

CONVERSATIONS ABOUT DRINKING: COLLEGE STUDENT PERCEPTIONS OF  
PERSONAL AND PEER DRINKING

A Thesis  
by  
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Submitted to the Graduate School  
at Appalachian State University  
in partial fulfillment of the requirements for the degree of  
MASTER OF ARTS

December 2012  
Department of Psychology

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## **Abstract**

### **CONVERSATIONS ABOUT DRINKING: COLLEGE STUDENT PERCEPTIONS OF PERSONAL AND PEER DRINKING**

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Alcohol consumption among college students relates to normative perceptions of peer use. One way in which these norms are likely disseminated among social groups is through conversations about drinking alcohol. Further, prior research suggests that frequency of alcohol-related conversations relate to self-reported college student drinking. However, little is known about college student discussions about alcohol. This study investigated how anticipated responses to a hypothetical conversation about drinking varied in relation to the valence of the discussion of drinking (positive vs. negative), perceptions of personal responses versus the “typical same-sex college student’s” responses, gender, and personal drinking behavior. Results indicated that college student participants generally matched the conversational valence depicted by fictitious peers in the vignette, and that participants perceived the typical same-sex college student as more accepting of heavy college student drinking than they perceived themselves. Overall, there were few gender differences, and self-reported personal drinking related weakly to anticipated responses. The findings suggest that college students report some willingness to express concern and offer advice when discussing heavy drinking with male peers. Results are generally consistent with previous college student drinking literature suggesting that college students match perceived

normative tolerance of drinking behavior. The need for future longitudinal and in-vivo investigations to understand the potential behavioral relationship between alcohol-related discussions and college student alcohol use is noted.

*Keywords:* college students, alcohol, conversations, perception of peer drinking

## **Acknowledgments**

I would like to thank my thesis chair, Dr. Lisa Curtin, for her guidance, direction, and patience throughout this thesis process and during my two years of graduate education. Additional gratitude is warranted to my dedicated thesis committee, Dr. Doris Bazzini and Dr. Denise Martz, and the undergraduate research assistants on this project, Jessica Stewart and Ashton Forelines.

## **Dedication**

I wish to dedicate this thesis to my mother, Sarah Helen Jensen, who has supported all my passions and academic endeavors.

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## **Foreword**

This thesis is written in accordance with the style of the *Publication Manual of the American Psychological Association (6<sup>th</sup> Edition)* as required by the Department of Psychology at Appalachian State University

Conversations about Drinking: College Student Perceptions of Personal and Peer Drinking

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### Abstract

Alcohol consumption among college students relates to normative perceptions of peer use. One way in which these norms are likely disseminated among social groups is through conversations about drinking alcohol. Further, prior research suggests that frequency of alcohol-related conversations relate to self-reported college student drinking; however, little is known about college student discussions about alcohol. This study investigated how anticipated responses to a hypothetical conversation about drinking varied in relation to the valence of the discussion of drinking (positive vs. negative), perceptions of personal responses versus the “typical same-sex college student’s” responses, gender, and personal drinking behavior. Results indicated that college student participants generally matched the conversational valence depicted by fictitious peers in the vignette and that participants perceived the typical same-sex college student as more accepting of heavy college student drinking than they perceived themselves. Overall, there were few gender differences, and self-reported personal drinking related weakly to anticipated responses. The findings suggest that college students report some willingness to express concern and offer advice when discussing heavy drinking with male peers. Results are generally consistent with previous college student drinking literature suggesting that college students match perceived normative tolerance of drinking behavior. The need for future longitudinal and in-vivo investigations to understand the potential behavioral relationship between alcohol-related discussions and college student alcohol use is noted.

*Keywords:* college students, alcohol, conversations, perception of peer drinking

### Conversations about Drinking: College Student Perceptions of Personal and Peer Drinking

A cultural stereotype shaped through media persuasion, news reports, and personal experience informs a popular image of college students drinking above average quantities of alcohol. However, this image is not far from the truth and has data to support that, indeed, 80 to 90% of college students drink alcohol (Grant, 1997; O'Malley & Johnston, 2002), and individuals between 18 and 24 years of age consume alcohol at a higher rate than other age groups (Kandel & Logan, 1984). Moreover, heavy alcohol consumption seems restricted to the college years for a majority of individuals (Weingardt et al., 1998). Those who attend college are more likely to consume alcohol than peers of their same age who do not attend college (O'Malley & Johnston, 2002); and during the years following college, the quantity and frequency of individual drinking decreases (Marlatt, Larimer, Baer, & Quigley, 1993). These findings suggest that variables unique to the college experience, the college environment, or both contribute to heavy drinking for some students.

The College Alcohol Study (CAS) conducted by the Harvard School of Public Health, surveyed students attending 140 four-year colleges across the United States. The researchers found that, although college students reported drinking a mean number of 5 drinks per week (Wechsler, Molnar, Davenport, & Baer, 1999), 44% of this sample were heavy episodic drinkers (also known as binge drinkers) and consumed 91% of the alcohol use reported. "Heavy episodic drinking" is defined as 5 or more drinks consumed consecutively in a single sitting for men and 4 drinks under the same conditions for women (Wechsler, Dowdall, Davenport, & Rimm, 1995). Not surprising, the frequency of heavy episodic drinking predicts the number of self-reported problems related to alcohol among college

students (Wechsler, Dowdall, Maenner, Gledhill-Hoyt, & Lee, 1998; Wechsler, Lee, Kuo, & Lee, 2000; Wechsler et al., 1999).

Ham and Hope (2003) reviewed and summarized the public health concerns and negative consequences related to alcohol consumption among college student samples as including hangovers, skipping class, failure to keep up with school assignments, memory loss, arguments, property damage (Wechsler, Davenport, Dowdall, Moeyken, & Castillo, 1994), and even death (Hingson, Heeren, Zakocs, Kopstein, & Wechsler, 2005). Consistent with high rates of drinking and associated consequences, Clements (1999) found that approximately 13.1% of undergraduate students from a sample of 306 undergraduate psychology students endorsed criteria congruent with alcohol abuse according to the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV, American Psychiatric Association [APA], 1994). Similarly, Knight and colleagues found that 1 in 3 college students met criteria for alcohol abuse or dependence based on the DSM-IV criteria (Knight et al., 2002).

Experiences of negative alcohol-related consequences are not limited to college students who engage in heavy drinking. However, Zador, Krawchuck, and Voas (2000) found that risk of injury and motor vehicle fatalities correlated with even low blood alcohol concentrations, and 53% of college drinkers from the CAS study who consumed five or fewer drinks per occasion reported alcohol-related injuries (Wechsler & Nelson, 2008). In addition, Wechsler (1996) notes that secondary alcohol-related consequences are experienced by more than 87% of individuals on college campuses. These consequences include being insulted, receiving unwanted sexual advances, experiencing disrupted sleep, and caring for intoxicated friends and roommates.

Some groups of college students are at high risk for heavy alcohol consumption. Men are much more likely to imbibe than women and are also more likely to meet criteria for an alcohol use disorder (Clements, 1999). Not only are there gender differences in frequency and quantity of alcohol consumption, but also drinking patterns across the college years differ as well. For example, McCabe (2002) found that as women ascended in class rank, their alcohol consumption decreased compared to their freshman year; however, men consumed more alcohol as their class rank increased compared to their freshman year. Men are also more likely to experience negative consequences related to alcohol than women (Read, Wood, Davidoff, McLacken, & Campbell, 2002). In addition, Perkins (2002) found that men are more likely to experience negative consequences involving others (e.g., public deviance), whereas women tend to experience more internal and private alcohol-related consequences.

Some evidence suggests that college student alcohol consumption among women is rising to meet the alcohol levels consumed by men (Maney, 1990). Biologically, females drink less to reach the equivalent intoxication level as males even beyond that accounted for merely by an average difference in weight; therefore, the increase in alcohol quantity consumption among females poses a potential health risk. Martin and Hoffman (1993) additionally found women who live with men consumed more alcohol compared to women who did not live with men. Alcohol consumption also varies by ethnicity. Anglo-American college students have higher drinking rates than African-Americans (O'Malley & Johnston, 2002), and evidence the highest risk for problematic drinking relative to ethnicity (Wechsler, Dowdall, Davenport, & Castillo, 1995). Additionally, Anglo-Americans and Native Americans reported higher rates of negative alcohol-related consequences compared to

Asian-American and African-American college students (Presley, Meilman, & Cashin, 1996).

The social company a college student keeps may also play an influential role in individual drinking behavior (Dorsey, Scherer, & Real, 1999). Barry (2007), after conducting a thorough literature review on alcohol consumption behaviors among college students, concluded that college students participating in Greek organizations (fraternities for men, sororities for women) drink more than students not affiliated with Greek organizations. Heavy episodic drinking is also reported at higher rates among Greek men and women compared to non-Greek affiliated students (Dorsey et al., 1999; Wechsler et al., 1998). Furthermore, Greek membership correlates with future heavy drinking, beyond the college years (Sher, Bartholow, & Nanda, 2001).

College athletes also report a high level of alcohol consumption. When Wechsler, Davenport, Dowdall, and Grossman (1997) surveyed a sample of students from 140 American colleges they found that students who self-reported their involvement with intercollegiate sports and thought their personal involvement in that sport was important were more likely to participate in heavy episodic drinking than individuals who did not participate in sports. Sixty-one percent of male athletes and 50% of women athletes engaged in heavy episodic drinking compared to 43% of male and 36% of women students who were not involved in athletics. Ham and Hope (2003) suggest that impulsivity among college athletes may contribute to high rates of heavy episodic drinking.

### **Social Learning**

College campuses provide a unique environment, where the close proximity of individuals similar in age, biological development, and social development, combined with a

high concentration of organized functions and gatherings may contribute to heavy drinking. Caudill and Marlatt (1975) experimentally explored the role of social modeling on alcohol consumption with college student participants. They examined a participant's level of alcohol consumption behavior when paired with a heavy drinking, light drinking or non-drinking confederate in a bar-like situation. Participants paired with the heavy drinking confederate consumed higher levels of alcohol compared to participants who were paired with the light and non-drinking confederates. These results suggest that individuals may form their own perception of appropriate behavior through observing the behaviors of others that, in turn, influences their own drinking behavior (Caudill & Marlatt, 1975).

Dorsey, et al. (1999) explored the extent to which the number and type of college students' social network predicted personal alcohol consumption. Although there was no connection between the number of social networks of which an individual was a part and personal drinking behavior, members of Greek organizations were more likely to drink excessively than non-Greeks. They also found that frequency of discussions about alcohol consumption and potential consequences within their social networks correlated with a higher likelihood of excessive individual drinking. The latter finding suggests that social conversations about alcohol consumption may relate to alcohol consumption.

The literature regarding social influences on drinking behavior suggests that they can be both direct and indirect (Borsari & Carey, 2001). Direct social learning involves the explicit offer of an alcoholic drink from a peer. In this instance, as suggested by Borsari and Carey (2001), the student being offered the drink is likely to accept the alcoholic drink in an effort to avoid scrutiny from peers. Also, the act of not consuming alcohol at a college social gathering is viewed as unusual and such an occasion is likely to elicit more offers from others

to drink alcohol (Rabow & Duncan-Schill, 1994). Moreover, the acceptance of the drink may be mediated by an individual's level of self-confidence or social security; the more mature and self-confident a student is, the easier it may be for that individual to resist and to continue to resist invitations to consume alcoholic beverages (Borsari & Carey, 2001).

Modeling, another social learning construct, may indirectly influence drinking behavior. Modeling is defined as the imitation of another's behavior. In this case, an individual matches the observed drinking behavior of another individual, as demonstrated in the previously described experimental study by Caudill and Marlatt (1975). Similarly, the perception of accepted social norms for drinking behavior may indirectly influence an individual's drinking behavior (Borsari & Carey, 2001).

### **Perceived Norms**

Perceived norms are often adaptive and used by individuals to guide acceptable social behavior. Clapp and McDonnell (2000) defined perceived alcohol norms as the amount of alcohol believed to be typically consumed by peers. Perceptions of college peers' alcohol consumption and perceptions of peers' acceptance of drinking reliably relates to personal drinking behavior (Borsari & Carey, 2001; Clapp & Mc Donnell, 2000; Nagoshi, Wood, Cote & Abbit, 1994; Wood, Read, Palfai, & Stevenson, 2001). However, perceived drinking norms and actual peer drinking behavior often differ (Borsari & Carey, 2003; Perkins & Berkowitz, 1986). Neighbors, Dillard, Lewis, Bergstrom, and Neil (2006) suggest that perceptions of peer quantity and frequency of drinking is often an overestimation of the actual quantity and frequency of behavior reported by peers (Baer & Carney, 1993; Perkins, Meilman, Leichliter, Cashin, & Presley, 1999). This misconception is problematic when faulty normative perceptions of heavy drinking among peers are used to guide personal

heavy alcohol consumption (Borsari & Carey, 2001). Often, individuals perceive their alcohol consumption levels as less than the “typical college student” whether that is the case or not (Baer & Carney, 1993; Thombs, 2000). These misperceived norms may lead some students to view their own drinking as less of a concern because they believe they drink in a normative fashion or less than their peers (Perkins, 2002). Additionally, perceptions of normative alcohol consumption are more predictive of personal drinking behavior when applied to a closer group of friends rather than perceptions of general campus drinking behavior. The closer an individual is to a group of people, the more influence that group will potentially have on his or her drinking behavior (Borsari & Carey, 2006).

### **College Student Discussions about Alcohol**

Discussions among college students about alcohol use may be one mechanism through which students develop perceived norms about alcohol use. Dorsey et al. (1999), as previously discussed, found that peer communication about alcohol use predicted college student drinking behavior. Real and Rimal (2007), in addition, investigated the extent to which peer communication about alcohol moderated the relationship between perceived drinking norms and personal drinking behavior while controlling for other predictors. For this study, 675 undergraduate college students completed questionnaires assessing their weekend activities and habits, including average weekend alcohol consumption. They also assessed drinking intentions, drinking norms, and group identity (strength of the relationship one feels towards a specific group) related to drinking behaviors. Finally, participants were asked to respond to the following two questions using a 7-point Likert scale with 1 being *never* and 7 being *all the time*: “Over the past 2 weeks how often have you talked with your friends or siblings about your drinking alcohol?” and “How often do you normally talk with

your friends or siblings about alcohol consumption?” They found that normative mechanisms (i.e., outcome expectancies for alcohol use, and perceptions of normative alcohol use) explained 12.7% of the variance in self-reported alcohol use, and peer communication accounted for an additional 3.2% of the variance in self-reported alcohol consumption. Real and Rimal (2007) also found that peer communication, as a type of social interaction, moderated the relationship between perceived drinking norms and personal drinking behavior among college students.

While Real and Rimal (2007) noted a relationship between peer communication, perceived drinking norms, and individual alcohol consumption behavior, their measurement of peer communication only assessed the frequency of conversations among friends and siblings about drinking alcohol. Real and Rimal (2007) and Dorsey et al. (1999) emphasize the importance of examining various facets of peer communication about drinking such as frequency of discussions relating to alcohol consumption, level of participation (bystander vs. active participant) and agreement in alcohol conversations, and the valence of the conversation (Dorsey et al., 1999).

In an effort to explore the valence of these discussions about alcohol use and consequences among college students, Curtin and colleagues (2008; 2010) employed a series of vignettes. The three vignette conditions included a discussion depicting negative consequences from drinking as a positive experience; the same negative consequences as a negative experience; and a description of heavy drinking in the absence of described consequences. Participants were asked how they would personally respond to the discussion and how the “typical college student” would respond to the discussion. The first study (2008) prompted for an open-ended response, and the second study (2010) asked participants to

choose from responses coded from the first study. The coded responses from the first study that were used in the second study included offering advice, reprimanding the drinker, expressing concern, and encouraging future heavy drinking. They found that participants' anticipated responses to the vignette discussions mirrored the conversational tone depicted in the vignettes.

Curtin et al. (2008), found that when heavy drinking was depicted with negative consequences the participants offered a reprimand (36.3%) or advice (30%); however, when heavy drinking was depicted within a positive fashion, the participants were more likely to reflect the experience as a "good time" (45%). Furthermore, Curtin et al. (2010) found that when heavy drinking was depicted in a negative manner, participants were most likely to suggest that their friends drink less next time (71.1%). When heavy drinking was depicted positively, the participants were most likely to suggest that the occasion "sounded like fun" (Curtin et al., 2010). These findings are consistent with modeling in the college student alcohol studies (Borsari & Carey, 2001; Caudill & Marlatt, 1975) and research examining modeling within body-related discussions among college women (Tucker, Martz, Curtin, & Bazzini, 2007). In addition, Curtin et al. (2008; 2010) found that the participants believed the "typical college student" would respond in a more accepting way to discussions about heavy drinking and consequences than participants would personally respond. This finding is consistent with the perception of peer drinking as heavier than personal drinking (Perkins & Wechsler, 1996). It is also consistent with the finding that college women perceive negative body-focused discussions as normative yet report they, themselves, would not always participate in such discussions (Britton, Martz, Bazzini, Curtin, & LeaShomb, 2006).

Both studies by Curtin et al. (2008, 2010) employed a within subjects design which required each participant to read and respond to each vignette condition. Thus, responses to the vignettes may have been comparative and influenced by awareness of the other vignette conditions. Additionally, they used gender-neutral names for the characters in the vignette, not allowing for investigation of gender differences. The use of open-ended and coded categorical responses only allowed for descriptions of anticipated responses to the vignettes but did not allow for direct quantitative comparisons across the two vignettes. Finally, the two pilot studies did not explore the relationship between the participants' responses to the scripted vignettes and personal drinking behaviors.

### **Present Study**

The current study further investigated college student conversations about drinking and related consequences by improving upon the previously employed methods. First, a between-subjects design was utilized to avoid comparison and possible priming effects due to awareness of the other vignette conditions. Second, the vignette characters were described as male to test for differences between men and women on anticipated responses to the vignette situations. Male characters were specifically chosen based on literature that men drink more heavily than women (Ham & Hope, 2003). Additionally, the use of a 5-point Likert scale to measure participant responses allows for a direct quantitative comparison between the participant's personal response and the perception of the "typical same-sex college student" response across the three vignettes. This study also explored the relationship between the participant's responses and their reported personal drinking patterns.

It was hypothesized that the participants' responses would match the conversational tone depicted in a given scenario (Caudill & Marlatt, 1975; Tucker et al., 2007). It was also

hypothesized that college student men and women would perceive the “typical same-sex college student” as more accepting and encouraging of heavy drinking compared to themselves, in both scenarios (Baer & Carney, 1993; Thombs, 2000). Further, it was hypothesized that participants who drink more heavily would respond in a manner more encouraging of drinking and express less concern across both the conditions, compared to lighter drinking participants. Finally, male participants were predicted to endorse more encouraging and less concerning responses relative to women.

## **Method**

### **Participants**

Two hundred and forty-five participants (men = 129, women = 116) were recruited from the psychology participant pool at a mid-sized, primarily Caucasian, Southeastern university. The age of participants ranged from 18 to 24 years ( $M = 19.35$ ,  $SD = 1.32$ ). In this sample, 34.7% were Freshman, 32.7% were Sophomores, 19.6% were Juniors, and 12.7% were Seniors. The majority of participants identified themselves as White (not of Hispanic origin) (90.2%), with 3.7% identifying as Black, 2.4% as Asian or Pacific Islander, .4% as Native American, and 3.3% as another ethnicity. Fifteen percent of participants reported being a member of a Greek community, and 38.8% reported being involved in a form of university athletics (i.e., university team, intramural team, club sports team). Across the past 30 days, men ( $M = 7.42$ ,  $SD = 5.78$ ) and women ( $M = 7.40$ ,  $SD = 5.65$ ) reported drinking, on average, 7.39 days ( $SD = 5.70$ ). Overall, participants reported becoming intoxicated an average of approximately 4 times ( $M = 3.78$ ,  $SD = 4.86$ ), over the past 30 days, with men ( $M = 5.30$ ,  $SD = 5.66$ ) reporting significantly more episodes of intoxication than women ( $M = 4.31$ ,  $SD = 4.05$ ),  $F(1, 243) = 4.41$ ,  $p = .037$ . Participants were treated in accordance with

American Psychological Association ethical guidelines (2002), and this study was deemed exempt from further review by the university's Institutional Review Board on May 12, 2011 (Appendix A).

### **Vignettes**

Two separate vignettes describing a conversation between two male college students were used (Appendix B). The two characters were given masculine names (Nick and Will). One vignette presented Will describing a night of heavy drinking in a positive and joking manner (i.e., it was fun) to Nick. The second vignette described the same events in a more negative way (i.e., bad hangover, loss of memory, and behaving poorly).

### **Demographic and Alcohol Measurements**

The Demographic questionnaire assessed gender, age, class rank, race/ethnicity, involvement in university athletics, and involvement in the Greek system (Appendix C). A *Substance Use Questionnaire* was used to assess self-reported personal drinking behavior and related variables. The questionnaire contains items from the *Brief Drinker Profile* (Miller & Marlatt, 1987) and assessed family substance use history, and personal current and past frequency and quantity of alcohol and other drug use. The questionnaire also utilized a *Timeline Follow-back*, (Sobell & Sobell, 1992), to assess quantity and frequency of alcohol consumption in the past two weeks (Appendix D). Data collected over a 10-year period reflects high test-retest reliability levels between .87 and .96, among college students over the past 90 and 30 days (Sobell & Sobell, 1992).

### **Vignette Responses**

After reading the vignettes, participants responded to the questions; "If you were in this situation what would you say?", and "If the 'typical college student' of your own gender

were in this situation what would he/she say?” Participants rated the likelihood of their response and the “typical same-sex college student’s” response on five dimensions derived from Curtin and colleagues (2008, 2010). The five response dimensions included: expressing concern about heavy drinking, offering advice, conveying understanding/relating to the heavy drinking, asking to join next time, and encouraging even heavier drinking. Each dimension was rated using a 5-point Likert scale (1 being *Not Likely* and 5 being *Very Likely*; Appendix E).

### **Procedure**

Students met in classrooms in the Department of Psychology and were greeted by one or two experimenters. At the beginning of each experimental session, the participants were asked to read an Informed Consent form (Appendix F), which was also reviewed verbally by one of the experimenters. After each student granted consent to participate, participants completed the Demographic sheet and were randomly assigned to read one of the two vignettes, with an equal number of men and women assigned to each condition. Upon reading the vignette, the participants rated how they would personally respond to the situation and how they perceived the “typical same-sex college student” would respond to the vignette. In an attempt to control for order effects, half the participants responded to the question about their personal response first, followed by their perception of the normal “typical same-sex college student’s” response, and the other half responded vice versa to the questions. The participants then completed the *Substance Use Questionnaire*. After handing in all measures, a manipulation check questionnaire was completed. Manipulation check items included “What gender was Will?” and “What gender was Nick?” Additionally, participants were asked which of the following two options best described the content of the

vignette: “Consequences of drinking the night before were discussed in a positive and fun manner” or “Consequences of drinking the night before were discussed in a negative manner.” At the end of the study, participants were debriefed, thanked for their participation, and given a research credit slip. Each participant earned research credits points toward their psychology classes, in accordance with instructor policy.

## **Results**

### **Manipulation Check**

One-hundred percent of participants identified “male” as the gender of the two vignette characters. Responses to the manipulation check item, assessing content of the vignette condition (i.e., positive or fun versus negative), were submitted to a chi square test across vignette content conditions,  $\chi^2 = 50.84, p < .001$ . The majority (87.8%) of individuals assigned to the positive content of the vignette condition perceived the conversation as positive in conversational tone. However, 82.7% of the individuals in the negative content of the vignette condition also perceived the conversation as positive in conversational tone. Upon closer examination, the vignettes described a similar evening of heavy drinking, differing in terms of the number of severe negative consequences rather than the conversational tone assessed via the manipulation check item. In addition, both vignettes included the phrase “we had a great time,” implying both depicted a fun and positive experience. The manipulation check directly asked about the manner in which consequences were discussed rather than the consequences themselves, rendering the manipulation check items an ineffective measure of discerning a difference between the two vignettes. Given the two vignettes objectively contained different consequential content, the originally planned analyses were conducted.

### **Mixed model Multivariate analyses of variance (MANOVA)**

The hypotheses stating that participants' responses would generally match the vignette's conversational tone, that participants would perceive the "typical same-sex college student" as more accepting of alcohol consumption, and that men would be more encouraging of drinking than women, were addressed simultaneously. The 10 response variables, five for personal responses and five for "typical female/male college student" response, were treated as dependent variables in five separate 2 (respondent perspective: personal vs. typical same-sex college student) x 2 (gender of participant: male vs. female) x 2 (content of discussion: positive vs. negative) mixed-model multivariate analyses of variance. See Table 1 for means and standard deviations of responses to vignettes based on condition, respondent perspective, and gender.

The MANOVA utilizing "express concern" as the dependent variable yielded a main effect of content of the vignette,  $F(1, 240) = 46.51, p < .001, \eta^2_p = .162$ . Expressions of concern were significantly greater in response to the negative-valance vignette,  $M = 3.02, SD = 1.42$ , compared to the positive-content vignette,  $M = 2.15, SD = 1.41$ . There were no main effects of subject gender or respondent perspective, and no significant interactions, all  $p$ 's  $> .05$ .

The MANOVA utilizing "offer advice" as the dependent variable yielded a main effect of the respondent perspective,  $F(1, 240) = 4.07, p = .045, \eta^2_p = .017$ , and of the content of the vignette,  $F(1, 240) = 35.25, p < .001, \eta^2_p = .128$ . Participants reported personally anticipated "offers advice" significantly more,  $M = 2.51, SD = 1.24$ , than the typical same-sex college student,  $M = 2.35, SD = 1.18$ . Additionally, "offers of advice" were significantly greater in response to the negative-content vignette,  $M = 2.80, SD = 1.38$  compared to the

response to the positive-content vignette,  $M = 2.06$ ,  $SD = 1.36$ . There were no main effects of gender, and no significant interactions. The MANOVA analysis utilizing “convey understanding” as the dependent variable yielded no significant main effects or interactions (all  $p$ 's  $> .05$ ).

The MANOVA utilizing “ask to join” as the dependent variable yielded a main effect of gender,  $F(1, 240) = 4.36$ ,  $p = .038$ ,  $\eta^2_p = .018$ , and content of the vignette,  $F(1, 240) = 20.17$ ,  $p < .001$ ,  $\eta^2_p = .077$ . Male participants were significantly more likely to report they would “ask to join next time”,  $M = 3.12$ ,  $SD = 1.19$ , than women,  $M = 2.89$ ,  $SD = 1.25$ . Additionally, participants were more likely to “ask to join” in response to the positive-content vignette,  $M = 3.26$ ,  $SD = 1.22$ , than the negative-content condition,  $M = 2.76$ ,  $SD = 1.22$ . There were no main effects of respondent perspective, and no significant interactions (all  $p$ 's  $> .05$ ).

The MANOVA utilizing “encouragement to drink more” as the dependent variable yielded a main effect of respondent perspective,  $F(1, 240) = 5.74$ ,  $p = .017$ ,  $\eta^2_p = .023$ , gender,  $F(1, 240) = 5.50$ ,  $p = .020$ ,  $\eta^2_p = .022$ , and of content of the vignette,  $F(1, 240) = 10.48$ ,  $p = .001$ ,  $\eta^2_p = .042$ . The typical same-sex college student was perceived as significantly more likely to encourage heavier drinking,  $M = 2.06$ ,  $SD = 1.03$ , than the participants self-reported,  $M = 1.84$ ,  $SD = 0.93$ . Men,  $M = 2.04$ ,  $SD = 0.86$ , were significantly more likely, than women,  $M = 1.85$ ,  $SD = 0.91$ , to encourage drinking. Finally, encouragement for more drinking was greater in response to the positive-content vignette condition,  $M = 2.07$ ,  $SD = 0.89$ , compared to the negative-content condition,  $M = 1.81$ ,  $SD = 0.89$ . There were no significant interactions (all  $p$ 's  $> .05$ ).

## Correlational and Regression Analyses

It was also predicted that personal drinking behavior (i.e., self-reported episodes of intoxication within the past month) would relate to anticipated vignette responses. Greater self-reported drinking was predicted to relate to an increased likelihood of encouraging drinking, asking to join, and offering understanding, and relate to lower endorsement of offering advice and expressing concern across all the conditions. This was assessed utilizing correlational and forced entry method multiple linear regressions.

Correlations were computed between the ten dependent variables and self-reported number of episodes of intoxication as shown in Table 2. In terms of *personal responses*, to the vignettes, episodes of intoxication significantly and positively correlated with “asking to join” and “conveying understanding,” and negatively correlated with “expressing concern” and “offering advice.” For the *typical same-sex student responses*, personal episodes of intoxication significantly and positively associated only with “conveying understanding,” and negatively correlated with “expressions of concern.” Episodes of intoxication did not significantly relate to “encouragement to drink more” for personal or “typical same-sex student responses.”

Ten multiple regression analyses were conducted to predict responses to the vignettes from the self-reported personal episodes of intoxication across the past month after controlling for content of the vignette conversations and the participant’s gender. Five of the ten regression analyses assessed *personal* anticipated responses to the vignettes (i.e., “If you were in this situation what would you say?”) as the criterion variable. Content of the vignette (positive or negative), participant episodes of intoxication, and participant gender served as predictor variables. Five identical regression analyses assessed anticipated responses of the

*typical same-sex college student* to the vignette (i.e., “If the ‘typical same-sex college student’ of your own gender were in this situation what would they say?”) as the criterion variable. Variables were forced into a regression equation in steps in the following order: (Step 1) gender and content of the vignette, (Step 2) number of self-reported days of intoxication within the last 30 days. The results of the multiple regression analyses are shown in Table 3.

The regression analysis using *personal* “expression of concern” as the criterion revealed that gender and vignette condition, together, accounted for 15% of the variance,  $F(2, 242) = 20.55, p < .001$ , and number of intoxication episodes accounted for an additional 5%,  $F(1, 241) = 19.69, p < .001$ . Gender and the content of the vignette accounted for 11% of the variance, in *personal* “offers of advice,”  $F(2, 242) = 14.97, p < .001$  and number of intoxication episodes accounted for an additional 5% of the variance,  $F(1, 241) = 15.43, p < .001$ . When *personal* “conveyances of understanding” as the criterion, the regression equation revealed that gender and the content of the vignette did not account for any variance in the responses,  $p = .758$ ; however, the number of intoxication episodes accounted for 7% of the variance,  $F(1, 241) = 6.23, p < .001$ . When *personal* responses for “asking to join” next time were used as the criterion, the regression equation revealed that gender and the content of the vignette accounted for 7% of the variance,  $F(2, 242) = 9.47, p < .001$ , and the number of intoxication episodes accounted for an additional 7% of the variance in responses,  $F(1, 241) = 13.39, p < .001$ . Finally, the regression using *personal* responses “encourage more drinking” as the criterion, revealed that gender and content of the vignette accounted for 4% of the variance,  $F(2, 242) = 5.20, p = .006$ ; however, the number of intoxication episodes accounted for very little additional variance (1%),  $F(1, 241) = 3.55, p < .015$ .

The regression analysis using the *typical same-sex college student* “expressions of concern” as the criterion revealed that gender and content of the vignette, together, accounted for 10% of the variance,  $F(2, 242) = 13.41, p < .001$ , and the number of intoxication episodes accounted for an additional 7%, of the variance,  $F(1, 241) = 16.05, p < .001$ . When *typical same-sex college student* responses for “offers of advice” were used as the criterion, revealed that gender and the content of the vignette accounted for 8%, of the variance  $F(2, 242) = 10.01, p < .001$ , and the number of intoxication episodes accounted for an additional 2% of the variance,  $F(1, 241) = 8.25, p < .001$ . Similar to *personal* “conveyances of understanding,” when the *typical same-sex college student* “conveyances of understanding” served as the criterion, gender and the content of the vignette failed to account for any variance, of the responses,  $F(2, 242) = .20, p = .823$ ; however, the number of intoxication episodes accounted for 6% of the variance in responses,  $F(1, 241) = 4.88, p = .003$ . For the variable assessing *typical same-sex college student* responses to “ask to join” next time as the criterion revealed that gender and the content of the vignette accounted for 3% of the variance in responses,  $F(2, 242) = 3.80, p = .024$  and number of intoxication episodes accounted for an additional 2% of the variance,  $F(1, 241) = 3.82, p < .001$ . Finally, the regression using *typical same-sex college student* responses to “encourage one to drink more next time” revealed that gender and content of the vignette did not account for a significant amount of the variance,  $F(2, 242) = 1.98, p = .140$ ; further, the number of intoxication episodes failed to account for any additional variance,  $F(1, 241) = 3.55, p = .015$ .

### **Discussion**

The current study investigated college student discussions of alcohol use, a mechanism through which subjective drinking norms may be disseminated among social

groups (Dorsey et al., 1999). Overall, college student participants were “somewhat likely” to endorse a willingness to express concern and offer advice to heavy drinking male peers.

Consistent with previous findings, college student participants generally matched the conversational content depicted by fictitious male peers discussing a night of heavy drinking and related consequences in a vignette (Caudill & Marlatt, 1975; Curtin et al., 2008; 2010), and perceived the “*typical same-sex college student*” as somewhat more accepting of heavy college student drinking than they perceived themselves (Perkins & Berkowitz, 1986). Few overall gender differences were noted, and self-reported personal drinking related only weakly to anticipated responses.

As hypothesized, when participants were presented with either the positive or the negative condition, anticipated personal responses generally matched the content of the vignette. Specifically, participants responded with greater acceptance and encouragement of heavy drinking when the main character discussed a night of heavy drinking with few negative consequences in a positive, light-hearted manner. Likewise, participants responded with more concern and direct advice when “Will” discussed a night of heavy drinking replete with apparent negative consequences in a defeated manner. Indeed, the results from the current study are consistent with findings from the pilot studies conducted by Curtin et al. (2008; 2010). While Curtin et al. (2008; 2010) used a within subjects design, exposing all participants to the positive and negative vignette conditions, as well as an additional neutral vignette condition, they also found that college students matched the tone of the vignette, and were more likely to offer concern and advice when presented with the vignette that described negative consequences.

Further, these matching results are consistent with previous investigations of other

social conversations such as fat talk (Nichter, 2000). Fat talk is a label used to describe discussions in which girls and women discuss their bodies in a self-degrading manner (e.g., “I’m so fat”) with each other (Britton, et al., 2006; Nichter, 2000). Tucker et al., (2007) found that participants matched a confederate’s rating of her body, and suggested that women may participate in fat talk discussions in part to conform to a social norm. Indeed, the reciprocity hypothesis posits an individual is likely to disclose information similar to that of their conversational partner (Cozby, 1972). Individuals may verbally conform to a conversational style as a form of impression management (Gouldner, 1960), under the assumption that such conformity will result in peer acceptance and rejection avoidance. Similar to evidence of conformity within the fat talk literature (e.g., Tompkins, Martz, Rocheleau, & Bazzini, 2009; Tucker et al., 2007), it is likely that participants in the current study conformed to a perceived drinking norm by choosing anticipated responses similar to the content (e.g., expressed concern about consequences) of the protagonist portrayed in the vignette, although further research is required to understand the motivation behind evidence of conversational conformity.

In addition, college student participants in this study perceived the “typical same-sex college student” as more accepting and encouraging of drinking compared to their own anticipated response, regardless of the conversational content and tone describing the previous night of heavy drinking. These results are consistent with previous literature suggesting that college students perceive the “typical same-sex college student” as more tolerant of heavier drinking and as drinking more than themselves (Perkins & Berkowitz, 1986; Prentice & Miller, 1993). The perception that “typical same-sex college students” are more accepting of drinking, and college students’ tendency to match a conversational tone,

are considered, by Borsari and Carey (2003), as indirectly influencing a college student's drinking behavior. An *in vivo* study employing a confederate engaging in varying alcohol-related discussions in the context of alcohol consumption could address the impact of such indirect factors on drinking more directly than the present investigation.

Misperceptions of the "typical same-sex college student's" alcohol consumption, and acceptance of heavy drinking behavior, even implicitly, in conversations, may be an example of pluralistic ignorance. Pluralistic ignorance occurs when individuals assume that their own attitudes are more conservative than those of others, in this case, of the "typical same-sex college student" (Schroeder & Prentice, 1998). Moreover, when college students have limited knowledge of average peer alcohol consumption and then observe, or hear about excessive peer drinking, such drinking is often then perceived as typical (Perkins, 2002). Indeed, this study found that college students may engage in pluralistic ignorance when perceiving their peers as being more tolerant of drinking compared to themselves in the context of fictitious discussion about alcohol use. College student attempts to match heavy drinking based upon a misperceived norm may be problematic (Borsari & Carey, 2001; Clapp & Mc Donnell, 2000; Nagoshi, et al., 1994; Wood, Read, Palfai, & Stevenson, 2001). For example, college students may achieve higher incidents of personal episodes of intoxication in an effort to achieve the perceived norm (Trockel, Williams, & Reis, 2003).

Although it was hypothesized that male participants would be more encouraging and accepting of alcohol consumption compared to women, this was only partially supported. College student men were significantly more likely to express a desire to join future drinking occasions, and to encourage heavier alcohol consumption than women, consistent with findings that college student men drink more (Clements, 1999; O'Malley & Johnston, 2002)

and may be less sensitive to negative drinking consequences (Suls & Green, 2003) than college student women. Further examination of mean differences and standard deviations reveals that, although statistically significant, reported anticipated responses to the vignette discussions may not differ much between men and women on a practical level. In addition, the present study did not find an interaction between gender and the vignette condition, indicating that men and women responded similarly regardless of the description of drinking-related consequences.

Results from the current study are not remarkably consistent with the college student drinking literature examining gender and peer influences. Previous findings suggest that men consume more alcohol than women, and are more inclined to participate in social activities that involve the consumption of alcohol (Clements, 1999; O'Malley & Johnston, 2005). In addition, Prentice and Miller (1993) found that college student men are also more likely than college student women to achieve alcohol consumption levels that match their normative perception of peer consumption. Further, Suls and Green (2003) found that college student women reported limiting their alcohol intake as a function of a general perception that drinking-related consequences are more negative compared to college student men. They also found that men reported experiencing a more difficult time fitting in with their peer group if they expressed concerns about heavy drinking, which may relate to greater alcohol consumption and endorsement of heavy drinking.

The small detectable difference found between responses of men and women to the vignettes in the present study is somewhat consistent with the shrinking gender-drinking gap between men and women among many ages (Keeling, 2002). Recent research shows that rates of college student binge drinking has increased for women and is approaching the rates

of men (O'Malley & Johnston, 2002; Young et al., 2005). Perhaps this closing gender gap reflects the current trend that heavy alcohol consumption is beginning earlier for men and women, before entry into college. Indeed, Wallace et al. (2002) found that senior high school men drank, on average, 25% more alcohol than high school women in 1975, but in 2001, senior high school men drank, on average, only 12% more alcohol than women. As students transition into a college environment, Wagoner et al. (2012) posit that the diminishing gender gap may relate to the emerging concern that college women, under the age of 21, receive free alcohol more frequently and more easily than in the past. Finally, Perderon and LaBrie (2006) found more women participate in college drinking games than previously believed, which is thought to further contribute to higher episodic alcohol consumption among college women.

The hypothesis that heavier drinking participants would encourage drinking and express less concern, compared to lighter drinking participants, was relatively supported. More specifically, when gender and vignette conditions were controlled for, participant intoxication predicted offers of concern or advice (negative relationship with self-reported intoxication) and predicted an understanding of the situation and asking to join next time (positive relationship with self-reports of intoxication). Overall, self-reports of intoxication were less predictive of anticipated "typical same-sex college student" responses than for anticipated personal responses. Previous literature indicates that students who drink at a higher quantity and frequency tend to perceive their peers as heavier drinkers as well (Agnostinelli, Brown, & Miller, 1995), and heavy drinkers, compared to light drinkers, often perceive their peers as having more lenient attitudes toward drinking (Perkins & Berkowitz, 1986). Interestingly, self-reported incidents of personal intoxication did not predict responses

of heavier drinking encouragement for either the anticipated personal responses or the anticipated “typical same-sex college student response.” Notably, alcohol consumption was self-reported by the college student participants and may be vulnerable to underreporting (Polich, 1982). Specifically, Northcote and Livingston (2011) found self-reports of drinking among college students most accurate for light to moderate drinkers and found evidence that heavy drinkers under reported their drinking between 10 to 17%. In the current study, 25.2% of participants reported consuming 9 or more drinks on a single day (heavy drinkers in Northcote & Livingston, 2011), suggesting a quarter of participants may have somewhat under reported their alcohol consumption.

Although partial support was found for all four hypotheses, the present study has a number of limitations. First, unlike other studies that implemented real-life simulations of conversations and behavior (Caudill & Marlatt, 1975; Tucker, et al., 2007), the current study presented participants with artificially constructed conversational vignettes, and it is unknown how the response to these vignettes would relate to real-life behavior. In addition, the hypothetical vignette included descriptions that could be interpreted differently by individual participants (e.g., may infer voice intonation); although, the random assignment of participants to vignette conditions should minimize the effects of this potential confound. To target these limitations in future research, researchers should utilize confederates to interact with participants, or employ a pre-recorded film of a dialogue about drinking. This would help to control the tone and delivery of the dialogue content, and the experimenters could minimize the risk of a participant misinterpreting the vignette.

Secondly, while the five types of responses were systematically derived from two separate pilot studies (Curtin et al., 2008; 2010), the forced responses limit an individual’s

range of possible responses to the scenario presented, but the Likert-scale responses allow for direct quantitative comparisons across independent (e.g., vignette condition, personal vs. “typical”) and quasi-independent variables (e.g., gender). Finally, and of some concern, the manipulation check results indicated that participants did not assess the designated negative vignette condition as portraying a negative tone. The between-subject design required the participants to read either the positive- or the negative-content vignette, with the intention to eliminate priming associated with within-subjects comparisons used in the pilot studies (Curtin et al., 2008, 2010). The lack of a comparison condition may have contributed to the ineffectiveness of the manipulation check item, which focused on tone rather than content. It could also be the case that feeling ill and missing class the next day, common drinking-related consequences noted among college students (Wechsler et al., 1994), were not perceived as severe enough to elicit a negative evaluation of the tone of the discussion. Indeed, retrospective analysis of the condition manipulation check item suggests it failed to adequately assess the content difference between the conditions. The positive and negative vignette conditions focused on the protagonist’s presentation of the number and severity of consequences, rather than inherently discussing consequences in a positive or negative tone assessed by the manipulation check question. A more effective manipulation check item may have directly assessed the content, rather than the tone, of the conversation by asking participants to rate the severity of consequences on a Likert scale, or objectively recalling the number of consequences discussed.

Alcohol-related problems lie along a continuum (Vik, Carrello, Tate, & Field, 2000); perhaps future research should focus on more severe consequences (e.g., involving property damage, physical harm, or fatalities; Hinsigon, Heeren, Zakocs, Kopstein, & Wechsler, 2001;

Wechsler et al., 2000) to elicit a more negative perception of consequences than more common negative consequences, such as a hangover, and skipping classes. Further, both vignettes described consequences that were harmful to the self, rather than others. Future research may consider assessing anticipated responses to reports of heavy drinking consequences that harm others relative to heavy drinking consequences that only result in harm to the self. Assessing harm to others may reveal more disparate responses across gender, as men tend to experience negative consequences involving public deviance, compared to the more personal and relatively private consequences experienced by women (Perkins, 2002).

It appears that conversations are a viable mechanism through which drinking attitudes and norms may be perpetuated and disseminated, as speculated by Dorsey et al. (1999) and Real and Rimal (2007). Given preliminary evidence of conformity in college student discussions about alcohol and the potential for such discussions to perpetuate perceptions of the college environment as accepting of heavy drinking, further research investigating the conversations among college students is warranted. Fat talk literature suggests that conformity, within conversations about body satisfaction, may relate to eating pathology and body dissatisfaction (Ousley, Cordero, & White, 2008). This may also be problematic for alcohol consumption, whereby conversations relating to alcohol correlate with increased drinking behavior and negative consequences (Dorsey et al., 1999; Real & Rimal, 2007). In-vivo and longitudinal research could investigate the extent to which intentions to respond to peer conversations of heavy drinking relate to subsequent behavior, and ultimately to potential impact on personal and peer drinking behavior.

On a positive note, the present results suggest that college students anticipated expressing some concern and/or offering advice when discussing consequences of heavy drinking with male peers. In addition, this study found college students anticipate responding in a way that varies as a function of the number and severity of the alcohol-related consequences discussed (e.g., greater concern and advice when discussing more severe consequences). Real and Rimal (2007) found that peer conversations moderated the relationship between perceived norms and personal alcohol consumption, such that a higher frequency of drinking-related conversations increase the likelihood of drinking alcohol at a level consistent with one's perception of normal behavior. The present study suggests that conversations about alcohol are likely influenced by the content of the drinking-related consequences in such discussions rather than just the frequency of such discussions.

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Table 1

*Means and Standard Deviations of Anticipated Personal and the Typical Same-sex College Student Responses*

Response	Personal				Typical Same-Sex College Student			
	Positive		Negative		Positive		Negative	
	<i>M (SD)</i>							
	Men	Women	Men	Women	Men	Women	Men	Women
Express Concern	2.20 (1.20)	2.07 (1.11)	2.98 (1.16)	3.19 (1.13)	2.32 (1.17)	2.00 (1.17)	2.83 (1.09)	3.09 (1.26)
Offer Advice	2.17 (1.17)	2.03 (1.12)	2.95 (1.23)	2.88 (1.17)	2.21 (1.11)	1.91 (1.01)	2.61 (1.20)	2.79 (1.19)
Convey Understanding	3.55 (1.12)	3.36 (1.14)	3.47 (1.12)	3.43 (1.30)	3.36 (1.17)	3.47 (1.40)	3.41 (1.21)	3.52 (1.11)
Ask to Join	3.46 (.99)	3.05 (1.28)	2.81 (1.21)	2.60 (1.09)	3.25 (1.15)	3.26 (1.42)	2.97 (1.31)	2.66 (1.32)
Encourage to Drink More	2.14 (.97)	1.83 (.98)	1.73 (.88)	1.62 (.83)	2.12 (.91)	2.21 (1.12)	2.16 (1.06)	1.74 (1.00)

Table 2

*Correlations between Episodes of Intoxication and Anticipated Responses to Vignettes*

	“You”	“Typical”
Express Concern	-.21**	-.24**
Offer Advice	-.20**	-.11
Convey Understanding	.27**	.23**
Ask to Join	.27**	.12
Encourage to Drink More	.04	-.04

*Note.*

\*\*  $p < .01$

\*  $p < .05$

Table 3

*Multiple Regression Model by Number of Days Intoxicated within the Last Month on Anticipated Responses*

	"You"				"Typical"			
	<i>b</i>	$\beta$	<i>t</i>	<i>Sig</i>	<i>b</i>	$\beta$	<i>t</i>	<i>Sig</i>
Express Concern	-.06	-.23	-3.94	< .000	-.07	-.26	-4.40	< .000
Offer Advice	-.06	-.23	-3.83	< .000	-.03	.02	-2.11	.036
Convey Understanding	.07	.27	4.26	< .000	.06	.24	3.77	< .000
Ask to Join	.07	.27	4.44	< .000	.03	.02	1.94	.054
Encourage to Drink More	.01	.03	.54	.589	-.01	-.04	-.66	.513

## Appendix A

**To:** Sarah Smith  
Psychology  
CAMPUS MAIL

**From:** Robin Tyndall, Institutional Review Board

**Date:** 5/13/2011

**RE:** Notice of IRB Exemption

**Study #:** 11-0318 **Study Title:** College Student Perceptions of Alcohol Conversations  
**Exemption Category:** (2) Anonymous Educational Tests; Surveys, Interviews or Observations

This submission has been reviewed by the IRB Office and was determined to be exempt from further review according to the regulatory category cited above under 45 CFR 46.101(b). Should you change any aspect of the proposal, you must contact the IRB before implementing the changes to make sure the exempt status continues to apply. Otherwise, you do not need to request an annual renewal of IRB approval. Please notify the IRB Office when you have completed the study.

Best wishes with your research!

CC:  
Lisa Curtin, Psychology

## Appendix B

## 1.

You and Nick are meeting Will at your usual spot for lunch. Will walks in looking slightly disheveled yet, in good spirits.

Nick: Hey Will, what did you get into last night? You're looking pretty rough.

Will: Oh man! I wish you'd both had come out last night! My friends came up to visit and we had a great time.

Nick: Yeah? What did y'all do?

Will: Well, we started pre-gaming at my apartment, then moved to a friend's house where they had some beer; we were pretty tipsy by then. After that we left and went to another house and played beer pong! By that point I was pretty drunk and my friends and I got a ride home. I woke up feeling a little rough. But dude, it was worth it!

2.

You and Nick are meeting Will at your usual spot for lunch. Will walks in looking disheveled and sick.

Nick: Hey Will, what did you get into last night? You're looking pretty rough.

Will: Oh man! I wish you'd both had come out last night! My friends came up to visit, we had a great time.

Nick: Yeah? What did y'all do?

Will: We started pre-gaming at my apartment, then moved to a friend's house where they had some beer; we were pretty tipsy by then. After that we left and went to another house to play beer pong. By that point I was pretty drunk and I am not sure where my friends went. Somebody gave me a ride and a place to crash. By the end of the night I was puking all over the place. I woke up with a heinous hangover. I talked to a friend of mine this morning and apparently my friends left me because I was being obnoxious and trying to start fights with people over a game of beer pong. I don't really remember much after that. I must have gone home and completely passed out. I slept through my first class this morning. It's going to be a long day.

## Appendix C

**Demographic Sheet**

Gender:     \_\_\_Male \_\_\_Female

Age: \_\_\_\_\_

Class rank:     \_\_\_Freshman \_\_\_Sophomore \_\_\_Junior \_\_\_Senior

Race/Ethnicity:     \_\_\_\_\_ (Fill in  
appropriate number)

1=White (not of Hispanic origin)

2=Black

3=Native American

4=Alaskan Native

5=Asian of Pacific Islander

6=Hispanic-Mexican

7=Hispanic-Dominican

8=Hispanic-Puerto Rican

9=Hispanic-Cuban

10=Other: \_\_\_\_\_

Are you involved in the Greek system?     \_\_\_\_\_ yes     \_\_\_\_\_no

Are you involved in college athletics?     \_\_\_\_\_ yes     \_\_\_\_\_no

If yes, do you play for an ASU team?     \_\_\_\_\_yes     \_\_\_\_\_no

If yes, do you play intramural sports?     \_\_\_\_\_yes     \_\_\_\_\_no

## Appendix D

Participant # \_\_\_\_\_

**Substance Use Questionnaire****Family History**

Have any of your immediate relatives (brothers, sisters, parents) had what you would call a significant drinking or drug use problem, one that did or should have led to treatment?

\_\_\_ Yes \_\_\_ No

Have any of your relatives on your mother's side of the family (e.g., grandparents, aunts, uncles) had what you would call a significant drinking or drug use problem, one that did or should have led to treatment?

\_\_\_ Yes \_\_\_ No

Have any of your relatives on your father's side of the family (e.g., grandparents, aunts, uncles) had what you would call a significant drinking or drug use problem, one that did or should have led to treatment?

\_\_\_ Yes \_\_\_ No

**Personal Use/History**

1. Within the last 30 days, on how many days did you use alcohol (includes beer, wine, and liquor)? \_\_\_\_\_

Never Used

Have used, but not in last 30 days

2. On average, how many alcoholic drinks did you consume on one of these drinking days (1 serving= 1 ounce of hard liquor= 4 ounces of wine= 12 ounces of beer)?

\_\_\_\_\_

3. The last time you "partied"/socialized, how many alcoholic drinks did you have? State your best estimate. \_\_\_\_\_

4. Using the calendar below please record the amount of alcohol that you have consumed over the past two weeks. Please record the amount as accurately as possible in the spaces provided below.

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday

5. How many times across the past 30 days have you become “intoxicated”? \_\_\_\_\_
6. How many times in your lifetime (best estimate) have you become “intoxicated”?  
\_\_\_\_\_
7. How many alcoholic drinks do YOU think the typical ASU student has on a typical “drinking day”? \_\_\_\_\_
8. How many alcoholic drinks do YOU think a member of your closest group of friends has on a typical “drinking day”? \_\_\_\_\_
9. Within the last 30 days, how often do you think the typical student at your school used alcohol (beer, wine, liquor)? \_\_\_\_\_
10. How many alcoholic drinks do you think the typical student at your school had the last time he/she “partied”/socialized? \_\_\_\_\_

**Scenario Questions:**

Think about the scenarios you read and responded to earlier:

1. What gender was Will? Male \_\_\_\_\_ Female \_\_\_\_\_
2. What gender was Nick? Male \_\_\_\_\_ Female \_\_\_\_\_
3. Which of the following two options best describes the content of the vignette you just read:
  - a. Consequences of drinking the night before were discussed in a positive and fun manner.
  - b. Consequences of drinking the night before were discussed in a negative manner.

## Appendix E

If **YOU** were in this situation, rate how likely you would be to respond using the following scales:

I would EXPRESS CONCERN about Will's drinking

1	2	3	4	5
Not at all likely		Somewhat likely		Very Likely

I would OFFER ADVICE to Will about drinking

1	2	3	4	5
Not at all likely		Somewhat likely		Very Likely

I would CONVEY UNDERSTANDING/RELATE to Will about drinking

1	2	3	4	5
Not at all likely		Somewhat likely		Very Likely

I would ASK TO JOIN Will next time

1	2	3	4	5
Not at all likely		Somewhat likely		Very Likely

I would ENCOURAGE Will to drink more

1	2	3	4	5
Not at all likely		Somewhat likely		Very Likely

If the "**typical female/male college student**" were in this situation, rate how a typical student would respond using the following scales:

The typical student would EXPRESS CONCERN about Will's drinking

1	2	3	4	5
Not at all likely		Somewhat likely		Very Likely

The typical student would OFFER ADVICE to Will about drinking

1	2	3	4	5
Not at all likely		Somewhat likely		Very Likely

The typical student would CONVEY UNDERSTANDING/RELATE to Will about drinking

1	2	3	4	5
Not at all likely		Somewhat likely		Very Likely

The typical student would ASK TO JOIN Will next time

1	2	3	4	5
Not at all likely		Somewhat likely		Very Likely

The typical student would ENCOURAGE Will to drink more

1	2	3	4	5
Not at all likely		Somewhat likely		Very Likely

## Appendix F



**Consent to Participate in Research**  
College Student Perceptions of Alcohol Conversations

Principal Investigator: Sarah Courtney Smith  
Department: Psychology  
Contact Information:

Sarah Courtney Smith  
ASU Box 15655  
Boone, NC, 29608  
(704) 281-8245

Dr. Lisa Curtin (advisor)  
(828) 262-2729

**What is the purpose of this research?**

You are invited to take part in a research study about college student drinking. If you take part in this study, you will be one of about 150 people to do so. By doing this study we hope to learn about alcohol-related conversations among college students.

**What will I be asked to do?**

You will be asked to read a brief description of a conversation among college students about drinking, complete a questionnaire about the description, and complete questionnaires about yourself (e.g., personal information such as gender, substance use and related problems, and personal preferences and beliefs). Completion of the study will take approximately 30 minutes and you will only need to complete the questionnaires one time.

You should not volunteer for this study if you are under 18 years of age.

**What are possible harms or discomforts that I might experience during the research?**

- To the best of our knowledge, the risk of harm for participating in this research study is no more than you would experience in everyday life. It is possible that you will experience some personal distress as you reflect upon your substance use. If you do experience personal discomfort, the ASU Wellness Center (x 3148) or the ASU Counseling Center (x3180), both located in the Annas Student Services Building, are available to you.
- A breach of confidentiality would likely be the largest risk to you (e.g., someone finds out your individual answers to the questions). Your name will only be on the signed informed consent and will not be linked in any way to your responses to questions.

**What are the possible benefits of this research?**

There may be no personal benefit from your participation but the information gained by doing this research may help others in the future. This study should help us learn about alcohol conversations and consumption among college students.

**Will I be paid for taking part in the research?**

We will not pay you for the time you volunteer while being in this study.

**How will you keep my private information confidential?**

Your information will be combined with information from other people taking part in the study. When we write up the study to share it with other researchers, we will write about the combined information. You will not be identified in any published or presented materials.

This study is anonymous. That means that no one, not even members of the research team, will know that the information you gave came from you.

There are some circumstances in which we may have to show your information to other people. For example, we may be required to show information that identifies you to people who need to be sure that we have done the research correctly, such as Appalachian's Institutional Review Board. However, there will still be no way to link your individual responses to you.

**Who can I contact if I have questions?**

The people conducting this study will be available to answer any questions concerning this research, now or in the future. You may contact the Principal Investigator (Courtney Smith) at [ss68801@appstate.edu](mailto:ss68801@appstate.edu) or the Faculty Research Supervisor (Dr. Lisa Curtin) at [curtinla@appstate.edu](mailto:curtinla@appstate.edu). If you have questions about your rights as someone taking part in research, contact the Appalachian Institutional Review Board Administrator at 828-262-2130 (days), through email at [irb@appstate.edu](mailto:irb@appstate.edu) or at Appalachian State University, Office of Research and Sponsored Programs, IRB Administrator, Boone, NC 28608.

**Do I have to participate? What else should I know?**

Your participation in this research is completely voluntary. If you choose not to volunteer, there will be no penalty and you will not lose any benefits or rights you would normally have. If you decide to take part in the study you still have the right to decide at any time that you no longer want to continue. There will be no penalty and no loss of benefits or rights if you decide at any time to stop participating in the study.

Upon completion of this research project, you will receive ½ Experiential Learning Credit in accordance with your Psychology instructor's class policies. It is important to remember that you are not required to participate in this particular project, and have the option to complete alternative class assignments (e.g., write an essay) rather than participate in research.

This research project has been approved, as required, by the Institutional Review Board of Appalachian State University. This study was approved on May 13, 2011.

**I have decided I want to take part in this research. What should I do now?**

The person obtaining informed consent will ask you to read the following and if you agree, you should indicate your agreement:

- I have read (or had read to me) all of the above information.
- I have had an opportunity to ask questions about things in this research I did not understand and have received satisfactory answers.
- I understand that I can stop taking part in this study at any time.
- I understand I am not giving up any of my rights.
- I have been given a copy of this consent document, and it is mine to keep.

### **Vita**

Sarah Courtney Smith was born in Charlotte, North Carolina. She graduated from Charlotte Country Day School in 2005. The following Autumn, she entered Appalachian State University to study Psychology; and in December 2009, she was awarded the Bachelor of Science degree, with Departmental Honors upon the completion of her undergraduate thesis. In the fall of 2010, she entered Appalachian State University's Clinical Health Psychology program and began study toward a Master of Arts degree, which was awarded in December 2012. Her future plans include applying for further education as a doctoral student in Clinical Psychology.