REGULATING CONSEQUENCES:
THE EFFECTS OF REGULATORY FOCUS AND ALCOHOL EXPECTANCIES ON
ALCOHOL CONSUMPTION IN A PEER CONTEXT

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By
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ABSTRACT

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Alcohol use is a pervasive problem among college students, with 59% of full-time students reporting alcohol use and 39% reporting binge drinking (SAMHSA, 2014). Although peers are known to influence alcohol consumption, the potential influence of personality characteristics are less well known.

This study examined the role of regulatory focus and alcohol expectancies on the association between peers' consequences for alcohol use and participants' alcohol consumption. Exposure to peers' experience of consequences for alcohol use was expected to have an increased association with participants' expectancies and consumption when it was congruent with participants' regulatory focus. Prevention focus was expected to result in an increased negative response to negative consequences for peer alcohol use and promotion focus was expected to result in an increased positive
response to positive consequences for peer alcohol use. The current study examined the potential effect of this person-situation congruence by having participants fill out a series of questionnaires online using SurveyMonkey. These questionnaires included measures of positive and negative consequences for peer alcohol use, positive and negative alcohol expectancies, regulatory focus, participants' own alcohol consumption, and perception of friends' alcohol use.

Neither positive nor negative alcohol expectancies were found to mediate the association between consequences for peers' alcohol use and one's own drinking. Promotion focus was also not found to moderate the association of peers' positive consequences for alcohol use and one's own use or the association between peers' positive consequences for alcohol use and positive alcohol expectancies. On its own, prevention focus did moderate the association between negative consequences for peers' alcohol use and one's own drinking, such that it enhanced the inverse association between negative consequences and alcohol consumption. Prevention focus also moderated the association between negative consequences for peers' alcohol use and negative alcohol expectancies in an unexpected way, with participants with a higher level of prevention focus being less influenced by peers' consequences. These results suggest that there may be additional confounding variables that are not included in these models. Future studies should consider alternative methods of data collection and research designs, including experimental or quasi-experimental designs.
ACKNOWLEDGEMENTS

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INTRODUCTION

A proportion of the college student population drinks alcohol to a degree that is associated with negative outcomes, including assault, sexual assault, and death by unintentional injury (Hingson, Zha, & Weitzman, 2009). In 2001, 12% of full time college students between the ages of 18 and 24, at a 4 year university, were hit or otherwise assaulted by another drinking college student and 2% were sexually assaulted or date raped by a drinking college student (Hingson et al., 2009). Also in 2001, 599,000 (10.5%) college students experienced injury and 474,000 (8%) had unprotected sex due to drinking (Hingson, Heeren, Winter, & Wechsler, 2005). These associations suggest that it is important to understand the factors that are associated with excessive drinking among college students.

There is evidence to illustrate that more college students drink alcohol than not. Based on a national survey, 59.4 % of full-time college students consume alcohol and 39% binge drink, with college students consistently (since 2002) having higher rates of alcohol use compared to other 18-22 year olds (Substance Abuse and Mental Health Services Administration, 2014). These large percentages, combined with the risk of assault from drinking college students, indicate a phenomenon that should continue to be studied and understood.

Past research has shown that affiliation with alcohol-using peers is associated
with alcohol use, but much less is known about the factors that could influence to what degree and under what circumstances an individual may be susceptible to alcohol-using peers. Brown, Bakken, Ameringer, and Mahon (2008) have suggested that individual, motivational, and contextual factors all have the potential to influence susceptibility to peer influences. By merging a general personality orientation with behavior-specific views of peers, the proposed study will examine the mediating effects of alcohol expectancies, an individual social-cognitive factor, on the association between peer and own alcohol use, and regulatory focus, a motivational factor, as a moderator of the hypothesized mediating effect of alcohol expectancies.

Peer Influence and Differential Susceptibility

Peers are known to influence a wide range of behaviors, including alcohol use. This influence has been studied using a variety of methods, including qualitative, experimental, survey, and intervention research (Borsari & Carey, 2001). In a review of this research, Borsari and Carey (2001) discuss how new students, who are attempting to make friends, may be more likely to accept alcohol from others and how it may be seen as unusual not to consume alcohol in a collegiate social setting. The combination of these and other peer-related factors are likely responsible for a large portion of alcohol use in college.

Similarly, Teunissen et al. (2012) found evidence for peer influence on pro-alcohol and anti-alcohol norms. More specifically, they found that adolescents were more influenced by peers of high social status than peers of low social status. The effect of peer social status on peer influence is one example of how there are multiple factors that can
influence the degree to which someone is influenced by their peers. For example, the perception that others drink heavily and approve of this heavy use is also positively associated with one's own alcohol consumption (Borsari & Carey, 2001).

Many factors can alter susceptibility to peer influences, including individual and contextual factors (Brown et al., 2008). Brown et al. used existing research to theorize 12 basic principles of peer influence. One principle that is relevant to the current study is that of individual characteristics, including personality, that can either facilitate or inhibit responsiveness to peer influence. This framework considers how a person acts in the context of a particular situation. The proposed study is specifically interested in how a personality disposition, regulatory focus, may modify susceptibility to peer influence.

**Regulatory Focus**

Regulatory focus has been described as two opposing motivational orientations in which one orientation, prevention focus, is focused on security, strong oughts, and nonlosses and the other, promotion focus, is centered on nurturance, strong ideals, and the pursuit of gains (Higgins, 1997; Molden et al., 2008). Although each of these two forms of regulatory focus can be temporarily evoked by situational factors, individuals also vary in terms of their chronic, personality-level promotion or prevention focus (Molden et al., 2008). The chronic regulatory focus of an individual is thought to be shaped by the socialization environment, such that repetitive emphasis of prevention (or promotion) goals results in the development of a prevention (or promotion) orientation. Promotion and prevention orientations have also been associated with different levels of baseline activity in the left and right frontal lobes of the brain (Amodio, Shah, Sigelman,
Brazy, & Harmon-Jones, 2004). The differences in baseline activity are such that those with a prevention focus are more sensitive to losses and those with a promotion focus are more sensitive to gains on a neurological level. This was demonstrated through correlations of brain activity recorded using an EEG while the participant responded to an implicit regulatory focus task (Amodio et al., 2004).

This key difference, in which those who have a prevention focus are focused on losses and those with a promotion focus are focused on gains, is not necessarily differentially associated with approach and avoidance behavior (Molden et al., 2008). Rather, both of these two orientations (promotion and prevention) can produce either approach or avoidance behaviors, depending on the situation (Molden et al., 2008).

Approach and avoidance refers to the tendency of people to approach positive states and to avoid negative states (Elliot, 2008). Scholer and Higgins (2008) describe approach/avoidance as taking place on three main levels: system, strategic, and tactical. At each of these levels, the use of approach or avoidance can be chosen regardless of the method used at any of the other levels. The tactical level is broader than the actual behavior that is carried out but does take place in a particular and concrete context. The strategic level is about the means or process used to reach the desired end state. This level relates to the broad method (approach or avoidance) used. The system level focuses on end points and includes regulatory focus. Although related, even at this level there is a distinction to be made between approach/avoidance and regulatory focus. As an example of how these different levels might be related to the achievement of a particular goal, if someone wants to be healthier (the system level), they may attempt to lose weight (the
strategic level) by exercising more and eating healthy (the tactical level). The actual
behavior, such as whether the person chooses a salad over french fries, is more specific
than the tactical decision to eat healthy.

At the level of actual behavior, you are motivated to either approach a positive end state or avoid a negative end state. When approaching a positive end state, you can either succeed (gains) or fail (non-gains), but a focus on approaching the positive state is referred to as promotion focus. To avoid something negative, you can also succeed (non-losses) or fail (losses), but the focus on avoidance is prevention focus (Scholer & Higgins, 2008). An example used to describe this by Molden et al. (2008) involves two students who both want to earn an A in a class. One student is focused on earning this A in order to improve their rank in the class (promotion-focus). The other student is focused on earning an A in order to maintain their good standing (prevention-focus). At the system level, both of these students are approaching the positive end state of earning an A; however, one student is doing so because they are focused on gains and the other is doing so because they are focused on preventing losses. In this way, the first student is promotion focused while the second is prevention focused even though they are both approaching a positive end state.

Although this distinction is made between regulatory focus and approach/avoidance, those with a promotion focus are inclined to use approach methods and those with a prevention focus are inclined to use avoidance methods.
**Regulatory Focus and Message Framing**

An example of how regulatory focus can alter how a person responds to a message or situation can be found in Yeung-Jo's study of antismoking advertisements. In this study, participants were primed to either have a prevention or promotion focus before being shown an advertisement which was either concerned with the positive results of not smoking (e.g. improving the respiratory system) or with avoiding the negative results of smoking (e.g. lung cancer). This study found that when the message frame was congruent with a participants' regulatory focus (i.e., promotion with positive results and prevention with negative results) the participants had lower intentions to smoke. Although participants were primed with the two distinct regulatory focuses, the end behavior of avoiding smoking was the same. Notably, when the participants viewed an advertisement that was *incongruent* with their regulatory focus (i.e., promotion with avoiding negative results and prevention with achieving positive results), there was little effect on their intention to smoke (Yeung-Jo, 2006). In this manner, it was the congruence between the person and message that resulted in an effect on the intention of the participants to smoke.

**Regulatory Focus and Role Models**

Responsiveness to social influences has also been found to vary depending on congruence with one's regulatory focus. In a series of studies, Lockwood, Jordan and Kunda (2002) found a connection between promotion focus and responsiveness to positive role models and between prevention focus and responsiveness to negative role models. These role models were described by the researchers as recent graduates of the
participants' academic program or were chosen by the participant, such as friends or parents. In the first two studies, regulatory focus was primed utilizing two different methods. The first method involved having the participant describe a strategy to either promote a positive outcome or prevent a negative outcome. The second study utilized a word association questionnaire. After being primed with either a promotion or prevention focus, the participants either read a description given by a positive role model who had positive academic experiences and a future which was promising and full of opportunities, or a negative role model who had negative academic experiences and a future which was uncertain and limited in opportunities. For both of these studies it was found that academic motivation was increased when the description provided of the role model was congruent with the participants' regulatory focus. That is, academic motivation, as measured by a 14 question scale, was at its highest levels when participants primed with a promotion focus read the positive role model's description and participants primed with a prevention focus read the negative role model's description. However, if the role model was incongruent with regulatory focus (i.e., positive role model for a prevention-focused individual or a negative role model for a promotion-focused individual), motivation decreased relative to controls.

In addition to the two studies just described that focused on situationally-induced regulatory focus, Lockwood, Jordan, and Kunda, (2002) tested chronic regulatory focus by asking about the role models that the participants used in real life. It was found that those with a prevention focus were more likely to use role models who have failed as incentive to do better in that domain, where those with a promotion focus were more
Alcohol Expectancies

Alcohol expectancies refer to how an individual expects to be influenced by alcohol. These expectancies can be positive, such as expecting alcohol to enhance sociability or reduce tension, or negative, such as expecting alcohol to increase the likelihood of taking risks and acting aggressively (Fromme & D'Amico, 2000). Although the evidence for the influence of negative expectancies on alcohol use has been mixed, negative alcohol expectancies have been shown in some studies to be associated with alcohol use. For example, negative expectancies were reliably associated with alcohol use in a correlational study of participants, ages 18-62, who were recruited from public settings (Mc Mahon, Jones, & O'Donnell, 1994). Similarly, positive expectancies were related to weekly alcohol consumption in a correlational study of college students recruited from psychology courses (Fromme et al., 1993). Overall, there is evidence that positive alcohol expectancies are associated with an increase in alcohol consumption while negative alcohol expectancies are associated with a decrease in consumption (Jones, Corbin, & Fromme, 2001).

An individual's expectancies may be shaped by observing the consequences of their peers' drinking. This type of mediating association was found in a cross-sectional study of middle school students, in which lifetime alcohol use was the outcome of interest. (Zamboanga, Schwartz, Ham, Jarvis, & Olthuis, 2009). In this study participants
used a 5 point scale to rank how many of their friends drink alcohol and how much they approve of their fellow youth drinking. Participants also reported on their alcohol expectancies and valuations (how good or bad an expected outcome is perceived to be), as well as their own alcohol use. Alcohol expectancies and valuations were found to be partial mediators for the relationship between peer alcohol use and one's own lifetime alcohol use (Zamboanga et al, 2009). Alcohol expectancies served as a partial mediator between peer alcohol use and peer approval and the likelihood and frequency of lifetime alcohol use. Alcohol valuations were found to be a partial mediator for peer use and approval of alcohol in relation to the likelihood of lifetime alcohol use, but not frequency of alcohol use. Similarly, another study found social facilitation expectations for alcohol partially mediated the relationship between number of “drinking buddies” (friends who regularly consumed alcohol with the participants) and married couples' heavy alcohol use in a longitudinal study (Lau-Barraco, Braitman, Leonard, & Padilla, 2012).

**The Proposed Study**

The proposed study extends research on susceptibility to peer influence on alcohol use by examining how regulatory focus and alcohol expectancies moderate and mediate, respectively, the effects of peers drinking on college students' drinking. Previous research has demonstrated an effect of regulatory focus on responsiveness to positive and negative consequences of smoking (Yeung- Jo, 2006) and to positive and negative role models (Lockwood et al., 2002), such that congruence between regulatory focus and message led to increased responsiveness. However, regulatory focus has not been studied in relation to individuals' degree of responsiveness to their peers, or as it relates to
alcohol use. As these previous studies show a pattern in which person-situation congruence in regards to regulatory focus leads to greater responsiveness, it is predicted that the same pattern of effects will be found in a peer context involving alcohol consumption. It is predicted that congruence between regulatory focus and peers' consequences will alter the participant's own alcohol consumption.

Next, the mechanism of the moderating effect of regulatory focus on susceptibility to peer use will be explored by examining the mediating effects of positive and negative alcohol expectancies. As previously conducted research has demonstrated that alcohol expectancies can serve as a mediator between peer use and one's own use of alcohol, a similar effect is expected here. It is hypothesized that the relationship between positive alcohol consequences for peers and one's own alcohol use will be mediated by positive alcohol expectancies, which will increase one's own use. In addition, it is hypothesized that the relationship between negative alcohol consequences for peers and one's own alcohol use will be mediated by negative alcohol expectancies. Furthermore, the association between peer alcohol consequences and alcohol expectancies will be moderated by regulatory focus. Promotion-focused individuals will be differentially influenced by positive consequences for peer alcohol use, leading to greater positive alcohol expectancies, whereas prevention-focused individuals will be differentially influenced by negative consequences for peer alcohol use, leading to greater negative alcohol expectancies. This is expected due to the congruence between the person and situation. As described, alcohol expectancies have been shown in previous studies to mediate the relationship between peers' alcohol use and one's own alcohol use.
(Zamboanga et al., 2009; Lau-Barraco et al., 2012). This may be due to an association between an individual's perception of peer alcohol use and how that individual thinks about alcohol use. For example, if an individual's peers consistently experience negative consequences of drinking, such as getting in fights with friends, that individual may be more likely to have negative alcohol expectancies because negative consequences have become associated with drinking alcohol. These expectancies may then alter the individual's consumption of alcohol. This mediation may then be moderated by regulatory focus, as regulatory focus is thought to influence one's sensitivity to and perception of positive and negative outcomes.

As such, it is predicted that positive alcohol expectancies will mediate the association between peers' positive consequences and own alcohol use for promotion-focused individuals, and negative alcohol expectancies will mediate the association between peers' negative consequences and own alcohol use for prevention-focused individuals.

**Hypotheses**

Hypothesis 1: Degree of knowledge of positive consequences of peer alcohol use will be associated with higher levels of one's own drinking behaviors. (Figure 1: Path A)

Hypothesis 2: Degree of knowledge of negative consequences of peer alcohol use will be associated with lower levels of one's own drinking behaviors. (Figure 1: Path B)

Hypothesis 3: Promotion focus will moderate the link between peers' positive consequences for alcohol use and participants' alcohol use. (Figure 1: Path C)

Hypothesis 4: Prevention focus will moderate the link between peers' negative
consequences for peer alcohol use and participants' alcohol use. (Figure 1: Path D)

Figure 1. A visual depiction of hypotheses 1 through 4.

Hypothesis 5: The relationship between positive consequences of peer alcohol use and one's own drinking behaviors will be mediated by positive alcohol expectancies. (Figure 2: Paths A*B)

Hypothesis 6: The relationship between negative consequences of peer alcohol use and one's own drinking behaviors will be mediated by negative alcohol expectancies. (Figure 2: Paths C*D)

Hypothesis 7: Promotion focus will moderate the link between positive consequences for peer alcohol use and positive alcohol expectancies. (Figure 2: Path F)

Hypothesis 8: Prevention focus will moderate the link between negative consequences for peer alcohol use and negative alcohol expectancies. (Figure 2: Path E)

Hypothesis 9: Promotion focus will moderate the mediating effects of positive
expectancies on the association between peers' positive consequences and one's own alcohol consumption, such that the association will be more strongly mediated for promotion-focused than for prevention-focused individuals (Figure 2).

Hypothesis 10: Prevention focus will moderate the mediating effects of negative expectancies on the association between peers' negative consequences and one's own alcohol consumption, such that the association will be more strongly mediated for prevention-focused than for promotion-focused individuals (Figure 2).

\[ \text{Figure 2. A visual depiction of hypotheses 5 through 10.} \]
METHOD

Participants

The sample included 235 participants from the University of Dayton who were recruited from the psychology participant pool and compensated with credit for their participation. Of these participants, 28.4% were 18 years old, 42% were 19, 17.7% were 20, 5.3% were 21, 1.2% were 22, and 1.2% were 23. In terms of gender, 49.8% were female and 46.9% were male, and the remaining participants did not answer the question. In terms of ethnicity, 84.8% were Caucasian, 3.3% African American, 3.7% Hispanic, 1.6% Asian, 0.4% Native American, and 2.9% were of another ethnicity.

Procedure

Using SurveyMonkey, participants provided informed consent before completing a series of questionnaires, including those for this study. Each questionnaire for this study was presented on a separate page, with the exception of peers' positive and negative consequences for alcohol use. These were in sections consisting of positive and negative consequences. The order of the pages and the sections of peer consequences for alcohol use were randomized. Questions pertaining to demographic characteristics were presented last and were followed by a debriefing page that explained the study to the participants. After data collection was completed, the debriefing sheet was emailed to all participants to ensure that everyone was able to review the information in the debriefing.
**Measures**

In addition to reporting their age, gender, ethnicity and year in school, participants completed questionnaires assessing regulatory focus, alcohol expectancies, consequences of peer drinking, and one's own drinking behaviors. As research has demonstrated that participants provide more accurate reports when requested to "Please be as honest and accurate as possible" (Olson, Fazio, & Hermann, 2007; Phillips & Olson, 2014), similar statements were included with each questionnaire. This is important as participants were reporting on alcohol consumption, an illegal behavior for those under 21 years of age. The means of each variable used can be found in Table 1.

Table 1

<table>
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<th>Variable</th>
<th>M</th>
<th>SD</th>
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<tr>
<td>Perception of Friends' Alcohol Use</td>
<td>3.38</td>
<td>.96</td>
<td>238</td>
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<tr>
<td>Prevention Focus</td>
<td>5.81</td>
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<td>238</td>
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<tr>
<td>Promotion Focus</td>
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<tr>
<td>Negative Alcohol Expectancies</td>
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<tr>
<td>Positive Alcohol Expectancies</td>
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<tr>
<td>Negative Consequences for Peer Alcohol Use</td>
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<tr>
<td>Positive Consequences for Peer Alcohol Use</td>
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<tr>
<td>Number of Alcoholic Drinks in a Typical Week</td>
<td>14.81</td>
<td>13.59</td>
<td>237</td>
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</table>

**Regulatory Focus.** The GRFM was used to assess regulatory focus (Lockwood et al., 2002). It consists of a series of 18 statements, which the participant rates on a scale of 1 “Not at all true of me” to 9 “very true of me”. There are two subscales in this measure, one for prevention focus and one for promotion focus. These two subscales were found to show high levels of internal consistency, promotion $\alpha=.93$, prevention $\alpha=.85$. See
Appendix A.

**Alcohol Expectancies.** Alcohol expectancies were assessed using the expected effects portion of the comprehensive effects of alcohol (CEOA) measure (Fromme et al., 1993). It consists of 38 items rated on a scale ranging from 1 “disagree” to 4 “agree”. These items create the following positive subscales: sociability, tension reduction, sexuality, and liquid courage. The negative subscales include: risk and aggression, self-perception, and cognitive and behavioral impairment. The internal reliability of the negative subscales was $\alpha=.89$ and the internal reliability of the positive subscales was .92. See Appendix E.

**Positive Consequences of Alcohol Use.** Positive consequences of alcohol use for peers was assessed using a 14-item measure derived from the Comprehensive Effects of Alcohol (CEOA) measure known as the Positive Drinking Consequences Questionnaire (PDCQ). This measure asks the participants to report on actual consequences experienced in the past month and not any expectancies the participant may have (Corbin, Morean, & Benedict, 2000). Possible responses are “0”, “1-2”, “3-5”, “6-10”, and “>10”. Although the measure is significantly correlated with subscales of the CEOA, the correlations were smaller than in previous studies and, across the subscales, less than 5% of variability overlapped (Corbin et al., 2000). The measure was altered to refer to positive consequences of alcohol use for peers. The measure has a Chronbach's $\alpha$ of .93. See Appendix B.

**Negative Consequences of Alcohol Use.** Rutgers Alcohol Problem Index (RAPI) was used to assess the peers' negative consequences of alcohol use (White & Labouvie,
This measure consists of 23 events. For each event the participant was asked how many times it had occurred in the past month. In the original measure, participants could respond 0 “None”, 1 “1-2 times”, 2 “3-5 times”, or 3 “more than 5 times”. For consistency and increased detail, participants responded to each event using the same scale as for the PDCQ (i.e. “0”, “1-2”, “3-5”, “6-10”, and “>10”). The measure had a Chronbach's α of .96. See Appendix C.

Alcohol Use. One's own drinking behaviors was measured using the Daily Drinking Questionnaire-Revised (DDQ; Collins, Parks & Marlatt, 1985; Kruse, Fromme, & Corbin, 2005). This measure describes different types of alcoholic drinks and their standard drink equivalents before asking the participant to report on the number of standard drinks consumed on each day of the week in a typical week for the past 30 days. Participants also reported the number of standard drinks consumed on each day of their heaviest drinking week during the same time period. See Appendix D.

Perception of Friends' Alcohol Use. In order to control for how peers' alcohol use can influence both the consequences that peers experience and participants' own consumption of alcohol, perception of friends' alcohol use was assessed using a measure designed for this study. It was measured using four questions, "My friends drink more than the average student at the University of Dayton.", "My friends drink every weekend.", "More of my friends drink than don't drink.", and "When my friends drink, they drink to get drunk." This set of questions had a Cronbach's α of .83.
RESULTS

Hypotheses were tested using the PROCESS macros for SPSS (Hayes, 2013). Mediation and moderated mediation were tested using a bootstrapping approach. This method determines statistical significance of mediation by producing percentile-based confidence intervals via repeated resampling of the data, and unlike other approaches, it does not have normality assumptions (Preachers & Hayes, 2008). In all of the following analyses, perception of friend's alcohol use and gender were included as covariates, and participants' self-report of drinking during a typical week was the criterion variable.

The first analysis tested hypotheses 1 and 3 by estimating the main and interaction effects of promotion focus and peers' positive consequences of alcohol use on participants' drinking behavior. Peers' positive consequences of alcohol use did not have a significant association with one's own drinking behavior, $b=.09$, SE = .08, $t(228) = 1.05$, $p=.29$. Promotion focus also did not have a significant association with participants' drinking behavior, $b=-.94$, SE = .54, $t(228) = -1.75$, $p=.08$. Promotion focus was also not found to moderate the association between peers' positive consequences for alcohol use and participants' drinking behavior. The interaction of peers' positive consequences for alcohol use and promotion focus was not significantly associated with participants' alcohol use, $b=-.08$, SE = .04, $t(228) = -1.86$, $p=.29$. 


The second analysis tested hypotheses 2 and 4 by estimating the main and interaction effects of prevention focus and peers' negative consequences on participants' drinking. In this model, knowledge of negative consequences of peer alcohol use was not significantly associated with participants' drinking behavior, $b=.02$, SE $=.05$, $t(228) = .46$, $p=.65$. Prevention focus was also not significantly associated with participants' drinking, $b=-.80$, SE $=.52$, $t(228) = -1.55$, $p=.12$. However, prevention focus was found to moderate the link between peers' negative consequences for peer alcohol use and participants' alcohol use. The interaction of prevention focus and peers' negative consequences for peer alcohol use was significantly associated with participants' alcohol use, $b=-.06$, SE $=.03$, $t(228) = -2.03$, $p<.05$. The interaction was probed by calculating the “region of significance” for the moderating effect of prevention focus using the approach developed by Preacher, Curran, and Bauer (2006) and by calculating simple slopes. For participants with a prevention focus of 3.10 standard deviations above the mean or greater (which puts it at a value above where the scale ended), negative consequences of peer alcohol use was significantly inversely associated with alcohol consumption. The simple slope for 1.5 $SD$ below the mean of prevention focus was -.67, $p=.20$, at the mean level of prevention focus the simple slope was -.80, $p=.12$, and at 1.5 $SD$ above the mean was -.92, $p=.08$.

The third analysis tested hypothesis 5 by estimating the mediating effect of positive alcohol expectancies on the association between positive consequences of peer alcohol use and participants' drinking behaviors. The mediating effect was not found to be significant, $b=.016$, 95% CI [-.00, .06]. Positive consequences of peer alcohol use
were also not significantly associated with positive alcohol expectancies, $b= .12$, $SE = .07$, $t(230) = 1.76$, $p = .08$, and positive alcohol expectancies were not significantly associated with one's own drinking behaviors, $b= .13$, $SE = .08$, $t(229) = 1.59$, $p = .11$. In addition, the direct effect of positive consequences for peer alcohol use and participants' alcohol use was also nonsignificant, $b= .06$, $SE = .08$, $t(229) = .06$, $p = .51$.

The fourth analysis tested hypothesis 6 by estimating the mediating effect of negative alcohol expectancies on the association between negative consequences of peer alcohol use and participants' alcohol use. The mediating effect was not found to be significant, $b = -.00$, 95% CI [-.03, .01]. Negative consequences of peer alcohol use was positively associated with negative alcohol expectancies, $b= .08$, $SE = .04$, $t(230) = 2.29$, $p < .05$, but negative alcohol expectancies were not associated with participants' alcohol use, $b= -.05$, $SE = .08$, $t(229) = -.65$, $p = .52$. Additionally, the direct effect of negative consequences of peer alcohol use and participants' drinking behaviors was not significant, $b= .02$, $SE = .05$, $t(229) = .54$, $p = .59$.

The fifth analysis tested hypothesis 7 by estimating the main and interaction effects of promotion focus and peers' positive consequences on positive alcohol expectancies with promotion focus as the moderator. This moderation was not supported; the interaction of promotion focus and positive consequences for peer alcohol use on positive alcohol expectancies was not significant, $b= -.08$, $SE = .04$, $t(228) = -1.86$, $p = .06$. In this model, promotion focus was significantly associated with positive alcohol expectancies, $b= 1.60$, $SE = .43$, $t(228) = 3.74$, $p < .001$. Positive consequences for peer alcohol use were not significantly associated with positive alcohol expectancies, $b= .12$, $SE = .08$, $t(228) = 1.59$, $p = .11$. In addition, the direct effect of positive consequences for peer alcohol use and participants' alcohol use was also nonsignificant, $b= .06$, $SE = .08$, $t(229) = .06$, $p = .51$. 

The fourth analysis tested hypothesis 6 by estimating the mediating effect of negative alcohol expectancies on the association between negative consequences of peer alcohol use and participants' alcohol use. The mediating effect was not found to be significant, $b = -.00$, 95% CI [-.03, .01]. Negative consequences of peer alcohol use was positively associated with negative alcohol expectancies, $b= .08$, $SE = .04$, $t(230) = 2.29$, $p < .05$, but negative alcohol expectancies were not associated with participants' alcohol use, $b= -.05$, $SE = .08$, $t(229) = -.65$, $p = .52$. Additionally, the direct effect of negative consequences of peer alcohol use and participants' drinking behaviors was not significant, $b= .02$, $SE = .05$, $t(229) = .54$, $p = .59$. 

The fifth analysis tested hypothesis 7 by estimating the main and interaction effects of promotion focus and peers' positive consequences on positive alcohol expectancies with promotion focus as the moderator. This moderation was not supported; the interaction of promotion focus and positive consequences for peer alcohol use on positive alcohol expectancies was not significant, $b= -.08$, $SE = .04$, $t(228) = -1.86$, $p = .06$. In this model, promotion focus was significantly associated with positive alcohol expectancies, $b= 1.60$, $SE = .43$, $t(228) = 3.74$, $p < .001$. Positive consequences for peer alcohol use were not significantly associated with positive alcohol expectancies, $b= .12$, $SE = .08$, $t(228) = 1.59$, $p = .11$.
SE = .07, t(228) = 1.79, p = .07.

The sixth analysis tested hypothesis 8 by estimating the main and interaction effects of prevention focus and peers' negative consequences on negative alcohol expectancies, with prevention focus as the moderator. This moderation was supported; the interaction of negative consequences for peer alcohol use and prevention focus was associated with negative alcohol expectancies, $b = -.06$, SE = .02, $t(228) = -2.78$, $p < .01$. The interaction effect was explored further by finding the region of significance for the moderating effect and computing simple slopes. The association between negative consequences and negative alcohol expectancies was significant and positive at all levels of prevention focus at or below 12.61 standard deviations above the mean, which included all values in the scale. The effect of negative consequences on negative expectancies became weaker at higher levels of prevention focus and stronger at lower levels of prevention focus. The simple slope for 1.5 SD below the mean of prevention focus was 2.29, $p < .01$, at the mean the simple slope was 2.16, $p < .01$ and at 1.5 SD above the mean was 2.03, $p < .01$. In this model, the main effect of prevention focus on negative alcohol expectancies was significant, $b = 2.16$, SE = .39, $t(228) = 5.49$, $p < .0001$. The main effect of negative consequences for peer alcohol use was also significant, $b = .08$, SE = .03, $t(228) = 2.38$, $p < .05$.

The seventh analysis tested hypothesis 9 by estimating the mediating effect of positive alcohol expectancies on the association between positive consequences of peer alcohol use and participants' drinking and by estimating the main and interaction effects of promotion focus and peers' positive consequences on positive alcohol expectancies and
participants' drinking. Promotion focus was included as a moderator in the association between positive consequences for peer alcohol use and positive alcohol expectancies and in the association between positive consequences for peer alcohol use and participants' alcohol use. In this model, positive consequences for peer alcohol use were not associated with positive alcohol expectancies, $b=.12$, $SE = .07$, $t(228) = 1.79$, $p = .07$, or with participants' alcohol use, $b=.16$, $SE = .08$, $t(227) = 1.91$, $p = .06$. Promotion focus was positively associated with positive alcohol expectancies, $b=1.60$, $SE = .43$, $t(228) = 3.74$, $p < .001$, and negatively associated with participants' alcohol use, $b=-1.20$, $SE = .55$, $t(227) = -2.16$, $p < .05$. However, the interaction effect of promotion focus and positive consequences for peer alcohol use was not significantly associated with positive alcohol expectancies, $b=-.08$, $SE = .04$, $t(228) = -1.86$, $p = .06$, nor was the interaction of positive consequences of peer alcohol use and promotion focus on participants' alcohol use, $b=-.07$, $SE = .06$, $t(227) = -1.23$, $p = .22$.

The eighth analysis tested hypothesis 10 by estimating the mediating effect of negative alcohol expectancies on the association between negative consequences of peer alcohol use and participants' drinking and by estimating the main and interaction effects of prevention focus and peers' negative consequences on negative alcohol expectancies and on participants' drinking. Prevention focus was included as a moderator. Negative consequences for peer alcohol use was positively associated with negative alcohol expectancies, $b=.08$, $SE = .03$, $t(228) = 2.38$, $p < .05$, but did not show a direct effect on participants' drinking, $b=.02$, $SE = .05$, $t(227) = .53$, $p = .59$. In addition, negative alcohol expectancies were not significantly associated with participants' drinking, $b=-.05$, $SE = .
.09, \( t(227) = -.53, p = .60 \), so the mediation aspect of this hypothesis was not supported.

Finally, prevention focus was positively associated with negative alcohol expectancies, \( b = 2.16, SE = .39, t(228) = 5.49, p < .0001 \), but not with participants' own drinking, \( b = -.70, SE = .55, t(227) = -1.27, p = .21 \).

Within this hypothesized moderated mediation model, prevention focus was included as a moderator of the association between negative consequences for peer alcohol use and negative alcohol expectancies, and as a moderator of the association between negative consequences for peer alcohol use and participants' alcohol use. The association between negative consequences for peer alcohol use and negative alcohol expectancies was moderated by prevention focus, \( b = -.06, SE = .02, t(228) = -2.78, p < .01 \).

For participants with greater prevention focus, the effect of negative consequences for peer alcohol use on negative alcohol expectancies became weaker. The interaction effect was further explored by finding the region of significance for the moderating effect and computing simple slopes. The association between negative consequences for peer alcohol use and negative alcohol expectancies was positive and significant at prevention focus levels of .15 standard deviations above the mean or less and was significant and negative at 3.35 standard deviations above the mean or higher (which puts it at a value above the end of the scale). The simple slope at 1.5 SD below the mean of prevention focus was .21, \( p < .001 \), at the mean the simple slope was .08, \( p < .05 \), and at 1.5 SD above the mean the simple slope was -.05, \( p = .40 \). Prevention focus also moderated the direct effect of negative consequences for peer alcohol use on participant's drinking, \( b = -.06, SE = .03, t(227) = -2.09, p < .05 \). For participants with a higher level of prevention focus,
negative consequences of peer alcohol use had less of an effect on the participant's own alcohol use than it did for participants with a lower level of prevention focus.
DISCUSSION

The results of the study failed to support most hypotheses. The results did not support either of the models in which positive or negative alcohol expectancies were predicted to mediate the association between consequences for peer alcohol use and one's own alcohol use, nor did it provide support for the prediction (shown in Figure 2) that regulatory focus would moderate the hypothesized mediation effects just described. In addition, promotion focus was not found to moderate the association between positive consequences for peer alcohol use and positive alcohol expectancies or to moderate the association between positive consequences for peer alcohol use and participants' alcohol use. However, one hypothesis was supported. Prevention focus was found to moderate the association between negative consequences for peer alcohol use and participants' alcohol use.

The significant moderating effects of prevention focus on the association between negative alcohol consequences for peers and on participants' alcohol use suggest that prevention focus may influence susceptibility to peer influence. This finding is consistent with the literature as in both the antismoking advertisement study (Yeung-Jo, 2006) and the study on role models (Lockwood et al., 2002). When the message or role model was congruent with participants' regulatory focus there was an effect on the target behavior, but when the two were incongruent there was not. As prevention focus is concerned with
security and the prevention of losses (Higgins, 1997; Molden et al., 2008), congruency of prevention focus and negative consequences for peer alcohol use was expected to result in an increased negative association between negative consequences and participants’ alcohol use. The finding suggests that, for prevention focused individuals, exposure to high levels of negative peer consequences would decrease risk for drinking.

In contrast, the association between negative consequences for peer alcohol use and negative alcohol expectancies was moderated by prevention focus in an unexpected way. It was expected that high levels of prevention focus would strengthen the positive association between peers' negative consequences and negative alcohol expectancies. Instead, results indicated that high levels of prevention focus weakened the association between negative consequences of peer alcohol use and negative alcohol expectancies. This may be due to a number of other influences that were not measured in this study. For example, the participants' own consequences for alcohol use may have contributed to this effect. It may also be due to the measured constructs being associated in a different order than the one hypothesized. As the data were cross-sectional, it is possible that participants' alcohol use influences their alcohol expectancies. Participants who do not consume a lot of alcohol may not expect negative consequences for their drinking.

Another unexpected result of the study was that neither positive nor negative alcohol expectancies were found to mediate associations between consequences for peer alcohol use and participants' alcohol use. Although prevention focus did moderate the association between negative consequences for peer alcohol use and negative alcohol expectancies, negative alcohol expectancies were not found to be associated with
participants' alcohol use. These findings were unexpected as there is evidence for negative alcohol expectancies being associated with a decrease in alcohol use and positive alcohol expectancies being associated with an increase in alcohol use (Jones et al., 2001).

Similarly, promotion focus was not found to moderate associations of positive peer consequences with either positive expectancies or with alcohol use. This may be due to other messages about drinking alcohol that the participants receive which focus on the positive effects of not drinking alcohol. As was shown in the studies by Yeung-Jo (2006) and Lockwood et al. (2002), it is the congruence of regulatory focus and the framing of the message that matters. When participants' are promotion-focused, they should respond more to messages promoting positive consequences. In this case, it is possible that these participants receive numerous messages promoting the positive consequences of abstaining from alcohol use, including better grades, health, and safety. It is possible that these messages are more salient to the participants with promotion focus than the positive consequences that their peers experience for alcohol use, which could be why the hypothesized moderating role of promotion focus was not supported in this study.

In the moderated mediation model, however, promotion focus had effects on both positive alcohol expectancies and alcohol use. Promotion focus was positively associated with positive alcohol expectancies, as may be expected given the focus on gains and positive experiences that the participant may anticipate experiencing with alcohol use. In contrast, promotion focus was negatively associated with participants' alcohol use. The negative association found between promotion focus and participants' alcohol use may be
due to participants' promotion focus resulting in a greater focus on the potential gains from other aspects of the participants' life. The participants may see greater potential gains for not drinking alcohol than they do from drinking. As discussed, there are likely messages involving alcohol use that the participants are exposed to other than the consequences that their peers experience. These messages may also suggest that other actions, including focusing on schoolwork or other activities, while abstaining from alcohol use will allow them to achieve their goals. As promotion-focused individuals are more concerned with strong ideals and pursuing gains (Higgins, 1997; Molden et al., 2008), they may be focused on gains that come from not drinking. This focus on other gains could explain the negative association between promotion focus and one's own alcohol use.

The interesting moderating role of prevention focus in this study is tempered by the limitations of the study and the lack of support for other hypotheses. This study was both cross-sectional and based on self-report data. Self-report could be a problem as participants may not accurately remember or report their own behaviors. Future studies may consider measuring alcohol use at multiple time points rather than using a one-time questionnaire, possibly by having participants complete questions regarding alcohol use every week, or at an even greater frequency. This would help control for any effects that memory may have had on the reporting of alcohol use. Additionally, participants' regulatory focus may affect what type of consequences participants remember their peers experiencing for alcohol use. Promotion focused individuals may be more likely to remember and report the positive consequences that peers experience for alcohol use, and
prevention focused individuals may be more likely to remember and report the negative consequences that peers experience for alcohol use. For this reason, the reported consequences that peers experience for alcohol use may not accurately reflect the actual consequences that their peers experience.

The data were also all collected at a single time point; therefore, it is not possible to determine the direction of effect between predictor and criterion variables. It is possible that they are in the direction indicated by the proposed model, but the associations may also be in a different direction. As mentioned, there is the possibility that regulatory focus could influence the consequences for peer alcohol use that the participant reports. This could alter the order of the associations, such that regulatory focus may moderate the reporting of peers' consequences for alcohol use, rather than influencing the later associations. In order to determine this, additional research using other methodological designs would be needed. A longitudinal design would allow for an understanding of the order in which these effects occur, but would not control for potentially confounding variables. As participants select their own environment and friend group, it is possible that some aspect of personality may influence the people that the participants associate with and the consequences for alcohol use that they are exposed to. Additionally, there may be some other factor that could influence personality and the environment that the participant is in. In order to control for these confounding variables, an experimental or quasi-experimental design would need to be used.

In conclusion, the current findings suggest that regulatory focus may interact with some social influences on behavior. As alcohol use is common and potentially
harmful in college students, it is important to understand how different people are
influenced to drink or to not drink alcohol. Doing so may allow colleges to implement
better strategies for decreasing dangerous drinking behaviors on college campuses. It also
allows for a more complete understanding of susceptibility to peer influence on college
campuses for alcohol consumption. However, it is important to keep in mind the
limitations of the current study that should be rectified in future studies before any such
strategies should be developed.
REFERENCES


Jones, B. T., Corbin, W., & Fromme, K. (2001). A review of expectancy theory and
alcohol consumption. *Addiction, 96*, 57-72. doi: 10.1080/09652140020016969


Appendix A

GRFM

Promotion/Prevention Scale

Please be as honest and accurate as possible.

Using the scale below, please write the appropriate number in the blank beside each item.

1 2 3 4 5 6 7 8 9
Not at all Very
true of me true of me

1. In general, I am focused on preventing negative events in my life.
2. I am anxious that I will fall short of my responsibilities and obligations.
3. I frequently imagine how I will achieve my hopes and aspirations.
4. I often think about the person I am afraid I might become in the future.
5. I often think about the person I would ideally like to be in the future.
6. I typically focus on the success I hope to achieve in the future.
7. I often worry that I will fail to accomplish my academic goals.
8. I often think about how I will achieve academic success.
9. I often imagine myself experiencing bad things that I fear might happen to me.
10. I frequently think about how I can prevent failures in my life.
11. I am more oriented toward preventing losses than I am toward achieving gains.
12. My major goal in school right now is to achieve my academic ambitions.
13. My major goal in school right now is to avoid becoming an academic failure.
14. I see myself as someone who is primarily striving to reach my “ideal self”—to fulfill my hopes, wishes, and aspirations.
15. I see myself as someone who is primarily striving to become the self I “ought” to be—to fulfill my duties, responsibilities, and obligations.
16. In general, I am focused on achieving positive outcomes in my life.
17. I often imagine myself experiencing good things that I hope will happen to me.
18. Overall, I am more oriented toward achieving success than preventing failure.

* denotes promotion item
APPENDIX B

POSITIVE DRINKING CONSEQUENCES QUESTIONNAIRE (PDCQ)

Please indicate the number of times your friend(s) have experienced each of the following consequences of drinking in the past month. If more than one friend experienced a consequence, note the total number of times for all friends who experienced it (i.e. if one friend experienced a consequence twice and another friend experienced it once, note that the consequence occurred three times). Please do not report experiencing consequences simply because you believe that they ordinarily occur when your friends drink. Think about actual drinking occasions that you have witnessed or that have been discussed with you and report the consequences experienced on these occasions.

Please be as honest and accurate as possible.

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<th>1-2</th>
<th>3-5</th>
<th>6-10</th>
<th>&gt;10</th>
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<tbody>
<tr>
<td>1.</td>
<td>A friend approached a person that he/she probably wouldn't have spoken to otherwise.</td>
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<td>2.</td>
<td>A friend told a funny story or joke and made others laugh.</td>
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<td>3.</td>
<td>A friend revealed a personal feeling or emotion that he/she had previously kept secret.</td>
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<td>4.</td>
<td>A friend felt like he/she had enough energy to stay out all night partying or dancing.</td>
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<td>5.</td>
<td>In a situation in which a friend would usually have stayed quiet, he/she found it easy to make conversation.</td>
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<td>6.</td>
<td>A friend stood up for his/her friend or confronted someone who was in the wrong.</td>
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<td>7.</td>
<td>A friend found him/herself in a frightening situation and felt surprisingly fearless.</td>
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<td>8.</td>
<td>A friend found a creative solution to a problem he/she might otherwise have had difficulty solving.</td>
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<td>9.</td>
<td>A friend felt especially confident that other people found him/her attractive.</td>
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<td>10.</td>
<td>The intensity of a friend's sexual experience was enhanced.</td>
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<td>11.</td>
<td>A friend acted out a sexual fantasy that he/she might ordinarily be embarrassed to reveal or attempt.</td>
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APPENDIX C

RUTGERS ALCOHOL PROBLEM INDEX (RAPI)

Please be as honest and accurate as possible.

<table>
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<tbody>
<tr>
<td>1.</td>
<td>A friend was not able to do his/her homework or study for a test</td>
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<td>2.</td>
<td>A friend got into fights, acted bad or did mean things</td>
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<td>3.</td>
<td>A friend missed out on other things because he/she spent too much money on alcohol</td>
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<td>4.</td>
<td>A friend went to work or school high or drunk</td>
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<td>5.</td>
<td>A friend caused shame or embarrassment to someone</td>
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<td>6.</td>
<td>A friend neglected his/her responsibilities</td>
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<td>7.</td>
<td>A friend's relatives avoided him/her</td>
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<td>8.</td>
<td>A friend felt that he/she needed more alcohol than he/she used to use in order to get the same effect</td>
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<td>9.</td>
<td>A friend tried to control his/her drinking by trying to drink only at certain times of the day or certain places</td>
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<td>10.</td>
<td>A friend had withdrawal symptoms, that is, felt sick because he/she stopped or cut down on drinking</td>
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<td>11.</td>
<td>I noticed a change in a friend's personality</td>
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<td>12.</td>
<td>A friend felt that he/she had a problem with alcohol</td>
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<td>13.</td>
<td>A friend missed a day (or part of a day) of school or work</td>
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<td>14.</td>
<td>A friend tried to cut down or quit drinking</td>
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<td>15.</td>
<td>A friend suddenly found him/herself in a place that he/she could not remember getting to</td>
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<td>16.</td>
<td>A friend passed out or fainted suddenly</td>
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<td>17.</td>
<td>A friend had a fight, argument or bad feelings with a friend</td>
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<td>18</td>
<td>A friend had a fight, argument or bad feelings with a family member</td>
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<td>19</td>
<td>A friend kept drinking when he/she promised him/herself not to</td>
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<td>20</td>
<td>A friend felt he/she was going crazy</td>
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<td>21</td>
<td>A friend had a bad time</td>
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<td>22</td>
<td>A friend felt physically or psychologically dependent on alcohol</td>
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<td>23</td>
<td>A friend was told by a friend or neighbor to stop or cut down drinking</td>
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APPENDIX D

DAILY DRINKING QUESTIONNAIRE - REVISED

Standard Drink Conversion

When asked how much you drink in the following questions use this chart.

One standard drink is equal to:

| Standard American Beer (3-5% alcohol) | 12 oz. Can, Bottle, or Glass |
| Microbrew or European Beer (8-12% alcohol) | ½ of a 12 oz. Can or Bottle |
| Wine (12-17% alcohol) | 4 oz. Glass |
| Wine Cooler | 10 oz. Bottle |
| Hard Liquor (80-proof, 40% alcohol) | 1-1/2 oz. or One Standard Shot |
| Hard Liquor (100-proof, 50% alcohol) | 1 oz. |
| Wine: 1 Bottle | |
| 25 oz. (12-17% alcohol) | 5 standard drinks |
| 40 oz. (12-17% alcohol) | 8 standard drinks |
| Hard Liquor: 1 Bottle | |
| 12 oz. | 8 standard drinks |
| 25 oz. | 17 standard drinks |
| 40 oz. | 27 standard drinks |

Instructions for recording drinking during a typical week

In the calendar below, please fill-in your drinking rate and time drinking during a typical week in the last 30 days.

First, think of a typical week in the last 30 days. (Where did you live? What were your regular weekly activities? Were you working or going to school? Etc.) Try to remember
as accurately as you can, how much and for how long you typically drank in a week during that one month period?

For each day of the week in the calendar below, fill in the number of standard drinks consumed on that day in the upper box and the typical number of hours you drank that day in the lower box.

Please be as honest and accurate as possible.

<table>
<thead>
<tr>
<th>Day of Week</th>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>Friday</th>
<th>Saturday</th>
<th>Sunday</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Drinks</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of Hours Drinking</td>
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<td></td>
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</tbody>
</table>

**Instructions for recoding drinking for your heaviest drinking week**

In the calendar below, please fill-in your drinking rate and time drinking during your heaviest drinking week in the last 30 days.

First, think of your heaviest drinking week in the last 30 days. (Where did you live? What were your regular weekly activities? Where you working or going to school? Etc.)

Try to remember as accurately as you can, how much and for how long did you drink during your heaviest drinking week in that one month period?

For each day of the week in the calendar below, fill in the number of standard drinks consumed on that day in the upper box and the typical number of hours you drank that day in the lower box.

Please be as honest and accurate as possible.

<table>
<thead>
<tr>
<th>Day of Week</th>
<th>Monday</th>
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</table>
APPENDIX E

COMPREHENSIVE EFFECTS OF ALCOHOL (CEOA)

Instructions: The following questions ask what you would expect to happen if you were under the influence of ALCOHOL. Circle from disagree to agree - depending on whether you expect the effect to happen to you if you were under the influence of alcohol. These effects will vary, depending upon the amount of alcohol you typically consume. This is not a personality test. We want to know what you would expect to happen if you were to drink alcohol, not how you are when you are sober. Example: If you are always emotional, you would not circle agree as your answer unless you expected to become more emotional if you drank.

Please be as honest and accurate as possible.

When I drink alcohol, I expect that ____________:

<table>
<thead>
<tr>
<th>Disagree</th>
<th>Slightly disagree</th>
<th>Slightly agree</th>
<th>Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

1. I would be outgoing*
2. My senses would be dulled
3. I would be humorous*
4. My problems would seem worse
5. It would be easier to express my feelings*
6. My writing would be impaired
7. I would feel sexy*
8. I would have difficulty thinking
9. I would neglect my obligations
10. I would be dominant
11. My head would feel fuzzy
12. I would enjoy sex more*
13. I would feel dizzy
14. I would be friendly*
15. I would be clumsy
16. It would be easier to act out my fantasies*
17. I would be loud, boisterous, or noisy
18. I would be feel peaceful*
19. I would be brave and daring*
20. I would feel unafraid*
21. I would feel creative*
22. I would be courageous*
23. I would feel shaky or jittery the next day
24. I would feel energetic*
25. I would act aggressively
26. My responses would be slow
27. My body would be relaxed*
28. I would feel guilty
29. I would feel calm*
30. I would feel moody
31. It would be easier to talk to people*
32. I would be a better lover*
33. I would feel self-critical
34. I would be talkative*
35. I would act tough
36. I would take risks
37. I would feel powerful*
38. I would act sociable*

* denotes item on a positive subscale