Evaluation of Butler University's Red Cup Culture Alcohol Prevention Program

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Evaluation of Butler University’s Red Cup Culture Alcohol Prevention Program

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Stephanie Ann Lander
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ABSTRACT

The purpose of the present research was to evaluate the alcohol prevention program of a small Midwest university. It was hypothesized that the students' knowledge about the potential negative consequences of alcohol use and intentions to engage in responsible drinking at the end of the program would not affect students' drinking behaviors. The residential freshmen at Butler University (population = 860) were requested to participate in two surveys to measure the independent variables of knowledge and responsible drinking, the dependent variable of drinking behavior, and control variables of gender and high school drinking. The variables were measured using sets of true or false, open-ended or close-ended questions related to each variable. The first survey was administered directly after the alcohol prevention program, called Red Cup Culture (n=683), followed by the spring survey (n=261), which resulted in a final matched sample of 184 respondents. Among the participants in the study, 79% were females, 32% drank in high school and 15% reported binge drinking. The results indicate that the respondents seemed to have the knowledge intended by the program, which was correlated with the intent to use protective behaviors; however, this did not translate into actual drinking behaviors, nor did drinking intentions.
INTRODUCTION

National surveys indicate that almost 90% of students drink alcohol (Bennett, Noto, and Walters 1999). Due to the prevalence of drinking among college students, college drinking is a common point of discussion among university officials. Experimentation with substance use, particularly alcohol, increases during a student’s time in college. For this reason, it is suggested that “college may be a unique opportunity to prevent or intervene with substance use” (Kilmer, Larimer, and Lee 2005:432). In an attempt to address this issue, programs used to prevent or intervene with substance use are implemented. These programs often focus on predictors of alcohol consumption, characteristics of alcohol use and dependence, and deterrents to alcohol consumption.

Alcohol prevention programs vary from campus to campus, with methods ranging from those intended to prevent drinking to those that are implemented at the point of intervention. Therefore, some programs reach the entire student body while others are aimed at those who are identified as being at high-risk. While some programs use multiple features, others are solely information based (Larsen and Kozar 2005). Studies show that programs based solely on information are not effective for the purpose of preventing drinking. In response to the ineffectiveness of information-based programs, more in-depth programs have been developed in an attempt to reach the audience in a more effective manner. This is done with hopes that the programs will encourage less drinking, and more importantly, safer drinking behaviors.

As an example of a preventative method, some campuses require that all freshmen take a computer-based alcohol prevention course upon arrival to the school. One such program is entitled Alcohol Edu, in which the program uses “some features of effective
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strategies recommended by an NIAAA Advisory Council Task Force, such as (1) personalized feedback to help students monitor their drinking, correct their misperceptions of drinking norms, and clarify their personal values and attitudes toward alcohol use, and (2) research-based information to challenge students' alcohol expectancies (Bersamin et al. 2011; 50-51). While these methods have proven to be effective for high-risk students in brief interventions, it is unknown as to whether it can also be effective when targeting the entire student population. Similarly, it has not been tested in the form of a web-based or computer-based program (Bersamin et al. 2011).

Other methods, those of intervention, are aimed toward students who are at a high risk for alcohol abuse. These programs are used as a disciplinary action for those students who have been sanctioned for alcohol consumption. It is common for these programs to take place in counseling or health services offices. Some of the programs also include teaching campus personnel and resident assistants about what they can do to help students reduce their alcohol consumption (Bennett et al. 1999). Additionally, it has been found that the duration of a program has little to no impact on the effectiveness of the program (Bennett et al. 1999).

One program in particular, studied by Bennett et al. was one that used a method of intervention that "randomly assigned students to one of three groups: (1) a Z-hour information session plus mailed personal feedback on their drinking, (2) mailed feedback only, or (3) no treatment" (1999). Feedback summarized each student's drinking behaviors based on self-reported data. The results showed that feedback was effective as an interventions method for those who were heavy drinkers. The presence of a group seemed to result in a lower efficiency of the feedback. Thus, this study shows that it may be more effective to administer programs that use an individual setting, rather than a group setting (Bennett et al. 1999).

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In other programs, harm reduction as an approach to intervention has been utilized. These programs are used because the focus of abstinence has been thought more and more to be an unrealistic goal. In a study done by Bennett et al. (1999) one program was targeted that had the intent of harm reduction that aims to "teach skills necessary to implement new behaviors (e.g. drink refusal, relaxation techniques, self-monitoring of consumption)." The result of such an approach found it to be more effective than educational programs (Bennett et al., 1999).

The Red Cup Culture program used at Butler University is a peer-administered program, which uses a student-made video followed by break out discussion groups led by the Red Cup Culture facilitators. The program is comprised of two main components. The first component informs students about alcohol use, including the law, campus policies, signs of high-risk drinking, and addressing misperceptions of drinking. The second component encourages students to make smart, informed decisions based on what they have learned. This type of program is similar to many alcohol programs in the sense that it is knowledge-based; however, it is different from many because it is led by the participants' peers. Additionally, it is different from many alcohol prevention programs because the goal of many programs on college campuses is to completely prevent alcohol consumption, while the goal of Red Cup Culture is harm reduction.

The purpose of the current study is to answer the research question: "Does the Red Cup Culture program effectively prevent students from partaking in high-risk drinking behavior?" I hypothesized that the knowledge gained about alcohol and its
potential negative consequences during the program will not affect the likelihood of drinking or the amount consumed. Additionally, I hypothesized that students’ intentions to engage in certain drinking behaviors would not be indicative of their actual actions. These hypotheses are a result of previous literature that states that “although learning took place through the intervention, it was not the mechanism by which the intervention reduced drinking behaviors” (Huchting, LaBrie, and Thandi 2009:31). Additionally, it is stated that those campus programs “that are evaluated often find that changes in attitudes or knowledge about alcohol are not accompanied by actual decreases in drinking” (Bennett, Noto et al., 1999:223).

As a result of this study, the successfulness of this program in informing students about alcohol use, and encouraging them to partake in low risk drinking behavior can be determined. By assessing the program, changes can be made to make the program more effective. While this study only applies to Butler University, the results could still prove to be beneficial to other colleges and universities, especially those with demographics similar to those of Butler University. It provides new knowledge on the effectiveness of programs similar to this one, because it focuses specifically on Red Cup Culture, rather than a collection of programs at many universities.

**METHOD**

This study consisted of two surveys administered to a group of Butler University students over the course of approximately five months. Over the course of the study, two questionnaires were used to assess changes in the students’ knowledge on the subject, as well as intentions and actual drinking behaviors. The surveys included questions that determine whether or not the students are knowledgeable of the goal learning outcomes and questions that measure drinking behavior, as a way of relating their knowledge to the decisions they choose to make with that knowledge. The questions include both closed-ended and open-ended responses. The questionnaires were administered by either the Red Cup Culture facilitators or Survey Monkey via emails from their Resident Assistants.

**Procedures and Participants**

**Survey Procedures.** During their first week on campus, residential freshmen at Butler University were required to attend the Red Cup Culture program with their residential units during one of four sessions offered during two evenings. Each session consisted of an educational student-made video and breakout discussion groups that were led by their peers who held the positions of Red Cup Culture facilitators. This questionnaire measured what they had learned by the end of the program. A questionnaire was given at the end of the program, which tested their knowledge of the five learning outcomes of the program by measuring whether or not they were able to correctly answer questions about the information presented to them during Red Cup Culture. It also included questions about students’ intentions as they relate to drinking behaviors. At the conclusion of the discussion portion of the program, the Red Cup Culture facilitators passed out the questionnaires to each student. Facilitators are upperclassmen that volunteer to hold the position. Questionnaires were returned to the facilitators, and then collected by those conducting the research. This questionnaire yielded a sample size of 683 respondents.

After the start of the spring 2012 semester, the same group of freshmen was again recruited to participate in the follow-up questionnaire. This survey was administered with the use of Survey Monkey by sending an email containing a link to the survey to the
Resident Assistants. The Resident Assistants then sent an email containing the link to the freshmen in their units. Students were encouraged to participate in the survey by rewarding the unit with the highest percentage of participation with a pizza party. Additionally, Resident Assistants were encouraged to increase participation in their unit by being eligible to win one of three $25 gift cards, with their chances of winning being increased by greater participation from their unit. This questionnaire again tested their knowledge of the learning outcomes to see what information was retained since the Red Cup Culture program. It also measured drinking behaviors over the course of the semester to determine whether actual drinking behaviors corresponded with their intentions, as well as how their knowledge related to their drinking behaviors. This survey included students’ demographic characteristics and high school drinking behaviors. The survey ran for approximately two weeks.

Sample. Participants in this study came from the population of all residential freshmen, ages 18 to 20, attending Butler University in the fall 2011 semester. A list of these students was obtained from the Office of Residence Life to ensure a complete list of 860 students. Participation in the survey was voluntary and anonymous, and resulted in 683 participants in the initial survey and 261 participants in the second survey. This low response rate in the second survey could be due to the way the survey was administered. Since the information was sent from the researchers to the resident assistants, and then to residents, the survey may not have even reached some residents. Similarly, residents may have deleted their emails containing the information, and again, never even seen the link to the survey. For those who simply chose not to take the survey, this could have been poor timing. After matching the participants from each survey using three identifying questions, the final sample was made up of 184 freshman respondents. This sample was made up of about 79% females (145) and the remainder males (39).

Measures

There were two independent variables in the model, which were knowledge and responsible drinking. Knowledge was broken into three categories: general alcohol knowledge, signs of high-risk drinking, and possible consequences of high-risk drinking. Responsible drinking was measured by intent to use protective drinking behaviors.

General Alcohol Knowledge. Students’ general knowledge regarding alcohol use, one aspect of the independent variable of knowledge, was measured using twelve true or false questions. The questions were adapted from Thandi, Huchting, and LaBrie’s (2009) Assessment of Alcohol Related Learning, and included statements that referred to facts that students’ were expected to learn as a result of the program (e.g. “the same quantity of alcohol will have a stronger effect on women than men;” “alcohol is involved in over 50% of college rapes;” and “the number of ounces in a ‘drink’ is the same for beer as it is for hard liquor”). Please see the appendix for specific items used to measure general alcohol knowledge. The level of knowledge was measured by counting the number of questions that students answered correctly.

Signs of High-Risk Drinking. The second aspect measuring the independent variable of knowledge was the students’ ability to list possible signs of high-risk drinking (e.g. vomiting, impaired judgment and blackouts). This was a free response question, which elicited many responses. Responses were considered correct or incorrect, and then correct responses were counted (see Appendix). The greater the number of correct responses, the greater the students’ knowledge of the risk signs was assumed to be.
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Consequences of High-Risk Drinking. The final aspect measuring the independent variable of knowledge was the students' ability to list possible negative consequences of high-risk drinking (e.g., death, sexual assault, and impaired judgment). This was also a free response question, eliciting both correct and incorrect responses. Correct responses were counted, with a greater number of correct responses indicating more knowledge. Please see the appendix for the specific items used to measure general alcohol knowledge.

Responsible Drinking. The second independent variable, responsible drinking, was measured by the students' intentions as they related to alcohol use. Twenty-four questions that were measured using a five-point Likert scale, with response options ranging from 1 "very unlikely" to 5 "very likely" were used to measure responsible drinking. Items used to measure responsible drinking were asked in the form of "How likely are you to...?" and included questions, such as, "make sure you have a plan in place before you use alcohol or party," "drink shots of liquor," and "make sure you know the individual you gives you a drink." Please see the appendix for a complete list of the items used to measure responsible drinking. An analysis of internal consistency indicated that this measure had a high degree of reliability among those surveyed (Alpha = .905).

The dependent variable was drinking behavior, and was made up of an index of their drinking behaviors, which combined the amount and frequency of their drinking, as well as their actual use of protective drinking behaviors. These variables were measured during the second survey.

Drinking Behavior Index. The dependent variable of drinking behavior was partially measured using a scale of students’ drinking behaviors. This included the amount that they drank as well as the frequency, and was measured using students’ responses to three questions:

1. What is the average number of drinks you consume in one week?
2. When you drink alcohol, how many drinks do you usually consume in one sitting?
3. How many times have you been intoxicated in the past month?

For these questions, a “drink” is considered one beer, one glass of wine, or one shot (1.5 fl. oz. of alcohol). High scores on this index indicate problem drinking behavior. An analysis of internal consistency indicated that this measure had a moderate degree of reliability among those surveyed (Alpha = .684).

Use of Protective Drinking Behaviors. The second component of the dependent variable of drinking behavior was measured using twenty-seven questions (see Appendix) that were measured using a six-point Likert scale, with response options ranging from 1 "never" to 6 “always.” These questions corresponded to those used to measure responsible drinking. Items used to measure the use of protective drinking behaviors were answered in response to the prompt “please indicate the degree to which you engaged in the following behaviors when using alcohol or ‘partying’ over the past semester.” Some items included: “made sure you had a plan in place before you participated in a social activity that involved alcohol,” “drank shots of liquor,” and “made sure you knew the individual who gave you a drink.” Please the appendix for a complete of the items used to measure the use of protective drinking behaviors. An analysis of internal consistency indicated that this measure had a high degree of reliability among students surveyed (Alpha = .888).
Control Variables. Other variables known to affect drinking behavior were included in all higher order analyses. These other variables included gender and high school drinking. Both were coded as dummy variables.

RESULTS

Descriptive statistics on the variables included in the analysis can be found in Table 1. As shown in the table, it appears that students do intend to use protective drinking behaviors. Additionally, respondents seem to possess the general knowledge about alcohol consumption, but they do not possess as much knowledge about the signs of high-risk drinking and possible consequences of high-risk drinking.

As we can see in Table 1, it is not likely that the sample is representative of the population. The sample reports that 79% of respondents are female compared to the population of Butler University that has about 61% female students. Additionally, the results show that this sample reports that only 15% of respondents are binge drinkers. This is unlikely when compared to the accepted statistic that approximately 40% of students binge drink (Wechsler, Lee, Nelson and Kuo: 2002). Respondents reported that they use many of the protective behaviors often (mean = 101.72) compared to a median of 85.

Table 1:

Descriptive Statistics of Key Variables (n=184)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>.79</td>
<td>.412</td>
<td>0-1</td>
</tr>
<tr>
<td>High School Drinking</td>
<td>.32</td>
<td>.466</td>
<td>0-1</td>
</tr>
<tr>
<td>General Alcohol Knowledge Index</td>
<td>9.20</td>
<td>1.426</td>
<td>5-12</td>
</tr>
<tr>
<td>Signs of High-Risk Drinking</td>
<td>3.03</td>
<td>1.450</td>
<td>0-8</td>
</tr>
<tr>
<td>Possible Consequences of High-Risk Drinking</td>
<td>2.96</td>
<td>1.396</td>
<td>0-7</td>
</tr>
<tr>
<td>Intentions Index</td>
<td>106.75</td>
<td>15.151</td>
<td>27-130</td>
</tr>
<tr>
<td>Drinking Index</td>
<td>6.73</td>
<td>8.574</td>
<td>0-36</td>
</tr>
<tr>
<td>Current Drinking</td>
<td>.59</td>
<td>.492</td>
<td>0-1</td>
</tr>
<tr>
<td>Binge Drinking</td>
<td>.15</td>
<td>.360</td>
<td>0-1</td>
</tr>
<tr>
<td>Use of Protective Behaviors Index</td>
<td>101.72</td>
<td>17.806</td>
<td>34-136</td>
</tr>
</tbody>
</table>
As shown in the bivariate correlations (Table 2), the only significant correlation with the dependent variable is the relationship between High School Drinking and the Drinking Index. This relationship had a bivariate correlation of .44. It should also be noted that the knowledge of the signs of high-risk drinking and possible consequences of high-risk drinking correlated with the intent to use protective behaviors. This was a positive correlation, showing that those who were able to list more possible consequences of high-risk drinking indicated that they had the intent of using more protective drinking behaviors. However, this did not correlate with their actual drinking behaviors in the long run.
Regression was used to assess the relative effects of the Red Cup Culture program objective on students' drinking behavior. To analyze this, dummy variables of Gender and High School Drinking, as well as the independent variable of General Alcohol Knowledge were entered into the regression model (Table 3, column 1) to run against the dependent variable of the Drinking Index. Next, the Signs of High Risk Drinking variable was added into the regression model to assess the predictive utility of this measure, beyond that of the other independent variables (Table 3, column 2). Then, the Possible Consequences of High-Risk Drinking variable was added into the regression model to assess the predictive utility of this measure, beyond that of the other independent variables (Table 3, column 3). Finally, the fourth variable, the Intentions Index was added into the regression model to, again, assess the predictive utility of this measure, beyond that of the other independent variables (Table 3, column 4).

Table 3

<table>
<thead>
<tr>
<th>Column</th>
<th>1</th>
<th>Beta</th>
<th>2</th>
<th>Beta</th>
<th>3</th>
<th>Beta</th>
<th>4</th>
<th>Beta</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>5.560</td>
<td></td>
<td>5.313</td>
<td></td>
<td>5.180</td>
<td></td>
<td>2.603</td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>-1.377</td>
<td>-.066</td>
<td>-1.379</td>
<td>-.067</td>
<td>-1.336</td>
<td>-.065</td>
<td>-1.324</td>
<td>-.064</td>
</tr>
<tr>
<td>General Alcohol Knowledge</td>
<td>.184</td>
<td>.031</td>
<td>.183</td>
<td>.031</td>
<td>.208</td>
<td>.035</td>
<td>.279</td>
<td>.047</td>
</tr>
<tr>
<td>Signs of High Risk Drinking Index</td>
<td></td>
<td>.018</td>
<td></td>
<td>.003</td>
<td></td>
<td>.017</td>
<td></td>
<td>.180</td>
</tr>
<tr>
<td>Possible Consequences of High-Risk Drinking Index</td>
<td></td>
<td></td>
<td>-.124</td>
<td>-.021</td>
<td>-.194</td>
<td>-.033</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intentions Index</td>
<td>.185</td>
<td></td>
<td>.180</td>
<td></td>
<td>.173</td>
<td></td>
<td>.171</td>
<td></td>
</tr>
<tr>
<td>R-Square</td>
<td></td>
<td>.017</td>
<td></td>
<td>.028</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>R-Square Change</td>
<td>-.005</td>
<td></td>
<td>-.007</td>
<td></td>
<td>-.002</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p < .05, **p < .01, ***p < .001
The independent variables were added to the regression in the same way, and run against the dependent variable of Use of Protective Behaviors. The dummy variables of Gender and High School Drinking, as well as the independent variable of General Alcohol Knowledge were entered into the regression model (Table 4, column 3), followed by Signs of High-Risk Drinking (Table 4, column 2), Possible Consequences of High-Risk Drinking (Table 4, column 3) and finally, the Intentions Index (Table 4, column 4).

The same process was used to assess the relative effects of the Red Cup Culture program objectives on the use of protective measures to test for moderating relationships.

### Table 4

**Estimated Effects of Red Cup Culture Program Objectives on Use of Protective Measures \( (n=184) \)**

<table>
<thead>
<tr>
<th>Column</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>95.373</td>
<td>93.361</td>
<td>92.460</td>
<td>83.904</td>
</tr>
<tr>
<td>Female</td>
<td>7.471</td>
<td>.179</td>
<td>7.489</td>
<td>.180</td>
</tr>
<tr>
<td>High School Drinking</td>
<td>-5.178</td>
<td>-.146</td>
<td>-5.440</td>
<td>-.154</td>
</tr>
<tr>
<td>General Alcohol Knowledge</td>
<td>-.426</td>
<td>-.034</td>
<td>-.355</td>
<td>-.028</td>
</tr>
<tr>
<td>Signs of High Risk Drinking Index</td>
<td></td>
<td></td>
<td>.464</td>
<td>.039</td>
</tr>
<tr>
<td>Possible Consequences of High-Risk Drinking Index</td>
<td></td>
<td></td>
<td></td>
<td>.986</td>
</tr>
<tr>
<td>Intentions Index</td>
<td></td>
<td></td>
<td></td>
<td>.082</td>
</tr>
<tr>
<td>R-Squared</td>
<td>.020</td>
<td>.010</td>
<td>.002</td>
<td>-0.006</td>
</tr>
<tr>
<td>R-Square Change</td>
<td>-.010</td>
<td>-.008</td>
<td>-.008</td>
<td></td>
</tr>
</tbody>
</table>

*p < .05, **p < .01, ***p < .001*
As shown in these tables, we can see that none of these relationships were significant. In response to these results, a new regression was used to determine if any individual items of the measure of independent variables were significantly related to the dependent variables. The results, shown in Tables 5 and 6, show that the only variable that was consistently related was the consequence of poor judgment, which was only significant on the use of protective behaviors (Table 5, column 2).

Since the consequence of poor judgment is the only variable that consistently related to the dependent variable of use of protective behaviors, this indicates that respondents who recognize that poor judgment could be the result of alcohol consumption, are more likely to use protective behaviors when consuming alcohol.
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DISCUSSION

Consistent with the findings of Hutching et al. (2009), this study found that level of knowledge about drinking and its potential negative consequences does not reduce problem drinking behavior among students. The lack of significance in the results is, in itself, telling of the relationship between knowledge and drinking behaviors. So, while it seems that the Red Cup Culture program does, indeed, leave students with the intended knowledge and the intent to engage in protective drinking behaviors, intentions do not translate into actual protective choices when drinking.

However, it does appear that the students’ knowledge correlated with their intent to use those protective behaviors. A disconnect appears to lie in the time between the intent to use protective behaviors and actually using the protective behaviors.

Additionally, at the time of the second data collection, those who used protective behaviors also drank less. The initial correlation between knowledge and intent could simply be a jerk reaction to the information presented during the program. Upon leaving the Red Cup Culture program and entering the social scene, it is likely that intentions gradually change. This could be explained by findings that reveal that “even though students may know and feel that they are drinking more than they would like, they may still be unwilling to reduce their consumption unless they feel that they can effectively cope with the social pressures to drink” (Bennett et al. 1999:225). Reminders of the information provided during the program following the conclusion of the program could potentially be beneficial in encouraging the use of protective drinking behaviors.

The Red Cup Culture, which is predominantly information based, also includes some of the components that prove to be effective in promoting low-risk drinking.
behaviors. One such component is the correction of misperceptions of drinking norms as suggested by the NIAAA Advisory Council Task Force. However, the program is administered in a group setting, which is thought to be less effective than those that are aimed towards individuals (Bennett et al. 1999). The fact that Red Cup Culture uses some methods thought to be effective and others that are suspected to be ineffective makes this study unique in that it is addressing a program different from those that have previously been studied.

It must also be noted that this sample is not representative of the population, as it is biased towards females and students who report that they don’t drink. This could have skewed the results, making it difficult to make any conclusions on the data collected. Due to the lack of a representative sample, the results may not be generalized to the rest of the population. A more complete sample would likely elicit more conclusive results.

In the future, it seems that it would be beneficial to measure the students’ perceptions of consequences as they relate to themselves. For example, the students should be asked if they believe that they will suffer any of the consequences of high-risk drinking that were mentioned. This may be a better indicator of their actual drinking behavior at time two, and provide more insight into the factors that affect college drinking behaviors.

References


Appendix

General Alcohol Knowledge (Adapted from Thandi, Huchting, and LaBrie)
(Correct answers indicated in parentheses)

Please indicate whether you believe the following statements concerning alcohol are true or false by writing the appropriate letter in the space provided. Place a T in the blank if you think it is true and an F in the blank if you think it is false.

1. The same quantity of alcohol will have a stronger effect on women than men. (True)
2. Alcohol mixed with water will absorb more slowly than alcohol mixed with a carbonated beverage. (True)
3. You should give a person who has had too much to drink food and water to help sober them up. (False)
4. A slowed pulse and cold, clammy skin are symptoms of alcohol poisoning. (True)
5. The only reason that alcohol affects women more than men is that men are larger on average than women. (False)
6. Alcohol is involved in over 50% of college rapes. (True)
7. The average person can metabolize 1 drink per hour, but this process will slow down after 2-3 drinks. (True)
8. Alcohol mixed with a stimulant such as Red Bull is dangerous because alcohol is also a stimulant. (False)
9. In Indiana it is illegal for someone under the age of 21 to drink alcohol. (True)
10. Someone who drinks several alcoholic drinks in a short period of time will first experience a “buzz” (that up feeling that comes while drinking) and then experience a “down” and then an “up” again as she/he continues to drink. (True)
11. The number of ounces in a “drink” is the same for beer as it is for hard liquor. (False)
12. For an average female, three drinks will result in a BAC that is over the legal limit for intoxication. (True)
**Signs of High-Risk Drinking**

What are some signs of high-risk drinking? List as many as you can think of.

- Vomiting
- Dizziness
- Lack of coordination
- Slurred speech
- Blackouts/memory loss
- Unconscious/passing out
- Impaired judgment
- Drinking excessively/drinking for the purpose of getting drunk
- Uncharacteristically obnoxious or loud
- Weak pulse
- Incoherent
- Clammy, pale or cold skin
- Alcohol poisoning
- Trouble breathing/shortness of breath
- Uncharacteristically emotional

**Possible Consequences of High-Risk Drinking**

What are some of the possible negative consequences of high-risk drinking? List as many as you can think of.

- Death
- Sexual assault
- Effect on reputation (Facebook pictures, embarrassment, etc.)
- Hangover
- Academics (missing class, loss of scholarship, poor grades)
- Losing friends/harming other relationships
- Vomiting or nausea
- Injury to self or others
- Alcohol poisoning
- Unconscious, unresponsive, passing out
- Trouble with school, law, etc.
- Impaired judgment
- Incoherent
- Blackouts/memory loss
- Health issues (liver failure, STDs, pregnancy, etc.)
**Intentions Index**

Please indicate the degree to which you are likely to engage in the following behaviors when using alcohol or “partying” in college.

**Use the following response options:**

1 = very unlikely  
2 = unlikely  
3 = somewhat likely  
4 = likely  
5 = very likely

How likely are you to:

- Know your limits and drink within these limits  
- Make sure you have a plan in place before you use alcohol or “party”  
- Engage in “pre-gaming” (drink or get drunk) prior to attending a social activity  
- Use a designated driver  
- Set limits on how many drinks you are going to have on a night out at a party  
- Alternate alcoholic and nonalcoholic drinks  
- Have a friend let you know when you have had enough to drink  
- Avoid drinking games  
- Leave a bar/party at a predetermined time  
- Make sure that you go home with a friend  
- Know where your drink has been at all times  
- Drink shots of liquor  
- Stop drinking at a predetermined time  
- Drink water while drinking alcohol  
- Put extra ice in your drink  
- Avoid mixing different types of alcohol

**Drinking Index**

What is the average number of drinks you consume in one week?  
When you drink alcohol, how many drinks do you usually consume at one sitting?  
How many times have you been intoxicated during the past month?
Use of Protective Behaviors Index

Please indicate the degree to which you engaged in the following behaviors when using alcohol or "partying" over the past semester.

Use the following response options:  
1 = never  
2 = rarely  
3 = occasionally  
4 = sometimes  
5 = usually  
6 = always

Avoided trying to "keep" up or "out-drink" others

Kept track of how much alcohol you had consumed (i.e. the number of servings)

Made sure you knew the individual who gave you a drink

Paced your drinking to one or fewer drinks per hour

Made sure that there was one sober person in your group

Used the buddy system

Had a predetermined meeting point in case you got separated from your friends

Made/got your own drinks

Watched when someone made a drink for you

Ate before and/or during drinking

Engaged in sex while you were drunk

Made sure you had a plan in place before you participated in a social activity that involved alcohol

Engaged in "pre-gaming" prior to attending a social activity

Used a designated driver

Set limits on how many drinks you had on a night out or at a party

Alternated alcoholic and nonalcoholic drinks

Had a friend let you know when you have had enough to drink

Avoided drinking games

Left the bar/party at a predetermined time

Made sure that you went home with a friend

Knew where your drink had been at all times

Drank shots of liquor

Stopped drinking at a predetermined time

Drank water while drinking alcohol

Put extra ice in your drink

Avoided mixing different types of alcohol

Drank slowly, rather than gulping or chugging