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The Role of Context-Specific Norms and Group Size in Alcohol Consumption and Compliance Drinking During Natural Drinking Events

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Abstract

Using experience sampling methods we examined how group size and context-specific drinking norms corresponded to alcohol consumption and compliance with drinking offers during natural social drinking events. For 30 days, 397 college students reported daily on their alcohol consumption during social events, the size of the group they were with, the average alcohol consumption of its' members, and the number of drinks they accepted that came directly from the group they were with during these social drinking events. Larger groups corresponded with greater alcohol consumption, but only when context-specific norms were high. Furthermore, larger groups increased compliance with drinking offers when context-specific norms were high, but decreased compliance with drinking offers when context-specific norms were low. Thus, subtle features of the social-context may influence not only overall consumption behavior, but also compliance with more overt forms of social influence.

Keywords

Social Influence; Norms; Compliance; Drinking Behavior; Diary Methods

Excessive alcohol consumption is one of the leading causes of preventable deaths (Mokdad, Marks, Stroup, & Gerberding, 2004). While most prevention efforts seek to alter an individual's consumption behavior, a growing body of research suggests that the networks of people with whom we routinely interact impact our alcohol intake (Reifman, Watson, & McCourt, 2006; Rosenquist, Murabito, Fowler, & Christakis, 2010). Much of this social influence on behavior may stem directly from the people with whom we consume alcohol

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(Herman, Roth, & Polivy, 2003), who (a) subtly influence us with their individual and collective behavior, which convey socially normative information about typical and desirable consumption levels, and who (b) overtly influence us with direct offers of alcohol or requests to drink alcohol (Borsari & Carey, 2001). The present study investigates these subtle and more overt influence processes that occur in natural social drinking contexts. Specifically, we examine how the number of people present and the norms that emerge during drinking contexts predict a person's level of alcohol consumption (conformity effect) and the amount of drinking offers or requests that he or she accepts from peers (compliance effect).

Conformity Drinking Effects

Group Size

The number of people present in a social drinking context may influence drinking behavior via several social psychological processes. First, the presence of others socially facilitates well-learned and habitual responses, like consumption (Zanjonc, 1966). Accordingly, people often consume greater quantities (de Castro, 1990; Rosenbluth, Nathan, & Lawson, 1978; Senchak, Leonard, & Greene, 1998) in the presence of others than while alone. Consistent with this notion, within-person daily diary studies of natural eating patterns found that personal food consumption increased across eating contexts as a function of group size (de Castro & Brewer, 1992). Between-person studies of alcohol consumption also suggest that larger groups of people consume more alcohol per person than smaller groups (Rosenbluth et al., 1978; Senchak et al., 1998). However some studies of natural drinking contexts (e.g., the bar, a house party) have found the opposite effect, whereby larger group size seems to suppress or inhibit alcohol consumption per person (e.g., Clapp, Won Min, Shillington, Reed, & Croff, 2008). This seeming contradiction may be addressed by a well supported principle of basic social influence processes; namely, that group size determines the magnitude of influence or conformity pressure on personal behavior, and not necessarily the direction of influence on behavior (e.g., increasing *vs.* decreasing consumption; Bond, 2005; Latané, 1981).

Social Norms

On the other hand, social norms—the real or imagined behaviors of others (Sherif, 1936)—can exert a subtle yet powerful directional influence on behavior, often without people being aware of it (Nolan, Schultz, Cialdini, Goldstein, & Griskevicius, 2008; Herman et al., 2003). People gain awareness of norms through observation of collective behavior and by communicating with others about their attitudes and behavioral preferences (Cullum & Harton, 2007; Prentice & Miller, 1993). Furthermore, norms can emerge relatively quickly among newly formed networks through dynamic interpersonal influence processes (Cullum & Harton, 2007) as people influence one another with their behaviors and attitudes. Once norms develop, people often adjust their behavior to correspond with what they perceive—rightly or wrongly—as endorsed by others (Cialdini & Goldstein, 2004). Furthermore, local norms that are specific to a setting or proximal group of people often elicit the highest levels of conformity (Goldstein, Cialdini, & Griskevicius, 2008; Reno, Cialdini, & Kallgren, 1993). A large body of research suggests that perceptions of the typical behavior of others

(i.e., descriptive norms) are robust predictors of personal behaviors (e.g., Kallgren, Reno, & Cialdini, 2000; Nolan et al., 2008) including drinking alcohol (see Borsari & Carey, 2003).

According to the Focus Theory of Norms (Cialdini, Reno, & Kallgren, 1990), descriptive norms will influence behavior to the extent that a person's attention is focused on these norms. Furthermore, Herman and colleagues recently proposed and validated a model of normative social influence on consumptive behaviors, which contends that the number of others present increases consumptive behaviors *only* when normative information clearly endorses consumption (Herman et al., 2003; Pliner & Mann, 2004); in settings where consumption norms are low or ambiguous, the presence of others can actually inhibit consumption rather than facilitate it (Leone, Pliner, & Herman, 2007; Petty, Williams, Haskin, & Latané, 1977). While much past research supporting the Focus Theory of Norms and the influence of norms on drinking behavior involved between-person analyses and design, the present work uses a within-person analysis and design to examine shifts in a person's behavior across social drinking contexts, as a function of the number of people present in the group, and the context-specific drinking norm. Based on Herman and colleagues' model of social influence on consumption (Herman et al., 2003), and the Focus theory of norms (Cialdini et al., 1990), we reasoned that when people are in a social drinking context where average drinking levels are higher than what they typically encounter, the heavy drinking norm will be particularly focal. And in these specific contexts, people should conform their personal drinking behavior increasingly to these heavy drinking norms as the size of the group increases. Therefore, we hypothesized that group size will lead to greater levels of alcohol consumption, but only in contexts where drinking norms are high.

Compliance Drinking Effects

Additionally, a request or offer from others is another, more overt means of social influence on behavior (Cialdini & Goldstein, 2004). Compliance with requests has been shown to increase in contexts where larger groups are present (Newton & Mann, 1980). Likewise, in experimental field studies, the number of people involved in making the request influences compliance behavior (Sedikides & Jackson, 1990). Additionally, compliance rates increase when requests are congruent with descriptive norms (Kallgren et al., 2000; Cialdini & Goldstein, 2004). Thus, when people receive a request, they often turn to the behavior of others for information regarding the appropriateness of the request, and rely on this information as a social proof in making compliance decisions (Festinger, 1954). Specifically regarding alcohol consumption, people commonly receive drinking requests or offers from friends and other peers present in social drinking contexts (Borsari & Carey, 2001; Rabow & Duncan-Schill, 1995). Compliance with offers of alcohol from peers, independent of other, more subtle social influence processes, has been shown to lead to greater overall alcohol consumption and contributes to binge drinking and alcohol-related problems in cross-sectional and panel studies using conventional retrospective reporting methods (Borsari & Carey, 2001; Read, Wood, & Capone, 2005). However, the relatively overt influence of receiving a direct drinking offer from a peer is often an acute and time sensitive form of social influence, requiring an immediate response on the part of the target person: to accept or decline the offered drink (Graham, Marks, & Hansen, 1991). Moreover, compliance drinking effects are the least understood social influence process in drinking behavior,

prompting some to call for experience sampling studies and within-person diary analyses of compliance drinking in order to better understand its contribution to alcohol consumption in natural social drinking contexts (Borsari & Carey, 2001).

Based on past findings regarding the influence of group size and norms on compliance behavior, we reasoned that people would use normative information present during a social drinking context when making decisions about accepting drinking offers from their peers, and that the number of people in these groups would increase the influence of these norms on compliance drinking. Therefore, we hypothesized that when drinking norms are high, people will comply with more drinking offers as the size of the group grew larger, but comply with fewer drinking offers as a function of group size, when drinking norms are low.

The Present Study

While researchers are beginning to explore the role of event-specific norms on alcohol consumption using conventional between-person analyses (e.g., 21st Birthday, most recent drinking episode; Clapp & Shillington, 2001; Neighbors, Oster-Aaland, & Bergstrom, 2006), no prior research—to which we are aware—directly examines the interaction of group size and norms in accounting for within-person variation in consumption and compliance behaviors across natural social-contexts. Because the processes we are interested in are situation-specific (Reno et al., 1993) and time sensitive (Graham et al., 1991), we examine these acute associations using a type of field method called daily diary sampling (Conner, Tennen, Fleeson, & Feildman Barret, 2009). Daily diary methods utilize people's episodic memories for recent events, which more accurately assess behavior-situation associations and are less prone to memory biases that may obscure such effects when retrospective reporting techniques are used (Robinson & Clore, 2002; Robinson, Johnson, & Shields, 1998; Tennen, Affleck, Armeli, & Carney, 2000). Similarly, much past research linking group size specifically to alcohol consumption either relied on between-person comparisons in observed drinking at a bar (dyad vs. group drinkers; Rosenbluth et al., 1978) or on between-person comparisons using retrospective reports of typical drinking contexts ("small" vs. "large" group drinkers; Senchak et al., 1998). The use of between-person designs in studies of contextual social influence on consumption behavior leave open the possibility that individual differences may alternatively account for the association between norms or group size and drinking. For example, people who are extraverted may be more prone to both drink more and gather with larger groups of people. Furthermore, we employ daily sampling methods to examine how the extent to which people comply with drinking offers from their peers may be enhanced or constrained by the more subtle influence of group size and the specific norm at hand when drinking offers are made.

Method

Participants

Four-hundred and sixteen college students who regularly drank alcohol ($M_{age} = 20.70$, $SD = .94$; 56% Female; 86% European American) but who had no prior history of substance abuse were recruited from the University of Connecticut to participate in a month long diary study of health and social behavior. Nineteen participants were removed from subsequent

analyses because either they reported zero drinking episodes across the diary sampling period or zero social drinking episodes during this period, leaving a final sample of 397.

Procedure

Participants were recruited during the third year of a broader, multi-wave study on health and social behavior (Cullum, Armeli, & Tennen, 2010). Although most research on alcohol consumption involving college students focuses on freshmen and less experienced drinkers, the present sample represents an older and more experienced set of drinkers who are likely to have more consistent access to alcohol than most freshmen or sophomore cohorts. Participants initially completed demographic measures and a substance abuse screening, followed 2 weeks later by the daily diary phase of the study. Participants received \$20 for the initial phase of the study, and received \$1–\$5 per day of participation in the daily diary surveys, with higher levels of compensation for participating on weekend days (Friday, Saturday, & Sunday). Each day for 30 days, participants were asked to log on to a secure website between the hours of 2:30 – 7:00 PM to report on their drinking behavior and drinking social context from the previous evening. This reporting time frame helped to ensure that participants were routinely recalling their behavior and social settings without the bias of heuristic recall that occurs after longer periods of time (Robinson & Clore, 2002) and without the potential bias of reporting while under the influence of alcohol that may result from an immediate post-event sampling strategy. We also inquired about daytime drinking, although virtually no drinking occurred during this time period. Participants received daily email reminders to complete the surveys and weekly emails updating them on the days remaining in the diary sampling period. Participants who missed more than 2 days in a row received a phone call reminder from a research assistant. The daily diary response rate was 86%.

Measures

Social Drinking Context—Time spent interacting with others is a corollary of availability to drink alcohol, which greatly increases the rate of binge drinking in college student populations (Weitzman et al., 2003). Therefore, each day participants were first asked “How many hours did you spend interacting with friends or acquaintances last night?” and responded using a drop-down menu, consisting of response options in hourly increments ranging from 0 to 12 hours, and > 12 hours (coded as 13). Second, each day participants were asked “Were you with other people who were drinking last night?” and they indicated ‘yes’ or ‘no’ by checking the appropriate box. To reduce respondent burden (Reis & Gable, 2000), we did not ask participants to further report on social context information for days in which they did not interact with at least one other person who was drinking. If participants answered ‘yes,’ they were then asked two questions regarding group size and drinking norms. Specifically, participants were first asked, “How many other people were with you in your group?”, to which they responded using a drop-down menu consisting of response options ranging from 1 to 10 people and > 10 people (coded as 11). This item served as our measure of the size of the group present in the social drinking context. Then, participants were asked “How many drinks did others have on average?” and they responded using a drop-down menu, consisting of response options in single serving increments ranging from 0 to 15 alcoholic drinks and > 15 (coded as 16; Cullum et al., 2010). This question was

accompanied by a standard definition for a serving of alcohol each day (e.g., a bottle of beer, a glass of wine, a straight or mixed shot of liquor; Wechsler & Nelson, 2001). This served as our measure of the context-specific drinking norm.

Personal Drinking Behavior—Additionally, we asked participants “How many alcoholic drinks did you have last night?” and they responded using the same alcohol serving scale as used above for context-specific drinking norms (i.e., 0 to 15 alcoholic drinks and > 15). This item served as our outcome measure of the total amount of alcohol participants consumed during each social drinking context. Participants also received the same definition of what constituted a single serving of alcohol as used above (Cullum et al., 2010; Wechsler & Nelson, 2001). We also asked participants “Last night, did others offer you any alcoholic drinks?” to which they indicated ‘yes’ or ‘no’ by checking the appropriate box; If participants answered ‘yes,’ they were then asked “How many drinks did you accept?” and they responded using a drop-down menu, consisting of the same alcohol serving response scale as used to report context-specific drinking norms (i.e., 0 to 15 alcoholic drinks and > 15). These last two items served as our outcome measures of the likelihood of receiving an alcoholic drink, and compliance drinking behavior, respectively.

Results

Participants reported interacting with others who were drinking on 32% of the total days sampled, which encompassed 90% of the days in which participants themselves reported drinking, and 5% of days in which participants did not drink. This resulted in 3,140 reports of social drinking events (*Mean per person* = 8.0, *SD* = 3.8). Participants also reported receiving a drinking offer during 65% of all social drinking contexts. Summary information and correlations of all variables are presented in Table 1.

To analyze the influence of the social-context on participants’ drinking levels and acceptance of alcoholic drinks, we conducted multilevel modeling with daily social drinking observations (Level 1) nested within people (Level 2) using Hierarchical Linear Modeling software (HLM; v. 6.06; Raudenbush, Bryk, & Congdon, 2008) which uses maximum likelihood estimation. Specifically, we estimated two models in which we predicted the number of alcoholic drinks consumed and the number of alcoholic drinks accepted during each social drinking event (the dependent variables) from group size, context-specific norm, and their product term (to test the interaction) at level 1. Additionally, we controlled for gender differences in drinking at level-2 for all analyses. To ensure that the influence effects on conformity and compliance drinking were distinct from one another, we controlled for the relationship between the number of drinks consumed and the number of drinks accepted by including each variable as a predictor in its counterparts’ model. Additionally, in each model, we included a measure of the amount of time participants spent interacting with others each night, as past research suggests this is a good estimate of a person’s availability to consume alcohol each evening (de Castro, 1990; Weitzman, Nelson, & Wechsler, 2003) and to control for duration of exposure to a social drinking context.

Gender was effects coded (−1 = Male, 1 = Female) as a between-persons Level 2 variable. All Level-1 predictor variables were centered within people and modeled as random factors

(Enders & Tofighi, 2007). Therefore, predictor variables (e.g., group size, context-specific norms) can be interpreted relative to each person's average level of that predictor over the 30 days, and the effects on compliance and conformity drinking (the betas) can be interpreted as the effect of each predictor on the DV, while the effect of all other predictors are held constant at zero (the person's average level for all predictors). For ease of interpretation, results are presented with the DV in each model as un-centered and in its original metric of number of drinks of alcohol consumed and number of alcoholic drinks accepted from others.

In the model predicting alcohol consumption, both group size and context-specific norm increased drinking levels (see Table 2). The group size \times context-specific norm interaction was also significant. We conducted simple slopes tests at $\pm 1SD$ around person-centered means for group size and context-specific norms (see Figure 1). When the drinking norm was *lower* than that of a person's typical drinking context, the effect of group size on drinking was at best marginal, $b = .04$, $SE = .025$, $t(393) = 1.53$, $p = .12$, $d = .15$. However, when the drinking norm was *higher* than that of a person's typical drinking context, the effect of group size on drinking was significant, $b = .18$, $SE = .029$, $t(393) = 6.25$, $p < .001$, $d = .63$, such that people consumed more alcohol when they were in large groups.

In the model predicting compliance with drinking offers, both group size and context-specific norms increased compliance drinking (see Table 2). Once again, the group size \times context-specific norm interaction was significant. Simple slopes tests, at $\pm 1SD$ around person-centered means for group size and context-specific norms, indicated that when the drinking norm was *lower* than that of a person's typical drinking context, increasing group size resulted in *less* compliance drinking, $b = -.03$, $SE = .013$, $t(393) = -2.29$, $p = .023$, $d = .26$; however, when the drinking norm was *higher* than that of a person's typical drinking context, the increasing group size resulted in *more* compliance drinking, $b = .09$, $SE = .019$, $t(393) = 4.57$, $p < .001$, $d = .46$.

Subsequent analyses investigated whether or not this interaction effect may be attributed to the likelihood of receiving a drinking offer as a function of group size and context-specific norms rather than through normative influence on decisions to comply with drinking offers. If group size and norms influence compliance drinking by increasing the rate at which overt influence attempts are made, then we should find a similar interaction pattern between group size and norms for receiving a drinking offer as for accepting a drinking offer. Using a multi-level logistic model, which included nightly alcohol consumption and time spent socializing as a covariate, we found that group size ($b = .11$, $SE = .019$, $t(392) = 5.79$, $p < .001$) and context-specific norm ($b = .12$, $SE = .026$, $t(392) = 4.74$, $p < .001$) independently increased the likelihood of receiving a drink offer ($ORs = 1.11$ & 1.13 , respectively); but, their interaction term was not a significant predictor ($p = .34$). Thus, the diverging effects of group size on compliance drinking when context-specific drinking norms are low *vs.* high does not appear to be attributable to the conditions in which participants receive a drinking offer.

Discussion

Our daily experience sampling analyses of social-contexts revealed several interesting social influence processes linked to within-person drinking patterns across contexts. First, people's drinking levels closely correspond to the average drinking level of the people they are with during each drinking event, consistent with the notion that descriptive norms are influential in specific contexts (Reno et al., 1993). Second, consistent with hypotheses, social facilitation effects of group size occur only in contexts where drinking norms are higher than what a person typically experiences, leading people to consume greater amounts of alcohol as the size of the group grows larger. However, in contexts where drinking norms are lower than what a person typically experiences, larger group size has little effect on how much people drink. This pattern of results is consistent with the Focus Theory of norms (Cialdini et al., 1990) because highest levels of personal drinking occurred in contexts where drinking norms were heavier than those people typically encountered in their immediate drinking environment. It is also consistent with previous research that suggests increasing group size will facilitate consumption behaviors only in settings where clear social endorsements of the behavior exist (Herman et al., 2003; Leone et al., 2007).

Additionally, our work reveals the novel finding that the subtle influence of group size and context-specific drinking norms may also influence compliance with overt social influences—such as peer drinking offers— independent of their direct influence on overall drinking. Interestingly, the effect of group size on compliance depended on the context-specific norm of each setting: When drinking norms were high, people accepted *more* drinking offers as the size of the group grew larger, but when drinking norms were low, people accepted *fewer* drinking offers as the size of the group grew larger. Furthermore, this latter effect is particularly compelling, as it occurs despite the increased likelihood of receiving a request to drink as the size of the group grew larger. This pattern of results is consistent with our predictions, suggesting that the extent of normative social influence, whether encouraging or discouraging heavy consumption, would vary as a function of group size (Latane, 1981) and that these dynamic social influence processes may also inform decisions to comply with offers of alcohol. Thus it appears that the size of the group may be an important determinant of the strength of social influence on compliance behavior, while the context-specific norm likely determines the direction of that influence.

Overall, the pattern of results for personal alcohol consumption and compliance drinking were quite similar when context-specific drinking norms were high: in both instances, group size increased the effect of the norm on overall personal drinking and on compliance drinking. However, when context-specific drinking norms were low, group size decreased compliance with drinking offers, but had no effect on overall personal drinking. This difference in type of effects may be the result of a floor effect for drinking norms that occurs in natural social drinking contexts. Although drinking in these social contexts may be normatively light, drinking is still typical and accepted, compared with social contexts where drinking is atypical or occurs rarely (e.g., during a class). Furthermore, this restricted range of low drinking norms may influence compliance drinking differently. That is, complying with drinking offers may continue to be discouraged in contexts with low drinking norms but encouraged in settings with high drinking norms.

The strengths of the present work are that it reveals for the first time that context-specific norms moderate the effect of group size on drinking in natural settings, while providing evidence that the findings are not the result of individual differences across people or flawed retrospection (Robinson & Clore, 2002; Tennen et al., 2000). Additionally, our work joins an emerging body of research on the effects of social environments on alcohol consumption using field methods (i.e., daily experience sampling; Reis & Gable, 2000) for collecting data from natural drinking events (e.g., Clapp et al., 2008; Cullum et al., 2010). Specifically we demonstrate that experience sampling methods such as daily dairies can be useful for identifying how subtle social influence processes may interact to directly shape personal behavior, as well as affect compliance decisions in response to more overt forms of social influence. It is also worth noting that while we focus on the social influence that others have on a target individual (the participant), influence in natural social contexts tends to be dynamic and reciprocal, and the targets of influence that we investigate here are also in turn influencing others they come in contact with, and contributing to the norms that emerge in each social drinking context (Cullum & Harton, 2007; Latané, 1981).

One limitation of the present work, however, is that we rely on individual perceptions of context-specific norms, which may reflect to some degree projection effects of personal behavior onto group typical behavior. However, assessing norm perceptions more acutely and over short recall periods (i.e. ‘how much did your friends drinking last night?’) should more accurately capture participants’ observations of the behavior and preferences of their drinking network members (Prentice & Miller, 1993) than if the standard more general and long term recall periods are assessed (‘how much did your friends drinking over the last month, year, or lifetime?’). This in turn should attenuate the extent to which projection biases recall of the normative drinking behavior of friends and acquaintances (Cullum et al., 2010; cf. Robinson & Clore, 2002).

A second limitation of the present research is that we did not have a continuous measure of drinking offers received. As such, it remains somewhat unclear whether context-specific norms influence compliance drinking directly by guiding decisions to accept drinking offers, or by first affecting the number of drinking offers being made. Although our multi-level logistic regression analysis failed to support this latter account, future work could use more continuous measures of receiving drinking offers to further distinguish the effects of group size and norms on the rate at which overt influence attempts are made (cf. Schacter, 1951) from the rate at which people comply with them.

Future work may also wish to address prevalence estimates of drinking in the social-context (i.e., percent of people in a setting who drank; Graham, Marks, & Hansen, 1991). Such information speaks to the degree of normative consensus and/or social cohesion during a social drinking context, which may likely moderate the degree to which group size and context-specific norms influence drinking behavior. Future work breaking social drinking contexts down further to investigate its gender composition, or the dyadic and network composition qualities of the people that make up the drinking context (i.e., relationship type, frequency of interaction, group cohesion; Rosenquist et al., 2010) may also be informative for testing contextual social influence effects in drinking. For instance, people may be more likely to comply with drinking offers from their close ties (e.g., best friend, dating partner),

or may defer more to the context-specific norm when the group consists of closer ties. Future research would benefit from exploring these and other network cohesion processes as they pertain to social influence dynamics. Lastly, comparing norms and group size across more descriptive qualities of drinking contexts (e.g., bar vs. house party) may also be informative and our findings may eventually help to explain the processes involved during large social gatherings that typically lead to heavy drinking, at least for college students, such as at tailgating parties and 21st birthdays, where drinking norms that are heavier than people normally encounter are likely to be focal (Neighbors et al., 2006).

The present findings may ultimately help inform policy and intervention strategies for reducing heavy drinking episodes and their corresponding acute health risks (e.g., drunk driving, violent behavior, unprotected sex; Wechsler & Nelson, 2001). For example, individual-focused cognitive behavioral, brief-motivational, and personalized normative feedback programs have shown some efficacy in reducing alcohol use and negative consequences (Larimer & Cronce, 2007); however they could be enhanced further by incorporating skills or feedback aimed at recognizing contexts in which norms may exert stronger effects on drinking behavior (e.g., large parties). In conclusion, the social-contexts in which people consume alcohol may subtly affect not only conformity processes, but also compliance processes in drinking behavior.

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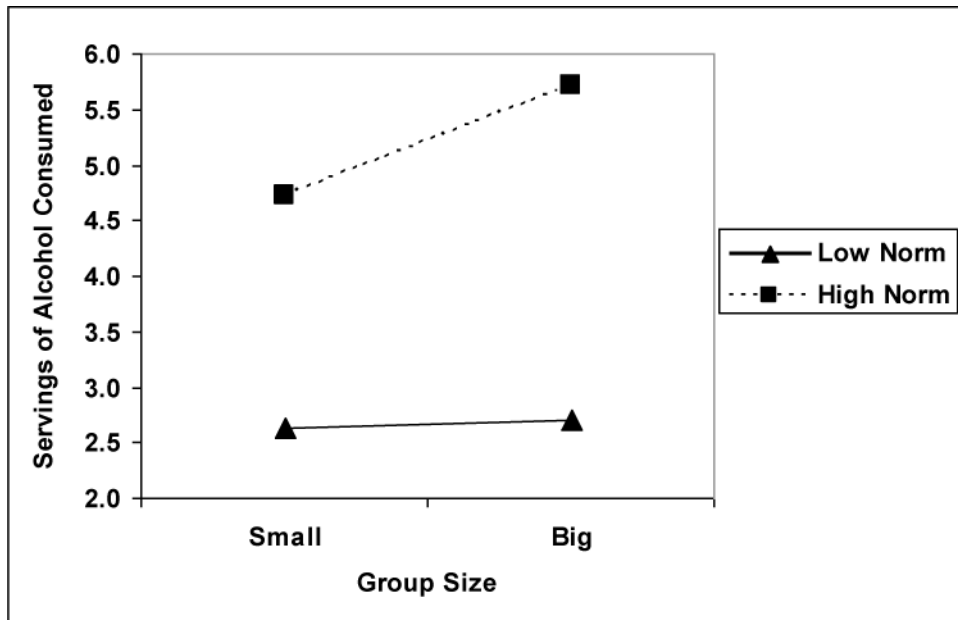


Figure 1. The Impact of Group Size and Context-Specific Drinking Norm on Alcohol Consumption. Note: Group Size and Drinking Norms are plotted at $-1SD$ and $+1SD$ around person-centered means.

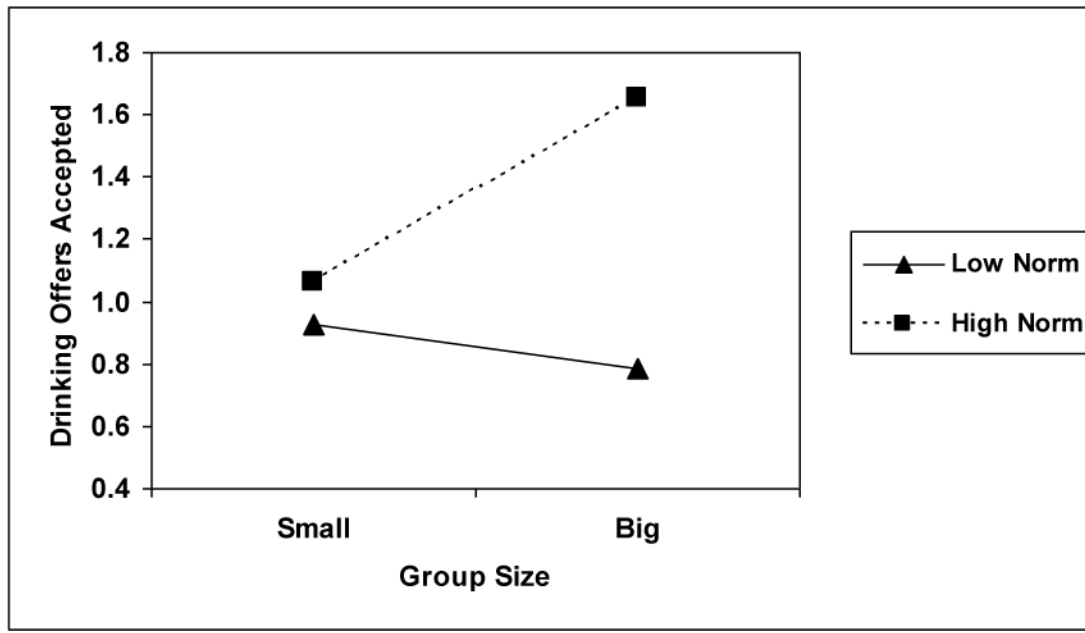


Figure 2.

The Impact of Group Size and Context-Specific Drinking Norm on Compliance with Drinking Offers.

Note: Group Size and Drinking Norms are plotted at $-1SD$ and $+1SD$ around person-centered means.

Table 1

Means & Correlations.

Variables	1	2	3	4	5
1) Compliance with Drinking Offers	1.24 (1.18)				
2) Time Spent Socializing	.26*	5.56 (1.98)			
3) Group Size	.27*	.39*	5.77 (2.21)		
4) Context-Specific Norm	.42*	.38*	.58*	5.60 (2.35)	
5) Amount of Alcohol Consumed	.36*	.40*	.44*	.51*	4.49 (2.60)
6) Gender	-.17*	.05	.02	-.35*	-.38*

Note:

* = $p < .001$ level. Means and standard deviations (in parentheses) are presented on the diagonal. Gender is effects coded (-1 = Male, 1 = Female). This summary information is based on person aggregated reports of social drinking events ($N = 394$). For all multi-level analyses, and grand-mean centered; all other variables were person-centered.

Table 2

Multi-level Regression Results for Drinking Behavior as a Function of Social Influence Processes.

Amount of Alcohol Consumed Outcome			
Predictor	Unstandardized <i>b</i>	<i>t</i>-value	<i>Cohen's d</i>
Intercept	3.96		
Gender	-1.07	-8.39**	.85
Compliance with Drinking Offers	.52	15.35**	1.55
Time Spent Socializing	.24	10.38**	1.05
Group Size	.09	4.45**	.45
Context-Specific Norm	.49	18.72**	1.89
Group Size × Context-Specific Norm	.03	5.17**	.52

Compliance with Drinking Offers Outcome			
Predictor	Unstandardized <i>b</i>	<i>t</i>-value	<i>Cohen's d</i>
Intercept	1.10		
Gender	-.17	-2.57*	.26
Amount of Alcohol consumed	.21	11.52**	1.16
Time Spent Socializing	-.01	-.51	.05
Group Size	.04	3.23*	.33
Context-Specific Norm	.10	5.33**	.54
Group Size × Context-Specific Norm	.02	5.43**	.55

Note:

* = $p < .05$,** = $p < .001$. Degrees of freedom are approximately 392. *Cohen's ds* are computed from *t*-values and approximate *dfs*.