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The effect of the victim-offender relationship and pre-assault intoxication on PTSD symptom severity

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THE EFFECT OF THE VICTIM-OFFENDER RELATIONSHIP AND PRE-ASSAULT INTOXICATION ON PTSD SYMPTOM SEVERITY

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Dedication

I would like to dedicate this manuscript to my parents, Joseph and Dawn Meloni, who have tirelessly supported me through my academic journey. This degree would not have been possible without them.

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Abstract

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College-aged women are at an increased risk for experiencing non-consensual sexual contact (i.e. sexual assault) relative to the general population. Women who endure a sexual assault are at an increased risk for developing Posttraumatic Stress Disorder (PTSD). Intoxication by drugs and/or alcohol during an assault is linked to victims experiencing less severe PTSD symptoms; however, little is known about how the victim-offender relationship relates to PTSD symptom severity. The current study sampled 125 university women on measures that assessed degree of sexual victimization and resulting PTSD symptoms. It was hypothesized that both intoxication and the victim-offender relationship would affect PTSD symptom severity; furthermore, the ANCOVA model examined a potential interaction effect: intoxication was expected to moderate symptom severity among varying categories of the victim-offender relationship. None of the three hypotheses proposed were supported; implications for the findings and directions for future research are discussed.

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Chapter 1: Introduction

Sexual assault is a broadly defined construct that includes any unwanted sexual contact or behavior occurring without explicit consent of the recipient (The United States Department of Justice, 2013). It includes behaviors such as attempted or completed rape, defined as forced attempted or completed penetration of the victim. However, many neglect to consider the large number of individuals that suffer unwanted sexual fondling, kissing, and other behaviors that occur without consent. At least 25% of American women report being sexually assaulted in adolescence or adulthood, with 18% of these women being the victim of a completed rape (Abbey, Zawaki, Buck, Clinton, & McAuslan, 2001). Among male perpetrators of sexual assault, 5% admit to completing rape against at least one victim; around 20% of American men admit to perpetrating sexual assault (excluding completed rape cases) (Abbey, Zawaki, Buck, Clinton, & McAuslan, 2001). Over half of all sexual assaults include victimized women aged 16 – 21, with a woman's chances of a sexual assault increasing once she enters college (Randall & Haskell, 1995). On average, only 38% of sexual assaults are reported to police, as opposed to 60% of robberies and 42% of simple assaults. Sexual assault is the most underreported violent crime in the United States (Kolivas & Gross, 2007).

There are a host of physical (e.g. smoking, overeating) and psychological (e.g. depression/anxiety issues, problem substance use) consequences of experiencing a sexual assault (Brown, DuMont, Macdonald, & Bainbridge, 2008). Posttraumatic Stress Disorder (PTSD) is the most prevalent psychological disorder diagnosed after a sexual assault. PTSD is an anxiety disorder that occurs after an individual experiences a

traumatic stressor. The three symptom clusters that define the disorder include re-experiencing the trauma through flashbacks and nightmares, avoidance of trauma-related stimuli, and a general state of hyper-arousal (APA, 2000). While the general lifetime prevalence of PTSD among North Americans is 7.8%, the lifetime prevalence of PTSD among victims of sexual assault is 50%. Sexual assault is reported to be the most frequent cause of PTSD in women (Chivers-Wilson, 2006).

A common variable among many sexual assault cases is intoxication by drugs and/or alcohol. Approximately half of all sexual assaults perpetrated against college-aged women involve the use of alcohol or other drugs (Abbey, 2002). Alcohol-involved assaults and non-alcohol involved assaults differ in key ways. Victim intoxication heightens both the risk of completed penetration and physical injury to the victim, as alcohol slows cognitive processes and makes it more difficult to defend oneself in a potentially dangerous situation (Brecklin & Ullman, 2010). While previous studies have examined the frequency of alcohol-involved assaults at length, there is limited research examining intoxication as it relates to later development of PTSD symptoms after a sexual assault.

While there is a suggested link between intoxication and PTSD symptoms after an assault experience, there is another situational assault variable that presents mixed findings in the literature. The victim-offender relationship (VOR), or the categorical definition of the victim's relationship to her perpetrator (i.e. stranger, acquaintance, or intimate partner,) has been studied in relation to PTSD symptom severity with community samples of assault victims. There have been no definitive results suggesting that one categorical relationship is more representative than the others in regards to

severity of PTSD symptoms (Ullman, Filipas, Townsend, & Starzynski, 2007). Because the research on the VOR's role in PTSD symptom severity is not clearly pointing in one direction, it follows that there could be another variable that, when studied alongside the VOR, could affect symptom severity. The established relationship between substance use and sexual assault may play a role in linking the category of the victim-offender relationship to its role in subsequent PTSD symptom presentation, as no previous study has looked at intoxication and the VOR as part of the same study.

Posttraumatic Stress Disorder & Intoxication

Limited research on peri-traumatic alcohol intoxication and later PTSD symptoms supports that alcohol plays a role in narrowing one's perceptual field and emotional reactions in high stress situations, therefore affecting the way the event is subjectively perceived by the individual (Clum, Nishith, & Calhoun, 2002; Steele & Josephs, 1990). Among cases of sexual assault, prior consumption of drugs and/or alcohol was shown to impact the victim's subjective severity rating of the event. Specifically, individuals who were intoxicated at the time of their assault collectively rated their assault experience as less severe than those who were not intoxicated at the time of their assault, hence developing less severe PTSD symptoms (Clum, Nishith, & Calhoun, 2002; Kaysen, Lindgren, Lee, Lewis, Fossos, & Atkins, 2010).

"Alcohol myopia" is a term used to describe the narrowed perceptual field that results from drinking alcohol (Steele & Josephs, 1990). The individual becomes focused on the most salient environmental cues, while not perceiving others more deeply embedded in the situational context. A perpetrator's motives could easily be missed by a victim who is intoxicated, as the victim may not perceive his actions as something to be

monitored if she is drinking alcohol. Intoxication can also affect emotional response to an event: the stress-response dampening (SRD) effects of alcohol allow an intoxicated individual to feel more at ease in an otherwise threatening situation, negatively affecting threat appraisal (Sayette, 1993). Therefore, when confronted with a sexually charged situation while intoxicated, alcohol's anxiolytic properties remove the ability to detect threat cues in the environment. This induces a "feel good" effect and inhibits the woman from perceiving the situation as dangerous.

Fear attenuation caused by alcohol consumption can influence the course of psychological outcomes for a sexual assault victim (Curtin, Patrick, Lang, Cacioppo, & Birbaumer, 2001). Alcohol intoxication was found to be related to assault severity perception, suggesting that alcohol's SRD effects impact subjective severity in a way that may protect the victim from experiencing PTSD symptoms (Clum, Nishith, & Calhoun, 2002). One of the only studies to measure intoxication's effect on PTSD symptom severity assessed victims' symptoms during three distinct time points: at five weeks, three months, and six months post-assault. Participants filled out measures that assessed their level of subjective trauma reactions. The researchers were interested in the interaction between severity of symptom presentation and number of days since the assault, while controlling for peak drinking episodes in the weeks following the assault. Results suggested that intoxicated individuals experienced less intrusive PTSD symptoms at both a three and six month follow-up than individuals who were not intoxicated at the time of the assault (Kaysen, Lindgren, Lee, Lewis, Fossos, & Atkins, 2010). Alcohol's disruption of cognitive appraisals during a threatening sexual situation may be a protective factor against the development of the symptoms of PTSD for survivors of

sexual assault (Kaysen et al., 2010). The previous study utilized a community sample of women, with a wide range of ages. Given that college-aged women are at an increased risk for sexual assault than the general population, research on intoxication's role in symptom impact should be studied directly with college-aged women.

The Victim-Offender Relationship

While there is a suggested link between intoxication and PTSD symptoms after an assault experience, there are other variables that present mixed findings in the literature. The victim-offender relationship (VOR), or the categorical definition of the victim's relationship to her perpetrator (i.e. stranger, acquaintance, or intimate partner,) is one such variable. How a victim identifies her relationship to her perpetrator may affect self-reported symptom severity.

Historically, sexual assaults have been portrayed as being committed by an assailant unknown to the victim; this perpetuates the myth that rape can only occur at the hands of a stranger as opposed to someone that the victim knows personally (Cowan, 2000). However, close to 80% of sexual assaults occur between a victim and perpetrator who know each other in some capacity. More specifically, the majority of completed rapes occur between a victim and offender who have had a prior relationship (Abbey et al., 2001; Ferro, Cermele, & Saltzman, 2008).

The stranger myth is one of many rape myths perpetuated by society. A rape myth is defined as an assumption about sexual assault that typically blames the victim and exonerates the perpetrator for the crime (Ryan, 2011). Rape myths can be cautionary, often warning a woman about what can happen if she drinks too much, wears provocative clothing, or congregates in the wrong places with the wrong people (i.e., "If

she wore provocative clothes, she was asking for it"; "Girls only get raped if they are not careful; "Drunk girls deserve to be raped when they lose control of themselves," etc.). They reflect a belief in a just world by helping both perpetrators and victims justify the action of assault; if the victim was assaulted, she is viewed as the one at fault (Ryan, 2011).

Prior research has linked rape myth acceptance to sex script acceptance. Sex scripts are culturally defined patterns of behavior that influence both men and women's attitudes and beliefs about sexual contact (Ryan, 2011). Women who accept rape myths as truth often do not question assault at the hands of a known assailant; therefore, they are less likely to report acquaintance or intimate partner assaults (Ryan, 2011). This finding inextricably links acceptance of rape myths with what one considers acceptable social behavior; therefore, traditional social and sexual roles can confuse a woman into thinking that sexual assault "was not really rape" if it occurred at the hands of someone she knows. Acceptance of rape myths may be one explanation for the lack of victim reporting. A victim may be less likely to label an assaultive situation as such if she accepts rape myths, especially relative to VOR status. If a woman is reluctant to accept that she was assaulted, it may make reporting symptoms difficult, as well.

In regard to psychological consequences and the VOR, the literature is mixed. Some studies report differences in PTSD symptom levels depending on the category of the VOR (Lawyer, Ruggiero, Resnick, Kilpatrick, & Saunders, 2006; Temple, Weston, Rodriquez, & Marshall, 2007); others report no significant differences in symptoms relative to VOR category (Ullman & Siegel, 1993). Furthermore, differences have been found among studies that reported a meaningful relationship between the VOR and PTSD

symptoms. Victims of intimate partner assault displayed more PTSD symptoms relative to stranger and acquaintance assault groups in one study (Temple et al., 2007). Other studies have found support for stranger assault being indicative of more PTSD symptoms than other VOR categories (Ullman, Filipas, Townsend, & Starzynski, 2007). One explanation for greater symptom severity among intimate partner assaults could be due to the high likelihood of re-victimization (Temple et al., 2007). On the contrary, a different explanation for greater symptom severity among stranger assaults is the likelihood of a greater threat to life (e.g., use of more weapons and physical force) associated with assaults involving strangers (Ullman et al., 2006; 2007).

The inconsistency in the VOR literature necessitates further research on this variable. There are several different explanations for its effect on PTSD symptoms; therefore, research should attempt testing a variable with an established relationship to PTSD symptoms as a potential moderator for the stranger, acquaintance, and intimate partner VOR categories. Assessing level of intoxication among each of these three VOR categories may help explain why the research is so mixed. Intoxication prior to an assault has an established relationship to PTSD symptom severity; it would follow that intoxication may be the variable responsible for an interaction effect. Because these two variables have never before been studied together, it could be that the moderating effects of intoxication on VOR categories were never observed. The current study will utilize a college sample to assess intoxication's role in PTSD symptom development among differing categories of the VOR.

The primary aim of the current study was to propose a moderation model that measures different symptom severity ratings among distinct intoxication and VOR

categories. The proposed model may provide answers about the VOR literature inconsistencies, as well as expand VOR research by being the first study to utilize a college sample. Intoxication prior to a sexual assault reduces later symptom severity due to the effects of alcohol myopia and stress response dampening; it may also play a role in affecting the VOR's relationship to PTSD symptoms.

Hypotheses

Hypothesis 1: Intoxication level will directly affect PTSD symptom severity; specifically, those who were extremely intoxicated at the time of assault will show the least severe symptoms.

Hypothesis 2: Differing victim-offender relationship categories are predicted to show differing levels of symptom severity; given the inconsistencies in the VOR literature, no specific directional predictions were made.

Hypothesis 3: Intoxication level at the time of a sexual assault will moderate symptom severity among differing categories of the victim-offender relationship.

Chapter 2: Method

Participants

Participants were 125 female undergraduates from a mid-sized East-coast state university. Over half of the sample identified as Caucasian (61.6%); the remainder of the sample described their ethnicity as follows: 16.8% African-American, 13.6% Hispanic, 4.8% Asian/Pacific Islander, 0.8% Native American, and 2.4% "other." The majority were freshmen (59.2%). The sample was almost entirely heterosexual, with only 12.8% reporting being bisexual or exclusively homosexual.

Materials

Demographics. Demographic information was collected from all participants that assessed age, race, sexual orientation, academic classification, and previous psychological treatment experience (Appendix A). Participants were asked to provide basic information about whether or not they had previously been in treatment for a psychological issue.

Negative Sexual Experiences. A modified version of the Sexual Experiences Survey (SES; Koss & Oros, 1982) was used to examine the occurrence and objective severity of a participant's negative sexual experiences (e.g., whether or not the participant experienced a sexual assault and where the experience fell on the assault continuum from "unwanted fondling" through "completed intercourse"; Appendix B). The original SES has 10 items. The current version has nine, as one item about alcohol use at the time of assault was omitted. Eight of the current SES items have follow-up questions depending upon the participants' responses to the initial dichotomous question.

Questions were presented in a "yes/no" format; an example item was, "Have you ever given into sexual intercourse when you didn't want to because you were overwhelmed by a man's continual arguments or pressure?" If a participant chose "no," she was directed to the next sexual experience question in the survey. If she chose "yes," she was directed to a series of follow-up questions that were developed specifically for the current study to assess age, VOR status, and intoxication level. The first follow-up question assessed at what age the experience occurred. The second question assessed relationship to the perpetrator at the time of the assault along a continuum ranging from "I did not know the person at all" to "I knew the person because we are currently in a long term relationship." The third and final follow-up question assessed the degree of intoxication she experienced at the time if she was using alcohol and/or drugs. Options included, "I was not intoxicated by alcohol and/or drugs," "I was slightly intoxicated," "I was moderately intoxicated," and "I was extremely intoxicated." The SES has been standardized for college-aged students and demonstrates good internal consistency; the SES alpha level for the current study was .71(Koss & Gidycz, 1985).

PTSD Symptom Severity. The Posttraumatic Stress Disorder Checklist – Civilian version (PCL-C) is a 17-item measure that assesses both the frequency and severity of an individual's PTSD symptoms within the past year (Appendix C). The measure assessed for subjective symptom severity relative to experiencing sexual victimization. While the original PCL-C assesses symptoms relative to a subjective stressful experience, PCL-C instructions for the present study were modified to ensure that participants answered the items to reflect the assault experience described during the SES questionnaire. The 5-point Likert scale assessed the frequency and severity of PTSD

symptoms experienced as a result of an assault situation on a continuum ranging from "not at all" through "extremely." An example item is, "Repeated, disturbing dreams of a stressful experience from the past." All items included on the PCL-C demonstrated good internal consistency. The PCL-C alpha level for the current study was .95.

Social Desirability. The Balanced Inventory of Desired Responding (BIDR; Paulhus, 1984) was utilized to control for participants' tendencies to respond in a socially desirable manner (Appendix D). Women show a tendency to respond more conservatively than men when answering self-report measures pertaining to sexual experiences (Meston, Heiman, Trapnell, & Paulhaus, 1998); given this data, social desirability was controlled for. Respondents were asked to answer 40 different statements on a 7-point Likert scale ranging from "not true" to "very true." Sample items include, "I never regret my decisions," and "I sometimes tell lies if I have to." The BIDR has high test-retest reliability, and its internal consistency for the current study was high ($\alpha = .79$).

Procedure

Ethical clearance to conduct the current study was obtained from the participating university's Institutional Review Board. Interested women were recruited via the psychology department's electronic subject pool. They took part in an online study via Survey Monkey titled "Nonconsensual Sexual Experiences, Posttraumatic Stress, and Substance Use." Participants electronically signed an informed consent detailing the nature of the study, how responses would be used and properly disposed of afterwards, and resources for psychological counseling if needed. After providing demographic information, the participants answered the three above questionnaires in the following

order: the SES, the PCL-C, and the BIDR. The study took approximately 30 minutes to complete. Upon completion of the study, all participants were debriefed and received appropriate credit for their participation.

Chapter 3: Results

Preliminary Analyses

Data were collected from Fall 2013 through Spring 2014. Surveys were completed by 300 women; 125 (41.6%) endorsed some form of sexual victimization; however, only 6 of the 125 experienced a stranger assault and were subsequently removed from the remainder of analyses. The final sample included 119 women who experienced some degree of sexual victimization. Verbal coercion was the most frequently used perpetrator tactic, followed by physical force. Frequencies of type of assault experienced can be found in Table 1.

Victim-Offender Relationship

The SES follow-up questions assessing VOR category asked the participant to describe her relationship to her perpetrator from seven choices ranging from "*I did not know the person at all*" through "*I know the person because we are currently in a long term relationship*." Women who reported not knowing their perpetrator at all were coded as victims of "stranger" assault. Women who answered that the perpetrator was an associate or friend were coded as victims of "acquaintance" assault. Those who were formerly or who are currently in an intimate relationship with their perpetrator were categorized as victims of "intimate partner" assault. As mentioned, only 6 women in the sample endorsed sexual victimization by a stranger; these women were removed from subsequent analyses due to insufficient power in this category. Final sample frequencies of acquaintance and intimate partner assault can be found in Table 1. The final sample contained 119 women, of whom 70 (58.8%) experienced acquaintance assault and 49 (41.2%) experienced intimate partner assault.

Pre-Assault Substance Use

Substance use prior to the assault via alcohol and/or other drugs was coded into four subjective rating categories: no consumption of alcohol and/or drugs, slightly intoxicated, moderately intoxicated, and extremely intoxicated. Participants chose the category that they believed best applied to them at the time of the assault experience. Substance category frequencies for all participants can be found in Table 1.

Table 1. *Independent Variable Frequencies* (*N* = 119)

Frequency Categories	N	%
Assault Breakdown		
Verbal Coercion	99	79.2
Physical Force	28	22.4
Attempted Rape	20	16.0
Completed Rape	15	12.0
VOR		
Acquaintance	70	58.8
Intimate Partner	49	41.2
Intoxication Level		
Sober	66	55.5
Slight	16	13.4
Moderate	25	21.0
Extreme	12	10.1

Note: "Assault Breakdown" category is not mutually exclusive.

Final Analyses

Correlation analyses revealed that both previous treatment experience (r = -.39, p < .05) and scores on the BIDR (r = -.25, p < .05) were significantly correlated with scores on the PCL-C. Both were entered as covariates into a one-way analysis of covariance (ANCOVA) model to assess the 2 (acquaintance/intimate partner) x 4 (sober/slight/moderate/extreme intoxication) potential main effects and interaction of the victim-offender relationship and pre-assault intoxication on PTSD symptoms severity.

Scores on the PCL-C did not differ significantly among the acquaintance assault group (M = 37.3, SD = 16.3) and the intimate partner assault group (M = 32.1, SD = 14.5), $F(1, 109) = 1.13$, $p = .289$. The pre-assault substance categories also did not differ significantly on PCL-C scores, $F(3, 109) = 1.25$, $p = .295$. The predicted interaction between the VOR and substance categories was also not supported, $F(1, 111) = 2.04$, $p = .156$. Table 2 presents all means and standard deviations among different substance and VOR categories.

Table 2. *Means and Standard Deviations by Category* (N = 119)

VOR Categories	Substance Categories	Mean	Standard Deviation	N
Acquaintance	Sober	37.3	19.1	35
	Slight	39.3	14.6	10
	Moderate	36.8	13.9	19
	Extreme	36.0	9.3	6
	Total	37.3	16.3	70
Intimate Partner	Sober	32.2	14.9	31
	Slight	35.0	15.5	6
	Moderate	29.0	13.5	6
	Extreme	31.8	15.3	6
	Total	32.1	14.5	49
Total	Sober	34.9	17.3	66
	Slight	37.7	14.6	16
	Moderate	34.9	13.9	25
	Extreme	33.9	12.3	12
	Total	35.2	15.7	119

Chapter 4: Discussion

The number of individuals who experienced a sexual assault was fairly representative of the general population, as the total percentage of participants who endorsed nonconsensual sexual experiences via the SES was 41.6%; this is consistent with data reporting the likelihood of sexual assault among this age group (Abbey et al., 2001). Also consistent with prior research was the large number of individuals who experienced acquaintance assault. Only 6 women experienced assault committed by a stranger; this is also consistent with literature that states that stranger assaults are in the minority compared to acquaintance and intimate partner assaults (Cowan, 2000).

While prior studies have reported significant effects for intoxication affecting PTSD symptom severity, the current study found no differences between subjective intoxication levels. Retrospective reports of alcohol and drug use at the time of assault may make it more difficult for victims to account for symptoms developed directly after the assault occurred (Kaysen et al., 2010). It is also possible that, although an intoxication scale was developed for the current study in order to gauge the possible range of intoxication, the intoxication scale used was not precise enough to account for individual differences in reporting. What constitutes "mild" intoxication for one participant may be "extreme" for another; future studies should attempt to assess for a more specific measurement of intoxication.

No differences in PTSD symptom severity were found among the victim-offender relationship categories, contrary to the second hypothesis. It was noted earlier that rape myth acceptance is related to acceptance of traditional sexual scripts. It is possible that these sex scripts are inadvertently influencing women to perceive a sexually assaultive

situation as a non-significant life event. Although not assessed in the current study, rape myth acceptance may influence degree of symptom severity. If a woman believes that she was at fault for the assault, she may be downplaying her distressing symptoms or coping inappropriately; both of these resulting behaviors could have lead to less severely reported symptoms in the current study. Future studies should consider rape myth acceptance as an area of inquiry in relation to psychological symptoms, as the social and sexual context in which a woman is brought up may affect how she chooses to view sexual transgressions.

The number of stranger assaults reported was 6 out of a total sample of 125; while this is consistent with the literature on the prevalence of stranger assaults as opposed to other VOR groups, assault by a stranger is more likely to involve a deadly weapon or more imminent threat to life than assault by an acquaintance or intimate partner (Ullman, Filipas, Townsend, & Starzynski, 2006). With more participants endorsing stranger assault, there may have been differing levels of symptoms observed; however, a college population may not be the best sample to survey stranger assault victims. Future research assessing the VOR in relation to PTSD symptoms should obtain a more varied sample with potentially more victims of stranger assault, which may be found in a community sample of individuals from rape crisis centers or mental health clinics.

The proposed moderation model did not show any variation among the eight different groups on PCL-C scores. Each group showed relatively the same level of symptom severity, and there was no VOR category or intoxication category that revealed more severe symptoms than the others. One potential reason for the lack of predicted effects could be that degree of victimization may play a role in symptom severity.

Perceived threat to life is related to severity of PTSD symptoms (Ullman & Filipas, 2001). It is possible that experiencing a lower degree of sexual assault (i.e. unwanted touching) may not be as psychologically unsettling as a first degree assault (i.e. attempted or completed rape via threats or force). While assault in any case could be psychologically damaging for the victim, future studies should attempt assessment of a first degree assault population when measuring post-traumatic stress reactions.

Posttraumatic Stress Disorder is a clinically significant psychological disorder that includes several clusters of symptoms, all of which heighten anxiety levels. Because this study only aimed to look at symptom severity and did not aim to diagnose participants with PTSD, it is possible that sexual assault victims may show higher levels of symptoms in one or two symptom clusters relative to the others. Future researchers could study one or two symptom clusters separately for their effects, rather than studying all the clusters together as a means of looking at the disorder as a whole. For example, one study found that re-experiencing the trauma was likely to occur more frequently in alcohol-involved assault victims than non-alcohol involved assault victims, but the symptoms of hyper-arousal and avoidance were relatively the same among both groups of victims (Kaysen et al., 2010). Utilizing a measure that gauges specific symptom cluster scores would be something to investigate further, as opposed to utilizing a measure like the PCL-C that could be used for diagnostic purposes.

There is always risk involved with retrospective data collection. Measuring PTSD symptom severity potentially months after a sexual assault makes it more difficult to assess intoxication's role in symptom development. In future studies, longitudinal data collection should be considered in order to account for when the assault occurred. Like

in the longitudinal study described earlier, taking a measurement of substance use only a few weeks after the assault would allow for more accurate substance reporting (Kaysen et al., 2010). Researchers could also take measurements of current substance use at different time points, in order to track if long term substance use affects symptom severity, as well. Longitudinal data collection would also make studying treatment's role more effective, as the trajectory of both PTSD symptoms and potential treatment approaches could be tracked over a period of time.

The current study assessed previous psychological treatment experience in a general way. It is possible that those individuals were treated for an issue unrelated to the assault, or that PTSD symptom remission was not the focus of the treatment. Future studies could assess a community sample of victims' symptoms longitudinally and track symptom remission more efficiently if they have data on the type of psychological treatment being utilized. Treatment data would allow for a more definitive answer about treatment's role in symptom remission.

Individuals with a history of childhood sexual abuse (CSA) often report higher rates of re-victimization as adolescents or adults. Re-victimized individuals often endorse higher levels of psychological distress relative to those who do not have a history of prior victimization (Lau & Kristensen, 2010). Future studies could look into re-victimization as a predictor of more severe psychological symptoms, as the focus of the current study was not psychological consequences of re-victimization. Re-victimized women also tend to utilize more maladaptive coping strategies after the event (e.g., problem substance use) (Hedtke et al., 2008). Women who have experienced re-victimization would be a helpful population to study, as they could provide answers about

the long-term consequences of sexual assault as they relate to problem substance use and later PTSD symptom development.

Despite its limitations, this study was among the first to examine both the victim-offender relationship and pre-assault intoxication on one's trauma-related symptoms after a sexual assault. While only two studies previously have assessed intoxication as a factor that affects PTSD symptom development (Clum et al., 2002; Kaysen et al., 2010), no study has looked at intoxication as a potential moderator that impacts symptom severity among different VOR categories. Because the prevalence of PTSD among sexual assault victims is so high, it is necessary to research the factors that may affect its presence and prognosis. Further research on variables that could affect the development of psychological disorders post-assault can help inform necessary treatment approaches.

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Appendix A

Demographics

How old are you?

Please indicate the response that corresponds to your race/ethnicity:

- Caucasian/Non-Hispanic
- African American/Black
- Hispanic/Latina
- Native American
- Asian/Pacific Islander
- Other (please specify)

Are you a part-time or full-time student?

- Yes
- No

If you answered "yes" to the previous question, what is your academic rank?

- Freshman/First year
- Sophomore
- Junior
- Senior
- Graduate student

Please select the choice below that best describes your sexual orientation:

- Exclusively heterosexual
- Equally heterosexual and homosexual
- Exclusively homosexual

Have you ever been in treatment (e.g., counseling) for a psychological issue before?

- Yes
- No

Appendix B
SES

1. Have you ever been fondled, kissed, or touched sexually when you didn't want to because you were overwhelmed by a man's continual arguments and pressure?
   Yes
   No

If you answered "yes" to the previous question, when did the experience occur?
Never
Between the ages of 14 and 17
From ages 18+
Both between 14 and 17 and from ages 18+

Please select the statement that best describes your relationship to the person who committed the action:
I did not know the person at all
I knew the person by association, but we were not close friends
I knew the person because we were friends
I knew the person because we had dated previously, but did not have sexual contact
I knew the person because we had dated previously, and had a prior sexual relationship
I knew the person because we had previously be in a long term relationship (i.e., over a year)
I know the person because we are currently in a long term relationship (i.e., over a year)
Other (please specify)

If you ingested alcohol and/or drugs prior to the event, please select the statement that best describes how you felt at the time of the experience:
I had ingested no alcohol and/or drugs
I was slightly intoxicated
I was moderately intoxicated
I was extremely intoxicated
Please specify the substances used:

2. Have you ever been fondled, kissed, or touched inappropriately when you didn't want to because a man used his position of authority (boss, teacher, camp counselor, supervisor) to make you?
   Yes
   No

If you answered "yes" to the previous question, when did the experience occur?
Never
Between the ages of 14 and 17
From ages 18+
Both between 14 and 17 and from ages 18+

Please select the statement that best describes your relationship to the person who committed the action:
I did not know the person at all
I knew the person by association, but we were not close friends

I knew the person because we were friends
I knew the person because we had dated previously, but did not have sexual contact
I knew the person because we had dated previously, and had a prior sexual relationship
I knew the person because we had previously be in a long term relationship (i.e., over a year)
I know the person because we are currently in a long term relationship (i.e., over a year)
Other (please specify)

If you ingested alcohol and/or drugs prior to the event, please select the statement that best describes how you felt at the time of the experience:
I had ingested no alcohol and/or drugs
I was slightly intoxicated
I was moderately intoxicated
I was extremely intoxicated
Please specify the substances used:

3. Have you ever been fondled, kissed, or touched sexually when you didn't want to be because a man threatened or used some degree of physical force (twisting your arm, holding you down, etc.) to make you?
Yes
No

If you answered "yes" to the previous question, when did the experience occur?
Never
Between the ages of 14 and 17
From ages 18+
Both between 14 and 17 and from ages 18+

Please select the statement that best describes your relationship to the person who committed the action:
I did not know the person at all
I knew the person by association, but we were not close friends
I knew the person because we were friends
I knew the person because we had dated previously, but did not have sexual contact
I knew the person because we had dated previously, and had a prior sexual relationship
I knew the person because we had previously be in a long term relationship (i.e., over a year)
I know the person because we are currently in a long term relationship (i.e., over a year)
Other (please specify)

If you ingested alcohol and/or drugs prior to the event, please select the statement that best describes how you felt at the time of the experience:
I had ingested no alcohol and/or drugs
I was slightly intoxicated
I was moderately intoxicated
I was extremely intoxicated
Please specify the substances used:

4. Have you ever given into sexual intercourse when you didn't want to because you were overwhelmed by a man's continual arguments and pressure?

Yes
No

If you answered "yes" to the previous question, when did the experience occur?
Never
Between the ages of 14 and 17
From ages 18+
Both between 14 and 17 and from ages 18+

Please select the statement that best describes your relationship to the person who committed the action:
I did not know the person at all
I knew the person by association, but we were not close friends
I knew the person because we were friends
I knew the person because we had dated previously, but did not have sexual contact
I knew the person because we had dated previously, and had a prior sexual relationship
I knew the person because we had previously be in a long term relationship (i.e., over a year)
I know the person because we are currently in a long term relationship (i.e., over a year)
Other (please specify)

If you ingested alcohol and/or drugs prior to the event, please select the statement that best describes how you felt at the time of the experience:
I had ingested no alcohol and/or drugs
I was slightly intoxicated
I was moderately intoxicated
I was extremely intoxicated
Please specify the substances used:

5. Have you ever had sexual intercourse when you didn't want to because a man used his position of authority (boss, teacher, camp counselor, supervisor) to make you?
Yes
No

If you answered "yes" to the previous question, when did the experience occur?
Never
Between the ages of 14 and 17
From ages 18+
Both between 14 and 17 and from ages 18+

Please select the statement that best describes your relationship to the person who committed the action:
I did not know the person at all
I knew the person by association, but we were not close friends
I knew the person because we were friends
I knew the person because we had dated previously, but did not have sexual contact
I knew the person because we had dated previously, and had a prior sexual relationship
I knew the person because we had previously be in a long term relationship (i.e., over a year)
I know the person because we are currently in a long term relationship (i.e., over a year)
Other (please specify)

If you ingested alcohol and/or drugs prior to the event, please select the statement that best describes how you felt at the time of the experience:

I had ingested no alcohol and/or drugs
I was slightly intoxicated
I was moderately intoxicated
I was extremely intoxicated
Please specify the substances used:

6. Have you had a man attempt to insert his penis (but intercourse did not occur) when you didn't want him to by threatening or using some degree of physical force (twisting your arm, holding you down, etc.)?
   Yes
   No

If you answered "yes" to the previous question, when did the experience occur?

Never
Between the ages of 14 and 17
From ages 18+
Both between 14 and 17 and from ages 18+

Please select the statement that best describes your relationship to the person who committed the action:

I did not know the person at all
I knew the person by association, but we were not close friends
I knew the person because we were friends
I knew the person because we had dated previously, but did not have sexual contact
I knew the person because we had dated previously, and had a prior sexual relationship
I knew the person because we had previously be in a long term relationship (i.e., over a year)
I know the person because we are currently in a long term relationship (i.e., over a year)
Other (please specify)

If you ingested alcohol and/or drugs prior to the event, please select the statement that best describes how you felt at the time of the experience:

I had ingested no alcohol and/or drugs
I was slightly intoxicated
I was moderately intoxicated
I was extremely intoxicated
Please specify the substances used:

7. Have you had sexual intercourse when you didn't want to because a man threatened or used some degree of physical force (twisting your arm, holding you down, etc.) to make you?

If you answered "yes" to the previous question, when did the experience occur?

Never
Between the ages of 14 and 17
From ages 18+
Both between 14 and 17 and from ages 18+

Please select the statement that best describes your relationship to the person who committed the action:

I did not know the person at all
I knew the person by association, but we were not close friends
I knew the person because we were friends
I knew the person because we had dated previously, but did not have sexual contact
I knew the person because we had dated previously, and had a prior sexual relationship
I knew the person because we had previously be in a long term relationship (i.e., over a year)
I know the person because we are currently in a long term relationship (i.e., over a year)
Other (please specify)

If you ingested alcohol and/or drugs prior to the event, please select the statement that best describes how you felt at the time of the experience:

I had ingested no alcohol and/or drugs
I was slightly intoxicated
I was moderately intoxicated
I was extremely intoxicated
Please specify the substances used:

8. Have you had sex acts (anal or oral intercourse or penetration by objects other than the penis) when you didn't want to because a man threatened or used some degree of physical force (twisting your arm, holding you down, etc.) to make you?
   Yes
   No

If you answered "yes" to the previous question, when did the experience occur?

Never
Between the ages of 14 and 17
From ages 18+
Both between 14 and 17 and from ages 18+

Please select the statement that best describes your relationship to the person who committed the action:

I did not know the person at all
I knew the person by association, but we were not close friends
I knew the person because we were friends
I knew the person because we had dated previously, but did not have sexual contact
I knew the person because we had dated previously, and had a prior sexual relationship
I knew the person because we had previously be in a long term relationship (i.e., over a year)
I know the person because we are currently in a long term relationship (i.e., over a year)
Other (please specify)

If you ingested alcohol and/or drugs prior to the event, please select the statement that best describes how you felt at the time of the experience:

I had ingested no alcohol and/or drugs
I was slightly intoxicated
I was moderately intoxicated
I was extremely intoxicated
Please specify the substances used:

9. Before the age of 14, were you ever forced by an adult to engage in sexual acts (i.e., kissing, fondling, oral sex, intercourse) when you didn't want to?
   Yes
   No

Appendix C
PCL-C

Instructions: Below is a list of problems and complaints that people sometimes have in response to stressful life experiences. **Pease keep in mind your responses from the previous questionnaire as you answer the following statements**. Read each one carefully, then circle one of the numbers to the right to indicate how much you have been bothered by that problem in the past year.

	Not at all	A little bit	Moderately	Quite a bit	Extremely
1) Repeated, disturbing memories, thoughts, or images of a stressful experience from the past?	1	2	3	4	5
2) Repeated, disturbing dreams of a stressful experience from the past?	1	2	3	4	5
3) Suddenly acting or feeling as if a stressful experience were happening again (as if you were reliving it)?	1	2	3	4	5
4) Feeling very upset when something reminded you of a stressful experience from the past?	1	2	3	4	5
5) Having physical reactions (e.g., heart pounding, trouble breathing, sweating) when something reminded you of a stressful experience from the past?	1	2	3	4	5
6) Avoiding thinking about or talking about a stressful experience from the past or avoiding having feelings related to it?	1	2	3	4	5
7) Avoiding activities or situations because they reminded you of a stressful experience from the past?	1	2	3	4	5
8) Trouble remembering important parts of a stressful experience from the past?	1	2	3	4	5
9) Loss of interest in activities that you used to enjoy?	1	2	3	4	5
10) Feeling distant or cut off from other people?	1	2	3	4	5
11) Feeling emotionally numb or being unable to have loving feelings for those close to you?	1	2	3	4	5
12) Feeling as if your future will somehow be cut short?	1	2	3	4	5

13) Trouble falling or staying asleep?	1	2	3	4	5
14) Feeling irritable or having angry outbursts?	1	2	3	4	5
15) Having difficulty concentrating?	1	2	3	4	5
16) Being super-alert or watchful or on guard?	1	2	3	4	5
17) Feeling jumpy or easily startled?	1	2	3	4	5

Appendix D

BIDR

Using the scale below as a guide, write a number beside each statement to indicate how true it is.

1	2	3	4	5	6	7
not true			somewhat			very true

____ 1. My first impressions of people usually turn out to be right.

____ 2. It would be hard for me to break any of my bad habits.

____ 3. I don't care to know what other people really think of me.

____ 4. I have not always been honest with myself.

____ 5. I always know why I like things.

____ 6. When my emotions are aroused, it biases my thinking.

____ 7. Once I've made up my mind, other people can seldom change my opinion.

____ 8. I am not a safe driver when I exceed the speed limit.

____ 9. I am fully in control of my own fate.

____ 10. It's hard for me to shut off a disturbing thought.

____ 11. I never regret my decisions.

____ 12. I sometimes lose out on things because I can't make up my mind soon enough.

____ 13. The reason I vote is because my vote can make a difference.

____ 14. My parents were not always fair when they punished me.

____ 15. I am a completely rational person.

____ 16. I rarely appreciate criticism.

____ 17. I am very confident of my judgments

____ 18. I have sometimes doubted my ability as a lover.

____ 19. It's all right with me if some people happen to dislike me.

____ 20. I don't always know the reasons why I do the things I do.

____ 21. I sometimes tell lies if I have to.

____ 22. I never cover up my mistakes.

____ 23. There have been occasions when I have taken advantage of someone.

____ 24. I never swear.

____ 25. I sometimes try to get even rather than forgive and forget.

____ 26. I always obey laws, even if I'm unlikely to get caught.

____ 27. I have said something bad about a friend behind his/her back.

____ 28. When I hear people talking privately, I avoid listening.

____ 29. I have received too much change from a salesperson without telling him or her.

____ 30. I always declare everything at customs.

____ 31. When I was young I sometimes stole things.

____ 32. I have never dropped litter on the street.

____ 33. I sometimes drive faster than the speed limit.

____ 34. I never read sexy books or magazines.

____ 35. I have done things that I don't tell other people about.

____ 36. I never take things that don't belong to me.

____ 37. I have taken sick-leave from work or school even though I wasn't really sick.

____ 38. I have never damaged a library book or store merchandise without reporting it.

____ 39. I have some pretty awful habits.

____ 40. I don't gossip about other people's business.