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# The Mediating Role of Self-Blame in the Relationship between Alcohol Intoxication, Bystander Intervention and PTSD Symptoms Following a Sexual Assault

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The Mediating Role of Self-Blame in the Relationship between Alcohol Intoxication,

Bystander Intervention and PTSD Symptoms Following a Sexual Assault

An Honors Thesis submitted in partial fulfillment of the requirements for Honors Studies in Psychology

By

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Spring 2021

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#### **DEDICATION**

This study is dedicated to the survivors of sexual assault and rape. Your willingness and bravery to share your story are the driving forces behind this line of research. Your stories are crucial in the battle to eliminate nonconsensual sexual experiences. Your strength, perseverance, and courage cannot be commended enough. Thank you from the bottom of my heart.

#### **ACKNOWLEDGEMENTS**

First, I would like to thank my undergraduate mentor, Dr. Lindsay Ham. She pushed me to think outside of the box and never ceased to encourage me in my endeavors. Secondly, I would like to acknowledge my fellow lab members in particular, Kayla Ford. The intellectually stimulating environment that they have created has been an integral factor in my development as a researcher. Lastly, I would not have been able to complete this research without support in my homelife. For this, I would like to thank my partner Wade Barnard, my parents Diddy and Mark Sawyer, and my closest friends Lauren Colliau and Kay Simon.

#### Table of Contents

Title Page
Dedication
Acknowledgements
Table of Contents
Abstract5
Introduction
The Present Study
Methods
Participants
Procedure
Materials14
Data Analytic Plan
Results
Discussion
References
Appendix

#### Abstract

**Introduction:** Sexual assault (SA) incidents are common. One in five women will be sexually assaulted during their lifetime (NSVRC, 2015); some will experience Posttraumatic Stress Disorder (PTSD) because of SA experiences (Resnick et al., 1993). Further, approximately two-thirds of all cases of sexual assault involve consumption of alcohol by the victim, perpetrator, or both (Testa & Livingston, 2009). Previous research has been dedicated to delineating cognitive and situational factors surrounding SA occurrences that contribute to risk for developing PTSD (Jaffe et al., 2013; Peter-Hagene & Ullman, 2018). Peter-Hagene and Ullman (2018) found that SA survivors that engage in more self-blame exhibit more PTSD symptoms (PTSS). Though bystanders are often present before an SA (Haikalis et al., 2018), little is known about bystanders' presence (vs. absence) impact on a survivor's mental health outcomes (Hamby et al., 2016). Further, no research to date has investigated both the role of selfblame in the relationship between victim alcohol intoxication/bystander presence (vs. absence) and PTSS. We hypothesized that SA survivor self-blame would mediate the association between alcohol intoxication/bystander presence (vs. absence) and severity of PTSS. Methods: Participants were 237 female college students ages of 18 to 25 (Mage=19.02, SDage=1.24; 81.4% Caucasian) with a lifetime history of SA (i.e., attempted or completed SA and rape on the revised SES) who completed an online survey. Participants reported on their subjective intoxication during the SA, bystander involvement and victim outcomes (Hamby et al., 2016), self-blame (RAQ; Frazier, 2003), and PTSS (PCL-5; Weathers, 2013). Results: PTSS and selfblame were positively correlated, r(234)=.473, p=.001. Participants who reported a bystander was present during the SA did not significantly differ from those who reported no bystanders were present in mean PTSS, F(1,229)=.247, p=.619, or self-blame, F(1,228)=2.588, p=.109.

Similarly, mean PTSS, F(1,234)=.560, p=.692, and self-blame, F(1,233)=.492, p=.741, did not significantly differ between participants who endorsed being intoxicated (vs. not intoxication) during the SA. Mediation analysis suggested that while self-blame was positively associated with PTSS,  $\beta=-.465$ , p<.001, bystander presence was unrelated to self-blame,  $\beta=-.259$ , p=.116, and PTSS,  $\beta=-.039$ , p=.793, and self-blame did not statistically mediate the association between bystander presence and PTSS,  $\beta=-.121$ , 95% CI=-0.270 to 0.028. Additionally, alcohol intoxication was found to be unrelated to self-blame  $\beta=-.279$ , p=.442, and self-blame did not mediate the relationship between victim alcohol intoxication and PTSS, partially standardized indirect effect =-.0152, 95% bootstrapped confidence interval (CI)=-.054 to .026. Conclusions: These results suggest that the presence of bystanders during an SA and victim alcohol intoxication was unrelated to self-blame, and consequently PTSS severity. However, the positive association between self-blame and PTSS is consistent with prior findings (Peter-Hagene & Ullman, 2018) and suggests that self-blame attributions following SA could be an intervention target.

# The Mediating Role of Self-Blame in the Relationship between Alcohol Intoxication, Bystander Intervention and PTSD Symptoms Following a Sexual Assault

According to the U.S. Department of Justice (2020), sexual assault can be defined as any nonconsensual sexual act that is outlined by Federal, tribal, or state law, including acts when the victim does not have the ability to provide consent. Instances of these unwanted sexual experiences are extremely common. One in five women and one in seventeen men will experience an occurrence of rape, a type of sexual assault, within their lifetime (National Sexual Violence Resource Center, 2015). In 2019 alone, 459,310 Americans reported being sexually assaulted (Morgan, & Truman, 2020). However, this figure does not factor in the significant amount of sexual assault that are not reported. Along with other comorbidities (e.g., depression and substance use disorders), Post-Traumatic Stress Disorder (PTSD) is often a consequence of unwanted sexual acts, with around one-third of female rape victims experience PTSD at some point following their trauma (Kilpatrick, Edmunds, & Seymour, 1992). Prior lines of research have been dedicated to investigating the relationship between characteristics of sexual assaults and PTSD symptomology. Previous data supports a relationship between certain sexual assault characteristics (i.e., physical violence) and PTSD symptoms (Brown, Testa, & Messman-Moore, 2009; Koss, Figueredo, & Prince, 2002; Zinzow et al., 2010), but the relationship between other contextual factors and PTSD symptoms is severely understudied. The present study focused on the association of two such contextual factors with PTSD symptomology levels -- specifically, victim alcohol intoxication and the presence of bystanders who could intervene in the sexual assault situation.

Alcohol intoxication is extremely prevalent in cases of sexual violence. Approximately two-thirds of all cases of sexual assault involve consumption of alcohol by the victim, perpetrator, or both (Testa & Livingston, 2009). Alcohol-related sexual assault typically includes less physical

violence (Brown et al., 2009; Peter-Hagene & Ullman, 2015; Zinzow et al., 2010), and thus could be related to less symptoms of PTSD. On the other hand, alcohol-related sexual assaults result in more negative social reactions, self-blame, and maladaptive coping and these psychosocial mediators could contribute to an increase in PTSD symptomology (Peter-Hagene & Ullman, 2015).

Delineating the role of self-blame after a sexual assault is integral to this study. Self-blame refers to the degree to which a sexual assault survivor attributes blame to themselves for the sexual assault occurring. Self-blame attributions may be situational, specific beliefs about one's action prior to, and after an assault. These types of attribution, referred to as behavioral attributions, come in the form of a survivor blaming themselves for drinking the day that the assault occurred or trusting the person that assaulted them (Peter-Hagene & Ullman, 2018). These attributions are less detrimental to a survivor's recovery because it gives them a sense of control over their actions. For example, a survivor may think that by avoiding certain behaviors, they can avoid victimization in the future. Comparatively, characterological self-blame attributions are beliefs about one's own character traits and can be far more detrimental because they elicit beliefs that something inherent to a survivor's personality made them predisposed to experience a victimization. They reflect beliefs that the assault occurred because of who the survivor is as a person, or that the assault was deserved. Further, characterological attributions entail a lack of control over one's situation and beliefs that one cannot change (e.g., Breitenbecher, 2006; Koss et al., 2002). Regardless of the type of attributions survivors engage in, both behavioral and characterological self-blame can produce important consequences for recovery.

Oftentimes, society tends to blame sexual assault survivors when they engage in risky behaviors such drinking and internalizing these beliefs could be highly detrimental to a survivor's recovery. Results from prior studies support the notion that if a survivor was drinking at the time of the assault (vs. not), they will engage in more self-blame (Brown et al., 2009; Donde, 2015; Macy, Nurius, & Norris, 2007; Nurius, Norris, Macy, & Huang, 2004), most likely because they believe that their intoxication facilitated the assault (Macy et al., 2007). In a cross-sectional study, investigators examined data from 340 college sexual assault survivors who drank prior to an assault found that those who were impaired or incapacitated reported feeling more stigma and self-blame vs. those who were not (Littleton, Grills-Taquechel, &\_Axsom, 2009). Consequently, self-blame is related to more psychological distress and increased risk for victimization (Breitenbecher, 2006; Miller et al., 2007).

The third variable of interest is the presence and (in)action of bystanders. Bystanders are individuals that witness criminal behavior; they may act to help the victim, support the perpetrator, or do nothing (Hamby et al., 2015). Research on the presence and helpfulness of bystanders in real-world sexual assault incidents is a relatively new field of research. The research on bystanders has almost been exclusively dedicated to determining efficacy of bystander intervention programs and factors that influence an individual's decision to intervene (Coker et al., 2016; Bennett, Banyard, & Garnhart, 2016). However, little is known about the effects that bystander presence (vs. absence) has on sexual assault survivor mental health. Specifically, no research to date has investigated how bystander presence (vs. absence) can impact sexual assault survivor self-blame, and consequently, symptoms of PTSD. In 2015, Hamby et al. conducted a study to investigate associations between bystander involvement and victim outcomes for 10 different types of victimizations. Results indicated that bystanders were present for 17% of sexual victimizations. Further, it was found that when bystanders intervened and were helpful in any capacity, survivors' short-term and long-term mental health outcomes improved. This finding suggests that bystander

helpfulness may be a key factor in improving mental health outcomes for survivors of sexual assault. Conversely, bystanders who are present but do not help could signal that the survivor was not worthy of intervention, encouraging self-blame.

#### **The Present Study**

The commonality of victim alcohol consumption and lack of research conducted on the presence of bystanders during sexual victimizations were the driving forces behind this research. In the present study, I examined how situational factors such as victim alcohol intoxication and the role of bystanders may influence self-blame and subsequent risk of developing PTSD symptoms following an act of sexual victimization. Specifically, I sought to test two hypotheses: **Hypothesis 1:** self-blame would mediate the association between participant intoxication at the time of the sexual assault incident and current posttraumatic stress symptoms. Specifically, as participant intoxication during the sexual victimization increases, so would participant self-blame, which would in turn predict posttraumatic stress symptoms. Hypothesis 2: self-blame would mediate the association between bystander presence and current posttraumatic stress symptoms. Specifically, participants that endorse that a bystander present (vs. not), would report more participant self-blame, which would in turn predict posttraumatic stress symptoms. The study fills a gap in the literature regarding how situational factors impact the presence and severity of PTSD symptoms to help inform targeted treatments for peoples who experience PTSD following a sexual victimization. Mediation models for victim alcohol intoxication and bystander presence are depicted below. Originally, a hypothesis was proposed that predicted that participants who endorsed that a bystander was present but did not help in any way would experience more selfblame, and consequently PTSS.

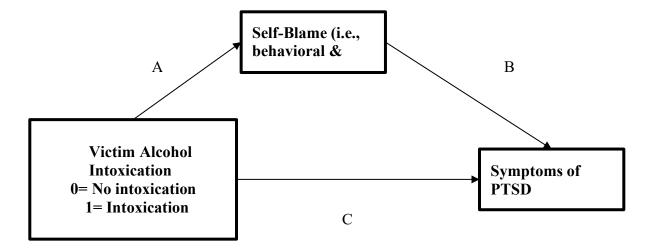


Figure 1

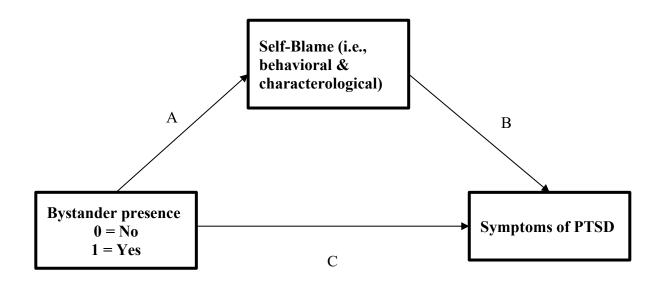


Figure 2

#### Methods

#### **Participants**

Table 1.

Two hundred and thirty-eight female participants were drawn from the larger study examining wanted and unwanted sexual situations among behavior among college students attending school in a midsouth college town (N = 974). For the current study, men (n = 336), women who experienced a past month sexual victimization (n = 51), and women who reported no instances of sexual assault since the age of 16 (n = 349) were excluded from the sample. Participants who endorsed a past month victimization were excluded because the first month post-trauma is a critical period where most people can sort and manage their emotions of their trauma on their own without developing PTSD.

As such, the final sample consisted of women ages 18-25 (mean age = 19.00; SD = 1.24; 81.4% White/non-Hispanic) who experienced at least one instance of sexual assault since the age of 16. See Table 1 for a demographic summary of the sample.

Participant Demographics and Measures

Age	M = 19.00 (SD = 1.24)	
Ethnicity		
White	193 (81.4%)	
Black or African	11 (4.6%)	
American		
Asian	5 (2.1%)	
Hispanic or	19 (18.1%)	
Latinx		
American Indian	5 (2.1%)	
or Native		
Other	4 (1.7%)	
Greek Affiliation		
Yes	112 (47.3%)	
No	125 (52.7%)	
SES (Rape)		

Yes	58 (24.5%)
No	179 (75.5%)
Level of Intoxication	M = 2.27 (SD = 1.57)
Not at all	126 (53.2%)
A little	24 (10.1%)
Somewhat	20 (8.4%)
Quite	29 (12.2%)
Very intoxicated	37 (15.6%)
Bystander Presence	,
Not Present	186 (78.5%)
Present	46 (19.4)
Type of Bystander	
Friend/Acquaintance	46 (19.3%)
Stranger	10 (4.2%)
Bystander Helpfulness	
Nobody Witnessed	184 (77.6%)
Helped in any way	24 (10.1%)
Both help and make	
things worse	5 (2.1%)
Did not help and	
did not make things	
worse	17 (7.2%)
Posttraumatic Checklist for L	OSM-5 $M = 21.12$ $(SD = 17.66)$
RAQ total (Self-Blame	
Subscales)	M = 21.85 (SD = 8.63)

Note: N = 237. All participants included in the analysis reported a sexual assault since the age of 16. Rape in the revised Sexual Experiences Survey (SES-R) was self-defined. RAQ = total score of self-blame subscales of the Rape Attribution Questionnaire. No participants indicated that a family member or police officer was present at the time of their victimization.

#### **Procedure**

After signing an informed consent, participants were directed to a survey in Qualtrics. Participants answered demographic items, including a question to assess past month sexual victimization. Responses on alcohol and drug use and dependence measures were recorded for all participants. If a participant endorsed a past month victimization or did not feel comfortable answering the question, along with individuals who had no prior sexual victimizations, were

diverted to a separate set of questionnaires that excluded the Sexual Experiences Survey-Revised (SES-R), sexual harassment questionnaire, bystander presence and helpfulness questions, Posttraumatic Checklist (PCL-5), Posttraumatic Cognitions Inventory (PCTI), and Rape Attribution Questionnaire (RAQ). At the end of the survey, participants were debriefed and awarded 1.5 research credits for their participation.

#### **Materials**

**Demographics.** Participants provided information about their gender, age, race/ethnicity, Greek status, and food/monetary security. This section also contained a question to assess for past month sexual victimization (see Table 1).

Assessment of Sexual Victimization History. Sexual victimization since the age of 16 was assessed using the revised Sexual Experiences Survey (SES-R; Testa, VanZile-Tamsen, Livingston, & Koss, 2004). This measure encompasses various forms of sexual assault including unwanted sexual contact, attempted rape, rape resulting from force or incapacitation, and verbally coerced intercourse. The revised 11-item measure has shown good reliability ( $\alpha$  = .73) (Peter-Hagene and Ullman, 2018). All participants endorse at least one item on the SES-R. 24% of the sample had reported being raped since the age of 16.

Level of Intoxication. To assess the participant level of intoxication during their most bothersome victimization, questions asked in a prior study were used (Jaffe et al., 2017). Level of intoxication was assessed by asking, "Please indicate the level of intoxication for your most bothersome victimization?" The possible responses included 1 (Not at all intoxicated), 2 (A little), 3 (somewhat), 4 (Quite), and 5 (Very Intoxicated). Of the 236 women who reported their intoxication, 110 (46%) reported some level of intoxication during their most bothersome victimization. See Table 1 for additional information.

Bystander Presence and Helpfulness. In order to determine the presence and helpfulness of bystanders during an unwanted sexual act, a set of questions was used from a prior study conducted by Hamby et al. (2015). Participants were asked the following questions in regard to their most bothersome victimization, "Did anybody see what happened to you, besides you and the person who did this?", with response options as family, friend/acquaintance, police, stranger, or no one. The next question was, "Did anyone who saw what happened (a) Help in any way, (b) Make things worse, (c) Both help and make things worse, or (d) Didn't help and didn't make it worse?".

Self-Blame Attributions. The Rape Attribution Questionnaire (RAQ; Frazier, 2003) is a 25-item measure with five attributions that measure behavioral and characterological self-blame, perpetrator blame, societal blame, and chance blame. For the purposes of the current study, only the behavioral and characterological subscales were used. The items include statements that ask how often the participant has had thoughts similar to the ones listed. Sample items include, "I am just the victim type", "I am too trusting", and "I should have been more cautious" and participants were asked to respond on a 5-point Likert scale (1 = never to 5 = very often). Total scores were computed by adding self-blame subscale items. Subscale scores ranged from 9 to 45. Frazier (2004) reported a combined (e.g., behavioral and characterological) Cronbach alpha of .88.

Posttraumatic Stress Disorder Symptoms. To assess for symptoms of PTSD, the Posttraumatic Checklist for DSM-5 (PCL-5; Weather et al., 2013) was used. The PCL-5 is a 20-item measure that assesses the 20 symptoms of PTSD according to the DSM-5. Participants were asked to rate how much they had been bothered by each symptom in the past month on a scale from 1 (Not at all) to 5 (Extremely). Total scores were calculated for each participant and ranged

from 0-80. Seventy-nine (33.5%) people had a total score of 31 or higher indicating probable PTSD. The PCL-5 shows strong internal consistency ( $\alpha = 0.96$ ). See Table 1 for additional information.

#### **Data Analytic Plan**

Prior to testing my hypotheses, preliminary analyses were conducted among the study variables. These included correlations for continuous variables to examine the relationship between self-blame and symptoms of PTSD. In addition, Analyses of Variance (ANOVAs) were conducted to assess if bystander presence (vs. absence) impacts the degree to which sexual assault survivors engage in self-blame and the presence and severity of PTSD symptoms. In addition, given the large number of participants who reported no intoxication during the sexual assault event, the bystander intoxication variable was recoded to create a dichotomous participant intoxicated variable (0 = not intoxicated; 1 = any intoxication level reported at time of sexual assault). An ANOVA was conducted to examine differences in PTSS, and self-blame attributions based on whether the survivor was intoxicated (yes/no) at the time of the assault.

To test the mediation models as depicted Figure 1 and Figure 2, I used the Hayes (2013) Process Macro in SPSS Model #4 with bootstrapping to test if self-blame mediates the association between victim alcohol intoxication (Hypothesis 1) or bystander presence (presence = 1, absence = 0; Hypothesis 2) and PTSD symptoms.

Originally, the statistical plan included analyzing the degree of bystander helpfulness indicated by the participant. However, due to the small number of participants that indicated a bystander was present (n = 46), it was determined that analysis conducted for bystanders should solely assess bystander presence vs absences.

#### Results

#### **Preliminary Analysis**

Descriptive statistics were assessed for the sample (see Table 1). Bivariate correlational analysis was conducted to assess the relationship between the major study variables (see Table 2). PTSS and RAQ total Means and SD's were reported for bystander versus absence and intoxication versus not intoxicated groups (see Table 3). It was hypothesized that as self-blame increased, PTSS would increase, and this was supported by the analysis, r(234) = .473, p = .001. All other correlations were non-significant. By conducting several one-way ANOVAs, it was found that participants who reported a bystander was present during the sexual assault did not significantly differ from those who reported no bystanders were present in mean PTSS, F(1,229) = .247, p = .619, or self-blame, F(1,228) = 2.588, p = .109. Further mean PTSS, F(1,234) = .560, p = .692, and self-blame, F(1,233) = .492, p = .741, did not significantly differ between participants who endorsed being intoxicated (vs. not intoxication) during the sexual assault.

Table 2. Intercorrelations between major study variables

	PCL	Intoxication	Bystander		
RAQ	.473**	057	106		
PCL		076	033		
Intoxication			.073		
Bystander					

Note: N=230, PCL = total score of PCL-5, Intoxication = subjective level of intoxication during the SA, Bystander = participant responses on the presence of bystanders (vs. not), RAQ = total score for self-blame subscale of Rape Attribution Questionnaire (RAQ) \*\*p < .01, two-tailed

Table 3.

PTSS and RAQ means for Bystander present (vs. absence) and Intoxicated (vs. not intoxicated) groups

	Bystander Present $n = 46$	Bystander Absent $n = 185$	Intoxicated $n = 109$	No Intoxication $n = 126$
PTSS	M = 23.2 ( $SD = 16.73$ )	M = 24.64 ( $SD = 17.89$ )	M = 22.61 ( $SD = 17.36$ )	M = 25.31 ( $SD = 17.91$ )
RAQ	M = 20.11 ( $SD = 8.22$ )	M = 22.39 ( $SD = 8.7$ )	M = 21.29 ( $SD = 8.28$ )	M = 22.80 ( $SD = 8.95$ )

#### **Hypotheses**

To test the main hypotheses, Hayes (2013) PROCESS Macro in SPSS was used.

Consistent with Preacher and Hayes' (2004) recommendations, I used model 4 with biascorrected bootstrapping (2000 replicates) with participant intoxication/bystander presence (vs. absence) as the independent variable, self-blame score as the mediator, and PTSS as the dependent variable. By using this model, I was able to observe rather or not there is a relationship between victim alcohol intoxication/bystander presence (vs. absence) and PTSS via a self-blame mediation pathway. Both of my main hypotheses were not supported by the study findings.

The mediation analysis to test my first hypothesis revealed that there was not a significant direct effect of level of intoxication on self-blame,  $\beta$  = -.279, p = \_.442. However, Pathway B indicated that there was a significant direct effect between self-blame and PTSS,  $\beta$  = .961, p < .001. Overall, self-blame did not statistically mediate the association between victim alcohol intoxication and PTSS, partially standardized indirect effect = -.0152, 95% bootstrapped confidence interval (CI) = -.054 to .026. In Pathway A of the second mediation analysis, bystander presence was found to be unrelated to self-blame,  $\beta$  = -2.241, p = .116. Concurrent with the first analysis, Pathway B revealed a significant direct effect of self-blame on PTSS,  $\beta$  = -.465, p < .001. Lastly, bystander presence was unrelated to self-blame and PTSS,  $\beta$  = -.039, p = .793, and overall, self-blame did not statistically mediate the association between bystander presence and PTSS,  $\beta$  = -.121, 95% CI = -0.270 to 0.028. Although the Pathways A and C were non-significant, bystander presence and self-blame accounted for a significant amount of variance in PTSS, R<sup>2</sup> = .215, p < .001.

#### **Discussion**

The aim of this study was to investigate the role that victim alcohol intoxication and the presence (vs. absence) of bystanders have on self-blame after a sexual assault, and how these factors may contribute to the presence and severity of PTSS. My hypotheses were partially supported by the finding that as self-blame increases so does PTSS. However, self-blame was found to not statistically mediate the association between victim alcohol intoxication/bystander presence (vs. absence) and PTSS.

The only statistically significant finding throughout the analysis was the positive correlation between self-blame and PTSS. Peter-Hagene and Ullman (2018) found that self-

blame led to an increase in PTSS, which the current study lends further support to. This established finding emphasizes the detrimental effect of victim-blaming on a survivor's mental health after a sexual assault and the need to eliminate this particular societal reaction towards survivors of sexual assault.

Based on prior research (Jaffe et al., 2017), an increase in PTSS as level of intoxication increased was expected. In the current study, however, a significant relationship was not detected between PTSS and intoxication (vs. no intoxication). This finding suggests that drinking at the time of an SA had no association with the presence and severity of PTSS after the SA. Additionally, testing to determine the mediating role of self-blame on the relationship between victim alcohol intoxication and PTSS did not support my hypothesis. Results indicated that whether a participant was intoxicated at the time of the SA (vs. not) was not associated with the degree to which they blamed themselves, and consequently PTSS. However, this nonsignificant finding could be due the large number of participants that indicated that they were not intoxicated at the time of the SA.

Self-blame was found to not mediate the relationship between bystander presence (vs. absence) and PTSS. Meaning that the presence or absence of bystanders did not related to an increase in self-blame, and indirectly, PTSS. Despite the non-significant finding, descriptive statistics regarding the type of bystander most present in a sexual assault incident and their perceived helpfulness, according to the survivor, can contribute to the minimal bystander literature. Hamby et al. (2016) reported that a family member was the most commonly endorsed bystander present during a sexual victimization. In the current study, this was not the case as a friend or acquaintance was the most commonly endorsed type of bystander. Further, participants in Hamby et al., 2016 reported that when a bystander was present, they most often had "No

impact" (50%) on the situation followed by "Help in some way" (27.3%). In the present study, the opposite was shown; 7.2% indicated that the bystander had "No impact" and 10.1% endorsed, "Help in some way". Along with their contribution to the minimal research on bystanders in sexual assault incidents, these findings can help inform targeted intervention programs that specifically address how most commonly present bystanders (e.g., family members and friends/acquaintances) can best contribute as a bystander in an instance of sexual assault.

Although it is not directly pertinent to the aims of the current study, I believe it is crucial to highlight some of the shocking statistics that were revealed in the larger study. Two hundred and eighty-eight (45.2%) of the 637 women who participated in the larger study experienced sexual victimization in their lifetime since the age of 16. As mentioned in the review of the literature, one in five women will experience sexual assault or rape (NSVRC, 2015). The larger study population doubles this already horrific statistic. Additionally, 51 women were excluded from the current analysis because they had experienced a past month sexual victimization.

Statistics from the larger study, along with the supported finding that increased survivor self-blame results in more PTSS, should cause college campuses to reevaluate their prevention programs, the level of punishment for the perpetrators of sexual victimizations, and their own role in perpetuating and normalizing victim-blaming sentiments and behaviors.

This study had several limitations. First and foremost, a significant number of participants endorsed bystander absence and lack of intoxication at the time of their victimization. Given the aims of the study and the chosen methods of analysis, this could be a potential reason why the mediation analysis revealed non-significant results. Future studies should recruit a larger sample of participants that endorsed bystander presence and impairment

or incapacitation at the time the SA to fully understand the impact of these factors on self-blame, and consequently, PTSS. The data could also be examined using non-parametric statistical methods as these data not normally distributed. Secondly, despite the gender-neutral language of the revised Sexual Experiences Survey (SES-R), it failed to encompass the full extent of sexual assault experiences (e.g., male or non-gender conforming victimizations). Additionally, I was unable to concretely confirm the items included in the self-blame subscales (e.g., behavioral and characterological) of the Rape Attribution Questionnaire (RAQ). Future studies should confirm which items belong in each subscale in order to analyze differences in PTSS means by different types of self-blame. Third, the sample included only women and was predominantly Caucasian. Replicating this study in a more diverse sample could lend valuable demographic information about the prevalence of sexual assault in minority populations, alcohol intoxication and bystander presence during sexual assaults, and if minorities experience differential rates of self-blame.

The purpose of this study was to determine if self-blame played a mediating role in the relationship between two variables, alcohol intoxication and bystander presence, and posttraumatic stress symptoms. Prior literature points towards the significance of self-blame in a survivor's recovery after a traumatic event, but factors that influence this self-blame have not been thoroughly explored. Few studies have looked at alcohol intoxication, self-blame, and PTSS, and no studies to date have looked at bystander presence, self-blame, and PTSS. Results indicated that victim alcohol intoxication and bystander presence (vs. absence) do not influence the mediator of self-blame, and as a result PTSS. However, meaningful findings were still revealed in the form of prevalence data for the rate of sexual assault among college students, as well as valuable prevalence data for bystander presence and helpfulness. If future studies employ

this methodology and reveal significant association between bystander variables or survivor intoxication during a sexual assault with self-blame and PTSS, the information could be used to inform PTSD treatments that target self-blame cognitions. Specifically, interventions could target cognitions surrounding a survivor's intoxication at the time of the sexual assault and the lack of presence or detrimental/helpful actions of a bystander.

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#### Appendix A

#### INFORMED CONSENT

Title: College Student's Experiences with Wanted and Unwanted Sexual Situations Study

Principal Researcher: Compliance Officer:

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**Study Aim:** The study aims to improve our understanding of how college students respond to wanted and unwanted sexual situations. Results from the study will help us understand how background and situational factors may influence the way the different sexual situations and the people in these situations are perceived. Study results will also provide data on the prevalence of sexual harassment, coercion, and victimization in the presence and without the presence of others when the event occurred, and how these factors relate to one's health behaviors and well-being, among college students.

**Eligibility:** The only inclusion criteria for this study is to be a student at the University of Arkansas and being 18 years or older.

**Description:** Once participants have read an online consent form and agree to participate, they will be asked to complete an anonymous survey which will take around 45 minutes to 1 hour. The survey will consist of self-report questions about demographics (e.g. age, gender, ethnicity), experiences one has had with wanted and unwanted sexual encounters (including experience with sexual victimization), attitudes and beliefs about sexual experiences, alcohol and other drug use, and mental health and well-being.

**Risks:** Although there are no known risks for completing this study, the sensitive nature of the topic (e.g., recounting events that pertain to acts of sexual victimization and situational factors surrounding them) may cause participants to become uncomfortable. We will provide mental health, crisis, and victim

hotlines to participants to ensure that they are able to receive services if they experience any distress related to the questions asked.

**Benefits:** Participants can benefit from this study by receiving 1 research credit towards their course requirements. Participants may also benefit by contributing to the knowledge that will help inform more effective sexual health education and violence prevention programs and better treatments for Posttraumatic Stress Disorder (PTSD).

**Voluntary Participation:** Your participation in this research is completely voluntary. You are not required to participate in this study or any other. Your future relations with the investigators of this study or the University of Arkansas will not be affected by your decision, whether or not you wish to participate in this study. If you are participating in order to obtain research or class credit, please note that there are other options besides this study to earn the same credit.

**Right to Discontinue Participation:** If at any point during the course of the study you feel uncomfortable and do not wish to continue, you are free to discontinue participation without penalty. Additionally, your participation in this study is anonymous, therefore it will not be possible to withdraw your survey answers from the study after you have submitted the survey.

Confidentiality: Please keep in mind that your responses will be anonymous. Your name will not be associated with any of your responses, and your responses will be stored anonymously by the online survey software. All information will be kept confidential to the extent allowed by applicable State and Federal law and University policy. However, our SONA system is set up in such a way that your name will not be linked to your responses on our survey. All data will be stored in a password protected computer in a locked laboratory office and will be recorded anonymously used coded subject numbers. Names will not be recorded by the researcher. Your research records will be kept for five years after the study is closed and then destroyed. Any scientific reports or other applications of the results of the study will include no individual identifying information.

Questions: You have the right to contact the Principal Researcher or the University of Arkansas Research Compliance office at the email addresses and phone numbers as listed above for any questions or concerns that you may have. If you have any questions about the study, you may contact Hannah Sawyer at 210-573-1288 or hs018@uark.edu or Dr. Lindsay Ham at 479-575-4256 or lham@uark.edu. If you like, a summary of the results of the study can be sent to you. If you have any other concerns about your rights as a research participant that have not been answered, or if you have any problems or concerns that occur as a result of your participation, you may contact Ro Windwalker, Compliance Officer at the University of Arkansas Institutional Review Board at irb@uark.edu or 479-575-2208.

If you would like to keep a copy of this document for your records, please print or save this page now. You may also contact the researcher to request a copy.

**Informed Consent:** By clicking the button below, I am indicating that I have read this form and understand its contents. I have had a chance to ask any questions, and my questions were answered to my satisfaction and that I agree to participate in this study.

# Appendix B SES-Revised (for gender neutral language)

The following questions concern sexual experiences that you may have had that were unwanted. We know that these are personal questions, so we do not ask your name or other identifying information. Your information is completely confidential. We hope that this helps you to feel comfortable answering each question honestly. Place a check mark in the box () showing the number of times each experience has happened to you. If several experiences occurred on the same occasion—for example, if one night someone told you some lies and had sex with you when you were drunk, you would check both boxes a and c. "The past 12 months" refers to the past year going back from today.

- 1. Someone fondled, kissed, or rubbed up against the private areas of my body (lips, breast/chest, crotch or butt) or removed some of my clothes without my consent (but did not attempt sexual penetration) by:
  - a. Telling lies, threatening to end the relationship, threatening to spread rumors about me, making promises I knew were untrue, or continually verbally pressuring me after I said I didn't want to.
  - b. Showing displeasure, criticizing my sexuality or attractiveness, getting angry but not using physical force, after I said I didn't want to.
  - c. Taking advantage of me when I was too drunk or out of it to stop what was happening.
  - d. Threatening to physically harm me or someone close to me.
  - e. Using force, for example holding me down with their body weight, pinning my arms, or having a weapon.
- 2. Someone had oral sex with me or made me have oral sex with them without my consent by:
  - a. Telling lies, threatening to end the relationship, threatening to spread rumors about me, making promises I knew were untrue, or continually verbally pressuring me after I said I didn't want to.
  - b. Showing displeasure, criticizing my sexuality or attractiveness, getting angry but not using physical force, after I said I didn't want to.
  - c. Taking advantage of me when I was too drunk or out of it to stop what was Happening.
  - d. Threatening to physically harm me or someone close to me.
  - e. Using force, for example holding me down with their body weight, pinning my arms, or having a weapon.
- 3. If you are a male, check box and skip to item 4
  - a. A man put his penis into my vagina, or someone inserted fingers or objects without my consent by:
  - b. Telling lies, threatening to end the relationship, threatening to spread rumors about

me, making promises I knew were untrue, or continually verbally pressuring me after I said I didn't want to.

- c. Showing displeasure, criticizing my sexuality or attractiveness, getting angry but not using physical force, after I said I didn't want to.
- d. Taking advantage of me when I was too drunk or out of it to stop what was Happening.
- e. Threatening to physically harm me or someone close to me.
- f. Using force, for example holding me down with their body weight, pinning my arms, or having a weapon.
- 4. A man put his penis into my butt, or someone inserted fin- gers or objects without my consent by:
  - a. Telling lies, threatening to end the relationship, threatening to spread rumors about me, making promises I knew were untrue, or continually verbally pressuring me after I said I didn't want to.
  - b. Showing displeasure, criticizing my sexuality or attractiveness, getting angry but not using physical force, after I said I didn't want to.
  - c. Taking advantage of me when I was too drunk or out of it to stop what was Happening.
  - d. Threatening to physically harm me or someone close to me.
  - e. Using force, for example holding me down with their body weight, pinning my arms, or having a weapon.
- 5. Even though it did not happen, someone TRIED to have oral sex with me, or make me have oral sex with them with- out my consent by:
  - a. Telling lies, threatening to end the relationship, threatening to spread rumors about me, making promises I knew were untrue, or continually verbally pressuring me after I said I didn't want to.
  - b. Showing displeasure, criticizing my sexuality or attractiveness, getting angry but not using physical force, after I said I didn't want to.
  - c. Taking advantage of me when I was too drunk or out of it to stop what was Happening.
  - d. Threatening to physically harm me or someone close to me.
  - e. Using force, for example holding me down with their body weight, pinning my arms, or having a weapon.
- 6. If you are male, check this box and skip to item 7.

Even though it did not happen, a man TRIED to put his penis into my vagina, or someone tried to stick in fingers or objects without my consent by:

- a. Telling lies, threatening to end the relationship, threatening to spread rumors about me, making promises I knew were untrue, or continually verbally pressuring me after I said I didn't want to.
- b. Showing displeasure, criticizing my sexuality or attractiveness, getting angry but not

using physical force, after I said I didn't want to.

- c. Taking advantage of me when I was too drunk or out of it to stop what was Happening.
- d. Threatening to physically harm me or someone close to me.
- e. Using force, for example holding me down with their body weight, pinning my arms, or having a weapon.
- 7. Even though it did not happen, a man TRIED to put his penis into my butt, or someone tried to stick in objects or fingers without my consent by:
  - a. Telling lies, threatening to end the relationship, threatening to spread rumors about me, making promises I knew were untrue, or continually verbally pressuring me after I said I didn't want to.
  - b. Showing displeasure, criticizing my sexuality or attractiveness, getting angry but not using physical force, after I said I didn't want to.
  - c. Taking advantage of me when I was too drunk or out of it to stop what was Happening.
  - d. Threatening to physically harm me or someone close to me.
  - e. Using force, for example holding me down with their body weight, pinning my arms, or having a weapon.

#### 8. I am:

Female

Male

9. Did any of the experiences described in this survey happen to you one or more Times?

Yes

No

What was the sex of the person or persons who did them to you?

I reported no experiences

Female only

Male only

Both females and males

10. Have you ever been raped?

Yes

No

#### Appendix C Level of Intoxication

Please indicate the level of intoxication for your most bothersome victimization

#### Level of intoxication

- 1 ( Not at all intoxicated )
- 2 ( *A little* )
- 3 ( *Somewhat* )
- 4 ( *Quite* )
- 5 ( *Very intoxicated* )

# Appendix D Bystander Presence and Helpfulness Questions

Please answer the following questions regarding the presence/helpfulness of bystanders during your most bothersome victimization

- o Did anybody see what happened to you, besides you and the person who did this?
  - Family
  - friend/acquaintance
  - Police
  - Stranger
  - No one
  - Other: please specify
- o Did anyone who saw what happened...
  - Help in anyway
  - Make things worse
  - Both help and make things worse
  - Did not help and did not make it worse
- Were any witnesses hurt or threatened
  - Yes
  - No

# Appendix E Posstraumatic Checklist (PCL-5)

**Instructions:** Below is a list of problems that people sometimes have in response to a very stressful experience. Please read each problem carefully and then circle one of the numbers to the right to indicate how much you have been bothered by that problem in the past month.

In the past month, how much were you bothered by:	Not at	A little	Moderately	Quite	Extremel
	all	bit		a bit	у
Repeated, disturbing, and unwanted memories of the stressful experience?	0	1	2	3	4
2. Repeated, disturbing dreams of the stressful experience?	0	1	2	3	4
Suddenly feeling or acting as if the stressful experience were actually happening again (as if you were actually back there reliving it)?	0	1	2	3	4
Feeling very upset when something reminded you of the stressful experience?	0	1	2	3	4
5. Having strong physical reactions when something reminded you of the stressful experience (for example, heart pounding, trouble breathing, sweating)?	0	1	2	3	4
6. Avoiding memories, thoughts, or feelings related to the stressful experience?	0	1	2	3	4
7. Avoiding external reminders of the stressful experience (for example, people, places, conversations, activities, objects, or situations)?	0	1	2	3	4
Trouble remembering important parts of the stressful experience?	0	1	2	3	4
9. Having strong negative beliefs about yourself, other people, or the world (for example, having thoughts such as: I am bad, there is something seriously wrong with me, no one can be trusted, the world is completely dangerous)?	0	1	2	3	4
Blaming yourself or someone else for the stressful experience or what happened after it?	0	1	2	3	4
11. Having strong negative feelings such as fear, horror, anger, guilt, or shame?	0	1	2	3	4
12. Loss of interest in activities that you used to enjoy?	0	1	2	3	4

13. Feeling distant or cut off from other people?	0	1	2	3	4
14. Trouble experiencing positive feelings (for example, being unable to feel happiness or have loving feelings for people close to you)?	0	1	2	3	4
15. Irritable behavior, angry outbursts, or acting aggressively?	0	1	2	3	4
16. Taking too many risks or doing things that could cause you harm?	0	1	2	3	4
17. Being "superalert" or watchful or on guard?	0	1	2	3	4
18. Feeling jumpy or easily startled?	0	1	2	3	4
19. Having difficulty concentrating?	0	1	2	3	4
20. Trouble falling or staying asleep?	0	1	2	3	4

### Appendix F Rape Attribution Questionnaire

DIRECTIONS: Below are statements describing thoughts women often have about why an assault occurred. Please indicate how often you have had each of the following thoughts in the past month.

Please use the following scale and mark your answers on the answer sheet:

A. Never B. Rarely C. Sometimes D. Often E. Very Often

In the past month, how often have you thought: I was assaulted because...

- 1. Society doesn't do enough to prevent violence against women.
- 2. I used poor judgment.
- 3. I am just the victim type.
- 4. It was just bad luck.
- 5. The person thought he could get away with it.
- 6. Men are taught not to respect women.
- 7. I should have resisted more.
- 8. I am a careless person.
- 9. I was in the wrong place at the wrong time.
- 10. The person wanted to feel power over someone.
- 11. Men are socialized to be violent.
- 12. I should have been more cautious.
- 13. Things like this happen to people like me.
- 14. Things like this happen at random.
- 15. The person was sick.
- 16. In our society, women are sex objects.
- 17. I just put myself in a vulnerable situation.
- 18. I am unlucky.
- 19. I was a victim of chance.
- 20. The person was angry at women.
- 21. The media encourages violence against women.
- 22. I didn't do enough to protect myself.
- 23. I am too trusting.
- 24. Bad things like this are just a part of life.
- 25. The person wanted to hurt someone.