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Ignoring Norms with a Little Help from My Friends: Social Support Reduces Normative Influence on Drinking Behavior

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Abstract

Alcohol norms are strong predictors of drinking. However, the extent to which norms influence behavior depends on how closely people attend to them; people are more likely to attend to norms when their affiliation needs are unfulfilled by members of their social networks (Cullum, O'Grady, & Tennen, 2011). Therefore, we predicted that Perceived Social Support (PSS) would moderate the relationship between norms and drinking such that people with low levels of PSS would be more motivated to attend to norms. College students ($N = 498$) completed measures of PSS and peer alcohol norms and then reported on their drinking behavior daily for 30 days. As predicted, we found when PSS was low, student drinking was strongly influenced by peer norms, but there was no relationship between norms and drinking when PSS was high. Findings suggest that when affiliation needs are high, norms are more influential on drinking behavior.

The influence of social norms—the real or imagined behaviors of others (Sherif, 1936)—on individual behavior is pervasive, with studies in myriad domains demonstrating how social norms predict behaviors such as energy use (Nolan, Schultz, Cialdini, Goldstein, & Griskevicius, 2008), stereotype expression (Crandall, Eshleman, & O'Brien, 2002), littering (Kallgren, Reno, & Cialdini, 2000), voting (Gerber, Green, & Larimer, 2008), and a large body of research has linked social norms to drinking alcohol (see Borsari & Carey, 2001; 2003 for reviews). People gain awareness of various norms, such as for drinking, through observation of the behavior of others and/or by communicating with others about their attitudes and behavioral preferences (Cullum, Okdie, & Harton, 2011; Prentice & Miller,

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1993). Mere exposure to the collective behaviors of close friends or proximal others (Capone, Wood, Borsari & Laird, 2007; Cullum, Armeli, & Tennen, 2010; Cullum & Harton, 2007; Goldstein, Cialdini, & Griskevicius, 2008) can be enough to guide a person's own subsequent behavior. Once acquired, knowledge of the typical behavior of others (descriptive norms) and behaviors approved of by others (injunctive norms) are expedient and low-cost informational tools that people often use to guide their own behavior in a situation (Cialdini, Reno, & Kallgren, 1990; Richerson & Boyd, 2005), especially when they are uncertain as to how best to respond (Festinger, 1954).

Although the link between norms and personal behavior seems fairly ubiquitous, research and theory suggests that norms do not influence behavior equally across all situations or across all people. According to the Focus Theory of Norms (Cialdini et al., 1990), a norm should influence people's behavior to the extent that their attention is drawn to that particular norm. For instance, Cialdini et al. (1990) focused people's attention to anti-littering norms by having a confederate drop litter in an otherwise clean environment. The juxtaposition between the confederate's action and the cleanliness of the environment made the anti-littering norm focal, and in turn, people littered less in that setting than when no litter was dropped at all. Similarly, Kallgren, Reno and Cialdini (2000) found that high physiological arousal of people in the presence of dominant normative information led them to conform their behavior more closely to that norm.

Kallgren et al. (2000) also found support for important individual differences that moderate the extent to which people attend to, and in turn are influenced by the norm. For instance, people who personally valued anti-littering norms were less likely to litter than people who did not value this norm, and this was especially the case when people were experimentally focused internally on their personal beliefs and values. Similarly, the motivations that are accessible for a particular individual may determine how much he/she attends to normative information. For instance persuasion attempts that appeal to normative information are not effective when people are motivated to be distinct/different, but are very effective when people are motivated to be accurate (Cialdini, Griskevicius, Sundie, & Kenrick, 2007). With respect to drinking behavior, several important individual differences relevant to motivation to attend to the norm have been identified as moderators of normative influence. First, there is a stronger correspondence between a reference group's (e.g., fraternity/sorority) drinking norm and a person's personal drinking behavior for people who closely identify with the group than for people who loosely identify with the same group (Reed, Lange, Ketchie, & Clapp, 2007). Second, people with high levels of social anxiety—i.e., fear negative evaluations from others and are preoccupied with social approval—more closely adhere to drinking norms among their peers than people who are low in social anxiety (Neighbors, Fossos, Woods, Faviano, Sledge, & Frost, 2007). Third, people who are more motivated to drink in order to facilitate rapport building with others also appear to attend more closely to the norm, as evidenced by a stronger correspondence between their personal behavior and their perception of drinking norms (Lee, Geisner, Lewis, Neighbors, & Larimer, 2007). Whereas Reed et al. (2007) demonstrate the importance of a sense of identity in motivating attention and adherence to a group's drinking norm, the findings of Lee et al. (2007) and Neighbors et al. (2007) are more suggestive of the role for interpersonal motivations in determining when a norm will be focal for a person.

People's affiliation motives, in particular, may modify the extent to which they are receptive to social influence (Cullum, O'Grady, & Tennen, 2011). Affiliation with others is a basic human need that motivates people to form and maintain close bonds with others and satisfying it entails establishing rapport, interpersonal warmth, and personal disclosure between one's self and at least a few members of one's network of relatives, friends, and acquaintances (Baumeister & Leary, 1995; Gere & MacDonald, 2010; McClelland, 1985). These affiliation motives may also play an important role in the extent to which people attend to the behaviors of others in several ways. First, affiliation needs lead people to attend more closely to the behaviors of others, and subsequently, more likely to mimic other's behaviors, whether people are aware of these tendencies or not (Cheng & Chartrand, 2003). Second, people are more receptive to social influence when their affiliation needs are threatened. For instance, people are more likely to comply with requests after being socially ostracized (Carter-Sowell, Adrienne, Chen, & Williams, 2008), and mimic the behavior of an interaction partner more after previous rejection by another (Lakin & Chartrand, 2003). Lastly, deference to the behaviors and requests of others in these instances is functional in that it helps to (re)establish rapport between people, and to ultimately satisfy a person's affiliation needs (Lakin & Chartrand, 2003; Lakin, Jefferis, Cheng, & Chartrand, 2003).

Cullum et al. (2011) recently proposed that people are more likely to attend to social norms as a guide for their own personal behavior when their affiliation motives are threatened or left under-fulfilled by their social networks. In the present study, we examine the extent to which being embedded within a social network that less adequately satisfies one's social needs leads people to attend to social drinking norms as a guide for their own behavior. One important indicator of the degree to which one feels affiliation needs are being satisfied is perceptions of social support from one's friendship network. Having one's affiliation needs fulfilled involves a sense that members of one's social networks are caring and receptive to one's needs (Baumeister & Leary, 1995), as well as feeling comfortable enough with social network members to freely disclose personal information (Procidano & Heller, 1983). Perceived social support corresponds closely with actual levels in which one's social network members express concern for one's well-being and convey interpersonal warmth (Cutrona, 1986), and accurately predicts the level of disclosure between oneself and members of his/her social network (Procidano & Heller, 1983).

Although past work demonstrates that high levels of social support can buffer against the effects of stress and other negative health outcomes such as depression (e.g., Cutrona, 1986), the link between social support and substance use behaviors remains mixed. For instance, Averna and Hesselbrock (2001) found that adolescents embedded within social networks that provided high levels of social support were less likely to smoke tobacco or marijuana heavily, but were more likely to drink alcohol heavily. Indeed, the act of drinking alcohol is often closely linked to the act of affiliation with close friends in college samples (Reifman, Watson, & McCourt, 2006), and among heavy drinking populations more broadly (Mohr, Averna, Kenny, & DelBoca, 2001). Based on these findings, high levels of social support may also correspond to higher drinking levels overall. However, other work suggest that the direct relationship between social support and substance use disappears after controlling for peer attitudes in favor and against substance use (e.g., Alemi, Stephens, Liorens, Schaefer,

Nemes, & Arendt, 2003). Thus more research on social support in the context of social influences such as drinking norms is needed.

Study Overview

In the current study, we assessed perceptions of descriptive drinking norms, and social support among college students during a baseline phase of the study, followed by a daily diary assessment of personal drinking behavior. We hypothesized that perceived social support will moderate the relationship between perceived drinking norms and personal drinking behavior. Specifically, we predicted that people who perceived low levels of social support from their social networks would be more motivated to attend to drinking norms, as evidenced by a close correspondence between their drinking behavior and drinking norms; and we predicted that people who perceived a high degree of social support from their social networks would not attend to drinking norms as guides for their own drinking behavior. Further, we did not expect a main effect relationship between social support and drinking behavior to exist, after controlling for drinking norms.

By assessing personal drinking behavior on a daily basis, as opposed to using a retrospective measure, we help to reduce recall error that occurs over longer periods of retrospection (Tennen et al., 2000). We then used these daily responses to compute two aggregated measures of personal drinking behavior: drinking frequency, and drinking quantity. Aggregating daily reports of drinking behavior should also provide unusually reliable measures of personal drinking (Epstein, 1983). Further, assessing drinking norms prior to assessing personal drinking behavior and over different intervals of time, should reduce projection bias in participants' assessment of drinking norms (Marks, Graham, & Hansen, 1992; Prentice & Miller, 1993), and therefore help to better discern the influence of social norms on personal behavior.

Method

Participants

Participants were 574 college students (52% male) recruited from an introductory psychology subject pool at a large public university in New England. Participants were mainly White (86%) and had a mean age of 18.77 years ($SD = 1.08$), with most being freshmen (57%) or sophomore students (34%).

Procedure

As part of a larger multi-wave study of college student health, participants completed a baseline survey and then approximately two weeks later, they completed a 30-day daily diary. Past work using materials from this data set focused on daily factors in alcohol consumption (e.g., Armeli, Cullum, Conner, & Tennen, 2010; O'Grady, Cullum, Armeli, & Tennen, 2011), while the present work is the first to capitalize on the increased accuracy of self-report alcohol use that comes with aggregated daily reporting, and it is the first to look at how between person differences in social support corresponds to drinking. Data were collected approximately 1 month into the start of the semester and both the baseline and daily surveys were completed on a secure website. Participants completed the daily survey

between 2:30pm and 7:00pm each day to reduce variation in reporting times and to coincide with the end of the school day. Participants received course credit and a monetary incentive for participating in the study. Participants were excluded if they completed less than 15 days of the diary data (69 excluded), or had incomplete data from the initial assessment (7 more excluded), leaving the final sample at 498. There were no differences between the excluded participants and the final sample in terms of age, average daily drinking, class year, full- or part-time status, or ethnicity. However, the two groups did differ somewhat on gender, $\chi^2(1) = 4.73, p = .03$, such that the excluded group had more men (65%) than the included group (52% men).

Measures

Baseline survey—Participants completed demographic questions such as age, year in school, ethnicity, and gender. To measure drinking norms, participants were asked “How much alcohol do you think is consumed by the typical college student of your gender?” and they had the following choices: None, 1-3 drinks per month, 1-3 drinks per week, 1 drink per day, and more than 1 drink per day and these were coded from 1–5 respectively. This question was adapted from other studies of alcohol norms among college students (e.g., Baer, Stacy, & Larimer, 1991; Wood, Read, Palfai & Tibor, 2001).

Social support was measured using the short form of the Perceived Social Support from Friends Scale (Procidano & Heller, 1983; Rice, & Longabaugh, 1996). Participants rated the following five items regarding their social relationships with friends on a scale from 1 (*strongly disagree*) to 7 (*strongly agree*): “My friends and I are very open about what we think about things”, “My friends give me the moral support I need”, “I rely on my friends for emotional support”, “Most other people are closer to their friends than I am (reverse scored)”, and “My friends are sensitive to my personal needs”. The scores for each item were averaged and therefore could range from 1 to 7 and had good internal reliability (Cronbach's $\alpha = .85$)¹.

Daily survey—Each day, participants were asked to report the number of alcoholic drinks they consumed the previous night. Response options ranged from 0 to greater than 15 (coded 16). One drink was defined as: one 12-oz. can or bottle of beer, one 5-oz. glass of wine, one 12-oz. wine cooler, or 1.5 oz. of distilled spirits (Wechsler & Nelson, 2001). For analysis purposes we aggregated the daily scores to create two outcomes: drinking frequency (percentage of days in the month that participants drank) and drinking quantity (mean number of drinks participants had per drinking day). Drinking frequency was derived by dividing the total number of drinks participants had during the 30 days of the study by the total days that they completed the daily survey, therefore, it is a percentage of how many days they drank over the 30 days. Drinking quantity was calculated by averaging the amount of drinks participants had on days only when they drank; therefore days in which they did not drink were excluded from their average.

¹As a partial validity measure, we also found that a significant (though modest) positive correlation between perceived social support and a daily measure of how much time people reported socializing with friends.

Results

Descriptive statistics and correlations for all study variables appear in Table 1. The daily response rate was 87% (M number of days responding = 25.75, SD = 3.57). Participants did not differ in their response rate by age, perceived norm, or level of social support, but women did on average respond somewhat more often than men (M^{diff} = 1.16 days, $t(403)$ = 3.08, p = .001). We conducted 2 separate hierarchical multiple regression analyses for each drinking DV, namely Drinking Frequency and Drinking Quantity. In each analysis, Gender (effects coded as -1 = Women, 1 = Men) and age (mean centered) were entered at Step 1 as control variables, along with Social Support and Norms (also mean centered). Next, the Social Support $\times$ Norms interaction term was entered at Step 2. The variables were entered in this way in order to determine the contribution of the main effects independent of the control variables, and the contribution of the interaction term above these main effects. Social support and norms were each mean centered, with the interaction term being created from the centered variables (Aiken & West, 1991). Results from the models, including the final R^2 for each model, are reported in Table 2 for both outcomes. In the figures, Low values were plotted at 1 SD below the mean, and High values at 1 SD above the mean.

Drinking Frequency²

Gender was a significant predictor such that men drank more frequently than women. Further, there was a significant main effect for norms such that as norms increased drinking frequency increased, b = .04, SE = .01, p = .001). As predicted, the main effect for social support was not significant (p = .21). However, these main effects results were qualified by a significant interaction between norms and social support. The significant interactions were decomposed using simple slopes analyses in which the norms slopes were reinterpreted when social support was centered at Low (-1 SD) and High ($+1$ SD) values (Aiken & West, 1991). As depicted in Figure 1, when social support was low, there was a significant relationship between norms and frequency of drinking such that when norms were high, participants drank more often than when norms were low (b = .06, SE = .02, p < .001). However, when social support was high, there was no significant relationship between norms and drinking frequency (b = .01, SE = .02, p = .42).

Drinking Quantity

Findings for drinking quantity mirrored those of drinking frequency. Men drank significantly greater amounts of alcohol than women and there was a significant main effect for norms such that as norms increased drinking quantity also increased, (b = .33, SE = .16, p = .037). The main effect for social support was not significant (p = .37), and these main effect findings were qualified by a significant interaction between norms and social support. As depicted in Figure 2, when social support was low, there was a significant relationship between norms and drinking quantity such that when norms were high, participants drank more alcohol than when norms were low (b = .62, SE = .20, p = .002). However, when social

²Drinking Frequency scores were moderately skewed, so we performed a square root transformation to normalize the data. The overall pattern of results were the same without this transformation. For ease of interpretation, Figure 1 depicts results reverse transformed back into their original metric.

support was high, there was no significant relationship between norms and drinking quantity ($b = -.04$, $SE = .22$, $p = .86$).

Discussion

Social norms can influence a wide array of behaviors, including drinking behavior, but this influence should be limited to the extent that circumstances or individual differences direct a person's attention toward the norm (Cialdini et al., 1990; Kallgren et al., 2000). One important individual difference factor that may moderate the level of focus on a norm is a person's motivation level. When people's affiliation needs are threatened or left unfulfilled, they should be more motivated to attend to social cues such as normative behavior (Cullum, O'Grady, & Tennen, 2011; Lakin et al., 2003), and more receptive to social influences on their behavior (Lakin & Chartrand, 2003; Carter-Sowell et al., 2008) as a result of efforts to improve their rapport with others by conforming to socially approved and typical behavior. When a person is embedded within a social network that is less receptive to their needs and affords him/her few opportunities for interpersonal warmth and disclosure (i.e., social support), he or she should be particularly motivated to attend to social norms for behavior, and use this normative information as a guide for his/her own behavior.

In support of this hypothesis, we found that college students in social networks that provided low levels of social support were highly influenced by their perceptions of the drinking norm in both the frequency and quantity with which they drank alcohol, as evidenced by the close correspondence between their perception of college student drinking norms, and their personal drinking behavior. Furthermore, people in social networks that provided high levels of social support were not influenced by their perceptions of drinking norms, neither over the frequency nor the quantity with which they drank.

This pattern of findings is consistent with the focus theory of norms (Cialdini et al., 1990) and further suggests that the level of social support one receives from their peer network may be an important factor in adherence to social norms. Much as identity (Reed et al., 2007) and personal conviction to a norm can determine the extent to which people adhere to normative information (Kallgren et al., 2000), perceiving low levels of support stemming from one's social network can also impact the extent to which people adhere to norms. Interestingly, this pattern of findings seems to be the opposite of what one may expect according to identity-based norm adherence in that those with higher levels of peer social support, who likely identify more strongly with their peer group, are not influenced by the drinking norm; rather, people with low levels of social support, who likely identify less with their peer group, are nonetheless more influenced by peer drinking norms. Instead, this pattern of findings is consistent with a burgeoning body of research suggesting that affiliation motives play a major role in who will be influenced by normative information (Cullum et al., 2011). Specifically regarding drinking norms, past work illustrates that people are more receptive to social drinking norms when they are fearful of negative evaluation (Neighbors et al., 2007), and when they believe drinking will help them to build rapport with others (Lee et al., 2007). The present work builds on these findings, suggesting that when people are embedded in a network that under-serves their affiliation needs, they

are more likely to drink alcohol in accordance with their perceptions of drinking norms. However, more research is needed to discern the motivational processes involved.

Implications

The present work demonstrates a unique role for social support when it comes to health behaviors. Although social support improves a number of important health outcomes such as coping with stress and well-being (Cutrona, 1986), its relationship to substance use behaviors previously remained unclear (Averna & Hesselbrock, 2001). Our findings suggest that rather than playing a health buffering role, or directly influencing drinking levels, social support moderates the extent to which people attend to normative information regarding drinking behavior. This pattern of findings is consistent with Alemi et al. (2003), in which social support was found to have no direct effect on personal substance use behavior after controlling for peer influence. Nevertheless, people with high levels of social support did appear to have slightly higher than average drinking levels, for both drinking frequency and quantity measures.

These findings also suggest that efforts to reduce heavy drinking behaviors may be improved by taking people's social networks and affiliation needs into consideration (Mohr et al., 2001). First, designing new interventions that take people's affiliation needs into consideration may help reduce the motivation to adhere to heavy drinking norms among their peers (Reifman et al., 2006). For instance, interventions that teach alcoholics skills for building supportive social networks are more effective and provide longer lasting health benefits than treatments using cognitive behavioral therapy alone (Litt, Kadden, Kabela-Cormier, & Petry, 2007). Second, a popular method for combating binge drinking in college settings involves addressing inflated misperceptions of drinking norms (for a review, see Borasi & Carey, 2001). These efforts may be improved by incorporating social support building exercises into such interventions to both reduce the extent to which people attend to their perceptions of heavy drinking norms, and to facilitate relationships with others who are non- or light drinkers, in order to further cultivate a social network that is supportive of lighter drinking norms.

Limitations and Future Directions

There are several limitations to the present study. First, although we examined one major tenant of the focus theory of norms (Cialdini et al., 1990) with regard to the conditions in which people focus on their knowledge of what is typical normative behavior, the theory also makes a distinction between this type of norm (i.e. descriptive norm) and knowledge of behavior that is commonly approved of (i.e., injunctive norm). We examined the moderating role of social support on descriptive norms, and future research should see if this pattern extends to injunctive norms as well. Moreover, future work should explore the moderating role of social support on other types of behavior, particularly health behaviors. Second, we relied on a single item measure of drinking norm perceptions, and although this measure has high face validity, it may also be less reliable than using multiple measures or daily assessments. However, the item we used to assess drinking norms is the standard item used by researchers to assess norm perceptions (Borasi & Carey, 2003)³. Thirdly, we relied on between person comparisons in social support to infer its effect on norm attentiveness, and

future work should utilize daily diary and longitudinal techniques to examine how within-person changes in social support over time correspond to when people defer to drinking norms as guides for their own behavior (cf. Tennen et al., 2000).

Conclusion

Being embedded within a social network that is supportive has many benefits for our health. It may reduce depressive symptoms and reactivity to stress and it helps to promote our well-being by fulfilling our basic needs to bond with others. But when it comes to health behaviors such as drinking alcohol, social support may also reduce the extent to which we attend to normative information. When our social networks fail to meet our affiliation needs, we are more likely to defer to drinking norms in making decisions about how often and how much we should drink; but when our social networks are supportive of us, we seem to completely ignore our knowledge regarding normative drinking. Thus, social norms may be highly influential over our behavior in multiple domains, but with a little help from our friends, we may feel little need to pay them any heed.

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References

- Armeli S, Cullum J, Conner T, Tennen H. A longitudinal analysis of drinking motives moderating the negative affect-drinking association amongst college students. *Psychology of Addictive Behavior*. 2010; 24:38–47.
- Alemi F, Stephens R, Liorens S, Schaefer D, Nemis S, Arendt R. The orientation of social support measure. *Addictive Behaviors*. 2003; 28:1285–1298. [PubMed: 12915169]
- Averna S, Hesselbrock V. The relationship of perceived social support to substance use in offspring of alcoholics. *Addictive Behaviors*. 2001; 26:363–374. [PubMed: 11436928]
- Baumeister RF, Leary MR. The need to belong: Desire for interpersonal attachments as a fundamental human motive. *Psychological Bulletin*. 1995; 117:497–529. [PubMed: 7777651]
- Borsari B, Carey KB. Peer influence on college drinking: A review of the research. *Journal of Substance Abuse*. 2001; 13:391–424. [PubMed: 11775073]
- Borsari B, Carey KB. Descriptive and injunctive norms in college drinking: A meta-analytic integration. *Journal of Studies on Alcohol*. 2003; 64:331–341. [PubMed: 12817821]
- Cheng CM, Chartrand TL. Self-monitoring without awareness: Using mimicry as a nonconscious affiliation strategy. *Journal of Personality and Social Psychology*. 2003; 85:1170–1179. [PubMed: 14674822]
- Cialdini RB, Griskevicius V, Sindi JM, Kenrick DT. Persuasion paralysis: When unrelated motives immobilize influence. *Social Influence*. 2007; 2:4–17.
- Cialdini RB, Reno RR, Kallgren CA. A focus theory of normative conduct: Recycling the concept of norms to reduce littering in public places. *Journal of Personality and Social Psychology*. 1990; 58:1015–1026.

³We also had a measure of drinking norms among student's close friends. The results were similar as those depicted here when this more commonly used single-item measure of drinking norms was used.

- Crandall CS, Eshleman A, O'Brien L. Social norms and the expression and suppression of prejudice: The struggle for internalization. *Journal of Personality and Social Psychology*. 2002; 82:835–848. [PubMed: 12003481]
- Cullum J, Armeli S, Tennen H. The drinking norm–behavior association over time using retrospective and daily measures. *Journal of Studies on Alcohol and Drugs*. 2010; 71:769–777. [PubMed: 20731984]
- Cullum JG, Harton HC. Cultural evolution: Interpersonal influence, issue importance, and the development of shared attitudes in college residence halls. *Personality and Social Psychology Bulletin*. 2007; 33:1327–1339. [PubMed: 17626890]
- Cullum J, O'grady MA, Tennen H. Affiliation goals and health behaviors. *Social and Personality Psychology Compass*. 2011; 5:694–705. [PubMed: 22140401]
- Cullum J, O'grady MA, Armeli S, Tennen H. Change and stability in active and passive social influence dynamics during natural drinking events: A longitudinal measurement-burst study. *Journal of Social and Clinical Psychology*. 2012; 31:51–80. [PubMed: 22661826]
- Cullum J, Okdie B, Harton H. When my country is at war: Issue importance and interpersonal influence lead Iraq War attitudes to cluster within social networks. *Social Influence*. 2011; 6:231–248.
- Cutrona CE. Behavioral manifestations of social support: A microanalytic investigation. *Journal of Personality and Social Psychology*. 1986; 51:201–208. [PubMed: 3735068]
- Epstein S. Aggregation and beyond: Some basic issues on the prediction of behavior. *Journal of Personality*. 1983; 51:360–392.
- Festinger L. A theory of social comparison processes. *Human Relations*. 1954; 7:117–140.
- Gere J, MacDonald G. An update of the empirical case for the need to belong. *Journal of Individual Psychology*. 2010; 66:93–115.
- Kallgren CA, Reno RR, Cialdini RB. A focus theory of normative conduct: When norms do and do not affect behavior. *Personality and Social Psychology Bulletin*. 2000; 26:1002–1012.
- Lakin JL, Chartrand TL. Using nonconscious behavioral mimicry to create affiliation and rapport. *Psychological Science*. 2003; 14:334–339. [PubMed: 12807406]
- Lakin JL, Jefferis VE, Cheng CM, Chartrand TL. The chameleon effect as social glue: Evidence for the evolutionary significance of nonconscious mimicry. *Journal of Nonverbal Behavior*. 2003; 27:145–162.
- Lee CM, Geisner IM, Lewis MA, Neighbors C, Larimer ME. Social motives and the interaction between descriptive and injunctive norms in college student drinking. *Journal of Studies on Alcohol and Drugs*. 2007; 68:714–721. [PubMed: 17690805]
- Litt MD, Kadden RM, Kabela-Cormier E, Petry N. Changing network support for drinking: Initial findings from the network support project. *Journal of Consulting and Clinical Psychology*. 2007; 75:542–555. [PubMed: 17663609]
- Marks G, Graham JW, Hansen WB. Social projection and social conformity in adolescent alcohol use: A longitudinal analysis. *Personality and Social Psychology Bulletin*. 1992; 18:96–101.
- McClelland DC. How motives, skills, and values determine what people do. *American Psychologist*. 1985; 40:812–825.
- Mohr CD, Avena S, Kenny DA, Del Boca F. Getting by (or getting high) with a little help from my friends: An examination of adult alcoholics' friendships. *Journal of Studies on Alcohol*. 2001; 62:637–645. [PubMed: 11702803]
- Neighbors C, Fossos N, Woods BA, Fabiano P, Sledge M, Frost D. Social anxiety as a moderator of the relationship between perceived norms and drinking. *Journal of Studies on Alcohol and Drugs*. 2007; 68:91–96. [PubMed: 17149522]
- Nolan JM, Schultz PW, Cialdini RB, Goldstein NJ, Griskevicius V. Normative social influence is underdetected. *Personality and Social Psychology Bulletin*. 2008; 34:913–923. [PubMed: 18550863]
- O'Grady M, Cullum J, Armeli S, Tennen H. Putting the relationship between social anxiety and alcohol use into context: A daily diary investigation of drinking in response to embarrassing events. *Journal of Social and Clinical Psychology*. 2011; 30:599–615. [PubMed: 21874086]

- Prentice DA, Miller DT. Pluralistic ignorance and alcohol use on campus: Some consequences of misperceiving the social norm. *Journal of Personality and Social Psychology*. 1993; 64:243–256. [PubMed: 8433272]
- Procidano ME, Heller K. Measures of perceived social support from friends and from family: Three validation studies. *American Journal of Community Psychology*. 1983; 11:1–24. [PubMed: 6837532]
- Reed MB, Lange JE, Ketchie JM, Clapp JD. The relationship between social identity, normative information, and college student drinking. *Social Influence*. 2007; 2:269–294.
- Rice C, Longabaugh R. Measuring general social support in alcoholic patients: Short forms for perceived social support. *Psychology of Addictive Behaviors*. 1996; 10:104–114.
- Reifman A, Watson WK, McCourt A. Social networks and college drinking: Probing processes of social influence and selection. *Personality and Social Psychology Bulletin*. 2006; 32:820–832. [PubMed: 16648206]
- Sherif, M. *The psychology of social norms*. Harper Collins; New York: 1936.

Note: Zero point represents the sample average or expected percent of drinking days during a month.

Figure 1.

Drinking Frequency as a Function of Social Support (SS) and Drinking Norms.

Note: Zero point represents the sample average or expected quantity of drinks consumed per drinking day.

Figure 2.
Drinking Quantity as a Function of Social Support (SS) and Drinking Norms.

Table 1

Descriptive statistics and correlations

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5
1. Drinking Frequency	0.20	0.16					
2. Drinking Quantity	5.24	2.70	.38***				
3. Social Support	5.38	1.05	-.11*	-.11*			
4. Norms	3.43	0.81	.20***	.15**	-.18***		
5. Gender	----	----	.28***	.34***	-.33***	.22***	.09*
6. Age	18.78	1.11	.10*	-.02	-.13**	.05	

Gender is coded -1 = female and 1 = male

*
 $p < .05$ **
 $p < .01$ ***
 $p < .001$

Table 2

Multiple regression results for drinking frequency and drinking quantity

	Outcome	Predictor	<i>B</i>	<i>SE</i>	β	<i>t</i>	<i>Final R</i> ²
Drinking Frequency							
Step 1	Intercept		.16	.01			
	Gender		.05	.01	.24	5.13***	
	Age		.02	.01	.09	1.97*	
	Norms		.04	.01	.15	3.39**	
	Social Support		.01	.01	.06	1.26	
Step 2	Intercept		.15	.01			
	Gender		.05	.01	.24	5.14***	
	Age		.02	.01	.07	1.89 [†]	
	Norms		.04	.01	.14	3.19**	
	Social Support		.01	.01	.06	1.43	
	Norms × Social Support		−.02	.01	−.10	−2.58*	
							.11***
Drinking Quantity							
Step 1	Intercept		5.15	.12			
	Gender		.93	.13	0.34	7.04***	
	Age		−.06	.11	−0.02	−0.58	
	Norms		.33	.16	0.10	2.09*	
	Social Support		.11	.13	0.04	0.83	
Step 2	Intercept		5.21	.12			
	Gender		.94	.13	0.35	7.12***	
	Age		−.06	.12	−0.02	−0.53	
	Norms		.29	.16	0.09	1.85 [†]	
	Social Support		.12	.13	0.05	0.91	
	Norms × Social Support		−.31	.14	−0.10	−2.27*	
							.14***

Gender is coded -1 = female and 1 = male

† $p < .07$ * $p < .05$ ** $p < .01$ *** $p < .001$