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Interactions in Social Settings: The Relationship Between Alcohol and Sexual Assault Among College Students

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INTERACTIONS IN SOCIAL SETTINGS: THE RELATIONSHIP BETWEEN ALCOHOL AND SEXUAL ASSAULT AMONG COLLEGE STUDENTS

A Master's Thesis

Presented to

The Graduate College of

Missouri State University

In Partial Fulfillment

Of the Requirements for the Degree

Master of Science, Psychology

By

Heather Michele Lepper

May 2018

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INTERACTIONS IN SOCIAL SETTINGS: THE RELATIONSHIP BETWEEN ALCOHOL AND SEXUAL ASSAULT AMONG COLLEGE STUDENTS

Department of Psychology

Missouri State University, May 2018

Master of Science

Heather Michele Lepper

ABSTRACT

Research has linked alcohol to violence and sexual assault, especially within the college student population. Most of this research focuses on the effects of alcohol on victims or perpetrators of sexual assault and not on bystanders of such situations. This study examines how self-reported drinking behavior affects students' ability to recognize risk of sexual assault in written scenarios and the various barriers that would inhibit their willingness to intervene. A sample of 275 students (183 female, 92 male) were asked to read one of three scenarios and respond to a brief questionnaire adapted from Burn's (2009) Barriers to Bystander Intervention Questionnaire. Participants also reported their alcohol consumption and drinking behavior using the Alcohol Use Disorder Identification Test (AUDIT). Participants who reported riskier levels of drinking behavior were less likely to agree that they could identify risk within the scenarios and that they were less likely to notice this type of scenario. Participants generally had difficulty differentiating situations based on risk. The results suggest that alcohol interferes with college students' ability to notice or identify risk in sexual assault scenarios that can impact intervention and reporting of sexual assault among college students.

KEYWORDS: alcohol, sexual assault, college students, bystanders

This abstract is approved as to form and content

_____

Dr. David Lutz
Chairperson, Advisory Committee
Missouri State University

INTERACTIONS IN SOCIAL SETTINGS: THE RELATIONSHIP BETWEEN ALCOHOL AND SEXUAL ASSAULT AMONG COLLEGE STUDENTS

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Heather Michele Lepper

A Master's Thesis
Submitted to the Graduate College
Of Missouri State University
In Partial Fulfillment of the Requirements
For the Degree of Master of Science, Clinical Psychology

May 2018

Approved:

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Julie Masterson, PhD: Dean, Graduate College

In the interest of academic freedom and the principle of free speech, approval of this thesis indicates the format is acceptable and meets the academic criteria for the discipline as determined by the faculty that constitute the thesis committee. The content and views expressed in this thesis are those of the student-scholar and are not endorsed by Missouri State University, its Graduate College, or its employees.

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INTRODUCTION

Alcohol use among college students is much different from the outside community, with social norms creating a dangerous environment for these adolescents. One of the biggest problems for college-aged students regarding alcohol is binge drinking, defined as consuming 4 or more drinks on one occasion (Shorey, Stuart, & Cornelius, 2011). According to a 2010 survey conducted by the Substance Abuse and Mental Health Services Association, 43.5% of college students reported consuming five or more drinks during one occasion at least once in the past month (Schnetzer, Schulenberg, & Buchanan, 2012). Another study indicated that 1 in 5 college students was found to be a heavy drinker, consuming 14.5 drinks or more per week (Presley, Meilman, & Leichliter, 2002). Fraternity and sorority life is especially important, as students involved in Greek life report higher rates of alcohol consumption, leading to higher instances of negative consequences, including violence and assault (Cashin, Presley, & Meilman, 2015). College parties and the nightlife surrounding college campuses contribute to more frequent alcohol use. These high rates of alcohol consumption lead to higher risks of sexual assaults and other alcohol-related assaults (WHO, 2006).

Fifteen to 20% of college women report being raped or sexually assaulted (Gidycz, McNamara, & Edwards, 2006; Hertzog & Yielding, 2009; Richardson & Shields, 2015). This is not significantly different from women aged 22-24 that are not in college (Sinozich & Langton, 2014). Longitudinal studies also report that up to 15% of women experience rape or assault over brief reporting periods of three to six months. In

2005, there were approximately 97,000 date rapes or sexual assaults linked to alcohol use involving college students (Schnetzer, Schulenberg, & Buchanan, 2012). In a national sample of college students 55% of women and 75% of men reported consuming alcohol at the time of an assault (Gidycz et al., 2007) with alcohol implicated in 33-66% of rapes (Ullman, Karabatsos, & Koss, 1999). Young adults are the most likely targets of these types of assault and are most often the victims of alcohol-related violence (WHO, 2006). Cognitive, social, and institutional reasons contribute to these rates. On a cognitive level, the effects of acute alcohol on emotional face processing has suggested reduced sensitivity to submissive signals (sad faces) and increased perceptual bias towards provocative signals (angry faces), after alcohol consumption (Craig, Attwood, Benton, Penton-Voak, & Munafo, 2009). Information processing is also reduced as alcohol alters the perception of emotional cues leading to their misinterpretation (Attwood & Munafo, 2014). These deficits have been linked to aggressive behavior and likelihood of risky sexual encounters (Bartholow, Pearson, Gratton, & Fabiani, 2003). At an age when the frontal cortex is still developing, college-aged students may be more susceptible to these cognitive disruptions. On a social level, college students frequent social settings where sexual assaults are most likely to occur. These settings include bars, nightclubs, and parties, all spontaneous social settings where alcohol is most often present and inhibitions are lowered (Presley, Meilman, & Leichliter, 2002). College aged students view alcohol as a way of facilitating sexual opportunities and therefore few women identify alcohol as a risk factor for sexual assault (Hertzog & Yielding, 2009). At an institutional level, the regulation of alcohol by college administration impacts that rates of sexual assaults among students. Schools that ban or limit alcohol on their campus receive fewer

accusations of sexual assault, while assault rates at more permissive schools have been 3.1 to 4.4 times higher (Richardson & Shields, 2015).

Several theories have been developed to help explain why alcohol causes violent behaviors that could potentially lead to sexual assault. The first theory discussed, and the most common, is the *disinhibition theory*. This theory purports that alcohol causes violence by disturbing the part of the brain that controls behavioral inhibition (Giancola, 2015). This is best thought of as "loosening behavioral restraints." (Zhang, Welte, & Wieczorek, 2002). Another theory to support the causal claim is the *deviance disavowal* theory, which stated that an individual might drink intentionally as a way to excuse their behavior. Drunken behavior is usually attributed to the effects of alcohol and therefore not a reflection of the individual or their personal characteristics. This provides an excuse for people to become violent and blame it on the effects of alcohol. A related hypothesis to deviance disavowal is the *embolden hypothesis*. This is most commonly referred to as "the liquid courage effect," stating the alcohol works as a facilitator to carry out acts that an individual would not normally act upon (Zhang, Welte, & Wieczorek, 2002). Finally, and perhaps most importantly, is the role of alcohol outcome expectancies, the beliefs that people hold about the effects of alcohol. Some violent behaviors are the result of the expectancies, specifically beliefs about alcohol increasing aggression, and not the alcohol consumption itself (Brasfield, et al., 2014).

These hypotheses focus primarily on the perpetrators of assaults, but these hypotheses and other factors contribute to the rates of sexual assaults involving alcohol among college students. For example, College women believed that alcohol makes it more difficult to identify risky situations (Gidycz, McNamara, & Edwards, 2006).

However, although women who identified themselves as heavy drinkers perceived themselves to be at a greater risk of sexual assault, they believed that it would not actually happen to them. In a laboratory study, women who consumed more alcohol were less likely to perceive social cues in a vignette that were indicative of a sexual assault (Davis, 2000). When consuming alcohol, women reading vignettes regarding sexual assault viewed the man in the scenario more positively compared to those who did not consume alcohol (Gidycz et al., 2007). These results were found by Bartholow, Pearson, Gratton, & Fabiani (2003) in which alcohol consumption was shown to interfere with person perception, making people seem more attractive and seen in a more positive light. This interference in person perception makes it more difficult to perceive risky or negative behaviors. Studies have also shown how alcohol alters men's perception of female arousal, leading to a better understanding of how some sexual assaults may occur. Men who consumed alcohol were less likely to recognize the level of female arousal in given vignettes and rated this arousal higher even after two given refusals (Gross, Bennett, Sloan, Marx, & Juergens, 2001). These results indicated that when consuming alcohol, men were less likely to be able to identify where the line is crossed into unwanted sexual advances leading to sexual assault.

In the case of bystanders to a potential sexual assault, alcohol impairs the ability to process facial expressions and emotions. After consuming alcohol, overall emotion recognition is less accurate and the ability to identify sadness or anger was impaired (Attwood & Munafo, 2014). Evidence from this study also suggested that similar insensitivity to facial expressions may exist for fear, making it harder to distinguish when a situation could be potentially dangerous, or people involved may feel threatened.

Attwood also found that alcohol consumption led to a reduced ability to recognize distress cues, which is paramount for bystanders in a threat situation such as a sexual assault. Research has shown that bystanders are less likely to help when their perception of risk in a situation is unclear or ambiguous (Banyard, Plante, & Moynihan, 2004). These results could have disastrous implications as college students who are in a setting where a sexual assault is occurring may not perceive it as such and therefore be less likely to intervene or report it. According to the 2014 Bureau of Justice Statistics Report, 80% of rapes and sexual assaults against college students were more likely to be unreported to police, while these assaults against nonstudents went unreported in 67% of cases (Sinozich & Langton, 2014).

Alcohol usage also affects how others perceive sexual assaults. When participants read scenarios depicting sexual assault, the perpetrator who is intoxicated is rated as less responsible for their actions compared to someone who committed the act sober (Klippenstine, Schuller, & Wall, 2007). In this same study, victims were blamed more when they were intoxicated during the act than when they were not. In fact, violent behavior was often excused as drunken behavior and therefore not perceived as deviant (Witte, Kopkin, & Hollis, 2015). However, as the violence in the encounter became more blatant, it was less likely to be excused regardless of whether the perpetrator was intoxicated.

As alcohol has been shown to change executive cognitive functioning and perceptions of violence and accountability, is it also possible that alcohol distorts how violence may be perceived from the perspective of those evaluating scenarios and not directly involved in them? Most of the previous studies have involved victims of sexual

assault, women who might be at risk, or bystanders judging the behavior of others after the fact. What has not been looked at further is how observers or bystanders perceive risk based on their own drinking behavior during such situations. The present study is designed to look at how self-reported drinking behavior affects perception of risk and sexual assault. Participants will report their own patterns of alcohol consumption, and then view one of three scenarios regarding sexual assault. These scenarios will vary only in the amount of risk presented in the scenario. It is hypothesized that participants who report higher rates of alcohol consumption will be less likely to identify the risk of sexual assault than those who are non-drinkers or light drinkers. The purpose of this study is to determine whether self-reported drinking behavior influences bystander decisions to report or intervene in a sexual assault on campus.

METHODS

Participants

Participants were students enrolled in Introductory Psychology at Missouri State University and received research credit for their participation. A total of 275 (183 female 92 male) students participated in the study during the fall semester of 2017 and the spring semester of 2018. The majority of the participants were freshmen students in their first year of college (76.98% Freshmen, 14.75% Sophomore, 6.12% Junior, 1.44% Senior, and 0.72% Other).

Independent Variables

Risk Scenarios. Participants were randomly assigned to read one of three scenarios regarding a sexual assault. The scenarios differed only in the degree of risk for sexual assault. All three scenarios began with the same introduction:

> "Imagine yourself in the following situation. You are at a house party with several of your friends. It is a typical Friday night, and everyone has said this is the best place to be. You have been at this party for about an hour, drinking with your friends and talking about how classes have been. Everyone at the party seems to be having a great time and you notice that some people are more intoxicated than others. There are a few couples paired up, and several people are flirting and getting to know each other. Across the room on the couch is a guy and girl who are kissing. Your friend says they just met, and you are not sure how much either one has been drinking."

The scenarios then varied (Appendix C). For the Low-Risk scenario, it concluded: "The guy moves his hand onto the girl's thigh and she hesitates. She says something to the guy, but you cannot hear the conversation. He pauses for a moment and then continues kissing her and keeps his hand where it is. The girl appears uneasy but is not pulling away." In the Medium-Risk condition, the scenario stated: "The guy moves his hand underneath the

girl's shirt and she immediately pulls away. She says something to the guy, but you cannot hear the conversation. She appears uncomfortable but the guys continues to try and kiss her." The High-Risk scenario concluded with: "The guy leans forward and is pushing the girl onto her back on the couch. The girl stops kissing him and immediately pulls away. She says something, but you cannot hear the conversation. She appears as if she is trying to get up, but the guy is continuing to push her back down and kiss her."

Alcohol Use Disorders Identification Test. The Alcohol Use Disorder Identification Test (AUDIT), used as an independent variable, was given to all participants to assess participants self-reported alcohol usage. The questionnaire consisted of ten items to assess quantity and frequency of alcohol use (see Appendix E). It also measured hazardous and excessive drinking behavior (Saunders, Aasland, & Babor, 1993). Scores on the AUDIT range from 0 to 40 with a suggested cutoff value of 8 points to maximize sensitivity and specificity (Schnetzer, Schulenberg, & Buchanan, 2012). A breakdown of self-reported alcohol usage can be seen below (Table 1) based on class, divided into the four categories on the AUDIT: low-risk, risky, harmful, and dependent (Appendix F).

Risk Recognition and Bystander Intervention Barriers. Participants were given a fifteen-item questionnaire, a modification of the Barriers to Bystander Intervention questionnaire (Burn, 2009), to measure bystander intervention barriers. Questions were measured on a 7-point Likert scale ranging from Strongly Disagree to Strongly Agree. Questions measured barriers in five different areas: failure to notice (one item), failure to identify situations as high-risk, measuring ambiguity and pluralistic ignorance (two items), failure to take intervention responsibility (two items), failure to

intervene due to a skills deficit (two items), and failure to intervene due to audience inhibition, measuring worthiness of the victim and diffusion of responsibility (eight items).

Establishment of Authenticity. Four items on the questionnaire measured how realistic the devised scenarios were to students. These questions can be found in Appendix D. Another item on the questionnaire was used to determine whether students were providing fixed response sets, worded simply as "Please mark neither agree nor disagree for this item."

Procedure

This study was reviewed in accordance with federal regulations governing human subjects research and approved by an Institutional Review Board (see Appendix A). Participants were given access to the study through the Qualtrics system and provided were provided an online informed consent (Appendix B). The amount of time participants spent on each screen was calculated and recorded. The first screen of the experiment allowed participants to provide basic demographic information regarding gender, age, year in school, and race. A scenario was then provided to participants using randomized order and was followed by questions from the Bystander Intervention Scales and the Alcohol Use Disorder Identification Test (AUDIT) in a counterbalanced order. Participants completed the study in approximately 15 minutes. Total scores for the AUDIT questionnaire were computed for each individual. Six regression models were created using *R* statistical software to determine the interaction between scores on each subscale of the Barriers to Bystander Intervention questionnaire and the total AUDIT score based on which scenario a participant received.

RESULTS

A multiple regression model was calculated to predict ratings on the questions regarding the establishment of authenticity (designed to test how realistic the scenarios in the experiment were) based on scenario type (Low-Risk, Medium-Risk, High-Risk) and total AUDIT score. Scales were recoded to obtain comparisons for all three scenarios. Participants were close to neutral in being able to imagine themselves in this situation or being likely to drink in this situation. They slightly disagreed with the statements that they had been in this situation previously or would spend a weekend night in this way. This establishment of authenticity model was determined to be significant, indicating that participants' ratings changed (see Table 2). However, this significance was not a result of which scenario participants received but based on their total AUDIT score. Those participants who reported a higher level of alcohol use were more likely to agree that they would find themselves in such a scenario, were more likely to spend a weekend night in such a scenario, and more likely to agree that the scenario is how they might spend a weekend night ($b = 0.12$, $t(267) = 9.09$, $p < .001$). For each of these questions, those participants in the Harmful and Dependent groups were not significantly different from each other but were significantly more likely than those in the Risky group who in turn were significantly more likely than those in the Low-Risk group.

A second model was calculated to predict whether participants could readily identify scenarios as high-risk based on their self-reported drinking behavior and the scenario they received. This model demonstrated that participants' ratings differed based on which scenario they received (Table 2). Participant scores were significantly different between the Low-Risk scenario and the Medium-Risk ($b = -0.49$, $t(267) = -2.40$, $p<.05$)

and High-Risk scenarios (b = -0.54, $t(267)$ = -2.62, p<.05), indicating that those in the Low-Risk scenario were more likely to agree with the statements that they would find it hard to tell if the guy is at risk for sexually assaulting the girl and that they would be more uncertain if the girl was at risk for being sexually assaulted. There were no significant differences in ratings from the Medium-Risk scenario to the High-Risk scenario. Total AUDIT scores also were significantly different for the ratings for whether participants identified the scenarios as high risk, showing that as participants reported more alcohol use, they were more likely to agree that they would find it hard to tell if the guy is at risk for sexually assaulting the girl and were more uncertain if the girl is at risk for being sexually assaulted (b = 0.04, $t(267)$ = 2.29, $p < .05$). Specifically, the Dependent group was significantly higher on these items compared with the other three groups. There were no differences among the other three groups.

Five other regression models were run based on the different subscales of the Barriers to Bystander Intervention questionnaire. Of these five models, only one was found to be significant (see Table 3). This model, based on the failure to notice subscale, was calculated to predict whether participants indicated they would notice the events within the scenario based on scenario type and total AUDIT score. Scores between scenarios were not significantly different. However, participants' ratings of whether they would notice a situation described in the scenario did increase based on their AUDIT score. Participants slightly disagreed that they would be too busy to be aware of the situation, but participants who self-reported higher alcohol use reported they would be less likely to notice the scenario happening (b = 0.09, $t(267)$ = 4.94, $p < .001$). A regression analysis was conducted to further determine the differences in ratings on the

failure to notice subscale by the level of risky drinking behavior (Low-Risk, Risky, Harmful, and Dependent) and was found to be significant (F (3, 267) = 6.14, p < .001, r^2= .06). Participants classified in the Low-Risk category (M = 3.02) disagreed that they would be too busy to notice more than participants in the Risky category (M = 3.65; b = 0.63, t(267) = 3.18, p<.01), the Harmful category (M = 4.24; b = 1.22, t(267) = 3.34, p<.001), and the Dependent category (M = 4.29; b = 1.27, t(267) = 2.12, p<.05). There were no other significant differences.

DISCUSSION

This study examined whether self-reported drinking behavior affected how college students perceive risk in sexual assault scenarios as a bystander. These results supported the hypotheses that students who self-reported riskier levels of drinking behavior were less likely to be able to identify risky sexual assault behavior and less likely to notice such behavior.

Students in this study were able to differentiate between the Low-Risk Scenario and the Medium-Risk and High-Risk Scenarios; however, the average rating for whether the girl was at risk for sexual assault was only "Slightly Disagree," even for the High-Risk Scenario. College students who are unable to identify the risk in these scenarios will be less likely to get involved and intervene. This is especially true when their perception of risk is unclear or ambiguous (Banyard, Plante, & Moynihan, 2004). Even more perplexing, most of the participants in this study were required to take sexual assault prevention training within their first year of college as part of a university requirement. The results indicated that this training had no effect on students' abilities to identify risk or notice such a situation happening. It may be that young college students have not developed an understanding of risk in scenarios such as the ones used in this study, which are social settings that college students frequent and where alcohol is present. Most participants stated they had never found themselves in this type of scenario before, but those who drank more rated that they could imagine themselves in this situation or had been in this situation before. With the prevalence of sexual assault on college campuses, it may be that students have been in these situations but have not noticed them.

These findings show that self-reported drinking behavior is a factor to consider among college students as they demonstrate that riskier drinking behavior changes their ability to identify sexual assault risk, as well as the ability to notice situations that may be risky in nature. This is important as the level of alcohol use among college students is higher than levels of alcohol use among the general population and is a major contributing factor to the rate of sexual assault among college campuses (WHO, 2006). Self-reported drinking behavior also shows how behavior is impacted by long term patterns of alcohol use which can change cognitive perceptions of risk over time and inhibit bystanders' ability to recognize distress cues (Attwood & Munafo, 2014). This study was consistent with this view, as it showed that as students reported higher drinking levels, they were less able to identify or notice such cues and therefore could not identify the scenarios as risky. Within the entire sample students had difficulty identifying risk, even within the Low-Risk drinking behavior category. Those who were in the Risky or Harmful categories found it even more difficult to identify risk, which may make them less likely to intervene.

Limitations are present within the sample and experimental realism of this study. While using a convenience sample of college students is not considered a limitation in this study, as the study was designed to measure the perceptions of college students, the majority of participants within this study were freshmen from a large University who are required to take sexual assault prevention training within their first year of college. It would have been beneficial to have more upper level students within our sample. Our study could have also benefitted from focusing on the population of college students who report more harmful or dependent drinking behavior, as these groups are impacted more

by the results of this study. The inability to identify risk may also be the result of the scenarios used in this study being too ambiguous and not salient enough to demonstrate actual risk factors, as students are less likely to intervene in ambiguous situations (Banyard, Plante, & Moynihan, 2004). Scenarios may have to involve vocal objections or more dramatic actions for students to be able to recognize the risk in the scenario and get involved. Men who consume alcohol are less likely to recognize the level of female arousal in scenarios and rated arousal higher even after given refusals (Gross, Bennett, Sloan, Marx, & Juergens, 2001). Women in written vignettes may have to expressly refuse advances for participants to intervene. An interesting finding, though not significant, was that participants often rated items indicating they would disagree that it was someone else's responsibility to intervene. They also agreed they would be more likely to intervene if they knew the people involved. Scenarios could be devised in which it is solely the participants' responsibility to intervene, as diffusion of responsibility would make it less likely that the participant would intervene if in a group, and in which there is both victim and perpetrator familiarity. Another potential limitation is the unequal proportion of females and males within the sample. Previous research has shown women to be less likely to perceive social cues in events indicative of sexual assault (Davis, 2000). However, our analyses revealed no significant gender differences. Perhaps the most prominent limitation of this study is the reliance of self-reporting to measure college students' drinking behavior rather than a direct measurement of that behavior. Future research should be conducted using measures of actual behavior rather than self-report. Recorded or live scenarios could be used, providing visual cues. Ultimately,

participants ingesting alcoholic beverages could be used in controlled settings to determine exactly what happens in such situations.

College campuses should recognize the importance of these findings and as a first step develop more extensive educational programs for students to understand how their drinking behavior may place them in situations in which they might not be able to readily identify risky situations that could lead to victimization. These programs should focus more on the effects of alcohol consumption and be more frequent throughout a student's college career. Such programs should also be incorporated into the classroom with more emphasis on discussion. Some institutions around the country have recognized the link between alcohol and sexual assault and banned or limited alcohol on their campus, decreasing the number of accusations of sexual assaults (Richardson & Shields, 2015). Programs also currently exist for sexual assault prevention trainings and how alcohol use could lead to direct victimization. This study revealed that college students are not good at recognizing risk and increased alcohol consumption makes it even less likely for risk recognition. A more focused program could be created to show college students that increased levels of alcohol use lead to a decreased ability to notice or identify risky situations that they could potentially intervene and prevent. Overall, this study demonstrates that the focus of alcohol use in sexual assaults among college students should not be limited to those directly involved in the act but also to bystanders of such situations.

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TABLES

Table 1

Percentage of Alcohol Use by Class.

	Low-Risk (0-4)	Risky (5-14)	Harmful (15-19)	Dependent (20+)	Total
Freshmen	36	53	9	3	76.98
Sophomore	61	34	2	2	14.75
Junior	35	47	18	0	6.12
Senior	50	50	0	0	1.44
Other	0	50	0	50	0.72
Total	39	49	8	3	100

Note. Categories based on Alcohol Use Disorder Identification Test (AUDIT) scoring. Totals in the right-hand column indicate total percentages or participants in each class. Totals in the bottom row indicate total percentages of participants in each category of alcohol use.

Table 2

Average Ratings for Establishment of Authenticity Questions and Failure to Identify Scenarios as High-Risk Questions.

	Scenarios			Audit Groups			
	Low-Risk	Medium-Risk	High-Risk	Low-Risk	Risky	Harmful	Dependent
Establishment of Authenticity ($F = 27.59$, $p < .001$, $r^2 = 0.24$)							
I can imagine myself being in this situation.	3.78	3.74	3.80	3.05_a	4.22_b	4.38_c	4.43_c
I have been in this situation before.	2.68	2.59	2.56	1.99_a	2.85_b	3.91_c	3.57_c
This is how I might spend a weekend night.	2.78	3.05	2.98	2.10_a	3.38_b	4.05_c	4.14_c
It is likely I would be drinking in this situation.	4.00	4.13	4.35	2.82_a	5.02_b	5.24_c	5.00_c
Failure to Identify Scenarios as High-Risk ($F = 4.20$, $p < .05$, $r^2 = .05$)							
At this party, I would find it hard to tell whether this guy is at risk for sexually assaulting this girl.	3.67_a	3.16_b	3.07_b	3.19_a	3.27_a	3.71_a	4.14_b
In this party situation, I think I might be uncertain as to whether this girl is at-risk for being sexually assaulted.	3.41_a	2.97_b	3.02_b	3.11_a	3.09_a	3.33_a	4.00_b

Note. Averages based on 7-point Likert scale where 1=Strongly Disagree and 7=Strongly Agree. All statistics based on 3,267 degrees of freedom. Cells with different subscripts are significantly different from one another (p<.05). Where no subscripts are present within categories (i.e., scenario or AUDIT score), there were no significant differences.

Table 3

Average Ratings for Questionnaire Items.

	Scenarios			Audit Groups			
	Low-Risk	Medium-Risk	High-Risk	Low-Risk	Risky	Harmful	Dependent
Failure to Notice ($F = 8.57$, $p < .001$, $r^2 = .24$)							
At this party, I would probably be too busy to be aware of this situation	3.59	3.34	3.45	3.02_a	3.65_b	4.24_b	4.29_b
Failure to Intervene Due to a Skills Deficit ($F = 0.48$, $p = .70$, $r^2 = .005$)							
Although I would intervene, I am not sure I would know what to say or do.	4.07	3.89	3.80	4.06	3.80	3.81	4.57
Even if it was my responsibility to say or do something, I am not sure I know how to.	3.74	3.48	3.51	3.59	3.52	3.62	4.29
Failure to Intervene Due to Audience Inhibition ($F = 1.40$, $p = .24$, $r^2 = .02$							
Even if I thought it was my responsibility to say or do something, I might not out of a concern I would look foolish.	2.84	2.79	2.55	2.66	2.69	3.24	3.43
I am hesitant to say or do something because I am not sure other people would support me.	3.15	3.25	2.88	3.17	2.96	3.38	3.86

Note. Averages based on 7-point Likert scale where 1=Strongly Disagree and 7=Strongly Agree. All statistics based on 3,267 degrees of freedom. Cells with different subscripts are significantly different from one another (p<.05).

Table 3 (continued). Average Ratings for Questionnaire Items.

	Scenarios			Audit Groups			
	Low-Risk	Medium-Risk	High-Risk	Low-Risk	Risky	Harmful	Dependent
Failure to Take Intervention Responsibility ($F = 0.77$, $p = .51$, $r^2 = .009$)							
Because I do not know this girl, I would leave it up to her friends to say or do something.	2.86	2.63	2.53	2.57	2.68	3.10	2.86
Even if I thought the girl wanted to be left alone, I would probably leave it up to others to say something.	2.78	2.70	2.48	2.65	2.62	2.86	2.86
I would not say or do something because I think she made choices that put her in this situation.	2.26	2.20	2.41	2.24	2.24	2.76	2.86
I am more likely to say or do something if I know the guy	4.93	4.90	4.62	4.56	4.99	4.86	5.29
If the girl is dressed provocatively, or acts provocatively, I feel less responsible for saying or doing something in this situation.	2.36	2.39	2.28	2.38	2.23	2.81	3.00
If the girl is extremely intoxicated I would not say or do anything about this situation.	1.96	2.02	2.11	2.07	1.93	2.43	3.00
I am more likely to say or do something if I know the girl.	5.34	5.50	5.62	5.38	5.63	5.00	5.71
If the girl is dressed provocatively, or acts provocatively, I would not say or do something about this situation.	2.27	2.35	2.21	2.38	2.11	2.81	2.71

Note. Averages based on 7-point Likert scale where 1=Strongly Disagree and 7=Strongly Agree. All statistics based on 3,267 degrees of freedom. Cells with different subscripts are significantly different from one another ($p<.05$).

APPENDICES

Appendix A

Human Subjects IRB Approval Letter.

Missouri State University

To:
David Lutz
Psychology

RE: Notice of IRB Approval
Submission Type: Initial
Study #: IRB-FY2018-150
Study Title: The Relationship between Alcohol and Sexual Assault Among College Students
Decision: Approved

Approval Date: Nov 1, 2017
Expiration Date: Oct 30, 2018

This submission has been approved by the Missouri State University Institutional Review Board (IRB) for the period indicated.

Federal regulations require that all research be reviewed at least annually. It is the Principal Investigator's responsibility to submit for renewal and obtain approval before the expiration date. You may not continue any research activity beyond the expiration date without IRB approval. Failure to receive approval for continuation before the expiration date will result in automatic termination of the approval for this study on the expiration date.

You are required to obtain IRB approval for any changes to any aspect of this study before they can be implemented. Should any adverse event or unanticipated problem involving risks to subjects or others occur it must be reported immediately to the IRB.

This study was reviewed in accordance with federal regulations governing human subjects research, including those found at 45 CFR 46 (Common Rule), 45 CFR 164 (HIPAA), 21 CFR 50 & 56 (FDA), and 40 CFR 26 (EPA), where applicable.

Researchers Associated with this Project:
PI: David Lutz
Co-PI:
Primary Contact: Heather Lepper
Other Investigators: Heather Lepper

Appendix B

Research Participant Information and Consent Form.

A. Purpose and Explanation of Research

You are being asked to participate in the research study conducted by the researchers below. The purpose of this research is to gather information on students' attitudes toward alcohol and sexual assault. You will be asked to read a short scenario about an interaction between a guy and girl at a college party. You will then be asked to answer various questions regarding your perspective of the both people's behavior, as well as your own. You will also need to provide some basic demographic information. You must be at least 18 years old to participate in this study.

B. Your Rights to Participate, Decline, or Withdraw

Your participation is completely voluntary. You have the right to refuse to participate, or you may change your mind at any time. Please let inform one of the researchers if you do not wish to have your information included.

C. Costs and Compensation for Your Participation in the Study

There are minimal risks if you decide to participate in this study. The scenarios are detailed and may include language that some participants may find uncomfortable or triggering. On the following page is information for the Missouri State Counseling Center for people who may wish to seek psychological service following the completion of this study. In order to complete this study, you will need to give approximately 15 to 20 minutes of your time. There are no direct, tangible benefits from participating. However, the researchers are grateful for your service and believe your participation will contribute to the best practices in sexual assault prevention. Your participation is anonymous. No

one will be able to identify you or know whether you participated in this study. Nothing you say on the questionnaire will in any way influence your present or future employment.

D. Contact Information for Questions and Concerns

If you have concerns or questions about this study, please contact the researcher:

Address: David Lutz, PhD

Department of Psychology, Missouri State University

901 S. National Ave.

Springfield, MO 65897

Email: DavidLutz@missouristate.edu

Phone: 417-836-5830

Address: Heather Lepper, Graduate Student

Department of Psychology, Missouri State University

901 S. National Ave.

Springfield, MO 65897

Email: lepper137@live.missouristate.edu

Phone: 417-836-8366

E. Documentation of Informed Consent

This study is voluntary. By signing below, you acknowledge that you understand this information and give your consent to participate.

Name: _____ Date: _____

F. Psychological Services

Missouri State University
Counseling Center - Carrington Hall, Room 311
901 S National Ave
Springfield MO 65897

Office hours:
Monday - Friday, 8:00 am - 5:00 pm

Phone:
417-836-5116

Appendix C

Risk Scenarios.

Scenario 1. Imagine yourself in the following situation. You are at a house party with several of your friends. It is a typical Friday night and everyone has said this is the best place to be. You have been at this party for about an hour, drinking with your friends and talking about how classes have been. Everyone at the party seems to be having a great time and you notice that some people are more intoxicated than others. There are a few couples paired up, and several people are flirting and getting to know each other. Across the room on the couch is a guy and girl who are kissing. Your friend says they just met, and you are not sure how much either one has been drinking. The guy moves his hand onto the girl's thigh and she hesitates. She says something to the guy but you cannot hear the conversation. He pauses for a moment and then continues kissing her and keeps his hand where it is. The girl appears uneasy but is not pulling away.

Scenario 2. Imagine yourself in the following situation. You are at a house party with several of your friends. It is a typical Friday night and everyone has said this is the best place to be. You have been at this party for about an hour, drinking with your friends and talking about how classes have been. Everyone at the party seems to be having a great time and you notice that some people are more intoxicated than others. There are a few couples paired up, and several people are flirting and getting to know each other. Across the room on the couch is a guy and girl who are kissing. Your friend says they just met, and you are not sure how much either one has been drinking. The guy moves his hand underneath the girl's shirt and she immediately pulls away. She says something to

the guy but you cannot hear the conversation. She appears uncomfortable but the guys continues to try and kiss her.

Scenario 3. Imagine yourself in the following situation. You are at a house party with several of your friends. It is a typical Friday night and everyone has said this is the best place to be. You have been at this party for about an hour, drinking with your friends and talking about how classes have been. Everyone at the party seems to be having a great time and you notice that some people are more intoxicated than others. There are a few couples paired up, and several people are flirting and getting to know each other. Across the room on the couch is a guy and girl who are kissing. Your friend says they just met, and you are not sure how much either one has been drinking. The guy leans forward and is pushing the girl onto her back on the couch. The girl stops kissing him and immediately pulls away. She says something but you cannot hear the conversation. She appears as if she is trying to get up but the guy is continuing to push her back down and kiss her.

Appendix D

Barriers to Bystander Intervention Questionnaire. All items are scored on a Likert scale from 1-7 (1=Strongly Disagree and 7=Strongly Agree).

Establishment of Authenticity Questions.

SQ1. I can imagine myself being in this situation.

SQ2. I have been in this situation before.

SQ3. This is how I might spend a weekend night.

SQ4. It is likely I would be drinking in this situation.

Failure to Notice Questions.

SQ5. At this party, I would probably be too busy to be aware of this situation.

Failure to Intervene Due to a Skills Deficit.

SQ11. Although I would like to intervene, I am not sure I would know what to say or do.

SQ17. Even if I thought it was my responsibility to say or do something, I am not sure I know how to.

Failure to Identify Situation as High Risk.

SQ10. At this party, I would find it hard to tell whether this guy is at risk for sexually assaulting this girl.

SQ14. In this party situation, I think I might be uncertain as to whether this girl is at-risk for being sexually assaulted.

Failure to Intervene Due to Audience Inhibition.

SQ19. Even if I thought it was my responsibility to say or do something, I might not out of a concern I would look foolish.

SQ20. I am hesitant to say or do something because I am not sure other people would support me.

Failure to Take Intervention Responsibility.

SQ6. Because I do not know this girl, I would leave it up to her friends to say or do something.

SQ7. Even if I thought the girl wanted to be left alone, I would probably leave it up to others to say something.

SQ8. I would not say or do something because I think she made choices that put her in this situation.

SQ9. I am more likely to say or do something if I know the guy.

SQ13. If the girl is dressed provocatively, or acts provocatively, I feel less responsible for saying or doing something in this situation.

SQ15. If the girl is extremely intoxicated I would not say or do anything about this situation.

SQ16. I am more likely to say or do something if I know the girl.

SQ18. If the girl is dressed provocatively, or acts provocatively, I would not say or do anything about this situation.

Appendix E

Alcohol Use Disorder Identification Test (AUDIT).

SMART!

Patient name: _____

Date of birth: _____

Alcohol screening questionnaire (AUDIT)

Drinking alcohol can affect your health and some medications you may take. Please help us provide you with the best medical care by answering the questions below.

One drink equals:  12 oz. beer  5 oz. wine  1.5 oz. liquor (one shot)

1. How often do you have a drink containing alcohol?	Never	Monthly or less	2 - 4 times a month	2 - 3 times a week	4 or more times a week
2. How many drinks containing alcohol do you have on a typical day when you are drinking?	0 - 2	3 or 4	5 or 6	7 - 9	10 or more
3. How often do you have six or more drinks on one occasion?	Never	Less than monthly	Monthly	Weekly	Daily or almost daily
4. How often during the last year have you found that you were not able to stop drinking once you had started?	Never	Less than monthly	Monthly	Weekly	Daily or almost daily
5. How often during the last year have you failed to do what was normally expected of you because of drinking?	Never	Less than monthly	Monthly	Weekly	Daily or almost daily
6. How often during the last year have you needed a first drink in the morning to get yourself going after a heavy drinking session?	Never	Less than monthly	Monthly	Weekly	Daily or almost daily
7. How often during the last year have you had a feeling of guilt or remorse after drinking?	Never	Less than monthly	Monthly	Weekly	Daily or almost daily
8. How often during the last year have you been unable to remember what happened the night before because of your drinking?	Never	Less than monthly	Monthly	Weekly	Daily or almost daily
9. Have you or someone else been injured because of your drinking?	No		Yes, but not in the last year		Yes, in the last year
10. Has a relative, friend, doctor, or other health care worker been concerned about your drinking or suggested you cut down?	No		Yes, but not in the last year		Yes, in the last year
	0	1	2	3	4

Have you ever been in treatment for an alcohol problem? ☐ Never ☐ Currently ☐ In the past

	I	II	III	IV
M:	0-4	5-14	15-19	20+
W:	0-3	4-12	13-19	20+

Appendix F

AUDIT Scoring Page.

(For the clinician or behavioralist)

Scoring and interpreting the AUDIT:

1. Each response has a score ranging from 0 to 4. All response scores are added for a total score.

2. The total score correlates with a zone of use, which can be circled on the bottom left corner.

Score*	Zone	Action
0-3: Women 0-4: Men	I – Low Risk	Brief education
4-12: Women 5-14: Men	II – Risky	Brief intervention
13-19: Women 15-19: Men	III – Harmful	Brief intervention/Brief treatment
20+: Men 20+: Women	IV – Dependent	Referral to specialized treatment

Brief education: An opportunity to educate patients about low-risk consumption levels and the risks of excessive alcohol use.

Brief intervention: Patient-centered discussion that employs Motivational Interviewing concepts to raise an individual's awareness of his/her substance use and enhancing his/her motivation towards behavioral change. Brief interventions are typically performed in 3-15 minutes, and should occur in the same session as the initial screening. Repeated sessions are more effective than a one-time intervention.

The recommended behavior change is to cut back to low-risk drinking levels unless there are other medical reasons to abstain (liver damage, pregnancy, medication contraindications, etc.).

Patients with numerous or serious negative consequences from their drinking, or patients with likely dependence who cannot or will not obtain conventional specialized treatment, should receive more numerous and intensive interventions with follow up. The recommended behavior change in this case is to either cut back to low-risk drinking levels or abstain from use.

Referral to specialized treatment: A proactive process that facilitates access to specialized care for individuals who have been assessed to have substance use dependence. These patients are referred to alcohol and drug treatment experts for more definitive, in-depth assessment and, if warranted, treatment. The recommended behavior change is to abstain from use and accept the referral.

* Johnson J, Lee A, Vinson D, Seale P. "Use of AUDIT-Based Measures to Identify Unhealthy Alcohol Use and Alcohol Dependence in Primary Care: A Validation Study." Alcohol Clin Exp Res, Vol 37, No S1, 2013: pp E253–E259