceptions of how often other students pregame.

### Method

**Participants.** Ninety-three female undergraduates participated in the study in exchange for class credit. Four participants (two from the control condition and two from the general norm only condition) failed to return for the second part of the study and were dropped from the investigation, leaving 89 participants in the final sample.

**Procedure.** Participants signed up to attend two experimental sessions exactly 1 week apart. Participants

were randomly assigned to one of three conditions, and, as in Study 1, experimenters led participants from two of the conditions into different rooms. Participants were informed that the study involved their perception of alcohol use on campus and were asked to complete an anonymous questionnaire. The questionnaire and instructions were identical to those used in the first study with the following two exceptions.

First, participants in the general norm only condition read the following statement at the end of the questionnaire instructions: "Although pregaming is often perceived to be common among students, a recent study found that, on a given evening, only 22% of SCU students who consume alcohol at a party or bar have also engaged in pregaming." Participants in the general plus gender norm condition read this statement: "Although pregaming is often perceived to be common among students, a recent study found that, on a given evening, only 32% of male SCU students and only 12% of female SCU students who consume alcohol at a party or bar have also engaged in pregaming." Because the student body has an approximate 50%–50% gender breakdown, participants in this condition would have the same norm data for the combined student population as participants in the general norm only condition. However, participants in the general plus gender norm condition were also informed that female students are less likely to pregame than male students. Participants in the control condition were given no information about pregaming norms.

Second, we included among the 10 questionnaire items four questions relevant for later analyses. We asked participants how many times a week they typically engaged in pregaming, how many times a week they thought the typical undergraduate at the university engaged in pregaming, how many drinks they typically consumed when pregaming, and how many drinks they thought the typical undergraduate at the university consumed when pregaming.

As in the first study, participants were instructed to return to the same room the following week, a procedure that allowed us to identify the participant's condition without using any personal identifiers on the second session questionnaire. When participants returned the next week, they were given a questionnaire identical to the one used in Study 1 with one exception. Participants were also asked in each part of the questionnaire (Wednesday, Friday, Saturday) to indicate, if they pregame, how many drinks they consumed that evening after pregaming.

### Results

We again examined the control condition's responses on the first questionnaire to compare the participants' pregaming behavior with their perceptions of other students'

pregaming behavior. As in Study 1, the students perceived that they pregamed significantly less often than the typical student at the university,  $t(30) = 4.42$ ,  $p = .001$ . They also believed that they consumed fewer drinks when pregaming than the typical student,  $t(30) = 2.03$ ,  $p = .01$ . The number of times participants reported pregaming in a typical week ( $M = 1.45$ ) was correlated with the number of times they perceived the typical undergraduate pregamed ( $M = 2.34$ ),  $r(31) = .40$ ,  $p = .03$ . Similarly, the number of pregame drinks participants consumed ( $M = 2.53$ ) was correlated with the number of pregame drinks they perceived the typical undergraduate consumed ( $M = 3.37$ ),  $r(31) = .38$ ,  $p = .03$ .

To examine the effect of the manipulation, we compared the number of nights (out of three) that participants engaged in pregaming. As shown in Table 3, a significant effect emerged in this analysis,  $F(2, 86) = 5.38$ ,  $p = .006$ , partial  $\eta^2 = .11$ . Specific cell comparisons (Tukey's honestly significant difference [HSD] tests) revealed that participants in both the general plus gender norm condition ( $p = .007$ ) and the general norm only condition ( $p = .04$ ) pregamed significantly less often than participants in the control condition. The general norm only and general plus gender norm conditions did not differ in this analysis ( $p = .82$ ). To obtain a better idea of whether or how the two kinds of norm information affected pregaming frequency, we also looked at the percentage of participants who had pregamed on any of the three nights. We found a significant overall effect for condition in this analysis,  $\chi^2(2, N = 89) = 6.69$ ,  $p = .04$ ,  $\phi = .27$ . As shown in Table 3, specific cell comparisons revealed that participants in the general plus gender norm condition were significantly less likely to pregame than participants in the control condition,  $\chi^2(1, N = 59) = 5.02$ ,  $p = .03$ ,  $\phi = .29$ . However, the difference between the general norm only condition and the control condition fell short of statistical significance,  $\chi^2(1, N = 59) = 2.07$ ,  $p = .15$ .

We also examined whether the norm information affected the amount of alcohol participants consumed. We looked at the average number of drinks participants consumed when they pregamed. That is, for this analysis,

we included only participants who pregamed. As shown in the table, the overall effect for this analysis fell short of statistical significance,  $F(2, 29) = .35$ ,  $p = .70$ , and none of the specific cell comparisons approached significance (all  $p > .69$ , Tukey's HSD test). Similarly, we found no overall effect when examining the average number of drinks participants consumed when they went out to a party or bar after pregaming,  $F(2, 29) = .77$ ,  $p = .47$ , and none of the specific cell comparisons approached statistical significance (all  $p > .44$ , Tukey's HSD test).

## Discussion

The Study 2 data generally replicate and extend the findings from the first study. How much and how often participants pregamed were positively correlated with how much and how often they perceived other students pregamed. As in Study 1, learning that the typical college student did not pregame before going out led to a significant decline in the number of nights students pregamed the following week. However, as in the first study, the norm manipulation did not affect how many drinks students consumed when the pregamed.

The results from Study 2 also provide some evidence that norm information specific to gender has more of an impact on pregaming than norm information about general student pregaming. Women presented with general norm information who also read that pregaming was especially atypical among female students were more likely to eliminate pregaming altogether the following week than women presented with no norm information. This effect was not found for the women presented only with the general norm information. These results are consistent with other research that finds individuals are more likely to rely on descriptive norms when those norms reflect the behavior of relevant others (Goldstein et al., 2008; Rimal et al., 2005). However, as in the first study, women who learned only that students pregamed at low rates also significantly lowered their frequency of pregaming. Finally, Study 2 also examined whether our norm manipulation affected the amount of alcohol students consumed after they pregamed. We found no effect for our manipulation on this measure.

TABLE 3  
Pregaming and Other Drinking Behaviors—Study 2

	Control	General Norm Only	General Plus Gender Norms
% Pregaming	55.2	33.3	23.3
No. of nights pregaming	1.03 (1.15)	0.47 (0.73)	0.33 (0.66)
Pregaming drinks per night	2.92 (1.00)	3.20 (1.53)	2.71 (1.07)
Average no. of drinks after pregaming	1.44 (1.54)	1.75 (1.58)	0.86 (1.03)

Note. Standard deviations are in parentheses.

## GENERAL DISCUSSION

The pattern of results from both studies support the notion that pregaming among college students is influenced by the students' perception of descriptive norms for the behavior. The extent to which students believed that their friends and other students engaged in pregaming was highly correlated with the amount and frequency of their own pregaming behavior. More important, when

we provided students with descriptive norm information indicating that pregameing among the general student body was not as common as they may have believed, female students reduced their frequency of pregameing the following week by 40.7% (Study 1) and 54.4% (Study 2). Although speculative, the bigger decline in pregameing in the second study may reflect the use of a lower descriptive norm figure in that study (22%) than in the first study (27%).

In both studies, our manipulation affected the frequency of pregameing but not the number of drinks consumed when pregameing. This finding could be attributed to the fact that our manipulation consisted of information about how often students pregame rather than how many pregame drinks students consume. However, it may also be the case that once students choose to pregame, decisions about how much to drink are influenced largely by the drinking behavior of the people around them. We also found in Study 2 that our manipulation had no effect on the number of drinks consumed when pregamers went out later that same evening. Although we had no prediction for this variable, researchers find that the impact of descriptive norms is often limited to specific situations (Reno et al., 1993). Thus, the descriptive norms students rely on when deciding whether to pregame may not apply to other drinking situations.

It is also noteworthy that our norm intervention affected the number of times female students engaged in pregameing but did not affect the number of drinks they consumed when they did pregame. This difference could reflect the fact that the norm information we provided was concerned with how often students pregame (i.e., the percentage of students who regularly engage in pregameing) rather than how much student consume when pregameing.

As with other studies on drinking behavior among college students, we found that gender had an important influence on the relation between descriptive norms and pregameing behavior. Of particular note, male participants in Study 1 did not alter their amount of pregameing after receiving norm information indicating that pregameing was not common. The reasons for this difference between male and female students are not clear. Future investigators may want to examine differences in the clarity of pregameing injunctive norms for men and women and differences in the extent to which men and women rely on descriptive norms to guide their drinking behavior.

We should also mention a few limitations of the research. First, we relied on self-reports of the students' drinking behavior, which inevitably raises questions about the accuracy of the reports. In response to this concern, we took extra steps to encourage honest reporting. We made it clear to students that they should put no identifying information on their questionnaires.

In Week 2, we identified condition by which room participants came to, but there was no way to connect specific responses to individual participants. Second, we also cannot tell from our data how long the intervention effect lasts. We examined pregameing behavior only for the week following the presentation of the norm data. It is entirely possible that the effect of the manipulation fades over time. However, it might also be the case that a widespread intervention program could affect the pregameing behavior of a large number of students and thereby alter the actual descriptive norms. If that were the case, the effect of the intervention could be long-lasting.

Finally, the findings have implications for strategies to reduce problem drinking on college campuses. Consistent with other investigations, we found the average pregameing student consumes two or three drinks during a short period. This observation indicates that excessive drinking and the problems associated with it often start before the party begins. Moreover, we found that students typically overestimated the amount of pregameing engaged in by other students. This was the case for both how often and how much students perceived other students pregame. Thus, current program that employ norm information to combat alcohol abuse on college campuses may want to include norm information about pregameing in their arsenal.

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