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The role of coping behaviors and intoxication in trauma symptomology subsequent to sexual victimization

Danika Martine Charles
Rowan University

THE ROLE OF COPING BEHAVIORS AND INTOXICATION IN TRAUMA SYMPTOMOLOGY SUBSEQUENT TO SEXUAL VICTIMIZATION

By

Danika M. Charles

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Thesis Advisor: DJ Angelone, Ph.D. & Meredith Joppa, Ph.D

Dedication

This is dedicated to my big brother, Terry Charles, who has supported me throughout my studies and never fails to make me laugh in times of hardship.

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This was not a solitary effort. It was team effort that guided and encouraged me to produce my master's thesis. Thank you to my loving parents, Martine and Frantz Charles, for your endless support that centered me when I felt off balance. Thank you to my friends and family who reminded me of my strengths and provided unwavering support.

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Abstract

Danika Charles
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DJ Angelone, Ph.D. & Meredith Joppa, Ph.D.
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College women are at an elevated risk for sexual victimization (SV). The unsupervised environment may encourage students to explore alcohol and other drugs and engage in risky sexual behavior, which are risk factors for SV. SV is defined as unwanted sexual contact ranging from oral, anal, vaginal contact or penetration. SV is often theorized in terms of severity, with completed sexual rape being the most severe. While some women experience negative outcomes such as posttraumatic stress disorder (PTSD), others experience reduced or complete absence of distress following SV. The variation in outcomes may be the one's intoxication during the SV, which may affect the processing and coping of the event. We examined the effects of SV severity on PTSD via coping and intoxication using a moderated mediation analysis among female college students (N=375). We hypothesized that coping would mediate the association between SV severity and PTSD, and intoxication would moderate these associations. Results demonstrate that coping mediates the association between SV severity and PTSD symptomology. However, intoxication did not moderate these associations. Results suggest that coping plays an important role in a victim's adjustment post-victimization and informs of clinical interventions within this population.

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Chapter 1

Introduction

Sexual victimization is a widespread public health concern in the United States (Dworkin et al., 2017) and encompasses various unwanted behaviors and tactics, including oral, anal, vaginal contact or penetration where the perpetrator uses force, intimidation, or coercion (Cantor et al., 2015). Nearly one in five women report an experience meeting this definition at some point in their lives (Black et al., 2011), and result suggests that college women may be at the highest risk (Fisher et al., 2000). In fact, across multiple studies, 20-25% of college women report at least one nonconsensual sexual experience during their time in higher education (Conley et al., 2017; Fisher et al., 2000; Krebs et al., 2016). Taken together, these data suggest that sexual victimization is a common experience for women, and a particular risk for female college students. That said, it is important to note that men are not immune to this public health concern; however, the focus of the current study is on women as victims. Nonetheless, sexual victimization is commonly conceptualized in terms of victimization severity (i.e., attempted versus completed rape) and the tactics used during the victimization (i.e., coercion versus physical force). This framework suggests that completed sexual rape is the most severe form of victimization: the perpetrator threatens the individual, uses physical force, and/or alcohol and other drugs to facilitate unwanted sexual contact. Consequently, sexual victimization severity is commonly associated with PTSD symptomology (Bennice et al., 2003; Gidycz et al., 1993; Ullman & Filipas, 2001). However, others experience negative consequences, including PTSD, while some women

experience little or aversive sequelae post-victimization. One explanation is that a victim's recovery process is unique in that women process and respond to sexual victimization differently. Thus, many studies have attempted to understand who is at risk for subsequently developing PTSD (Möller et al., 2014; Ullman et al., 2006).

Sexual victimization is associated with a host of negative consequences such as physical injury (Sugar et al., 2004), sexually transmitted infections (STIs), self-blame, anxiety, and depression (Black et al., 2011), which may decrease an individual's quality of life (Coker et al., 2011). For example, 32% of women who reported victimization also reported physical injuries such as sore muscles, sprains, bruises, swelling, and other related symptoms (Amar & Gennaro, 2005); 19% percent of women report receiving an STI diagnosis (Trent et al., 2007), and approximately 39% of victims endorsed moderate-to-severe symptoms of depression (Gidycz & Koss, 1989). However, posttraumatic stress disorder (PTSD) is the most commonly reported mental disorder associated with sexual victimization (Breslau et al., 1998; Nishith et al., 2000). PTSD is defined by the experience of a traumatic event in which the individual (1) reexperiences the trauma, (2) avoids stimuli that reminds them of the trauma and actively attempts to escape memories, thoughts, and negative emotions, (3) and hyperarousal (APA, 2013). In the present study, our definition of PTSD captures the aforementioned clusters and complies with DSM-5 criteria (APA, 2013).

Alcohol and other drug use and abuse is commonly reported among women who have experienced sexual victimization (Aakvaag et al., 2018; Abbey et al., 2002; Faugno et al., 2007; Horvath & Brown, 2007; Testa, Vanzile-Tamsen, et al., 2004). In fact, 30-

80% of women who have experienced sexual victimization have reported being under the influence of substances during the sexual victimization including alcohol intoxication, marijuana, and other illicit drugs (Brecklin & Ullman, 2010; Kilpatrick et al., 2007; Muram et al., 1995). For this reason, we define intoxication broadly as the condition in which an individual's mental and/or physical state is altered by alcohol and/or other drugs. Indeed, intoxication during sexual victimization can affect the processing of the victimization after the fact (Filipas & Ullman, 2006). Intoxication is known to impair motor skills, lower inhibitions and contribute to sexual victimization risk by initiating one's contact with perpetrators and creating difficulty in assessing and interpreting a risky situation (Abbey, 2002; Abbey et al., 2003; Testa, VanZile-Tamsen, et al., 2004). Correspondingly, intoxication interferes with higher order cognitive processes such as conceptualization, planning, and problem solving making it difficult to interpret complex stimuli (Hindmarch et al., 1991). The role of intoxication can vary in its involvement in sexual victimization in that intoxication affects cognitive processing and impairs one's ability to sense danger, leading to a great number of completed sexual victimizations (Abbey et al., 1996), as some perpetrators view inebriated women as potential victims due to a perceived sexual availability (Testa et al., 2010).

Women who are intoxicated during the sexual victimization may experience a sense of blame that is placed on themselves and/or by society. This misconception creates a false narrative that the cause of the sexual victimization is due to their intoxication and can elicit unhealthy cognitions such as, "I should not have been intoxicated" or "I did this to myself" (Breitenbecher, 2006). On the other hand, women might use the fact that they

were intoxicated as a way to normalize their experience and understate the sexual victimization experience and its importance. Women who report being intoxicated during the sexual victimization may be more likely to engage in maladaptive coping methods compared to women who are not intoxicated (e.g., avoidance, given that they may not be able to process the event because of difficulty in recalling memories (Arata, 1999; Littleton et al., 2009). These gaps in memory can cause an individual to try and make sense of their experience by using sexual violence and victimization scenarios portrayed on television, for example, to help connect missing pieces in their memory. Factors such as societal blame, self-blame, and memory impairment as a result of intoxication during the sexual victimization experience may exacerbate distress. When experiencing high levels of distress, an individual may perceive that the stress is unmanageable and that they have less control over their recovery process; this may cause victims to engage in maladaptive coping strategies which may predict greater levels of PTSD (Filipas & Ullman, 2006; Tsong & Ullman, 2018). Thus, it is possible that intoxication may moderate the relationship between sexual victimization severity and coping behaviors.

On the other hand, intoxication during the sexual victimization may serve as a protective factor towards PTSD symptom severity (Maes et al., 2001), as substances may reduce an individual's stress response (Sayette, 1999). Intoxication reported in samples of women who have experienced sexual victimization has been associated with less PTSD symptomology (Testa & Livingston, 2009). These findings are consistent with the tension-reduction theory that posits that individuals use alcohol and other drugs as a means of managing distress (Craighead et al., 2013). As a result, alcohol dampens a

victim's stress response during the sexual victimization and may diminish the risk of developing PTSD (Maes et al., 2001). Intoxication in any form may operate similarly in that drugs also alter an individual's stress response. In fact, benzodiazepines have been shown to reduce subjective ratings of anxiety in response to stress-related events (Van Hedger et al., 2017), and individuals who consumed methamphetamine rated their mood as calm after a stress-inducing task (Söderpalm et al., 2003). Taken together, it is possible that intoxication during sexual victimization may blunt an individual's processing of the event and subsequently influence their coping style and PTSD symptomology. For example, women who report being intoxicated during the sexual victimization may endorse lower levels of distress, given the effects of intoxication on episodic memory. That said, reduction in posttraumatic stress symptoms may influence the use of adaptive coping in that the victim perceives the situation to be manageable. Thus, we think intoxication might moderate these associations. However, the research examining intoxication during sexual victimization and coping behaviors is minimal. This study aims to fill a gap in understanding risk and protective factors in the role of intoxication and coping behaviors in relation to sexual victimization severity and PTSD symptomology.

Many factors contribute to developing PTSD after experiencing sexual victimization. One factor is a victim's coping response post-victimization, which can either exacerbate PTSD symptomology or aid in the recovery process. In other words, how a person copes can play an important role in determining whether they develop PTSD or have an absence of posttraumatic stress symptoms. Coping can refer to the

emotional and behavioral efforts used by an individual to deal with stress and adversity (Folkman, 2013). Coping is a dimensional construct based on adaptive or maladaptive strategies that are considered effective or ineffective at actually reducing distress (Resick, 2001). In fact, women who were sexually victimized demonstrate a variety of adaptive and maladaptive coping strategies, which play a direct role in developing PTSD.

Maladaptive coping is characterized as using cognitive and behavioral strategies that include thought avoidance, social withdrawal, and denial (Carver et al., 1989). Cognitive and behavioral disengagement as well as avoidance are predictors of increased psychological distress (Santello & Leitenberg, 1993). Specific cognitive factors such as safety seeking and negative beliefs after victimization, are linked to long-term PTSD and symptom severity (Dunmore et al., 2001). Additionally, some college women who have experienced sexual victimization may engage in maladaptive coping strategies and in turn may endorse greater PTSD symptomology (Filipas & Ullman, 2006; Gutner et al., 2006; Najdowski & Ullman, 2009).

One reason for this link is that maladaptive coping styles temporarily alleviate distress without addressing the source of distress itself (Resick & Schnicke, 1993). This ultimately prolongs an individual's stress-response and exacerbates PTSD symptomology (Pacella et al., 2011; Ullman, 2014). Some cognitive theories propose that women who have experienced sexual victimization learn maladaptive ways to cope with life experiences that affect their perspective on themselves, the world, and others (Filipas & Ullman, 2006; Wheeler & Berliner, 1988). Because these victimization experiences occur more often in victim's home or places the victim may be familiar with, they may develop

a conditioned fear response in places in which they were once comfortable, eliciting feelings of insecurity, loss of safety, and mistrust of others (Maletzky, 2000). However, to decrease the intensity and frequency of the intrusive reminders of sexual victimization, victims cope through avoidance of these stimuli, which leads to failure to process the fear responses effectively which interferes with PTSD symptom reduction (Foa & Kozak, 1986).

On the other hand, adaptive coping strategies aim to increase an individual's functioning and overall well-being. Adaptive coping is characterized by behaviors such as active problem-solving, utilizing mental and related-healthcare services, and using emotional support to adjust to stressors in an effective way for positive adjustment and better quality of life (Matheson et al., 2007). One way to manage the effects of sexual victimization is by engaging in adaptive coping strategies. For example, post-victimization, individuals will need to employ skills such as seeking therapeutic services and actively problem solving in order to enhance their sense of safety. Although there is limited research in this area, the existing data suggests that women who use adaptive coping skills subsequent to sexual victimization demonstrate a decrease in PTSD symptomology over time (Gutner et al., 2006). Few studies have examined the role of adaptive coping on PTSD symptom severity. The use of adaptive coping (e.g., expressing one's emotion and seeking support) are believed to aid in a victim's recovery and decrease symptoms over time (Gutner et al., 2006). Thus, we aim to examine the relationships of coping behaviors on sexual victimization severity and PTSD symptomology.

Present Study

Given that sexual victimization is a common occurrence on college campuses and can lead to severe consequences, this study aims to examine how coping behaviors (adaptive and maladaptive) play a role post-victimization. Understanding the effects of coping is an important aspect of an individual's recovery and adaptation following sexual victimization.

Because maladaptive coping strategies may be associated with greater psychological distress, we will examine how this method of coping will be associated with PTSD symptomology. On the contrary, adaptive coping styles may be associated with greater adaptation following the sexual victimization, which can result in positive outcomes such as less PTSD symptomology.

Though findings on intoxication during sexual victimization are mixed, we predict that intoxication will moderate the association between sexual victimization severity and coping, as well as the association between sexual victimization severity and PTSD symptomology, regardless of whether the intoxication is due to alcohol and other drug use and abuse. This study aims to fill a gap in understanding the factors that can influence PTSD symptoms.

Hypotheses

Hypothesis 1: More sexual victimization severity will be positively associated with PTSD symptomology and less severe sexual victimization will be positively associated with less PTSD symptomology.

Hypothesis 2: More sexual victimization severity will be positively associated more maladaptive coping and less severe sexual victimization will be positively associated with less maladaptive coping.

Hypothesis 3: More severe sexual victimization will be positively associated with more adaptive coping. Conversely, we hypothesize that more severe sexual victimization will be negatively associated with less adaptive coping.

Hypothesis 4: Utilizing more maladaptive coping will be positively associated with PTSD symptomology or less maladaptive coping will be positively associated with less PTSD symptomology.

Hypothesis 5: Utilizing more adaptive coping will be negatively associated with PTSD symptomology or less adaptive coping will be negatively associated with PTSD symptomology.

Hypothesis 6: Intoxication will moderate the association between sexual victimization severity and PTSD symptomology such that intoxication as a potential moderator will weaken the association between sexual victimization severity and PTSD symptomology. Conversely, we hypothesize that intoxication as a potential moderator will strengthen the association between sexual victimization severity and PTSD symptomology.

Hypothesis 7: Intoxication will moderate the association between sexual victimization severity and maladaptive coping such that intoxication as a potential moderator will weaken the association between sexual victimization severity and maladaptive coping. Conversely, we hypothesize that intoxication as a potential

moderator will strengthen the association between sexual victimization severity and maladaptive coping.

Hypothesis 8: Intoxication will moderate the association between sexual victimization severity and adaptive coping such that intoxication as a potential moderator will weaken the association between sexual victimization severity and adaptive coping. Conversely, we hypothesize that intoxication as a potential moderator will strengthen the association between sexual victimization severity and adaptive coping.

Chapter 2

Methodology

Participants

The Rowan University Institutional Review Board granted approval for this study. College-aged women were recruited using SONA, an electronic undergraduate participant pool. Women enrolled in Essentials of Psychology between the ages of 18-25 were eligible to participate. Those interested and eligible to participate were directed to a one-time survey via SurveyMonkey in exchange for course credit. The informed consent detailed information about the nature of the study, how the data will be used, and resources available for participants to access should they experience emotional distress while completing the measures. A total of 743 undergraduate students enrolled in a mid-sized university in the Northeastern U.S. completed the study. Our sample of interest included a total of 375 female undergraduate students who indicated that they have experienced sexual victimization. Women who did not report experiencing sexual victimization were excluded from the analyses. The mean age of our sample of interest is 19.2 (SD = 1.5). Participants self-identified their race/ethnicity as Caucasian (65%, N=244), African American (16%, N=58), Hispanic/Latino (11%, N=40), Native American (.3%, N=1), Asian/Pacific Islander (5%%, N=19), Other (4%, N=13). Participants self-identified their sexual orientation as heterosexual (86%, N=323), bisexual (11%, N=42), homosexual (2%, N=8).

Measures

Participants completed a series of self-report measures in order to examine the association between sexual victimization severity, self-described intoxication during the event, coping behaviors, and PTSD symptomology.

Sexual victimization and intoxication. We used a modified version of the Sexual Experiences Survey (SES; Testa et al., 2004) to identify sexual victimization. The SES uses various behavioral questions to capture sexual victimization experiences since age 14. An example item is “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 force (twisting your arm, holding you down, etc.)?" Participants were asked to respond with “yes” or “no.” A sexual victimization severity score was calculated on participant’s responses to questions on the SES. Participants received a score ranging from 1 (representing sexual contact) to 4 (representing that they have been raped). A follow-up question was asked after each question of the SES. Participants were asked to indicate whether or not they were intoxicated during the victimization. The follow-up question asked, “If you ingested alcohol and/or drug(s) prior to the event, please select the statement that best describes how you felt at the time of the experience.” Responses were assessed using a 4-point Likert scale, ranging from 0 (ingested no alcohol and/or drugs) to 3 (I was extremely intoxicated). Participants received a score (ranging from 0-3) based on the reported level of intoxication during the most severe sexual victimization experience.

PTSD symptomology. The Posttraumatic Stress Disorder (PTSD) Checklist-Civilian Version (PCL-C; Weathers et al., 1993) is a 17-item measure used to assess DSM-IV symptoms of PTSD using a 5-point Likert scale, ranging from 1 (not at all) to 5 (extremely). The PCL-C requires individuals to indicate how much they have been bothered by the symptoms in the past 30 days. An example item includes "In the past 30 days, how much have you been bothered by repeated, disturbing memories, thoughts, and/or images of a stressful experience from the past?" A total score was calculated by adding up all the items to obtain a total severity score ranging from 17 and 85. Items on the PCL-C were added up for a total severity score. Higher scores represent more PTSD symptomology. A total score between 17-29 represents an absence of or mild PTSD symptom severity, whereas a total score ranging from 30-44 represented moderately high symptom severity. A total score between 45-85 represent high severity of PTSD symptomology.

Coping. The Brief COPE (Carver et al., 1989) is a 28-item measure which includes 14 types of coping strategies (self-distraction, active coping, denial, substance use, use of emotional support, use of instrumental support, behavioral disengagement, venting, positive reframing, planning, humor, acceptance, religion, and self-blame) geared towards understanding how individuals manage or respond after adversity. Eight of the 14 subscales target adaptive coping and six subscales on maladaptive coping strategies (Meyer, 2001). The adaptive subscales include active coping, planning, positive reframing, acceptance, humor, religion, using emotional support, and using instrumental support. The maladaptive coping subscales include self-distraction, denial, venting,

substance use, behavioral disengagement, and self-blame. The present study utilized the literature to inform the distinction between subscales and coping styles (García et al., 2018; Meyer, 2001; Ullman & Peter-Hagene, 2014), which was consistent in categorizing items as adaptive and maladaptive. Items are rated on a four-point Likert scale, ranging from 1 (I haven't been doing this at all) to 4 (I have been doing this a lot). An example item of adaptive coping is "I've been getting help and advice from other people" whereas an example of maladaptive coping is "I've been giving up trying to deal with it." After combining the subscales into two categories, we then calculated mean scores for the adaptive and maladaptive coping subscales to produce a total score for the two subscales. The mean scores for adaptive and maladaptive coping are presented in Table A1.

Chapter 3

Results

Analytic Strategy

To test study hypotheses, we used the PROCESS macro for SPSS (Hayes, 2013) to estimate the direct and indirect effects for the mediation and moderation models. First, we tested the effect of sexual victimization severity on PTSD symptomology with coping behaviors (i.e., maladaptive coping or adaptive coping) serving as a potential mediator of this relationship (see Figure A1 and A2). We examined the specific paths by interpreting beta coefficients, p-values, and confidence intervals. However, p-values were not provided for the indirect effects in our mediation analysis; statistical significance is implied when the confidence interval does not contain zero.

We tested maladaptive and adaptive coping in separate models as potential mediators of the association between sexual victimization severity and PTSD symptomology using model 4 in the PROCESS macro for SPSS (Hayes, 2013). We analyzed coping in separate models to address our research question and examine the effects of how specific coping strategies employed post-victimization may have different effects on PTSD symptomology. We used a moderated mediation analysis to examine how the indirect effect of sexual victimization severity on PTSD symptomology via coping strategies differed on report of intoxication during the event, as shown in Figure A7 and A8. Moderation occurs when an association between two variables depends on the size or strength of a third variable or the moderator (Hayes, 2013). The analysis produces an index of moderated mediation, which quantifies the indirect effect and the

moderation. We used model 8 in the PROCESS macro for SPSS (Hayes, 2013). Our models included standardized variables to reduce multicollinearity and bootstrapping method to estimate direct and indirect effects.

Preliminary Analyses

We conducted preliminary analyses to check whether our data fit the assumptions of the moderated mediation analysis. We visualized each path through graphic representation in order to examine each association. We used the Shapiro-Wilk test to assess normality. Sexual victimization severity was non-normally distributed, with skewness of .83 (SE = .13) and kurtosis of -.61 (SE= .30). Adaptive coping symptomology was non-normally distributed with skewness of .33 (SE= .13) and kurtosis of -.61 (SE= .30). Maladaptive coping symptomology was non-normally distributed with skewness of 1.23 (SE= .13) and kurtosis of 1.10 (SE= .30). Lastly, PTSD symptomology was non-normally distributed with skewness of .82 (SE= .13) and kurtosis of .05 (SE= .30). Of the 375 women in our sample, 41% reported experiencing unwanted sexual contact, 36% reported being sexually coerced, 6% experienced attempted rape, and 17% reported being raped as the most severe form of sexual victimization. When asked about their level of intoxication during the sexual victimization, 5% indicated that they ingested no alcohol and/or drugs, 55% reported being slightly intoxicated, 22% reported being moderately intoxicated, and 18% indicated that they were extremely intoxicated. The mean score on the PCL-C for the current sample is 34.2 (SD = 14), suggesting that women in our sample endorsed moderately high PTSD symptom severity.

We then examined the bivariate correlations between each variable. Cohen's (1988) guidelines were used for interpreting effect size of r^2 in our bivariate analyses (.01 = small, .06 = medium, and .14 = large). Consistent with previous research, sexual victimization severity and PTSD symptomatology were positively correlated with a small effect size (r = .25, p = < .01), which accounted for 6.3% of variance of explained. Women who experienced sexual victimization were more likely to endorse greater symptoms of PTSD. Additionally, there was a positive relationship between sexual victimization severity and maladaptive coping strategies with a medium effect size (r = .30, p = < .01) with 7.8% of the variance explained, as well as sexual victimization severity and adaptive coping strategies with a small effect size (r = .12, p = < .05), which accounted for 1.4% of the variance explained. With regard to the relationship between coping behaviors and PTSD symptomology, the effect size for maladaptive coping and PTSD symptomology is large (r = .60, p = < .01) and a medium effect size for adaptive coping and PTSD symptomology (r = .40, p = < .01). Lastly, adaptive and maladaptive coping were positively correlated with a medium effect size (r = .42, p = < .01). Taken together, the pattern of significant bivariate correlations substantiated proceeding with mediation models, although there was a counterintuitive association between higher adaptive coping and more severe PTSD symptoms.

Primary Analyses: Mediation

In the mediation analyses, we tested whether coping (adaptive and maladaptive) mediated the association between sexual victimization severity and PTSD symptomology (see Figure A1 and A2). In the maladaptive model, the results of the direct (β = .10, 95 %

CI [.01, .20], p = .02) and total (β = .25, 95 % CI [.15, .34], p = < .05) effects of sexual victimization severity on PTSD symptomology were significant. The association between sexual victimization severity and maladaptive coping was also significant (β = .28, 95 % CI [.20, .40], p = < .05). The direct path from maladaptive coping to PTSD symptomology was significant, in that greater use of maladaptive coping was associated with an increase in PTSD symptomology (β = .54, 95 % CI [.45, .62], p = < .05). The indirect effect of sexual victimization severity on PTSD symptomology via maladaptive coping suggests that more severe sexual victimization is associated with greater PTSD symptomology via maladaptive coping (β = .15, 95% CI [.10, .22]). More specifically, the more severe an individual's sexual victimization, more maladaptive coping strategies are employed, and in turn, greater PTSD symptomology.

In the adaptive coping model, the direct (β = .21, 95% CI [.11, .30], p = < .05) and total (β = .25, 95% CI [.15, .35]) effects of sexual victimization severity on PTSD symptomology were significant. The association between sexual victimization severity and adaptive coping strategies was also significant (β = .11, 95 % CI [.01, .21], p =.02). The direct path from adaptive coping to PTSD symptomology was significant and revealed that women are actively coping following sexual victimization and endorsing greater levels of PTSD symptomology (β = .33, 95% CI [.24, .42], p = < .05). The indirect effect of sexual victimization severity on PTSD symptomology via adaptive coping (β = .04, 95% CI [.01, .10]) suggests that more severe sexual victimization is associated with an increase in PTSD symptomology via adaptive coping. That is, the

more severe an individual's sexual victimization, the more adaptive coping styles are used, which are in turn are related to greater PTSD symptomology.

Primary Analyses: Moderated Mediation

In order to test the moderating effect of intoxication on the associations between sexual victimization, coping behaviors (e.g., adaptive or maladaptive), and PTSD symptomology, we tested the moderating effect of intoxication on each pathway in two models: one model for adaptive coping and one model for maladaptive coping. Self-reported levels of intoxication were included as the proposed moderator to the mediation models mentioned above. In the adaptive model, the direct effect of sexual victimization severity on PTSD symptomology was significant (β = .20, 95 % CI [.10, .30], p = < .05). However, when intoxication was added to the model, there was no interaction between sexual victimization severity, PTSD, and intoxication (β = .03, 95 % CI [-.06, .12], p = .52). The interaction between sexual victimization severity and adaptive coping was not significant (β = -.02, 95 % CI [-.12, .10], p = .10), suggesting intoxication had no effect on adaptive coping strategies. However, the effect of adaptive coping on PTSD symptomology was significant (β = .33, 95 % CI [.23, .42], p = < .05). Overall, the index of moderated mediation was not statistically significant (β = -.00, 95% CI [-.03, .02]). At high (β = .23, p < .01) and low (β = .17, p <.05) levels of intoxication, our results show significant moderating effects of intoxication on the direct relationship between sexual victimization severity and PTSD symptomology at varying levels. In other words, women who report high or low intoxication levels during sexual victimization endorse greater

symptoms of PTSD. However, the indirect relationship of sexual victimization severity on PTSD symptomology via adaptive coping was not significant at high (β = .03 CI [-.00, .10]) and low (β = .04 CI [-.00, .10]) levels of intoxication.

In the maladaptive model, the direct effect of sexual victimization severity on PTSD symptomology was significant (β = .10, 95 % CI [.01, .20], p = .02). However, when intoxication was added to the model, the direct effect of sexual victimization severity on PTSD symptomology demonstrate that this association is not influenced by intoxication (β = -.00, 95% CI [-.10, .10], p = .94). Contrary to our hypothesis that the association between sexual victimization severity and maladaptive coping would be moderated by intoxication, the moderating effect of intoxication on the association between sexual victimization severity and maladaptive coping was not significant (β = .05, 95 % CI [-.04, .14], p = .33), demonstrating there was not an interaction effect between these associations. The direct effect of maladaptive coping on PTSD symptomology was statistically significant (β = .54, 95% CI [.45, .62], p = < .05). Overall, the index of moderated mediation was not statistically significant (β = .02, 95% CI [-.04, .10]). At high (β = .10, p = .10) and low (β = .10, p = .10) levels of intoxication, our results show no moderating effect of intoxication on the direct relationship between sexual victimization severity on PTSD symptomology. However, when the standardized beta coefficient of intoxication is at the mean level (i.e., 0), there is a moderating effect of intoxication on the association between sexual victimization severity and PTSD symptomology (β = .10, p < .05). The indirect relationship of sexual

victimization severity on PTSD Symptomology via maladaptive coping was significant at both high ($\beta = .20$, CI [.10, .30]) and low ($\beta = .11$ CI [.03, .20] levels of intoxication.

Chapter 4

Discussion

First, we examined the indirect effects of sexual victimization severity on PTSD via adaptive coping. Sexual victimization severity was associated with PTSD symptomology consistent with past research showing the negative consequences of victimization. Within this model, sexual victimization severity was positively associated with adaptive coping, suggesting that some women in our sample were utilizing positive reframing, acceptance, and instrumental support as an attempt to reduce distress in response to adversity. We predicted that potentially helpful efforts such as positive reframing, planning and seeking social support, active coping, use of emotional and instrumental support, acceptance, religion, and humor (Carver, 1997) may assist in the recovery process resulting in a decrease in PTSD symptomatology. This hypothesis was not supported; engaging in adaptive coping strategies in response to sexual victimization predicted greater PTSD symptomology. Similarly, other research has found that adaptive coping is associated with experiencing more PTSD symptoms (Najdowski & Ullman, 2009; Ong et al., 2016; Read et al., 2014). One possible explanation for the positive association between adaptive coping and PTSD symptomology may be that women presenting with severe symptomology have developed emotional awareness, and in turn, are actively employing coping strategies to gain a sense of control over their current emotional state. In fact, seeking social support contributed to greater distress (Brand & Alexander, 2003), as well as active/problem-focused coping (Schnider et al., 2007) in previous studies.

Another possible explanation for the positive association between adaptive coping and greater PTSD symptomology may be that adaptive coping strategies are being employed to address cognitive and behavioral reactions to the victimization and not accounting for the range of effects sexual victimization may have such as physical injury (Amar & Gennaro, 2005; Fisher et al., 2000; Richmond & Kauder, 2000; Sugar et al., 2004). Physical injury can have a negative impact on an individual's life and interfere with their ability to cope with stress. Thus, when treating clients exposed to sexual victimization, thorough evaluation of both mental and physical illness via a team-based approach is crucial in ensuring posttraumatic stress symptoms are treated without disregarding the co-occurrence of physical illness and vice versa. Additionally, self-disclosing sexual victimization experiences to a party that displays negative social reactions can also result in negative outcomes. For example, negative reactions after self-disclosing sexual victimization experiences was associated with greater PTSD symptomology and use of maladaptive coping, whereas positive reactions were associated with better adjustment post-victimization (Borja et al., 2006; Orchowski et al., 2013; Tiura et al., 2010).

We then examined the indirect effects of sexual victimization severity on PTSD symptomology via maladaptive coping. This hypothesis was supported showing that sexual victimization severity serves as a risk factor for PTSD. Sexual victimization severity was positively related to maladaptive coping suggesting that victimization may lead to negative outcomes such as denial, behavioral disengagement, self-distraction, and self-blame (Carver, 1997). Though there is variation in the literature regarding the effects

of sexual victimization on psychological outcomes, our results provide support that more severe sexual victimization is associated with posttraumatic stress. Consistent with previous findings (Filipas & Ullman, 2006; Johnson et al., 2003), maladaptive coping was also positively related to PTSD symptomology after being sexually victimized. Our hypothesis was supported and demonstrated that maladaptive coping strategies are unsuccessful in alleviating PTSD symptomology post-victimization. Though maladaptive coping temporarily suppresses distress, it ultimately prolongs distress, as it numbs symptoms rather than learning effective coping skills to address the source of distress. In fact, adaptive and maladaptive coping share some similarities, which is supported in our bivariate analysis of the association between adaptive and maladaptive coping. That is, adaptive coping involves the direct application of problem-solving strategies and maladaptive coping is an approach focused on escaping emotional distress. Our findings demonstrate that both coping strategies contributed to greater psychological distress. However, maladaptive coping accounted for a larger portion of variance in explaining PTSD symptomology, suggesting that engaging in more maladaptive coping strategies has a greater negative impact on an individual's recovery process; this is supported by examining and comparing the two standardized beta coefficients, which provide information on the strength of each path within in our adaptive and maladaptive mediation analysis.

The second purpose of this study was to examine the moderating effects of intoxication on sexual victimization severity and PTSD symptomology via coping behaviors. Path analyses revealed that intoxication during sexual victimization did not

moderate these associations. The literature on intoxication during sexual victimization demonstrates inconsistent findings of intoxication serving as both a preventative factor to developing PTSD (Kaysen et al., 2010; Maes et al., 2001) as well as one that influences or exacerbates PTSD symptomology (Jaffe et al., 2017). Our results show moderating effects of high and low levels of intoxication on the direct association between sexual victimization and PTSD symptomology in the adaptive coping model. Consistent with previous research, these findings provide empirical support that at PTSD symptomology is a function of impairment in cognitive processes and memory as a result of greater levels of intoxication during the sexual victimization experience. Lower levels of intoxication are associated with PTSD symptomology. Figure A11 suggests that lower PTSD symptom severity occurs at low levels of intoxication, but nonetheless, intoxication during the victimization does not result in total absence of PTSD. Additionally, moderate levels of intoxication moderated the association between sexual victimization severity and PTSD symptomology in the maladaptive model, as shown in Figure A9. It is possible that after reaching a particular threshold of intoxication, moderate and high levels of intoxication will have similar effects on the conceptualization and consolidation of memory and information. Taken together, these data suggest that PTSD symptom severity is a matter of degree rather than a dichotomy of being intoxication or not. However, the association between sexual victimization severity and coping behaviors (adaptive and maladaptive) was not moderated by intoxication. One reason for the lack of evidence for intoxication influencing coping styles may be that secondary appraisals may actually be moderating the associations

between sexual victimization, coping, and PTSD symptomology. For example, cognitions such as secondary appraisals developed post-victimization (e.g., should I have trusted the perpetrator? Should I have gone to the party?) may play an important role influencing coping styles and the course of PTSD development. Emotions are often influenced by appraisals, which is supported by the cognitive behavioral triangle; what we think effects how we feel. Thus, individuals who have experienced sexual victimization and develop secondary appraisals such as, "Maybe it wasn't as bad as I think" may serve as a protective factor and influence adaptive coping. Contrastingly, cognitions such as "Am I responsible for what happened to me?" may elicit feelings of guilt influencing their coping styles and subsequently contributing to psychological distress. Similarly, specific subscales of the Brief COPE such as self-blame (maladaptive coping) or positive reframing (adaptive coping) can be analyzed as potential mediators between the association of sexual victimization severity and PTSD symptomology to examine whether different coping styles are associated with more or less psychological distress. For example, engaging in positive reframing as a method of overcoming adversity is associated with the perception of an individual's symptoms and situation is manageable, which can result in greater adaption post-victimization (Lambert et al., 2009). Contrastingly, social isolation, a form of behavioral disengagement, can have a negative impact on an individual's well-being and contribute to psychological distress (Taylor et al., 2018).

Further, our nonsignificant findings of intoxication as a moderator may be because it is unclear exactly how much alcohol and other drug use can increase or reduce

PTSD symptomology. Participants provided subjective self-reported ratings of intoxication that ranged from slightly intoxicated to extremely intoxicated. Though participants were encouraged to try their best to recall these experiences, we cannot precisely quantify an individual's alcohol consumption and other drug use prior to the event. Lastly, it is possible that intoxication did not moderate the associations in our study because regardless of intoxication, women who experience sexual victimization are affected by the unwanted sexual experiences. Though the effects of sexual victimization vary by individual in that each person reacts to the experience differently, women in our sample who experienced more severe sexual victimization engaged in adaptive and/or maladaptive coping and endorsed greater PTSD symptomology, underscoring the psychological impact on victims. Conversely, the effects of adaptive coping contributing to great PTSD symptomology may have also been influenced by lower sexual victimization severity and the use of less adaptive coping.

This study had limitations, which point to directions for future research. First, the nonsignificant findings of intoxication as a moderator may have been a function of how we assessed the variable in our analyses. We assessed intoxication by calculating a severity score based on the participants' responses to questions on the SES. We used the most severe sexual victimization experience, which was determined by the SES and whether participants reported being intoxicated during that experience. Despite alternate ways of examining intoxication during the sexual victimization, our current method of conceptualizing intoxication broadly defined, allowed our analysis to reflect varying

levels of intoxication and provide a more accurate assessment of factors contributing to coping behaviors and PTSD symptomology.

Further, drawing conclusions from the role of intoxication in the context of sexual victimization should be done with caution. As previously mentioned, our analyses examining intoxication as a moderator was not significant. One possible explanation for this may be because of the combination of alcohol and drug intoxication during the sexual victimization, which has been done in previous research (Kilpatrick et al., 2007; Koss et al., 1988; Testa, Vanzile-Tamsen, et al., 2004; Ullman & Knight, 1993). This present study measured intoxication using a modified version of the SES (Testa et al., 2004), where we made further revisions to include a follow-up question asking participants to indicate whether they were intoxicated during the sexual victimization. We then used a continuous intoxication score to capture intoxication at different levels and various types of drugs. Future directions should aim towards examining the independent role of intoxication during sexual victimization; thus, controlling for extraneous variables such as intoxication as additional substances. However, being able to detect these differences are complex, as even within drug use are multiple classes of drugs that can have different intoxication effects.

Another limitation is the study of college students in research, who are often viewed as a convenience sample. The use of college students as participants in behavioral and social science research has raised questions of generalizability to non-student populations (Peterson, 2001). However, college students, and women in particular, are at high risk for sexual victimization (Fisher et al., 2000). Accordingly, the knowledge

gained from examining intoxication during the sexual victimization, coping, and PTSD among a college population can be useful in applying the information to study the broader community. In addition, we did not include the time since participants have experienced sexual victimization in our analysis, which may further complicate examining whether impaired memory consolidation is due to the effects of intoxication or a function of typical memory lapses.

In this study we provide an empirical test of the association between sexual victimization severity on PTSD via coping, but we did not see evidence for the moderating effects of intoxication during sexual victimization. However, women who have been sexually victimized and report intoxication during the event may be more likely to endorse feelings of self-blame (Breitenbecher, 2006; Peter-Hagene & Ullman, 2018). As a result, it is possible that self-blame attributions may be another contributing factor to psychological distress. For example, women might blame themselves for drinking prior to the victimization, trusting the perpetrator, or even internalize societal guilt and shame (Peter-Hagene & Ullman, 2018). All of which may be detrimental to one's psychological wellbeing. Future research is needed to examine other potential moderators such as the role of self-blame and/or guilt between the relationship of intoxication, sexual victimization severity, coping, and PTSD.

We examined coping behaviors by categorizing coping into two dimensions: adaptive and maladaptive, which provided a general idea of how both strategies influence post-victimization responses. However, independently examining strategies that have been shown to be associated with greater distress or improvement in psychological

functioning and well-being will yield a comprehensive understanding of which specific strategies are considered adaptive or maladaptive and contribute to greater or reduction in PTSD symptomology. Additionally, our study focused on one type of event (sexual victimization). It is possible that various situations can elicit different coping responses among different individuals.

Despite the significant findings of adaptive and maladaptive coping strategies mediating these associations, employing coping strategies post-victimization should not be taken as the solution to permanently eliminate PTSD symptomology or posttraumatic stress-related symptoms. These conclusions regarding clinical implications of these findings should be drawn with caution. Clinicians should routinely examine how individuals are coping with sexual victimization. Because the effects of sexual victimization can vary and lead to a wide range of outcomes, clinical should be familiar with a variety of treatment strategies. Early interventions should operate within a holistic framework that involves a combination of psychosocial treatment and pharmacological treatments that are capable of reducing PTSD symptomology (Craighead et al., 2013). Increasing psychoeducation relating to the individual's psychological symptoms and their response to distress is warranted. An individual's environment also plays a critical role in one's recovery process. For example, a lack of negative social reactions and appropriate resources are important components in predicting good adjustment and less psychological distress post-victimization (Craighead et al., 2013; Orchowski et al., 2013; Ullman & Filipas, 2001). In essence, the steps that occur after experiencing sexual victimization

can begin the recovery process and work towards good adjustment and the maintenance of PTSD symptomology.

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Appendix A
Moderated Mediation Models and Results

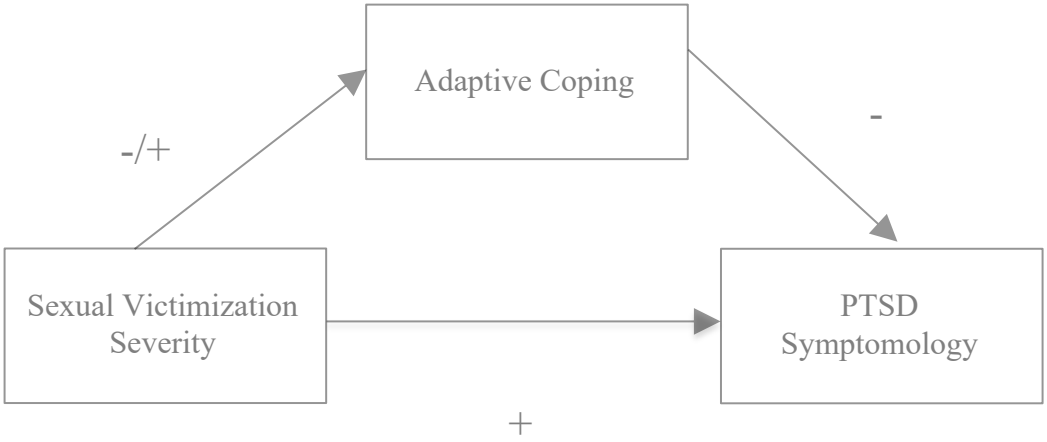


Figure A1. Mediation Analysis (Adaptive Coping).

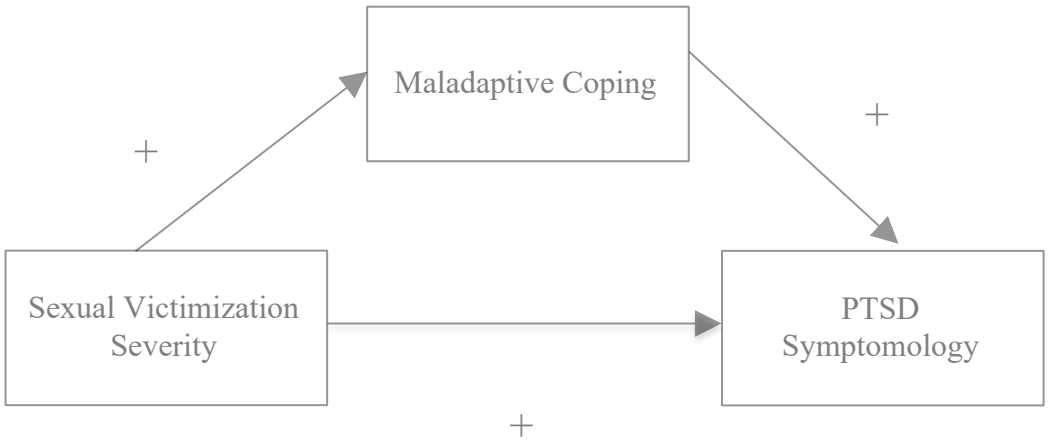


Figure A2. Mediation Analysis (Maladaptive Coping).

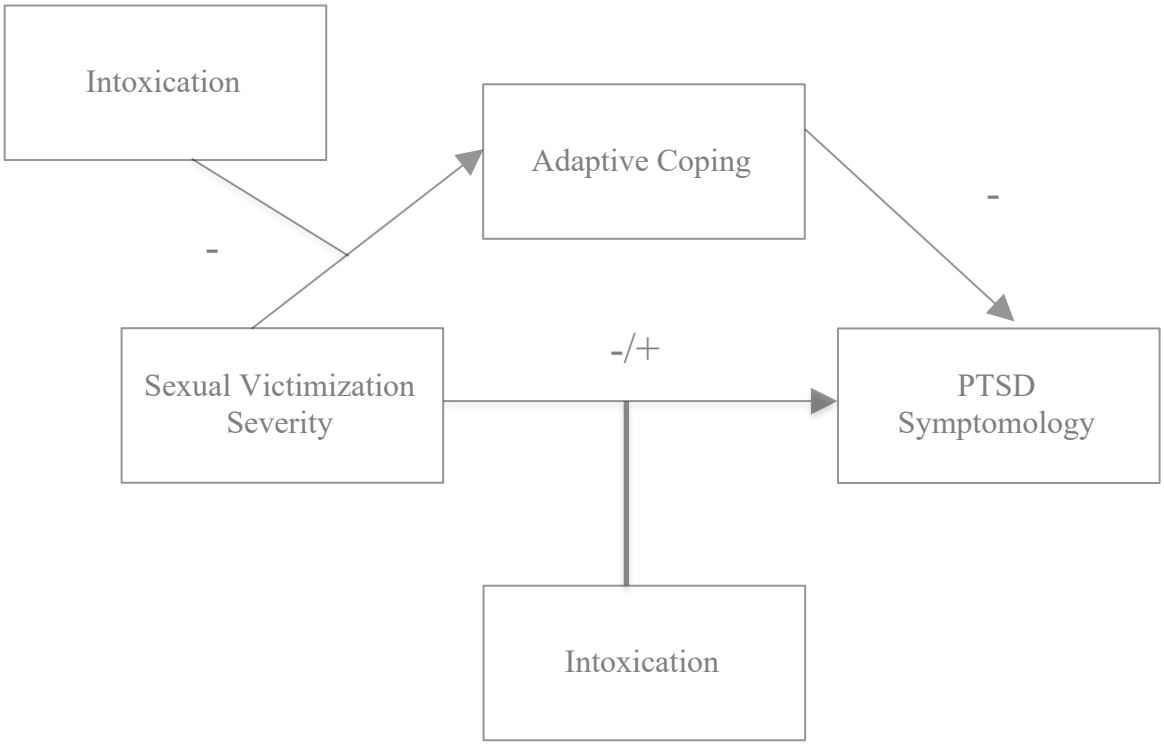


Figure A3. Moderated Mediation Analysis (Adaptive Coping).

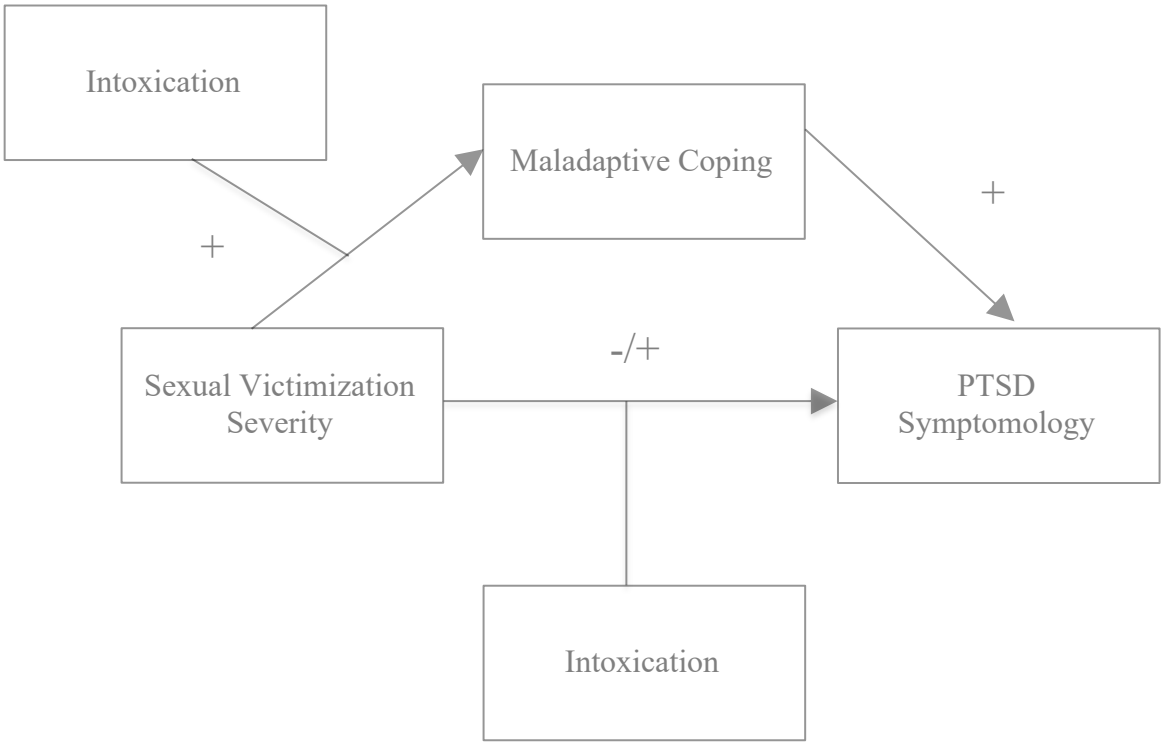


Figure A4. Moderated Mediation Analysis (Maladaptive Coping)

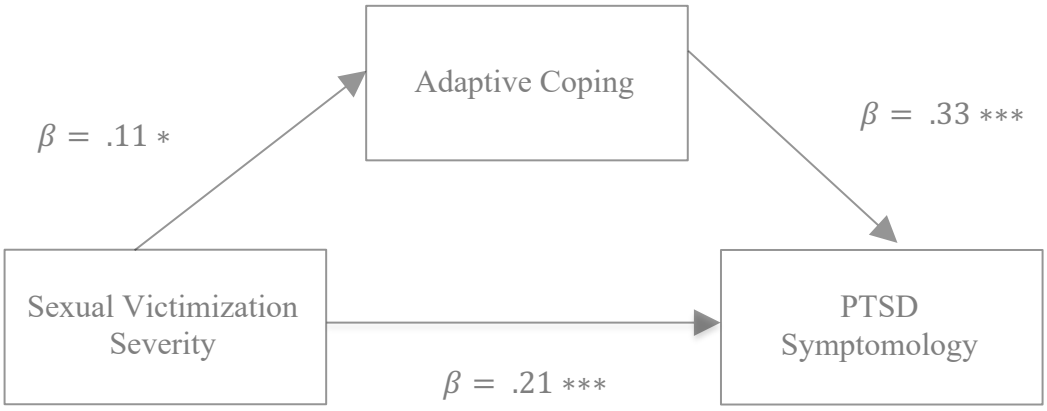
Table A1. *Adaptive and Maladaptive Coping Mean Scores*

	Adaptive			Maladaptive	
	M	SD		M	SD
Active Coping	2.01	.85	Self-distraction	2.20	.85
Planning	1.90	.88	Denial	1.37	.62
Positive Reframing	2.06	.96	Venting	1.74	.72
Acceptance	2.38	1.01	Substance Use	1.37	.70
Humor	1.66	.87	Behavioral Disengagement	1.44	.67
Religion	1.62	.91	Self-blame	1.94	.96
Emotional Support	2.03	.88			
Instrumental Support	1.91	.88			

Table A2. *Correlations between Sexual Victimization Severity, Coping Behaviors, and PTSD Symptomology*

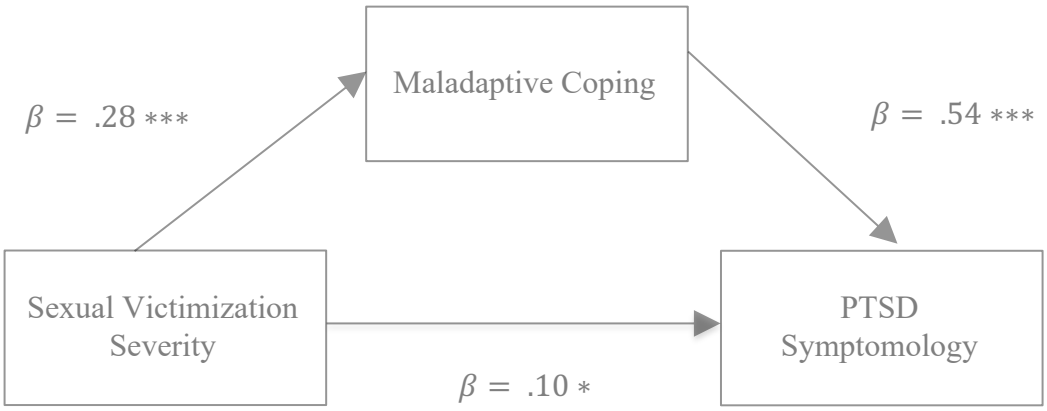
	(1)	(2)	(3)	(4)
1. Sexual Victimization Severity	-			
2. PTSD Symptomology	.25**	-		
3. Maladaptive Coping	.28**	.57**	-	
4. Adaptive Coping	.12*	.36**	.42**	-
Mean	2.00	34.20	1.53	2.00
SD	1.10	14.01	.60	.70
Alpha	.53	.93	.78	.85

Note: * $p < .05$, ** $p < .01$



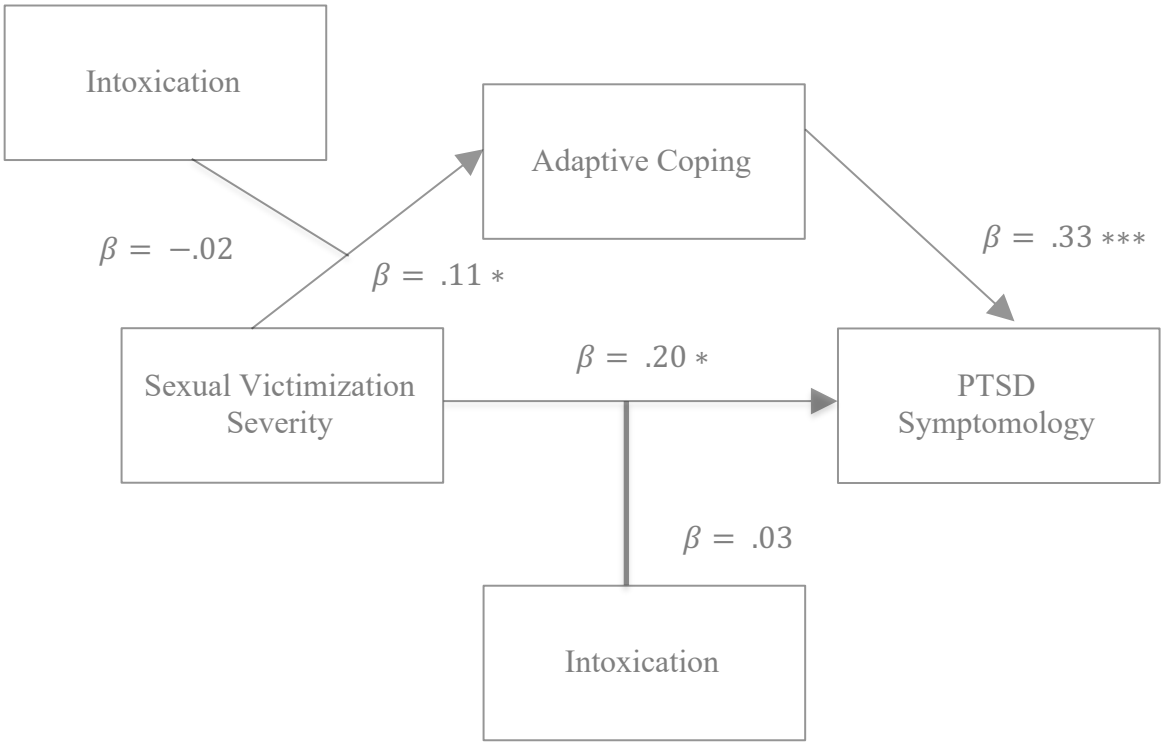
Note. * $p < .05$, ** $p < .01$, *** $p < .001$

Figure A5. The relationship between sexual victimization severity and PTSD symptomology, mediated by adaptive coping.
Note. Direct effect: (β = .21, 95 % CI [.11, .30], $p = < .05$); indirect effect: (β = .04, 95% CI [.01, .10]); total effects: (β = .25, 95% CI [.15, .35]). CI = confidence interval



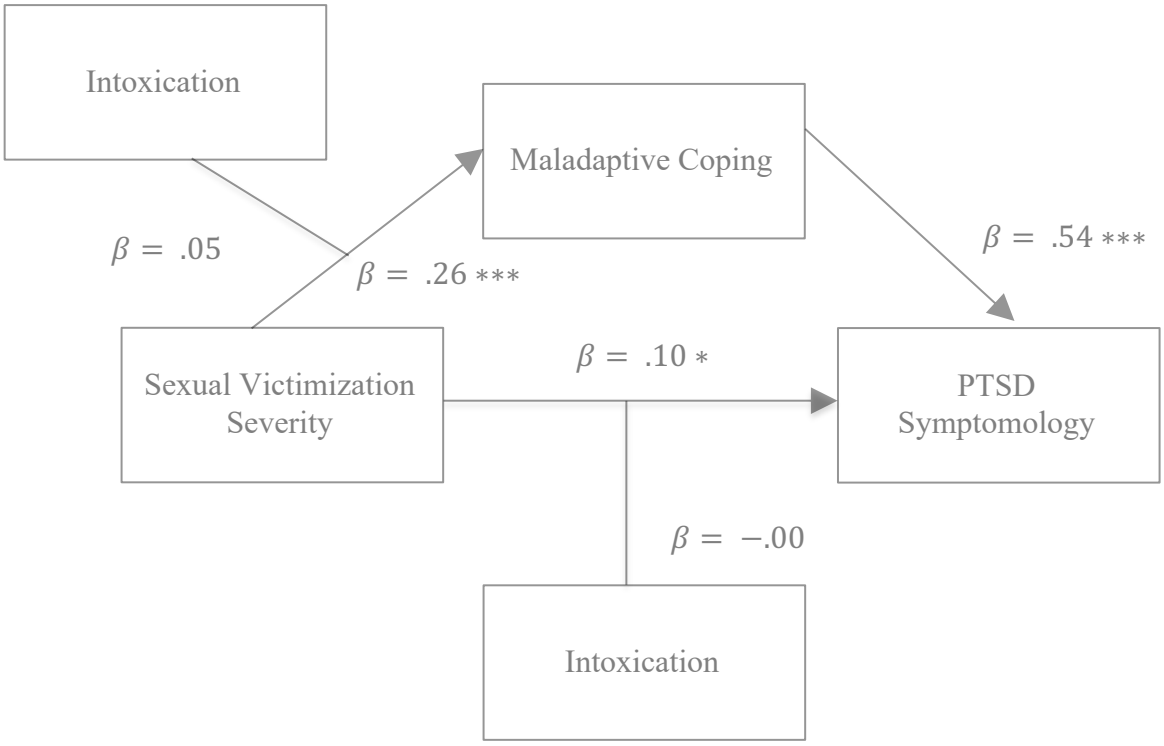
Note. * $p < .05$, ** $p < .01$, *** $p < .001$

Figure A6. The relationship between sexual victimization severity and PTSD symptomology, mediated by maladaptive coping.
Note. Direct effect: (β = .10, 95 % CI [.01, .20], $p = < .05$); indirect effect: (β = .15, 95% CI [.10, .22]); total effects: (β = .25, 95% CI [.15, .34]). CI = confidence interval



Note. * $p < .05$, ** $p < .01$, *** $p < .001$

*Figure A7***.** The effect of intoxication on the relationship between sexual victimization severity and PTSD symptomology and on the relationship between sexual victimization severity and adaptive coping; the indirect relationship between sexual victimization severity on PTSD via adaptive coping.
Note. Index of moderated mediation: (β = -.00, 95% CI [-.04, .02]). CI = confidence interval



Note. * $p < .05$, ** $p < .01$, *** $p < .001$

Figure A8. The effect of intoxication on the relationship between sexual victimization severity and PTSD symptomology and on the relationship between sexual victimization severity and maladaptive coping; the indirect relationship between sexual victimization severity on PTSD via maladaptive coping.
Note. Index of moderated mediation: (β = .02, 95% CI [-.03, .10]). CI = confidence interval

Figure A9. *Interaction Between Sexual Victimization Severity, PTSD, and Intoxication as the Moderator (Maladaptive Model)*

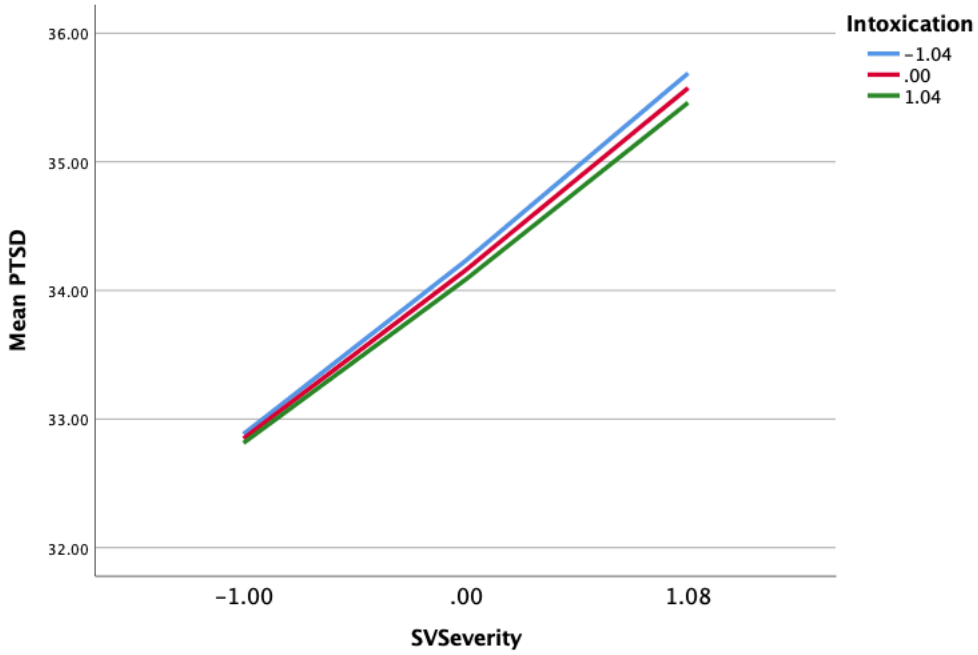


Figure A10. *Interaction Between Sexual Victimization Severity, Maladaptive Coping, and Intoxication as the Moderator*

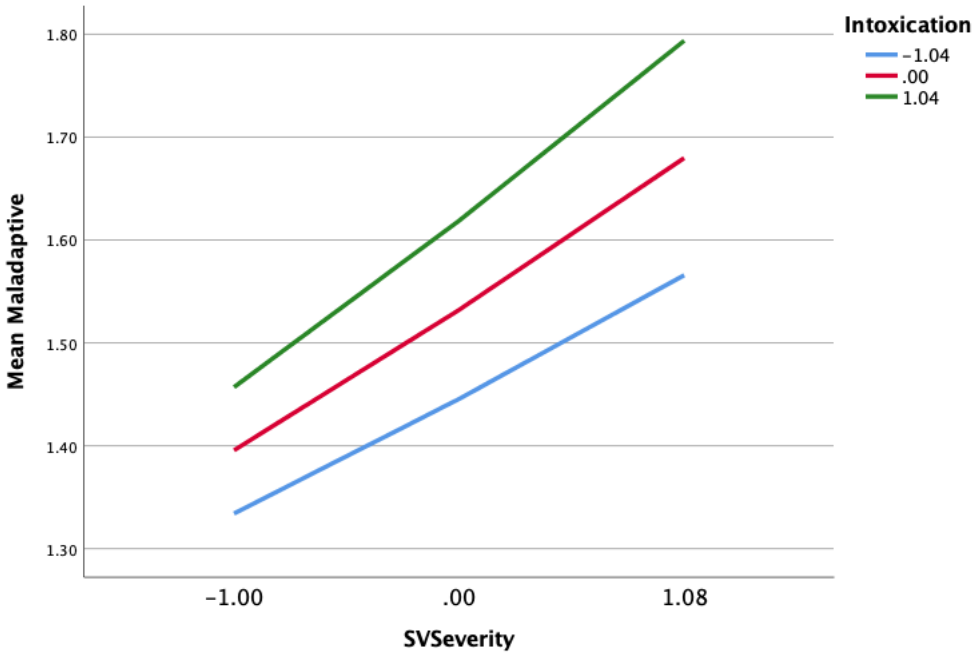


Figure A11. *Interaction Between Sexual Victimization Severity, PTSD, and Intoxication as the Moderator (Adaptive Model)*

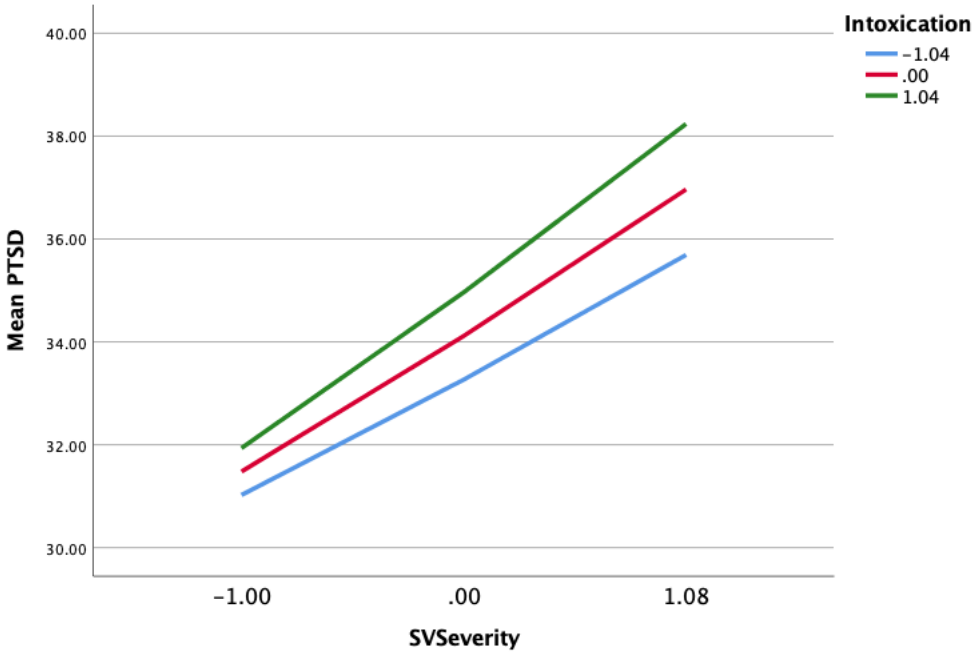
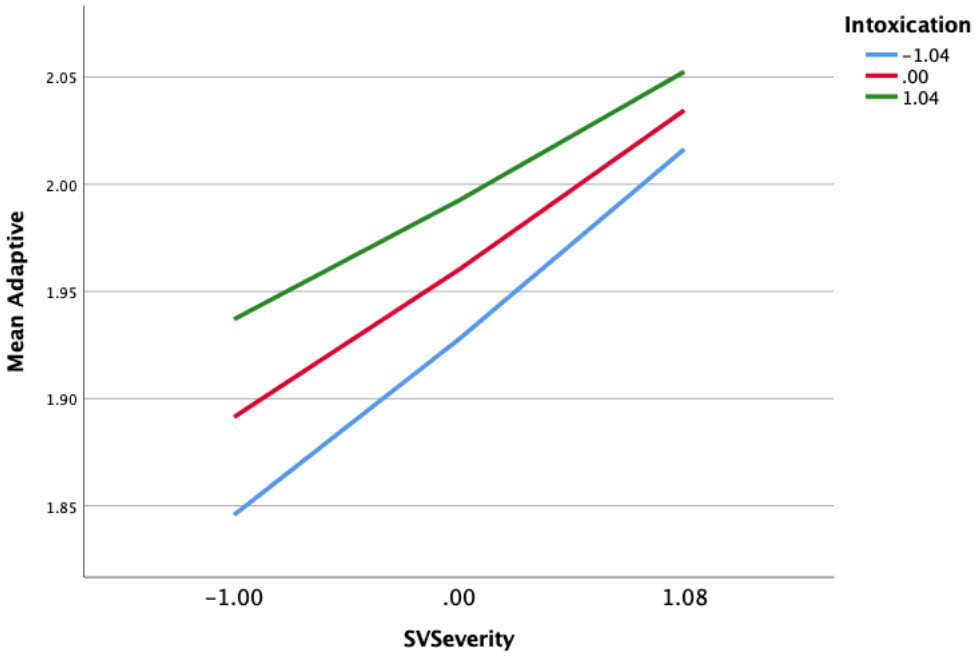


Figure A12. *Interaction Between Sexual Victimization Severity, Adaptive Coping, and Intoxication as the Moderator*



Appendix B
SES and Intoxication

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 been 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 been 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 been 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 been 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 been 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 been 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 been 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 been 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. Please 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 six months.

	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
Brief COPE

Instructions: These items deal with ways people may cope with the stress in their lives. Each item says something about a particular way of coping. To what extent have you been doing what each item says? Use the following response choices. Try to rate each item separately in your mind from the others. Make your answers as true FOR YOU as you can.

1. I've been turning to work or other activities to take my mind off things.
2. I've been concentrating my efforts on doing something about the situation I'm in.
3. I've been saying to myself "this isn't real".
4. I've been using alcohol or other drugs to make myself feel better.
5. I've been getting emotional support from others.
6. I've been giving up trying to deal with it.
7. I've been taking action to try to make the situation better.
8. I've been refusing to believe that it has happened.
9. I've been saying things to let my unpleasant feelings escape.
10. I've been getting help and advice from other people.
11. I've been using alcohol or other drugs to help me get through it.
12. I've been trying to see it in a different light, to make it seem more positive.
13. I've been criticizing myself.
14. I've been trying to come up with a strategy about what to do.
15. I've been getting comfort and understanding from someone.
16. I've been giving up the attempt to cope.
17. I've been looking for something good in what is happening.
18. I've been making jokes about it.
19. I've been doing something to think about it less, such as going to movies, watching TV, reading, daydreaming, sleeping, or shopping.
20. I've been accepting the reality of the fact that it has happened.
21. I've been expressing my negative feelings.
22. I've been trying to find comfort in my religion or spiritual beliefs.

23. I’ve been trying to get advice or help from other people about what to do.
24. I've been learning to live with it.
25. I've been thinking hard about what steps to take.
26. I’ve been blaming myself for things that happened.
27. I've been praying or meditating.
28. I've been making fun of the situation.