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Sexual Risk Recognition Deficits: The Role of Prior Victimization and Emotion Dysregulation

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SEXUAL RISK RECOGNITION DEFICITS: THE ROLE OF PRIOR VICTIMIZATION AND EMOTION DYSREGULATION

by

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SEXUAL RISK RECOGNITION DEFICITS: THE ROLE OF PRIOR VICTIMIZATION AND EMOTION DYSREGULATION

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Recent theoretical writings suggest that the ineffective regulation of negative emotional states may reduce the ability of women to detect and respond effectively to situational and interpersonal factors that increase risk for sexual assault. However, little empirical research has explored this hypothesis. In the present study, it was hypothesized that prior sexual victimization and negative mood state would each independently predict poor risk recognition and less effective defensive actions in response to an analogue sexual assault vignette. Further, these variables were expected to interact to produce particularly impaired risk responses. Finally, that the *in vivo* emotion regulation strategy of suppression and corresponding cognitive resource usage (operationalized as memory impairment for the vignette) were hypothesized to mediate these associations. Participants were 668 female undergraduate students who were randomly assigned to receive a negative or neutral film mood induction followed by an audiotaped dating interaction during which they were instructed to indicate when the man had "gone too far" and describe an adaptive response to the situation. Approximately 33.5% of the sample reported a single victimization and 10% reported revictimization. Hypotheses were largely unsupported as sexual victimization history, mood condition, and their interaction did not impact risk recognition or adaptive responding. However, in vivo emotional suppression and cognitive resource usage were shown to predict delayed risk recognition only. Findings suggest that contrary to hypotheses, negative mood (as induced here) may not relate to risk recognition and

response impairments. However, it may be important for victimization prevention programs that focus on risk perception to address possible underlying issues with emotional suppression and limited cognitive resources to improve risk perception abilities. Limitations and future directions are discussed.

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Introduction

Research on risk factors for adult sexual assault has burgeoned during the last two decades. One consistent finding in this literature is that women with a history of sexual victimization are at increased risk for subsequent sexual assault (referred to as "sexual revictimization") when compared to women without such a history. In a separate literature, prominent theorists have proposed that ineffective emotion regulation strategies may increase vulnerability to sexual assault by reducing an individual's ability to identify situational risk and implement adaptive defensive responses (e.g., verbal or behavioral resistance to the assault). Despite research indicating that sexual assault survivors report difficulties in their abilities to experience and express emotions, no studies to date have examined whether and to what degree emotional experiences influence risk responses among sexual assault survivors. Therefore, the purpose of the proposed study is to employ experimental methods to investigate whether sexually victimized women who experience negative mood demonstrate impaired abilities to detect risk and respond adaptively to a hypothetical sexual assault vignette. Additionally, this study will explore whether the maladaptive emotion regulation strategy of suppression, and concomitant reductions in cognitive resources, mediate the relationship between prior sexual victimization and poor risk responses.

Prevalence and Characteristics of Sexual Victimization among College Women

Sexual assault is an endemic societal problem associated with sequelae such as anxiety, depression, posttraumatic stress disorder (PTSD), substance abuse, interpersonal difficulties, and

serious health problems including HIV (e.g., Filipas & Ullman, 2006). University women are particularly vulnerable to sexual assault, with approximately 15% of college women reporting a rape or attempted rape since the age of 15 and 20% reporting experiencing a rape or attempted rape during their lives (Brener, McMahon, Warren, & Douglas, 1999). Further, studies using broader definitions of sexual victimization (i.e., forced sexual contact vs. rape) have documented substantially higher rates of victimization among college women. For example, in a national study of college students, approximately 54% of college women reported forced sexual contact (Koss et al., 1987). Furthermore, longitudinal studies of college students have documented rates of rape and attempted rape ranging from 3 to 4% over brief two to three month periods (Gidycz, Coble, Latham, & Layman, 1993; Gidycz, Hanson, & Layman, 1995). When these definitions were broadened to include sexual contact forms of victimization, rates increased to 6% over a brief two month period (Gidycz et al., 1993). Taken together, these findings suggest that sexual victimization poses a serious risk to college women.

Risk Factors for Sexual Victimization

In response to these alarming figures, researchers have explored myriad factors that may increase vulnerability to assault. A large body of research has documented a robust link between early child sexual victimization and later sexual victimization as an adult, a phenomenon termed revictimization (for review see Classen, Palesh, & Aggarwal, 2005). In fact, a meta-analysis of 19 studies revealed that between 15% and 79% of women with histories of child sexual abuse were revictimized as adults (Roodman & Clum, 2001). These authors reported an overall effect size of .59 for revictimization, with an effect size of .49 among college samples specifically. Evidence of revictimization also has been documented in many empirical studies with college students (Arata, 2000; Gidycz et al., 1993; Gidycz et al., 1995; Kessler & Bieschke,

1999; Messman-Moore & Long, 2000). These studies reveal that approximately 30% of child rape victims go on to experience revictimization in adolescence or adulthood; whereas only 9% of non-victims experience sexual victimization during adolescence or adulthood (Gidycz et al., 1993).

Despite the strong linkages between child and adult sexual victimization, not all women with child sexual abuse histories go on to be revictimized. This fact raises the possibility that other important variables also may be associated with increased risk for adult victimization. For instance, it has been suggested that nearly half of all sexual assaults are associated with alcohol use by the victim, the perpetrator, or both individuals (Abbey, Zawacki, Buck, Clinton, & McAuslan, 2004). Alcohol use by the victim may diminish the salience of interpersonal risk cues both by altering women's perception of male partners as more positive and by decreasing women's abilities to physically fend off an attack (Testa, Livingston, & Collins, 2000; Testa & Parks, 1996). Recent research suggests that approximately 300,000 incapacitated rapes (i.e., sexual contact when the victim is unable to consent due to the use of alcohol or drugs) are reported each year in the United States (Kilpatrick, Resnick, Ruggiero, Conoscenti, & McCauley, 2007). Alcohol-related sexual assault may be a particularly important phenomenon to explore among college women in light of numerous studies showing that alcohol use is a salient predictor of sexual victimization in this population (Abbey, 1991; Gidycz et al., 2007; Koss, 1988).

The literature on sexual victimization also provides support for linkages between psychopathology, such as posttraumatic stress disorder (PTSD), including dissociation, and sexual revictimization (for reviews see Classen et al., 2005; Marx, Heidt, & Gold, 2005; Messman-Moore & Long, 2002; Polusny & Follette, 1995). Among undergraduate women

specifically, links have been made between PTSD and sexual victimization (Sandberg, Matorin, & Lynn, 1999), with particular support emerging for the role of hyperarousal symptoms (Risser, Hetzel-Riggin, Thomsen, & McCanne, 2006). It has been hypothesized that women experiencing distressing psychopathology, including heightened negative affect, may have greater difficulty detecting environmental risk cues because all available attentional resources are focused on managing internal distress. Similarly, clinicians writing about revictimization have theorized that dissociation may increase risk for sexual victimization by diminishing awareness of risk cues in the environment (Chu, 1992). However, while there are limited indications that alcohol use, PTSD symptomatology, and dissociation might relate to sexual victimization, no single factor has been found to adequately explain such risk.

Sexual Risk Recognition Impairments and Prospective Risk for Victimization

Among the many factors that have been examined in relation to sexual victimization, one potentially important proximal variable that has been associated with increased risk for assault is the inability to recognize risk cues in sexually dangerous interpersonal situations. Termed "risk recognition," these abilities often are assessed via hypothetical dating vignettes in which participants must identify when the man in the scenario has "gone too far" in making unwanted sexual advances toward a woman. Using a prospective design with a small (N = 66) sample of college women with histories of sexual victimization, Marx, Calhoun, Wilson, and Meyerson (2001) revealed that women who took longer to recognize risk during the vignette were more likely to experience subsequent sexual victimization during a 2-month follow-up period. However, not all studies have found prospective links between poor risk recognition and subsequent sexual victimization (e.g., Breitenbecher, 1999; Messman-Moore & Brown, 2006; Naugle, 2000). Indeed, although *recognizing* risk in a timely fashion may be important for

avoiding a potential assault, responding adaptively to such a situation once risk has been identified (e.g., by leaving) also may be important for avoiding victimization. In fact, women who indicate that they would stay longer in a risky sexual situation are more likely to report actually experiencing a sexual assault during an 8-month follow-up period (Messman-Moore & Brown, 2006). Overall, these findings highlight the importance of studying risk responses (both risk recognition deficits and failure to employ defensive escape action) as critical precursors to sexual assault.

Links Between Past Sexual Victimization and Risk Responses

Given their potential role in contributing to sexual assault, researchers have begun to identify factors that may lead to impaired risk responses during threatening sexual encounters. One factor that consistently emerges in the literature is a history of prior sexual victimization. Indeed, at least two studies using college women have found positive associations between a history of sexual victimization and delayed situational risk recognition during a hypothetical dating vignette. The first of these studies found that revictimized college women took significantly longer to indicate that a man in a hypothetical dating vignette had "gone too far" when compared to non-victimized and singly victimized women (Wilson, Calhoun, & Bernat, 1999). Interestingly, singly victimized women took less time to identify risk when compared to non-victims. Associations between posttraumatic stress symptomatology and risk recognition deficits also were examined in this study. Revictimized women with heightened arousal symptoms had shorter risk response latencies than did revictimized women with increased avoidance and numbing symptoms. The second study also examined associations between victimization and risk recognition among college women and found that sexual assault victims displayed longer risk recognition latencies and had increased physiological responsivity during

earlier, but not later, parts of the sexual assault vignette (Soler-Baillo, Marx, & Sloan, 2005). Together, these findings suggest that women with prior victimization histories demonstrate poorer risk recognition abilities (i.e., they take significantly longer to identify risk in a sexual assault vignette) than do nonvictimized women.

Prior sexual victimization also has been associated with maladaptive defensive responses; however, there is some evidence that the manner in which one responds is predicated on the ability to identify risk (Nurius, 2000). More specifically, women who fail to recognize risk early in a threatening encounter may have few options available to avoid assault once risk has been recognized later in the encounter. In concert with this theory, women tend to report low perceived personal risk for sexual assault, which in turn, might lead to low preparedness for assertive behavioral resistance. For instance, when providing responses to hypothetical sexual assault scenarios, victimized women describe less assertive and more passive resistance strategies (Stoner et al., 2007; VanZile-Tamsen, Testa, & Livingston, 2005). In laboratory research on behavioral responses to risky situations, intended resistance strategies have been further subdivided to reflect the response effectiveness (VanZile-Tamsen et al., 2005). These strategies include direct resistance (e.g., clearly and directly telling him to stop), indirect resistance (e.g., making an excuse about why to stop), consent (e.g., kiss him), and passivity (e.g., just see what happens). Thus, evidence suggests that prior sexual victimization is a crucial risk factor for impaired risk recognition and maladaptive defensive responding.

Proposed Explanations for Links between Past Victimization and Risk Response Difficulties

Attempts to explain linkages between past victimization and risk response impairments have met with limited support. However, in many cases, victimization may have occurred in the distant past and numerous proximal variables may be important to consider. As noted previously,

victimized women with PTSD symptomatology, particularly hyperarousal symptoms, evidence shorter risk response latencies, suggesting that these symptoms actually may improve risk detection abilities (Wilson et al., 1999). As further support for this finding, these authors also found that dissociative symptomatology was not associated with risk response latencies.

Among undergraduate women, laboratory alcohol use also has been shown to impair risk recognition during the audiotaped vignette, with women in the alcohol consumption group demonstrating significantly longer risk recognition latencies when compared to those in the placebo group (Loiselle & Fuqua, 2007). Laboratory alcohol use also predicts less assertive refusal responses to the audiotaped sexual assault risk vignette among female undergraduates (Pumphrey-Gordon & Gross, 2007). Finally, past victimization has been found to interact with laboratory alcohol use to predict secondary appraisals of a sexually risky situation depicted in a written vignette, which in turn, impacted intended resistance responses (Stoner et al., 2007). CSA victims may also use alcohol to reduce negative affect associated with abuse experiences (Grayson & Nolen-Hoeksema, 2005). Taken together, these findings suggest that victimized women experiencing heightened negative affect may resort to alcohol use to this distress, but increased alcohol use may decrease risk recognition abilities in risky interpersonal situations

Critique of the Risk Recognition and Response Literatures

As noted previously, not all studies have found relationships between risk recognition abilities and sexual victimization (e.g., Breitenbecher, 1999; Messman-Moore & Brown, 2006; Naugle, 2000). A recent review article suggested a variety of plausible explanations for discrepancies in findings (Gidycz, McNamara, & Edwards, 2006). For example, some studies have prospectively examined risk recognition in relation to sexual victimization (Messman-Moore & Brown, 2006; Marx et al., 2001) whereas others have used cross-sectional assessments

to glean an understanding of links between past victimization and risk recognition deficits (Soler-Baillo et al., 2005; Wilson et al., 1999). Further, studies have employed varied vignette mediums including audiotaped (Marx et al., 2001), written (Messman-Moore & Brown, 2006) and videotaped (Breitenbecher, 1999; Naugle, 2000) vignettes (Gidycz, McNamara, & Edwards, 2006). In the case of written vignettes, women may read down to the point of recognizing that the vignette culminated in rape and go back to indicate that they recognized risk sooner than they did (Gidyc et al.). In the case of videotaped vignettes, women may have difficulty imagining themselves in the situation because the specific details are too unfamiliar. This, in turn, may remove the personal salience of the risk. Using vignettes to approximate a sexually risky scenario in the laboratory is an advantageous approach to the study of sexual victimization because it provides an ethical means of collecting sensitive response time data to a threatening interpersonal encounter encompassed in the context of a typical social activity (e.g., dating). However, the accompanying instructions (e.g., to press a button if they feel the man in the vignette has "gone too far") may detract from the ecological validity of the task by giving participants a warning that they likely do not receive when typically engaged in such encounters (Gidycz et al.).

Clinical Implications of Risk Recognition and Adaptive Responding

Despite the limitations of this research, the studies reviewed here suggest the possible value of designing interventions to address deficits in risk recognition and adaptive responding. However, to date, such interventions have met with only modest success (Breitenbecher & Gidycz, 1998; Marx et al., 2001; Yeater & O'Donahue, 2002). Because these programs are primarily educational in nature, women may be unable to use the information they learn to identify risk or formulate effective defense plans in the face of an assault because they cannot

cope effectively with negative emotions. Said differently, although women may be trained to recognize risk factors for sexual victimization, when actually confronted with a highly emotional risk situation, it may be difficult to detect risk cues or engage in defensive escape behavior when concurrently trying to internally regulate highly distressing negative emotions. Thus, findings from the present study have the potential to illuminate the nature and extent of emotion regulation deficits underlying poor risk responses. The results of this study could be incorporated into prevention programs that train women to quickly and effectively reduce highly distressing negative emotions while also scanning the environment for danger cues and implementing effective defensive action to avoid assault. Interventions that might derive from these data also fit with other emotion-focused interventions for trauma survivors (e.g., Skills Training in Affective and Interpersonal Regulation (STAIR); Cloitre, Koenen, Cohen, & Han, 2002).

Impact of Negative Emotions on Risk Responses

During the past several decades, researchers have begun to document myriad ways in which emotional states may influence interpersonal interactions (e.g., Forgas, 2008). Among depressed individuals, for example, positive linkages have been found between heightened negative affect and limited social support (e.g., Elliot, Marmarash, & Pickelman, 1994). Emotional states also have been shown to influence perceptions of and responses to a wide range of interpersonal situations. For instance, many studies have utilized mood inductions to examine the effects of particular emotions on performance and cognitions. In general, emotional states tend to influence cognitive attributions in a mood-congruent manner, such that individuals who undergo a negative mood induction evince more negative or critical attributions for everyday events when compared to individuals experiencing a neutral mood (e.g., Forgas & Locke, 2005). Mood states also appear to influence social judgments, particularly for complex interactions that

require elaborate processing and responses, such as generating verbal responses to stressful interpersonal exchanges (Forgas, 2002). For instance, lab-induced sadness (vs. happiness) has been linked to more evasive and equivocal responses to stress-evoking interpersonal situations, an effect that is heightened for high-conflict interpersonal situations (Forgas & Cromer, 2004). Sad mood states also have been shown to increase politeness when making requests, particularly when making riskier requests that may require more elaborate processing (Forgas, 1999). Together, these studies indicate that acute negative emotional states may have significant effects on the perception of and response to complex and conflictual interpersonal interactions. Applied to the detection of interpersonal threat specifically, it is possible that women who experience negative mood immediately prior to or during a potentially risky encounter also may have difficulty perceiving subtle risk cues and responding adaptively (i.e., assertively) to sexually risky interpersonal situations.

Although these works provide support for the notion that negative mood might impact risk detection abilities, it is important to acknowledge an emerging body of literature suggesting that *mild* negative mood states actually may result in more detailed, systematic information processing that requires attention to and accommodation of external information (Forgas, 1995). This is in contrast to positive mood states, wherein it is more common to rely on existing schemas and avoid arduous processing that may not help to maintain positive affect (Forgas). For instance, mild negative mood states (e.g., sadness) have been associated with increased skepticism and better deception detection abilities when compared to neutral and positive mood states (Forgas & East, 2008). However, these studies have not included sexually victimized women, a population who tend to report frequent and intense negative mood states (Glaser, van Os, Portegijs, & Myin-Germeys, 2006; Resick & Schnicke, 1992; Wagner, Roemer, Orsillo, &

Litz, 2003), and they have induced only mild negative mood states. More intense negative emotional reactions may result in more impaired information processing abilities, particularly for women who have experienced prior victimization. As corroboration for this possibility, it has been suggested that some individuals may display a propensity to engage in rash behavior (e.g., substance abuse, risky sexual behavior) when experiencing extreme positive or negative mood states (Cyders & Smith, 2008). Compared to non-victims, women with victimization histories have been shown to engage in more risky and impulsive behavior (e.g., alcohol use, risky sexual behavior) to reduce negative affect (e.g., Grayson & Nolen-Hoeksema, 2005; Orcutt, Cooper, & Garcia, 2005). Therefore, it is possible that such women have a higher propensity to engage in risky behavior when experiencing extreme negative affective states. Engaging in these risky behaviors, in turn, may increase risk for sexual revictimization.

Interaction of Prior Victimization and Mood States on Risk Recognition

Based on separate literatures suggesting that prior victimization and negative mood may independently contribute to impaired risk responding, it is hypothesized that victimization history and negative mood interact to produce even greater deficits in risk responding. More specifically, women with histories of sexual victimization, particularly revictimization, who experience acute negative emotion may demonstrate particularly impaired risk responses. Support for this possibility stems from literature suggesting that revictimized women not only have greater difficulty detecting risk (e.g., Wilson et al., 1999), but also experience higher rates of emotional problems and psychopathology, including depression, PTSD, and dissociation than do non-victimized or singly-victimized women (Finkelhor, 1994; Filipas & Ullman, 2006; Follette, Polusny, Bechtle, & Naugle, 2006; Messman-Moore & Long, 1996; Polusny & Follette, 1995). Further, several authors actually have suggested that psychopathology may serve as the

mechanism underlying the link between prior victimization and impaired risk responses by decreasing a woman's ability to attend to external risk cues in the environment (Chu, 1992; Marx et al., 2005; Polusny & Follette, 1995; van der Kolk, 1989). However, not all women who are revictimized meet criteria for an emotional disorder and some studies have found that certain symptoms (e.g., PTSD hyperarousal symptoms) are associated with decreased risk response latencies, suggesting that these sequelae may actually serve a protective role in risk for subsequent sexual victimization (Wilson et al., 1999). The literature on this topic is inconsistent, however, as some research suggests that increased hyperarousal symptoms actually are associated with increased adult sexual assault severity (Risser et al., 2006). Instead, the common factor underlying poor risk responses may be ineffective management of overwhelming negative emotions.

Emotion Regulation Strategies: The Role of Suppression

To explain the mechanism underlying the possible link between negative mood and impaired risk responses in threatening sexual encounters, it is proposed here that acute negative mood states may cause some individuals to use maladaptive emotion regulation strategies, which in turn, interfere with the ability to perceive the sometimes subtle precursors to a sexual assault. Although yet to be applied to the study of sexual victimization, one prominent theory of emotion regulation defines the construct as the ability to influence which emotions are experienced, when and how they are experienced, as well as how they are expressed (Gross, 1998). This theory also differentiates emotion regulation from coping, mood regulation, defenses, and affect regulation in its focus on both amplifying and attenuating brief emotional states depending on the individual's goals within a particular context.

Gross (1998) has identified and conducted extensive investigations of two emotion regulation strategies are especially salient in changing the trajectory of negative affective states. The first strategy, cognitive reappraisal, occurs prior to the generation of an emotional response and refers to changing one's thoughts to reduce the emotional consequences of the situation. The other, suppression, occurs after an emotional response has been generated and refers to attempts to inhibit or conceal the experience and expression of emotions. Across numerous self-report and laboratory studies, use of cognitive reappraisal has been associated with adaptive outcomes including increased positive affect, decreased negative affect, improved physical health and general well-being (Gross, 2002; Gross & John, 2003). Conversely, a significant body of experimental research has linked experimentally induced suppression to a host of negative outcomes, including restricted positive affect, increased negative affect, poorer social adjustment, increased physiological arousal, and decreased well-being (Campbell-Sills, Barlow, Brown, & Hofmann, 2006; Gross, 2002; Gross & John, 2003). Furthermore, suppression has been associated with greater levels of psychopathology such as depression and anxiety (Gross & Munoz, 1995).

Suppression and the use of other emotional avoidance strategies also have been linked specifically to sexual victimization. For example, adult college women with histories of child and adolescent sexual abuse have been found to report greater levels of experiential avoidance (defined as an unwillingness to experience unpleasant thoughts, emotions, or bodily sensations) compared to women without abuse histories (Batten, Follette, & Aban, 2001; Polusny, Rosenthal, Aban, & Follette, 2004; Marx & Sloan, 2002; Rosenthal, Hall, Palm, Batten, & Follette, 2005). This applies to the current study because experiential avoidance is conceptualized as a trait that increases vulnerability to general psychopathology by promoting

the use of maladaptive and avoidant coping strategies (Kashdan, Barrios, Forsyth, & Steger, 2006; Rosenthal, Cheavens, Lynch, & Follette, 2006). Additionally, chronic avoidance has been shown to mediate associations between child sexual abuse and adult psychological distress among undergraduate women (Rosenthal et al., 2005). Of particular relevance to the present study, experiential avoidance also correlates highly with use of emotional suppression (Hayes et al., 2004), suggesting that individuals with a general tendency to avoid unpleasant emotional experiences may be more likely to use emotional suppression to manage negative emotions when they are experienced. Finally, emotional suppression has been found to predict adult sexual assault in women with histories of child sexual abuse (Gordon, Gold, Castro, & Marx, 2006). The range of negative emotional sequelae linked to sexual abuse and assault point to emotion regulation problems as a significant concern.

Based on these findings, suppression also might account for the relationship between negative mood and rape-related risk impairments. More specifically, suppression requires substantial effort to inhibit the experience and expression of negative emotions, and women employing this emotion regulation strategy may actually experience increased emotional and physiological distress. Similar to research linking PTSD and dissociation to poor risk detection abilities (e.g., Chu, 1992), women using suppression may be devoting the majority of their attentional resources to the inhibition of their emotional responses, which in turn, may decrease the ability to attend to and perceive threat cues in the environment.

Cognitive Costs of Suppression

The use of suppression involves pervasive self-monitoring behavior that requires a continuous expenditure of cognitive resources, which has been shown to interfere with cognitive processing abilities, particularly during tasks involving complex social interactions (Gross,

2001). Evidence of this effect has been illuminated in laboratory experiments in which participants instructed to use suppression during a conversation task report greater levels of distraction when compared to those instructed to use cognitive reappraisal (Butler, Egloff, Whilhelm, Smith, Erickson, & Gross, 2003). In addition, both experimentally manipulated and spontaneously occurring suppression have been associated with poorer recall of emotionally arousing interpersonal events, including public speaking tasks and conflictual conversations (Egloff, Schmukle, Burns, & Schwerdtfeger, 2006; Richards, Butler, & Gross, 2003; Richards & Gross, 2006). Moreover, suppression may be equivalent to outright distraction in its negative effects on memory, indicating that suppression may interfere with the actual encoding of stressful events (Richards & Gross, 2006). Thus, whereas the educational psychology literature suggests that increased utilization of cognitive resources for the purposes of high-level cognitive processing is associated with better recall (e.g., Barker, McInerney, & Dowson, 2002), heightened utilization of cognitive resources to reduce negative emotions (rather than to process stimuli in depth) actually may decrease memory abilities. Applied to the area of sexual assault, these findings suggest that women who engage in the emotion regulation strategy of suppression during a risky interpersonal situation may have few residual resources available to attend to cognitive tasks such as detecting risk or formulating an effective defensive plan. Consistent with prior studies that have operationalized cognitive resources expenditure as memory deficits for emotional events (Egloff et al., 2006), the current study will explore memory deficits for the sexual assault vignette to examine the cognitive impact of suppression.

Emotion Regulation in Context

Although numerous studies have documented emotional sequelae associated with abuse and assault, few studies have differentiated between general emotional processing tendencies,

such as experiential avoidance, and emotion regulation strategies that are utilized in a particular context with specific goals (e.g., a sexually risky scenario). Although general emotion regulation tendencies may predict the use of specific emotion regulation strategies used under stressful conditions, specific emotion regulation strategies used in a particular context also may differ drastically from typical emotion regulation tendencies. For instance, Egloff et al. (2006) found low-level associations (r = .28 to .31) between habitual emotion regulation as assessed by Gross and John's (2003) Emotion Regulation Questionnaire and the laboratory assessment of cognitive reappraisal and suppression during a stressful speech task. This suggests that habitual emotion regulation may be associated with context-specific emotion regulation; however, the specific context may dictate a significantly greater proportion of the variance in emotion regulation strategies used under stressful circumstances.

Summary and Aims of the Present Study

Research on risk factors for adult sexual assault suggests that women with a history of sexual victimization are at increased risk for subsequent sexual assault (referred to as "sexual revictimization"). In a separate literature, theorists and empirical findings suggest that ineffective emotion regulation strategies may increase vulnerability to sexual assault by reducing an individual's ability to identify situational risk and implement adaptive defensive responses (e.g., verbal or behavioral resistance to the assault). Despite research indicating that sexual assault survivors report difficulties in their abilities to experience and express emotions, no studies to date have examined whether and to what degree emotional experiences influence risk responses among sexual assault survivors. Therefore, the purpose of the proposed study is to employ experimental methods to investigate whether sexually victimized women who experience negative mood demonstrate impaired abilities to detect risk and respond adaptively to a

hypothetical sexual assault vignette. A second aim of this study is to explore whether emotion regulation strategies mediate associations between prior sexual victimization and risk recognition difficulties. Specifically, this study will examine whether the maladaptive emotion regulation strategy of suppression, and concomitant reductions in cognitive resources, mediate the relationship between prior sexual victimization and poor risk responses.

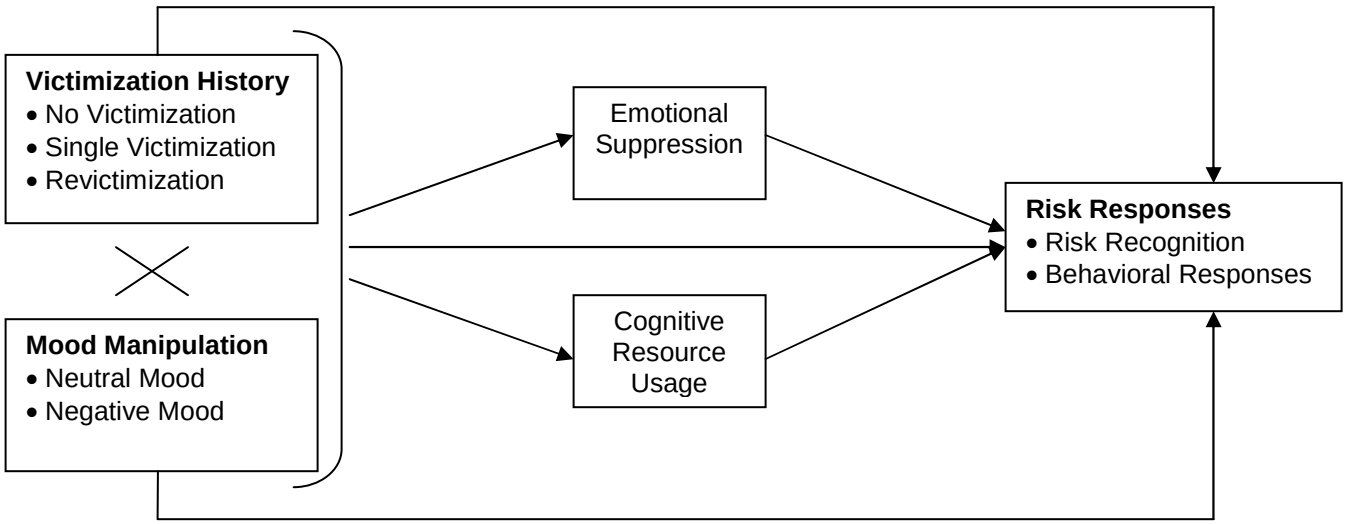
Conceptual Model

The basic conceptualization of this project is depicted in Figure 1 below. Based on past research linking poor risk recognition to increased risk for sexual victimization (Marx et al., 2001; Messman-Moore & Brown, 2006), maladaptive risk responses will serve as the focal dependent variables in the present study (see box labeled *Risk Responses*). Thus, consistent with past findings (e.g., Wilson et al., 1999; Soler-Baillo et al., 2005), any prior sexual victimization (child, adolescent or adult) is expected to predict poorer risk responses. However, revictimization—defined here as sexual victimization occurring in two or more developmental periods (i.e., childhood, adolescence, adulthood)—is expected to be associated with the least adaptive risk responses. Consistent with findings documenting the impact of negative mood states on social decision making (e.g., Forgas, 2002; Forgas & Cromer, 2004), it is also hypothesized that experimentally induced negative emotions will negatively impact risk responses, such that participants in the negative mood condition will recognize risk later in the vignette and will describe using less resistance and escape behaviors in response to the vignette. Integrating the literature on past victimization and negative mood states, an interaction is expected between victimization history and the assigned mood condition such that women with more severe victimization histories who experience negative mood will have the poorest risk responses (i.e., longer latencies in recognizing risk and in taking self-protective action). Beyond

the main and interactive effects expected for victimization history and negative mood, past research (Egloff et al., 2006; Feldner et al., 2003; Richards et al., 2003) points to two *in vivo* emotion regulation processes that are expected to mediate the impact of prior victimization and negative mood on risk responses. These constructs are suppression and cognitive resource usage (see middle boxes). While both variables might independently mediate links between past abuse/mood and risk responses, these constructs also may function in concert to produce risk response impairments. For example, emotional suppression may cause reductions in the cognitive resources available to process risk cues. Therefore, the model will be examined first by testing the unique contributions of each mediator and then by examining the combined (i.e., sequential) contributions of both mediators.

Figure 1

Conceptual Model of Hypothesized Relationships Among Key Constructs



Design Overview

As depicted in Figure 1, the present study employs a **3** (nonvictimized, singly victimized, revictimized) X **2** (neutral or negative mood) design. Past sexual victimization status is assessed through self-report measures. Mood state is induced following random assignment to conditions.

Following the mood induction, participants listen to an audiotaped sexual assault vignette (Marx & Gross, 1995). The primary DV consists of risk responses assessed by asking participants to indicate when the male in the sexual assault vignette has "gone too far" in making sexual demands of the woman. Once participants have identified risk, they describe how they "would respond as the woman in the vignette." The study is designed entirely between subjects rather than within subjects due to lack of an empirically equivalent assault vignette to serve as the second DV. The only within-subjects factor is time (pre vs. post mood induction).

Specific Aims and Corresponding Hypotheses

Aim 1: To investigate the relationship between sexual victimization history and the ability to identify sexual assault-related risk and implement an adaptive defensive response.

1a) Consistent with prior research (e.g., Soler-Baillo et al., 2005; Wilson et al., 1999), it is hypothesized that women with a history of sexual victimization, particularly revictimization, will have poorer overall risk recognition in response to an audiotaped sexual assault vignette than will non-victimized participants.

1b) It also is hypothesized that women with a history of victimization, particularly revictimization, will generate less adaptive defensive responses to an audiotaped sexual assault vignette than will non-victimized participants.

Aim 2: To examine the effects of negative mood on sexual assault-related risk detection and adaptive defensive responding.

2a) Women assigned to a negative mood condition are hypothesized to show poorer risk recognition in response to a sexual assault vignette than will women in a neutral control group.

2b) It also is hypothesized that women assigned to a negative mood condition will generate less adaptive defensive responses to an audiotaped sexual assault vignette than will women in a neutral control group.

Aim 3: To determine whether sexual victimization status and negative mood interact to impact rape-related risk detection and adaptive defensive responding.

3a) Women with a history of sexual victimization, particularly revictimization, who are assigned to a negative mood condition, are hypothesized to have poorer overall risk recognition in response to an audiotaped sexual assault vignette.

3b) It also is hypothesized that women with a history of victimization, particularly revictimization, who are assigned to a negative mood condition, will generate less adaptive defensive responses to an audiotaped sexual assault vignette.

Aim 4: To evaluate the possible mediating roles of emotional suppression and cognitive resource usage in the relationship between sexual victimization history, mood, and subsequent risk response deficits.

4a) Women with victimization histories, particularly revictimization, are hypothesized to report greater use of emotional suppression and cognitive resources than will control participants.

4b) It also is hypothesized that emotional suppression and cognitive resource usage will be positively associated with poor risk response abilities.

4c) The previously hypothesized relationship between victimization history, mood, and poor risk recognition will be mediated by emotional suppression and cognitive resource usage.

Aim 5: To examine whether habitual emotion regulation strategies predict emotion regulation strategies used during the vignette among previously victimized women.

5a) Women with victimization histories, particularly revictimization, are hypothesized to report greater experiential avoidance and increased habitual use of emotional suppression when compared to control participants.

5b) Increased experiential avoidance and heightened habitual use of suppression will be associated with increased use of suppression during the audiotaped sexual assault vignette.

Method

Participants

The decision to use female college students was based on epidemiological data documenting that nearly 90% of sexual assault cases are reported by young women (Pimlott-Kubiak & Cortina, 2003). Data also reveal that college women comprise the largest proportion of individuals at risk for sexual victimization (Gross, Winslett, Roberts, & Gohm, 2006). Finally, prior studies examining victimization have relied heavily on college samples (e.g., Gidycz et al., 1995), making findings from the present study easily comparable to past work.

Participants for the present study were 668 female undergraduates from a large Midwestern University. Approximately 84.3% of participants were full-time students. Most participants were European American (81%). Other ethnicities included African American (4%), Hispanic/Latina (4.0%), Asian (5.5%), Native American (.3%), Hawaiian/ Pacific Islander (.7%), and multiracial (4.5%). Participants were 17-54 years old, with a mean age of 19.7 (*SD* = 2.7). Most participants (92%) had never been married, but 2.8% are cohabitating, 4.6% are married, and .5% are divorced or separated. Approximately 23% of the sample reported a household

income while growing up of 40,000 or less, 39.7% reported a household income while growing up between 40,000 and 80,000, and 37% reported a household income of greater than 80,000 while growing up.

Measures

As indicated in Figure 1, four primary classes of variables were measured in this study: (1) victimization history, (2) mood condition, (3) risk responses, and (4) emotion regulation processes. In addition, a fifth set of variables that served as covariates were assessed to determine whether the proposed mediators significantly influence the model even after the inclusion of these variables. Measurement methods included self-report methods as well as computerized responses to the sexual assault vignette.

Sexual Victimization History: Independent Variable

The sexual abuse subscale of the Computer Assisted Maltreatment Inventory (DiLillo et al., in press) was administered to assess sexual victimization experiences occurring during childhood or adolescence. The CAMI sexual abuse subscale is a computer-based, self-report questionnaire that consists of behaviorally specific screener questions followed by more detailed items that assess various dimensions of the victimization experience, including age at the time of abuse, specific acts that occurred, frequency and duration of the abuse, relationship to the perpetrator (e.g., family versus non-family), and number of perpetrators involved. Participants who respond positively to one of the screener items are classified as having experienced sexual victimization. The sexual abuse subscale has a test-retest coefficient of .71 and correlates highly with measures of child maltreatment such as the Childhood Trauma Questionnaire (DiLillo et al.). Consistent with general trends in the literature (for review see Classen et al., 2005), child sexual abuse was be defined as explicitly sexual contact occurring before age 14 that either

involved force or occurred with an individual at least 5 years older or a family member. Individuals reporting sex play or exploration experiences with same-age peers were not classified as abuse victims. Adolescent sexual abuse was defined as sexual contact (e.g., fondling or sexual touching, oral, anal, or vaginal sex) occurring between the ages of 14 and 18 that either involved force or occurred with an individual at least 10 years older.

Finally, adult sexual victimization was assessed using the Sexual Experiences Survey (SES; Koss & Gidycz, 1985), a 10-item instrument that has been used extensively in prior research to assess unwanted sexual experiences obtained via force, coercion, or the use of alcohol or drugs. The SES yields an internal consistency coefficient of .74 and a test-retest coefficient of .93 (Koss & Gidycz). Although the original SES was designed to assess unwanted sexual experiences since age 14, instructions were modified in the present study to glean information only about experiences occurring after age 18. Thus, women reporting unwanted sexual contact obtained via force or the use of drugs or alcohol since age 18 were considered adult sexual assault victims.

Mood Manipulation: Independent Variable

Negative mood induction. A brief (4.5 minute) film clip that has been shown to induce negative mood (as indicated by significant mean pre-to-post PANAS negative affect change scores) in prior studies (Campbell-Sills et al., 2006) was used. The clip depicts a scene from the movie "The Deer Hunter" in which captured soldiers are forced to play "Russian Roulette." The most common negative emotion adjectives reported in response to the clip are distressed, upset, anxious and nervous, which collectively reflect general negative emotions (Campbell-Sills et al.). Prior exposure to the film clip was assessed to ensure that previously exposed participants did not differ with respect to ability to attain negative mood. Only 2% of participants (n = 14)

reported seeing the film prior to the study. Although a variety of stimuli could have been used to induce mood (e.g., film, music, autobiographical memories), meta-analyses have revealed that films are the most effective means of inducing both positive and negative mood (Westermann, Spies, Stahl, & Hesse, 1996). In that study, the weighted mean effect size (r_m) for films was .74, whereas for other procedures (music, imagination, and social interactions), r_m ranged from .27 to .40. Films also are advantageous because of the standardized administration format (Rottenberg, Ray, & Gross, 2007). More specifically, the use of films lends more internal validity to the mood induction procedure by permitting exposure to identical emotion-provoking stimuli using uniform equipment and consistent procedures in a controlled setting.

Neutral mood induction. To draw conclusions about the effects of mood states on risk responses, it was necessary to include a comparison mood condition. Participants in this condition viewed a 4.5-minute film intended to elicit a neutral emotional state. Although termed "neutral" here and elsewhere in the literature, the specific clip that was used has actually been found to induce a mildly pleasant emotional state (Rottenberg, Ray, & Gross, 2007). Purely "neutral" films depicting abstract visual displays (e.g., computer screensaver graphics) have the potential to induce feelings of mild annoyance or boredom, whereas clips portraying nature scenery, animals, and uplifting music are preferable because they avoid such pitfalls (Gross & Levenson, 1995). The latter approach was selected to maximize mood state differences between the "neutral" and negative groups. To induce mildly pleasant emotions, researchers recommend using a clip of the film "Denali," noting that participants find it relaxing and fully engaging (Rottenberg, Ray, & Gross, 2007).

Positive and Negative Affective Schedule (PANAS; Watson, Clark, & Tellegen, 1988). The PANAS is a 20-item self-report measure consisting of adjectives that describe two general

mood dimensions: positive and negative affect. Participants rate each mood adjective on a 5-point Likert scale ranging from 0 = very slightly to 4 =extremely regarding their current emotional state. In undergraduate samples, internal consistency coefficients for the positive and negative affect subscales are .88 and .85, respectively. Further, the PANAS has been shown to have good convergent and discriminant validity (Watson et al., 1988). The PANAS was administered before and after the film mood induction to ensure that the negative mood induction effectively elicited negative emotions. It also was given again after the memory task at the end of the experimental portion of the study to examine whether women with victimization experiences maintain negative mood states for longer periods of time.

Risk Responses: Dependent Variable

Sexual assault vignette. The sexual assault vignette (Marx & Gross, 1995) is a 350-second audio recording of a dating interaction between a man and woman that concludes in forcible rape. The man's tactics to obtain sexual intercourse increase in intensity throughout the vignette, progressing from verbal pleas to verbal threats and physical force. In response to these tactics, the woman's refusals increase in intensity, beginning with reasoning and refusing and culminating in pleading and crying. Although typically used as a continuous measure, there are six distinct portions of the vignette: mutual interaction (0-74s), polite refusals (75-97s), verbal refusals and apologies by the man (98-136s), verbal pressure and refusals (137-179s), verbal threats and adamant refusals (180-276s), and forced sex (277-350s). The vignette has 2-week test-retest reliability of .87 (Bernat, Stolp, Calhoun, & Adams, 1997). In prior studies with this vignette, victimized women have demonstrated slower risk recognition than nonvictimized women (Soler-Baillo et al., 2005; Wilson et al., 1999). In addition, data have suggested that

participants find the sexual assault vignette highly realistic (average rating of 84.11 on a 100-point scale; Soler-Baillo et al., 2005).

Three primary dependent variables were derived from the sexual assault vignette. First, consistent with previous studies (Soler-Baillo et al., 2005; Wilson et al., 1999), participants indicated recognition of risk in the assault vignette by reporting the precise moment when they felt that the male in the vignette had "gone too far." Response latency, operationalized as the time in seconds between the start of the recording and the point at which risk was identified, served as the primary dependent measure of risk recognition. The vignette was administered via a computer connected to earphones to enable the use of a computer-based reaction-time program developed to record response latency to the tenth of a second. Once participants identified risk, the second dependent variable was derived by asking them to describe how they "would respond as the woman in the situation." Response latency was computed for the time that elapsed between the presentation of the question about how they would respond and the point at which the participant indicated that her typed response was complete (i.e., pushes a submit button). This measurement was recorded to test the hypothesis that victimization history and negative mood would be associated with a greater length of time to generate a defensive response. The third risk recognition variable involved the classification of defensive responses provided by participants. Using a coding system developed by Vanzile-Tamsen et al. (2005), the first author and trained undergraduate research assistants classified each response according to key themes reflecting the effectiveness of actions taken to avoid assault (e.g., no resistance, verbal resistance, physical resistance, escape). The overall effectiveness of the response was classified on the following 0-5 scale:

- 0: No response or an uncodable response (e.g., "same way she did")

- 1: Completely ineffective response—perhaps the woman stayed in the situation or indicated consent (e.g., "the girl sounded upset, but I would be fine with it")
- 2: Mostly ineffective response—the woman may have indicated discomfort, but in a passive way (e.g., "I would ask the man for a ride home" or "I would suggest that we watch a movie instead")
- 3: Somewhat ineffective—the woman indicates discomfort, but doesn't clearly say no (e.g., "I would probably move to a different chair and even consider leaving")
- 4: Mostly effective—clearly said no and/or used active resistance (e.g., "I would tell him no and push him away")
- 5: Completely effective—clearly indicated that she would leave

This coding was conducted to test the hypothesis that prior victimization and negative mood would be positively associated with descriptions of less adaptive responses to the vignette. The intraclass correlation was .92 (95% CI = .91-.93).

In Vivo Emotion Regulation Processes: Proposed Mediators

The primary hypotheses for the present study focused on the possible mediating roles of emotion regulation processes that unfold during the sexual assault vignette. To assess emotion regulation processes *in vivo*, the present study employed a situation-specific emotion regulation questionnaire and a free recall memory task.

Situation-Specific Emotion Regulation Strategies (Egloff et al., 2006). Three items developed by Egloff et al. were used to assess actual use of suppression during the experimental session. These three items correspond to the suppression construct assessed by the ERQ (Gross & John, 2003). Immediately following the sexual assault vignette, participants use a 7-point

Likert scale anchored from 0 = *not at all* to 6 = *extremely* to complete these questions based on their emotional reactions to the vignette. Responses were averaged. Alpha for the scale is .73 and the measure has demonstrated adequate test-retest reliability and positive correlations with the suppression subscale of the ERQ (Egloff et al.). Alpha for the scale in the present study was .64.

Free recall memory task. After listening to the sexual assault vignette and responding to the emotion regulation questions, participants completed a free recall task in which they recorded as many details of the vignette as they could remember within a 10-minute period. Responses were coded to reflect the number of remembered details from the vignette. This coding task objectively quantified cognitive resource usage based on the assumption that greater recall for the vignette reflected fewer cognitive resources used to regulate negative affect during the vignette. In other words, it was expected that women who use suppression would devote more cognitive resources to regulating negative emotions and thus would be less able to process and remember details of the vignette. To ascertain reliability between coders, approximately 20% (*n* = 131) of the memory tasks were randomly selected for double-coding. The intraclass correlation coefficient was .96 (95% CI = .94-.97) suggesting good intercoder reliability.

Covariates

The literature on risk responses among individuals with child sexual abuse experiences has found modest support for the mediating role of variables such as experiential avoidance (Batten et al, 2001; Polusny et al, 2004), PTSD symptomatology (e.g., Wilson et al., 1999), and dissociation (e.g., Cloitre et al., 1997). Additionally, women with CSA histories have been found to begin drinking at an earlier age (Senn et al., 2007) and to use alcohol to cope with negative affect stemming from abuse experiences (Grayson & Nolen-Hoeksema, 2005), and alcohol use has been linked independently both to risk for sexual victimization (for review see Abbey,

Zawacki, Buck, Clinton, & McAuslan, 2004) and to decreased resistance responses during. Although not the primary focus of the current study, these constructs were assessed and included as covariates during analyses to evaluate whether emotion regulation processes mediate the relationship between victimization and negative mood and impaired risk responses above and beyond variance that accounted for by covariates.

Acceptance and Action Questionnaire (AAQ; Hayes et al., 2004). The AAQ is a 9-item measure of experiential avoidance. Respondents indicate the degree to which they regularly attempt to avoid or alter the experience of unpleasant private events on a 7-point Likert scale anchored from 1 = *never true* to 7 = *always true*. Internal consistency for the scale is .7, and test-retest reliability is .64 over a four-month period (Hayes et al.). The AAQ also has good convergent and discriminant validity. It is positively correlated with measures of thought suppression and it is not associated with measures of social desirability (Hayes et al.).

Traumatic Life Events Questionnaire (TLEQ; Kubany et al, 2000). The TLEQ assesses exposure to 21 traumatic events that meet the DSM-IV PTSD criterion A1 definition of a traumatic event. For each traumatic event endorsed, respondents indicated the number of times they experienced the event as well as whether they experienced intense fear, helplessness, or horror in response to the event. The TLEQ has a test-retest coefficient of .63, and excellent convergent validity with interview-based measures of trauma exposure (Kubany et al.). The TLEQ assessed exposure to traumatic experiences beyond the sexual abuse and rape experiences captured by the CAMI and SES-R. For example, the TLEQ includes questions pertaining to natural disasters, motor vehicle accidents, robbery and other forms of interpersonal victimization.

PTSD Checklist (PCL; Weathers, Litz, Herman, Huska, & Keane, 1993). The PCL is a 17-item instrument designed to assess PTSD symptoms during the previous month. The PCL was

used in conjunction with the TLEQ to assess the severity of current PTSD symptoms. In contrast to the TLEQ, which assesses trauma exposure, the PCL items correspond to the PTSD reexperiencing, avoidance, and arousal symptom clusters described in the DSM-IV. Respondents rate the severity of their symptoms on a Likert-type scale ranging from 1 = *not at all* to 5 = *extremely*. The PCL has internal consistency ranging from .89 to .97 and test-retest reliability of .96 (Weathers et al., 1993). In addition, it correlates highly with interview-based measures of PTSD (r = .93; Blanchard, Jones-Alexander, Buckley, & Forneris, 1996).

Dissociative Experiences Scale-II (DES-II; Carlson & Putnam, 1993). The DES-II is a 28-item inventory designed to measure several facets of dissociative experiences: derealization/ depersonalization, absorption, and amnesic experiences. The scale yields a single dissociation score that taps into a broad range of dissociative experiences including disturbances in memory, identity, and cognition, and feelings of derealization, depersonalization, absorption, and imaginative involvement. Item responses range from 0% = *This never happens to you* to 100% = *This always happens to you*. The scale has clinical and nonclinical norms and good test-retest reliability and criterion validity (Carlson & Putnam, 1993).

Emotion Regulation Questionnaire (ERQ; Gross & John, 2003). The ERQ is a 10-item self-report measure designed to assess individual differences in the use of two emotion regulation strategies: cognitive reappraisal and expressive suppression. Respondents indicate the extent to which they agree with each statement on a 7-point Likert-style scale rated from *1 = strongly disagree* to *7 = strongly agree.* The ERQ has good psychometric properties, with internal consistency coefficients of .79 for Cognitive Reappraisal and .73 for Expressive Suppression, and a test-retest reliability coefficient of .69 over a 3-month period (Gross & John, 2003). The ERQ assessed the self-reported habitual use of expressive suppression.

Alcohol Use Disorders Identification Test (AUDIT; Babor, De La Fuente, Saunders, & Grant, 1992). The AUDIT contains 10 items that assess frequency, quantity, control over drinking behavior, and potentially harmful consequences such as blackouts and alcohol-related injuries. In addition to average consumption, the AUDIT items also were used to index blackouts. Consistent with procedures used by Testa et al. (2007) to assess heavy episodic drinking, a question assessing the frequency of drinking until intoxicated in the last 12 months was added to the AUDIT items. The AUDIT was added to the protocol after data collection commenced, therefore, AUDIT data were only available for 214 participants in the current study.

Marlowe-Crowne Social Desirability Scale (MCSDS; Crowne & Marlowe, 1960). To assess the possible impact of social desirability response bias on study outcomes, a 10-item version (Fischer & Fick, 1993) of the MCSDS was administered. The MCSDS-SF conceptualizes social desirability as a need for approval, and appears to have strong reliability and validity (Fischer & Fick).

Attention Questions. To differentiate between lack of attention to aversive stimuli versus dissociative responding to aversive stimuli, participants were asked to rate how much of the mood induction film and dating vignette they attended to on a scale from 1 = *I listened to/ watched almost none* to 10 = *I listened to/ watched the entire film/ vignette*. These two items also were used as covariates in all analyses involving the risk recognition vignette and mood condition. However, because these items were added to the protocol after data collection commenced, data are only available for 214 participants.

Participants also completed a 24-item demographic measure assessing age, education level, ethnicity, marital status, sexual orientation, and day one of the last menstrual period to

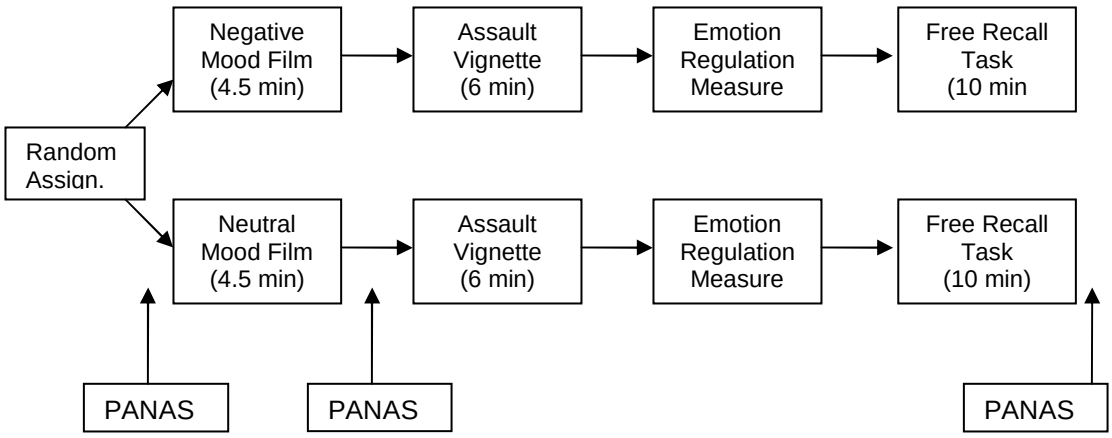
ensure that the mood induction is not adversely influenced by extreme hormonal fluctuations (Hernandez, Vander Wal, & Spring, 2003).

Procedure

*Recruitment***.** Participants were recruited through psychology courses offering extra credit for research participation. To increase ethnic diversity within the sample, participants also were recruited through the Ethnic Studies Institute and ethnic student associations on campus. If recruited through psychology courses, interested individuals signed up for the study on Experimetrix, a subject pool management website run by the department. If recruited through the Ethnic Studies department or ethnic student associations, a trained research assistant entered classes and meetings to advertise the study in person. A sign-up sheet was circulated and interested students received the email contact information and phone number for a study recruiter if they wished to sign up later. Students recruited from the Ethnic Studies Institute or through ethnic student associations received $25 for participating in the study.

Figure 2

Schematic for Experimental Protocol



Informed consent and data collection procedure. Figure 2 depicts the sequencing of the experimental protocol during data collection sessions. After written informed consent was obtained, participants were randomly assigned to either a negative or neutral mood condition. Random assignment was accomplished using a random number generator in Excel. Before watching the film for that mood condition, participants complete the PANAS to obtain a baseline indication of mood state. To induce negative or neutral mood, brief (4.5 minute) film clips were shown to participants, followed by a second administration of the PANAS to ensure that the procedure effectively induced a negative emotional state. The six-minute audio taped sexual assault vignette (Marx & Gross, 1995) was then administered via a computer connected to earphones and participants were instructed to use a computer mouse to indicate when the man in the sexual assault vignette has "gone too far." At that point, participants were asked to describe how they would "respond as the woman in the situation." When they finished typing their response, participants clicked on a "response complete" button. To ensure exposure to equivalent information for the purpose of the free recall task, all participants listened to the complete assault vignette. Consistent with prior studies examining spontaneously occurring emotion regulation (e.g., Egloff et al., 2006), participants then completed a self-reported emotion regulation questionnaire anchored to the sexual assault vignette to assess the strategies used to manage emotional states during the sexual assault vignette. Finally, to examine the cognitive effects of emotion regulation strategies used during the vignette, participants were asked to recall as many details of the vignette as they could remember during a 10-minute period. Upon completion of these measures, the PANAS was re-administered to examine the duration of the negative mood experienced by participants. Participants then completed a randomly-ordered battery of self-report questionnaires assessing child maltreatment experiences, adolescent and adult sexual

experiences, dissociation, experiential avoidance, substance abuse, PTSD, and other traumatic life events. It was expected that participants with a history of victimization who use maladaptive emotion regulation strategies would have less success in reducing the emotional consequences of the negative mood procedure and thus would report more negative emotion on this final PANAS administration. Although the present study included several tasks, the average length of time required to complete the protocol was 75 minutes.

Results

Preliminary analyses. Data were checked for entry errors and outliers and descriptive statistics were computed for each set of variables: independent variables, dependent variables, proposed mediators, and proposed covariates).

Sexual victimization descriptive statistics. Using the CAMI and SES, approximately 56.4% (n = 375) were classified as non-victims, 33.5% (n = 224) were classified as having been singly victimized, and 10% (n = 69) were classified as revictimized, defined as experiencing sexual victimization during at least two of the three age periods (childhood [before age 14], adolescence [age 14-18], or adulthood [age 18 and older]. Further, 28% of women reporting child or adolescent sexual victimization also reported adult sexual victimization, whereas only 20% of women without prior abuse reported experiencing an adult rape, χ^2 (1) = 5.27, $p < .05$. Descriptive statistics for child, adolescent, and adult sexual victims are presented in Table 1. The majority of child or adolescent sexual abuse victims reported abuse by one perpetrator who was not a family member. Approximately half of the child or adolescent abuse victims indicated that the abuse occurred for less than one year, with another one-third of victims indicated the abuse lasted one to two years. Further, although the majority of victims noted that the most severe act experienced occurred once or twice, 20% of victims reported that the act occurred 3-10 times,

and another 20% reported that the most severe act occurred upwards of 11 times. Nearly 40% of victims indicated that the most severe act experienced was penetration, and approximately three-quarters of victims reported that the perpetrator used verbally coercive tactics (e.g., threatening to get the child in trouble with parents or threatening to end a relationship) to engage in the sexual contact. For adult victims, the majority of participants reported that vaginal or anal penetration was the most severe act experienced.

Table 1

Characteristics of Child, Adolescent, and Adult Sexual Victimization Experiences

Child and Adolescent Sexual Victimization	*n* = 219	% of victims
Number of Perpetrators		
One	153	70
Two	39	18
Three	11	5
Four	10	4.6
Five or more	6	2.4
Perpetrator		
Non-family	170	79
Family but Not Parent	39	18
Parent	7	3
Frequency of Acts		
1-2 Times	133	61
3-10 Times	42	19

11+ Times	44	20
Duration		
Less than 1 Year	108	50
1-2 Years	71	33
More than 2 Years	38	17
Nature of Acts		
Genital Contact/No Penetration	134	61.2
Penetration	85	38.8
Force		
Verbal Tactics	165	75
Threats of Physical Harm	5	2
Physically Held Down	49	23
Adult Sexual Victimization	*n* = 153	%
Nature of Most Severe Forced or Incapacitated Experience		
Fondling	6	4.0
Oral Sex	15	9.8
Attempted Vaginal or Anal Penetration	27	17.6
Vaginal or Anal Penetration	105	68.6

Manipulation check. To ensure that the mood induction produced negative emotion, a negative emotion change score was computed by subtracting the PANAS pre- score from the

PANAS post-score. Using a paired samples *t*-test, mean PANAS negative mood scores for individuals in the negative mood condition changed from 17.3 (*SD* = 7.3) pre-film to 24.0 (*SD* = 9.1) post-film, $t(327) = -12.7$, $p < .001$. Further, when post-film mean PANAS negative mood scores were compared for those in the negative and neutral mood conditions, there was a statistically significant difference, *Mserror* = 19976.2, $F(1, 654) = 399.7$, $p < .001$. Specifically, those in the negative condition reported a mean post-film PANAS negative mood score of 24.0 (*SD* = 9.1) compared to a mean of 12.9 (*SD* = 4.2) for those in the neutral mood condition. This manipulation check suggests that the negative mood film induced the expected changes in negative affect.

To better understand the specific emotions induced by the negative and neural mood films, paired samples *t*-tests were used to compare changes in specific emotions pre-post film. The negative mood film produced significant increases in distress, upset, guilt, scared feelings, hostility, irritability, shame, nervousness, jittery feelings, and fear. The film also produced decreases in interest, excitement, strength, enthusiasm, pride, inspiration, determination, attentiveness, and active feelings. The neutral film produced significant increases in feelings of inspiration and significant decreases in distress, upset, strength, guilt, scared feelings, hostility, pride, irritability, alertness, shame, nervousness, determination, attentiveness, jitteriness, active feelings, and fear. Overall, the negative mood film appears to produce substantial changes in general distress and upset, with participants characterizing their emotions as becoming more negative and less positive from the beginning to end of the film. In contrast, the neutral mood film appears to produce milder emotional changes, with participants characterizing their emotions as becoming less negative from the beginning to end of the film (see Table 2).

Table 2

Paired Samples T-Tests Examining Changes in Specific Emotions Pre-Post Film

	Negative Condition (*n* = 333)			Neutral Condition (*n* = 335)		
Emotion	Pre-film	Post-film	*t (p)*	Pre-film	Post-film	*t (p)*
Interested	3.2 (.97)	2.7 (1.3)	6.63**	3.15 (.91)	3.1 (1.18)	1.11
Distressed	2.01 (1.05)	2.98 (1.19)	-12.19**	1.91 (1.01)	1.37 (.71)	10.4**
Excited	2.5 (1.26)	1.75 (.99)	9.63**	2.45 (1.23)	2.49 (1.22)	-.64
Upset	1.73 (1.04)	3.03 (1.23)	-16.53**	1.63 (.94)	1.25 (.66)	8.61**
Strong	2.13 (1.14)	2.2 (1.14)	14.29**	3.1 (1.09)	2.7 (1.2)	6.3**
Guilty	1.65 (1.04)	1.8 (1.03)	-2.12*	1.62 (1.08)	1.22 (.59)	7.9**
Scared	1.62 (.96)	2.45 (1.26)	-11.24**	1.59 (.94)	1.26 (.62)	6.6**
Hostile	1.32 (.76)	2.03 (1.17)	-10.61**	1.31 (.72)	1.15 (.51)	5.13**
Enthusiastic	2.67 (1.3)	1.56 (.89)	15.63**	2.7 (1.28)	2.9 (1.3)	.37
Proud	2.99 (1.35)	1.75 (1.12)	15.5**	2.91 (1.24)	2.61 (1.32)	4.83**
Irritable	1.89 (1.01)	2.39 (1.17)	-6.35**	1.94 (1.04)	1.45 (.84)	10.26**
Alert	3.04 (1.16)	3.15 (1.27)	-1.56	3.1 (1.08)	2.81 (1.23)	4.14**
Ashamed	1.55 (.99)	1.81 (1.10)	-3.51**	1.52 (1.01)	1.17 (.54)	7.39**
Inspired	2.72 (1.32)	1.56 (.99)	14.92**	2.71 (1.27)	2.94 (1.29)	-3.34**
Nervous	2.03 (1.13)	2.46 (1.26)	-5.57**	1.92 (1.13)	1.44 (.86)	8.5**
Determined	3.25 (1.32)	2.05 (1.24)	15.86**	3.28 (1.26)	2.65 (1.28)	9.87**
Attentive	3.32 (1.06)	3.13 (1.2)	2.59**	3.26 (1.04)	3.04 (1.21)	3.4**
Jittery	1.89 (1.07)	2.46 (1.29)	-8.11**	1.8 (1.07)	1.45 (.84)	7.03**
Active	2.88 (1.27)	2.04 (1.14)	11.29**	2.9 (1.3)	2.5 (1.2)	6.78**
Afraid	1.55 (.90)	2.47 (1.35)	-11.84**	1.5 (.91)	1.24 (.60)	5.37**

Descriptive statistics also were computed for the remaining study variables (see Table 3). The mean risk recognition latency score of 103.5 seconds corresponds to the point within the dating vignette that depicts verbal refusals by the woman and apologies by the man. The mean response latency of 42.9 seconds suggests that it took participants less than one minute to type out a probable response to the sexual victimization vignette. The mean response effectiveness score of 3.3 suggests that on average, respondents reported that they would engage in behavioral responses that could be classified as "somewhat ineffective" (e.g., indicating discomfort, but in a passive manner).

Although the only study that has previously used the situation-specific emotion regulation questionnaire focused on situations salient to social anxiety (Egloff et al., 2006), those means were compared to those from the current study for point of reference. Interestingly, the suppression subscale mean of 4.96 in the current study is somewhat higher than the mean of 2.78 obtained during a public speaking task among socially anxious individuals. The cognitive resource usage score suggests that participants recalled an average of 23 distinct details from the vignette.

The mean AAQ score of 37.7 closely approximates the upper quartile score of 38 that has been used to identify high levels of experiential avoidance in non-clinical populations (Hayes et al., 2004). The TLEQ total suggests that, on average, participants reported experiencing four traumatic events that would likely meet the definition for a Criterion A event according to the DSM-IV. However, the PCL score of 33 is significantly below the mean of 50 typically used to identify individuals who likely meet criteria for a PTSD diagnosis (Resick, 2007). In fact, 13% of the sample (n = 86) met this cutoff of 50 or higher. The DES score of 11 is well below the

clinical cutoff of 30 that typically identifies clinically significant dissociation. Further, the AUDIT score of 6 is below a score of 8 that typically indicates problematic levels of drinking (Conigrave, Hall, & Saunders, 1995). The habitual suppression mean of 3.1 is nearly identical to those observed in other studies with non-clinical female populations (Gross & John, 2003). Finally, means of 8 and 9 (out of a possible 10) on the attention items suggests that participants were closely attending to both the vignette and film.

Table 3

Means, Standard Deviations, Skewness, and Kurtosis for Study Variables

	Mean (SD)	Range	Skewness	Kurtosis
Dependent Variables				
Risk Recognition Latency	103.5 (56.3)	3.07 – 351	2.2 (.10)	6.5 (.20)
Behavioral Response Latency	42.7 (34.4)	0-252.8	2.1 (.10)	6.6 (.20)
Behavioral Response Effectiveness	3.25 (1.50)	0-5	-.16 (.10)	-.994 (.20)
Proposed Mediators				
Vignette suppression	4.95 (1.21)	1-7	-.45 (.10)	-.36 (.19)
Cognitive Resource Usage	22.8 (8.07)	0-47	-.22 (.10)	.11 (.19)
Covariates				
Experiential Avoidance (AAQ)	37.65 (6.62)	19-58	.37 (.10)	-.14 (.19)
Trauma Exposure (TLEQ)	4.36 (2.88)	0-16	.94 (.10)	.87 (.19)
PTSD Symptoms (PCL)	33.01 (13.12)	17-77	.88 (.10)	.18 (.19)
Dissociation (DES)	11.2 (9.07)	0-53.2	1.47 (.10)	2.40 (.19)
Alcohol Use (AUDIT)	6.2 (5.5)	0-26	1.04 (.17)	.846 (.34)
Social Desirability (MCSDS)	4.89 (2.06)	0-10	0.0 (.17)	-.19 (.34)

Habitual suppression (ERQ)	3.1 (1.24)	1-7	.43 (.10)	-.52 (.19)
Attention to vignette	9.3 (1.3)	1-10	-3.2 (.17)	16.2 (.34)
Attention to film	8.3 (2.2)	1-10	-1.79 (.17)	3.13 (.34)

Bivariate analyses. Correlations were computed to examine associations among the variables (see Table 4). As can be seen, a number of significant positive associations emerged between the various psychological functioning variables (e.g., AAQ, PCL, DES), and a small number of low-level associations can be observed between the various risk recognition variables. However, very few associations were evident between the psychological functioning and risk recognition variables. Further, although emotional suppression during the vignette was positively associated with risk recognition latency, and cognitive resource usage was negatively associated with risk recognition latency and positively associated with risk response latency, neither variable was associated with any other variable in the study.

Table 4

Correlations Between Study Variables

	Vic Status	Risk Latency	Response Latency	Effective	V Sup	CR Use	AAQ	TLEQ	PCL	DES	AUDIT	MCSDS	Vig. Attention	H Sup
Vic Status	--													
Risk Latency	-.05	--												
Response Latency	.05	-.04	--											
Effectiveness	-.05	.09*	-.06	--										
Vig. Emot. Sup	-.04	.09*	-.01	.04	__									
Vig. CR Use	-.01	-.08*	.09*	.09*	-.01	--								
AAQ	.18**	.02	-.03	-.04	-.05	-.10*	--							
TLEQ	.51**	-.01	.07	-.02	.01	.12	.25**	--						
PCL	.28**	-.04	-.01	-.05	-.02	-.02	.52**	.40**	--					
DES	.27**	-.02	.04	-.02	-.07	-.06	.38**	.36**	.54**	--				
AUDIT	,21**	.10	-.04	-.02	.002	-.03	.20**	.12	.04	.15*	--			
MCSDS	-.08	.001	.07	-.04	-.01	-.05	-.33**	-.09	-.20*	-.09	-.001	--		
Vig. Attention	-.03	-.15	-.02	-.01	-.06	.16*	-.07	.01	-.08	-.07	.05	.02	--	
Habitual Sup	.14**	.01	.01	.06	.08*	-.07	.31	.09**	.18**	.20**	.12	-.04	-.07	--

*p <.05, **p<.01

Note: Vic Status non-victimized, singly victimized, revictimized); risk latency = length of time between the start of the vignette and the point at which the participant indicated the man had “gone too far”; response latency = length of time to type behavioral response; effectiveness = effectiveness of behavioral response coded on 1-5 scale; Vig. Emot. Sup. = vignette emotional suppression; Vig, CR use = vignette cognitive resource use; AAQ = Acceptance and Action

Questionnaire (experiential avoidance); TLEQ = Traumatic Life Events Questionnaire (trauma exposure); PCL = PTSD Checklist (PTSD symptoms); DES = Dissociative Experiences Scale (dissociation); AUDIT = Alcohol Use Disorders Test (alcohol use and problems; MCSDS = Marlowe Crowne Social Desirability Scale; Vig. Attention = self-reported attention to the vignette; Habitual Sup = ERQ Emotional Suppression Subscale

Hypotheses 1a and 1b. It was hypothesized that victimized women, particularly revictimized women, would have longer risk recognition and adaptive response latencies (assessed via the sexual assault vignette) than would non-victimized women. Multivariate analysis of variance (MANOVA) was utilized to explore mean differences in risk recognition and adaptive response latencies across the three victimization groups (see Table 5). No statistically significant differences emerged between groups for risk recognition, $F(2,614) = 1.45$, $p = .24$, behavioral response latencies, $F(2, 615) = .09$, $p = .91$, or behavioral response effectiveness, $F(2, 615) = 1.24$, $p = .29$. Further, none of the follow-up pairwise comparisons was significant. The estimated marginal mean with 95% confidence interval for risk recognition was 100.2 (*S.E.* = 2.9, *95% C.I.* = 94.6 – 105.9), for adaptive response latency was 44.1 (*S.E.*= 1.8, *95% C.I.* = 40.5 – 47.6).

Table 5

Mean Differences Between Victim Groups on Risk Recognition and Response Variables

	Non-victimized (n = 375)	Singly victimized (n = 224)	Revictimized (n = 69)	*MANOVA F (p)*
Risk Recognition Latency	104.4 (55.8)	99.6 (51.8)	96.6 (50.0)	.83 (.44)
Adaptive Response Latency	41.7 (36.8)	43.4 (29.6)	47.2 (32.3)	.43 (.65)
Response Effectiveness	3.2 (1.4)	3.1 (1.4)	2.9 (1.4)	1.2 (.30)

When risk response latency was regressed on sexual victimization status while controlling for attention paid to the dating interaction, the model was significant, $F(2,211) = 4.45$, $p < .01$. Sexual victimization status ($B = -12.8$, *S.E.* = 6.5, $t = -1.97$, $p < .05$) and attention ($B = -7.8$, *S.E.* = 3.4, $t = -2.29$, $p < .05$) were both significantly negatively associated with risk recognition latency. However, neither the overall model nor any variable within the model was

significant when attention was included in analyses examining links between victimization status and behavioral response latency, $F(2,211) = .18$, $p = .83$, and behavioral response effectiveness, $F(2,211) = .12$, $p = .89$.

Hypotheses 2a and 2b. It was hypothesized that there would be a main effect for mood condition such that women in the negative mood condition would have longer risk recognition and adaptive response latencies as well as less adaptive behavioral responses when compared to women in the neutral mood condition. MANOVA was utilized to explore mean differences in risk recognition and adaptive response latencies across the mood conditions. Results revealed that there were no statistically significant differences in risk recognition, behavioral response latency, or behavioral response effectiveness across the mood conditions (see Table 6).

Table 6

Mean Differences Between Mood Condition Groups on Risk Recognition and Response Variables

	Neutral Mood	Negative Mood	*MANOVA F (p)*
Risk Recognition Latency	103.3 (60.3)	103.7 (52.1)	.01 (.94)
Adaptive Response Latency	43.9 (36.1)	42.0 (32.6)	.46 (.50)
Response Effectiveness	3.2 (1.5)	3.3 (1.5)	.27 (.60)

Hypotheses 3a and 3b. It was hypothesized that sexual victimization history and negative mood would interact to impact rape-related risk detection and defensive responses. Prior to evaluating this hypothesis, MANOVAs were conducted to examine whether revictimized and singly victimized women endorsed more negative affect and less positive affect prior to the mood induction than did non-victimized women (see Table 7). Indeed, prior to watching the film, revictimized women reported significantly more negative affect on the PANAS when

compared to single victims and non-victims, and single victims reported more negative affect than non-victim, $F(2,665) = 17.39$, $p < .001$. However, there were no difference across groups in positive affect prior to the mood film, $F(2,665) = 2.27$, $p = .11$.

Table 7

Initial Mood States Across Victim Groups

	Non-victimized (n = 375)	Singly victimized (n = 224)	Revictimized (n = 69)	*F (p)*
Pre-film positive	30.22 (8.74)	29.03 (8.91)	28.22 (8.85)	2.27
Pre-film negative	15.70 (5.95)	18.09 (7.69)	20.39 (9.34)	17.39**

** p <.001

MANOVA also was conducted to examine whether victimization status and mood condition interacted to produce mood state changes. As shown in Table 8, there was a main effect for mood condition on post-film positive and negative mood such that women in the negative mood condition endorsed lower levels of positive affect and higher levels of negative affect when compared to women in the neutral condition. Moreover, there was indeed a significant interaction between victimization status and mood state changes across victimization group such that revictimized women in the negative condition endorsed greater negative affect post-film when compared to non-victims and single victims. When differences in mood change scores were examined, revictimized women reported less of a decrease in positive emotions during both the negative and neutral films than did non-victims and singly victimized women in the negative and neutral mood conditions, respectively. Further, revictimized women in the negative condition reported less of an increase in negative emotions from pre-post film when compared to non-victims and singly victimized women in the negative condition. In the neutral

condition, however, revictimized women reported a greater change in negative emotion (i.e., their negative emotions decreased more) when compared to non-victims and singly victimized women in the neutral condition.

Table 8

Post-film Mood States and Changes in Mood States Across Victimization Groups

	Non-victims		Single victims		Revictimized		*F*
	Negative	Neutral	Negative	Neutral	Negative	Neutral	
Post-film positive	21.7 (7.4)	28.1 (9.8)	21.6 (7.6)	26.2 (9.5)	23.6 (7.9)	27.6 (10.1)	14.6**
Post-film negative	23.4 (8.9)	12.6 (4.2)	24.0 (8.9)	13.8 (4.6)	25.9(10.3)	12.8 (3.8)	79.9**
Pre-post positive change	8.6 (8.6)	1.9 (7.5)	7.6 (9.0)	2.6 (8.3)	4.4 (6.3)	.84 (7.8)	18.3**
Pre-post negative change	-7.9 (9.1)	3.3 (5.2)	-5.6 (9.8)	3.9 (6.0)	-4.05 (9.7)	5.9 (8.4)	61.6**

** $p < .001$

Having found an interaction between victimization status and mood condition on mood state, a 3 (sexual victimization status) x 2 (mood condition) MANOVA examining the dependent variables of risk recognition latency, behavioral response latency, and behavioral response effectiveness was conducted. No statistically significant interaction terms emerged. Means and standard deviations are presented in Table 9.

Table 9

Mean Differences Between Victim Groups on Risk Recognition and Response Latencies

	Non-vic x neutral (n = 187)	Single vic x neutral (n = 100)	Revic. x neutral (n = 29)	Non-vic x negative (n = 165)	Single vic x negative (n = 111)	Revic. x negative (n = 36)	*MANOVA F (p)*
Recognition Latency	107.1(65.1)	96.9 (52.7)	100.8(51.9)	105.8 (54.9)	101.9 (52.8)	98.4 (34.2)	.56 (.73)
Response Latency	43.1 (38.1)	46.6 (32.7)	40.7 (34.4)	42.6 (38.1)	40.2 (25.5)	46.8 (24.3)	.51 (.77)
Response Effectiveness	3.2 (1.5)	3.3 (1.4)	3.1 (1.6)	3.4 (1.5)	3.2 (1.5)	3.1 (1.6)	.79 (.56)

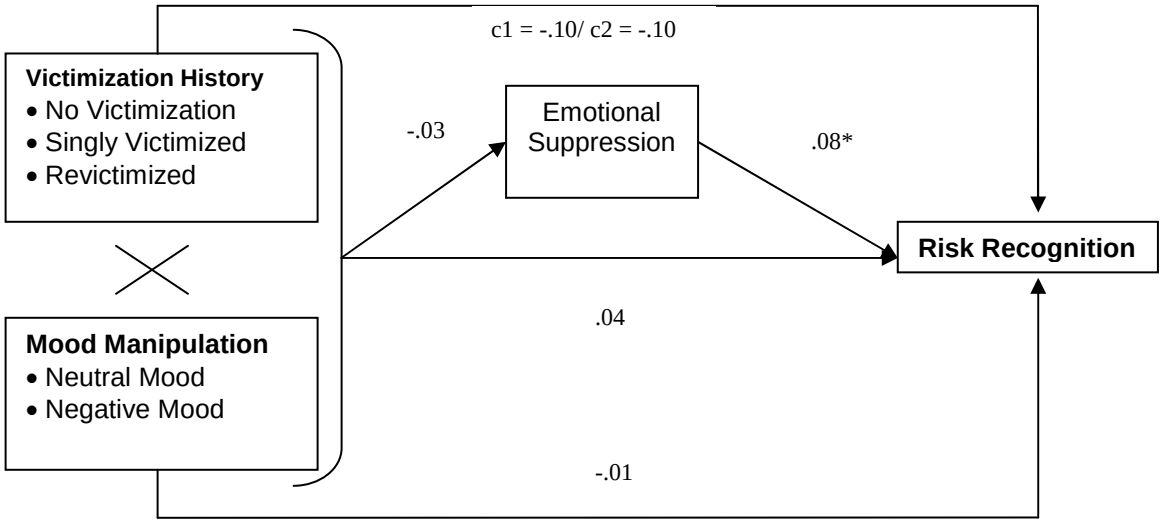
Hypotheses 4a, 4b, and 4c. It was hypothesized that *in vivo* emotional suppression and cognitive resource usage would mediate the relationship between victimization history, negative mood, and impaired risk responses. Although both mediators were expected to contribute uniquely to the model, significant relationships also might exist between these constructs. Therefore, each mediator was tested both independently and in relation to the other proposed mediator. To accommodate the simultaneous estimation of both mediators and enhance power to detect mediation, a product of coefficients method ($\tau - \tau' = \alpha\beta$) was used (MacKinnon Lockwood, Hoffman, West, & Sheets, 2002). All models were evaluated using Mplus version 5.0 (Muthen & Muthen, 1998-2008). To account for the categorical nature of the sexual victimization status variable, contrast coding was conducted. The number of contrast variables needed for *k* groups is *k*-1 (Hardy, 1993). In the present study, the three category variable required 2 contrast variables entered simultaneously in each model. The first contrast variable (c1) was computed such that revictimized women were assigned a value of 1 and all other

women were assigned a value of 0. The second contrast variable (c2) was computed such that singly victimized women were assigned a value of 1, non-victims were assigned a value of 0, and revictimized women were assigned a value of -1. Both effect coded variables were entered simultaneously in each model to enable non-victims to serve as the reference group to whom singly victimized and revictimized women were compared.

The first model tested whether emotional suppression functioned as a mediator between sexual victimization, mood condition, and risk recognition deficits. Results revealed that although the overall model was a good fit for these data, $\chi^2(2) = 1.01$, $p = .60$, *RMSEA* = 0.01; *SRMR* = 0.001; *CFI* = 1.00, and emotional suppression was positively and significantly associated with longer risk recognition latencies, the path between the interaction term (victimization history x mood) and emotional suppression was not significant (see Figure 2a). Thus, support was not found for emotional suppression as a mediator between prior victimization, mood, and poor risk recognition.

Figure 2a

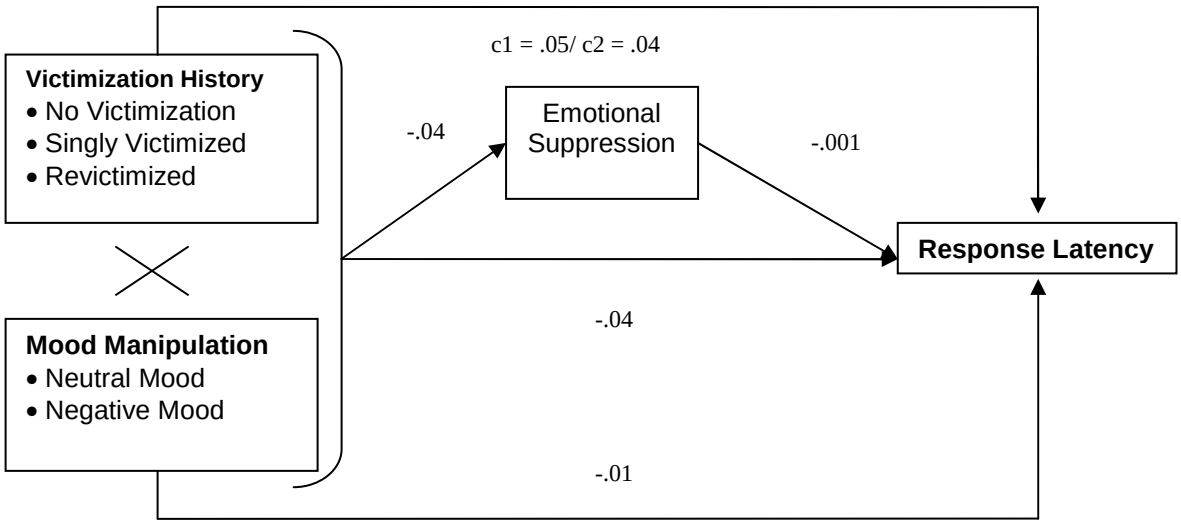
Situation-specific Emotional Suppression as a Mediator the Associations between Victimization History, Mood Condition, and Risk Recognition



The next model evaluated behavioral response latency as an outcome, $\chi^2(2) = .83$, $p = .67$, *RMSEA* = 0.01; *SRMR* = 0.001; *CFI* = 1.00. No significant associations emerged between any variable in the model (see Figure 2b).

Figure 2b

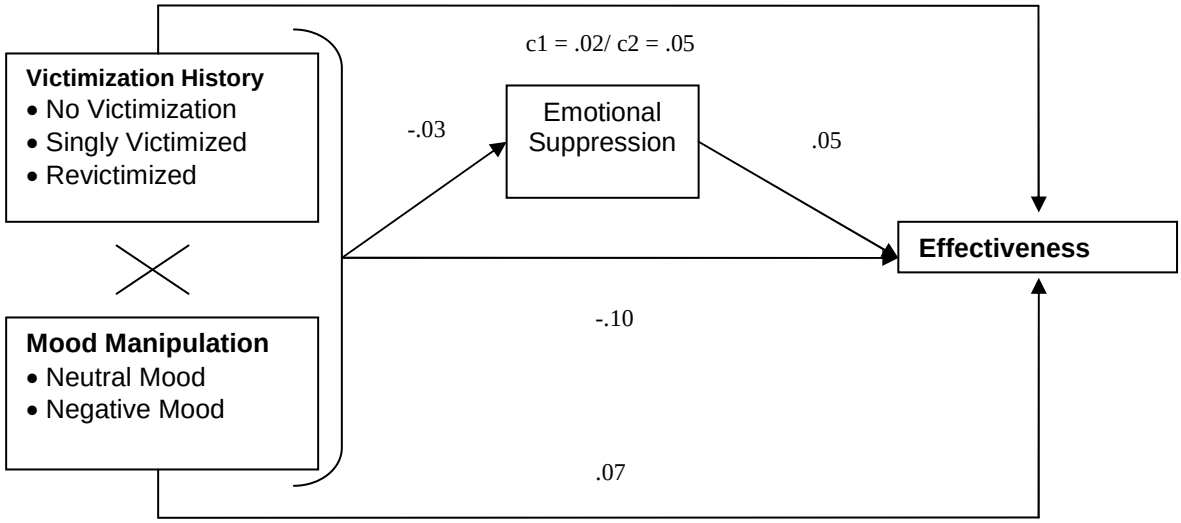
Situation-specific Emotional Suppression as a Mediator the Associations between Victimization History, Mood Condition, and Behavioral Response Latency



The last model in this set evaluated whether emotional suppression serves as a mediator in the relationship between victimization status, mood condition and behavioral response effectiveness, $\chi^2(2) = .83$, $p = .66$, *RMSEA* = 0.01; *SRMR* = 0.006; *CFI* = 1.0. Again, no significant associations emerged between any variable in the model (see Figure 2c).

Figure 2c

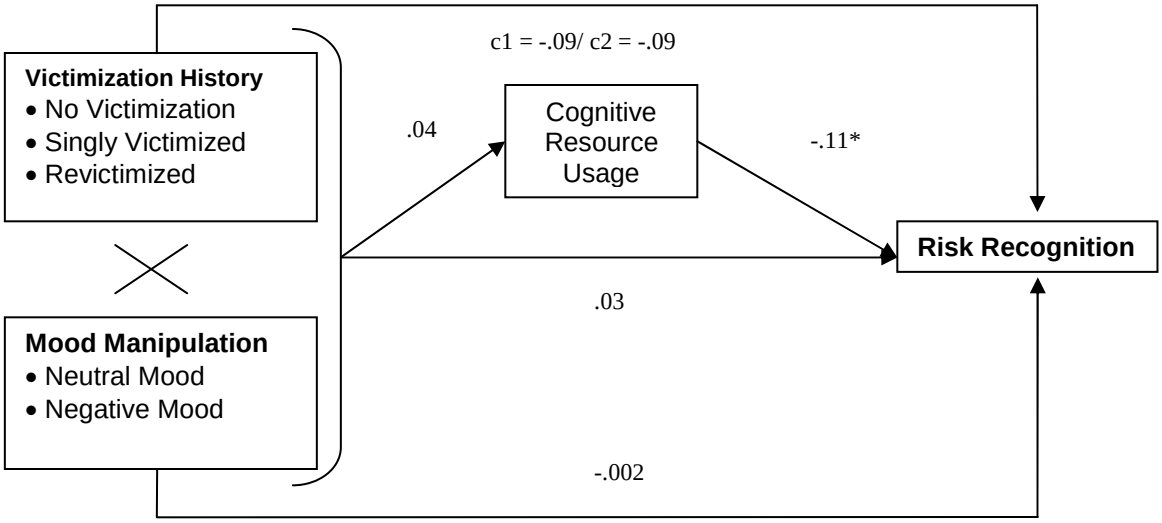
Situation-specific Emotional Suppression as a Mediator the Associations between Victimization History, Mood Condition, and Behavioral Response Effectiveness



The second set of models tested whether cognitive resource usage, as assessed by the memory task, mediated links sexual victimization, mood condition, and risk recognition deficits. Results revealed that model fit was good, $\chi^2(2) = 2.08$, $p = .36$, *RMSEA* = 0.01; *SRMR* = 0.01; *CFI* = 0.99, and a significant negative path was observed between cognitive resource usage and risk recognition. Consistent with hypotheses, this path coefficient suggested that lower levels of cognitive resource usage (indicated by higher scores on the memory task) were associated with shorter risk recognition latencies. However, the path between the interaction term (victimization history x mood) and cognitive resource usage was not significant (see Figure 3a). Thus, support was not found for cognitive resource usage as a mediator between prior victimization, mood, and poor risk recognition.

Figure 3a

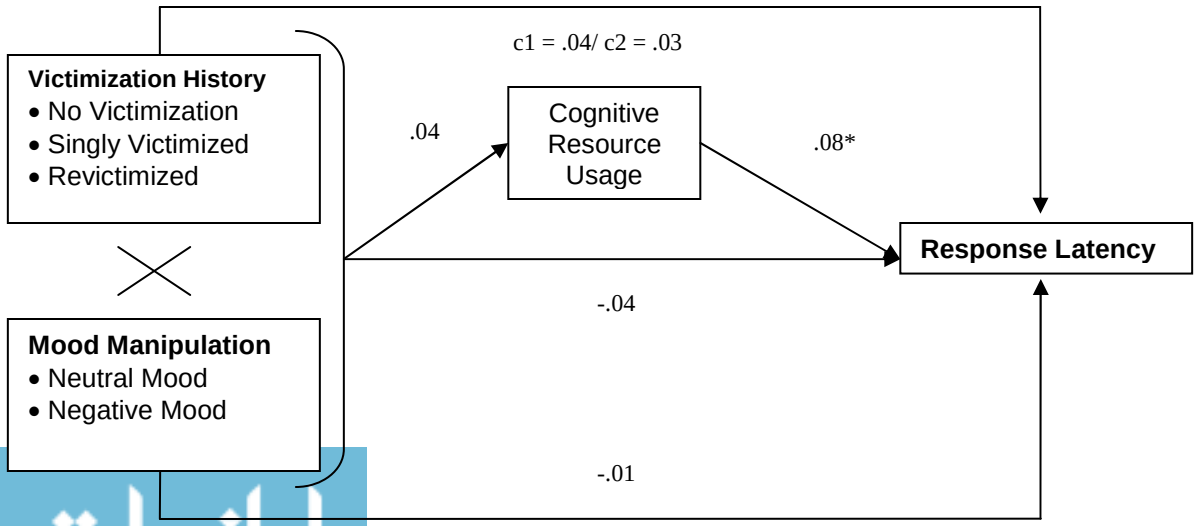
Cognitive Resource Usage as a Mediator in the Associations between Victimization History, Mood Condition, and Risk Recognition



The next model evaluated behavioral response latency as an outcome, $\chi^2(2) = 2.49$, $p = .29$, *RMSEA* = 0.02; *SRMR* = 0.001; *CFI* = .68. Cognitive resource usage was the only significant predictor of behavioral response latency (see Figure 3b).

Figure 3b

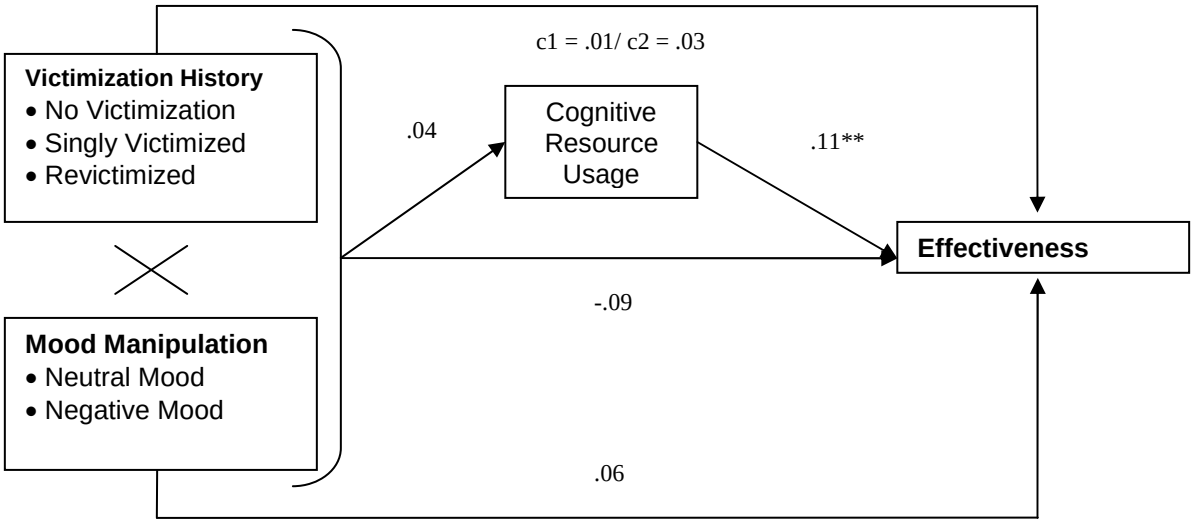
Cognitive Resource Usage as a Mediator in the Associations between Victimization History, Mood Condition, and Behavioral Response Latency



The final model in this set evaluated whether cognitive resource usage mediated associations between victimization status, mood condition, and behavioral response effectiveness, $\chi^2(3) = 2.5$, $p = .47$, *RMSEA* = 0.001; *SRMR* = 0.01; *CFI* = 1.0. Cognitive resource usage was the only significant predictor of behavioral response effectiveness. Standardized path coefficients are presented in Figure 3c.

Figure 3c

Cognitive Resource Usage as a Mediator in the Associations between Victimization History, Mood Condition, and Behavioral Response Effectiveness

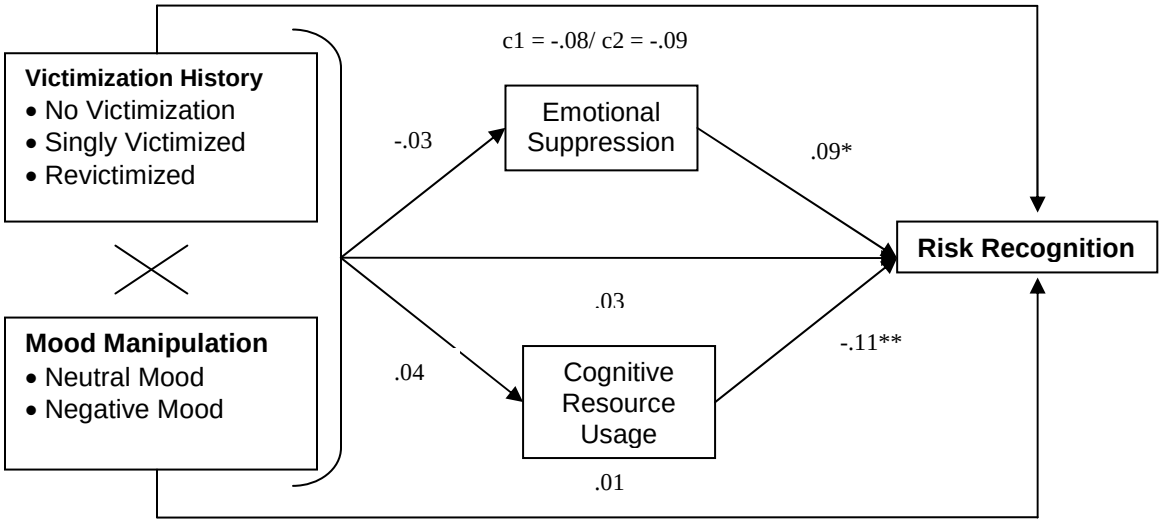


Finally, the third set of models tested whether emotional suppression and cognitive resource usage might function in concert to mediate links between sexual victimization, mood condition, and risk recognition deficits. Results again revealed that model fit was good, $\chi^2(4) = 3.09$, $p = .54$, *RMSEA* = 0.001; *SRMR* = 0.01; *CFI* = 1.00, and emotional suppression and cognitive resource usage were both significantly associated with longer risk recognition latencies

(see Figure 4a). However, because the interaction term was not associated with emotional suppression or cognitive resource usage, support for these variables as mediators was not elucidated.

Figure 4a

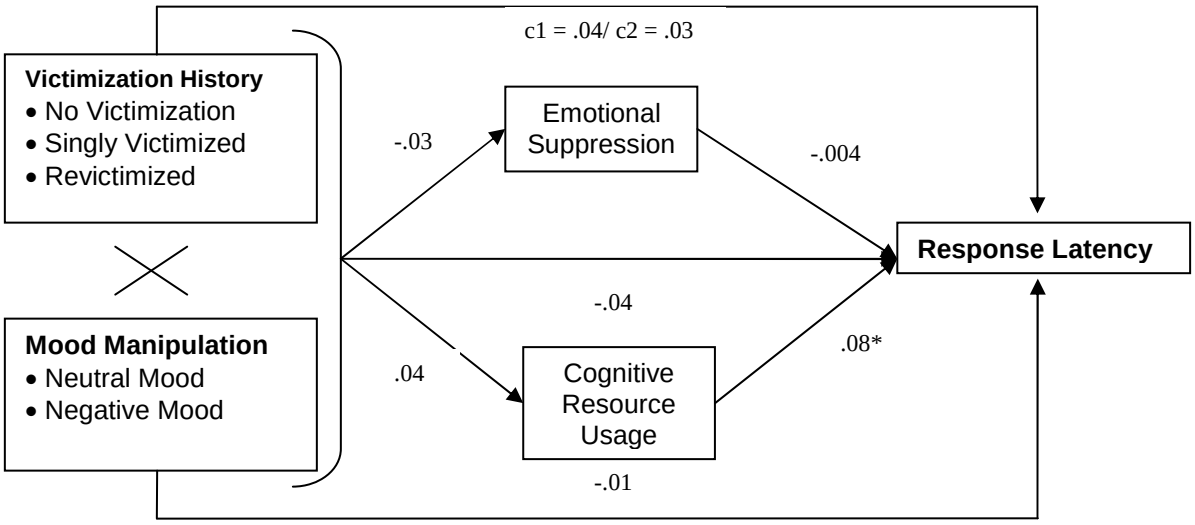
Emotional Suppression and Cognitive Resource Usage as Mediators in the Associations between Victimization History, Mood Condition, and Risk Recognition



When behavioral response latency was examined as the outcome, the model was a good fit, $\chi^2(5) = 3.3$, $p = .65$, *RMSEA* = 0.001; *SRMR* = 0.01; *CFI* = 1.00. Only cognitive resource usage contributed significantly to behavioral response latency, *Estimate* = .08, *S.E.* = .04, $p < .05$. See Figure 4b for all standardized path coefficients.

Figure 4b

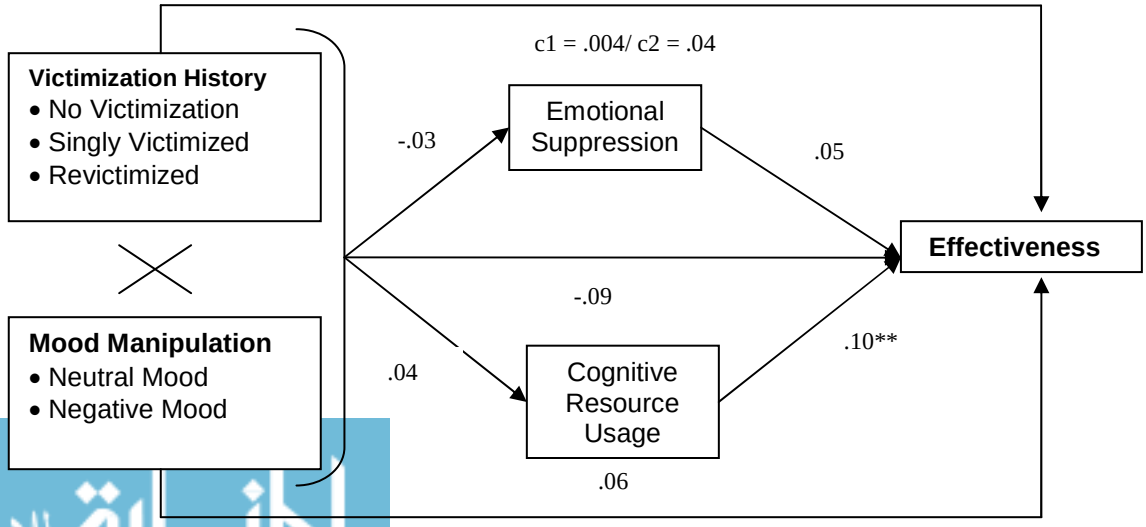
Emotional Suppression and Cognitive Resource Usage as Mediators in the Associations between Victimization History, Mood Condition, and Behavioral Response Latency



Finally, when behavioral response effectiveness was examined as the outcome, a similar pattern of findings emerged (see Figure 4c). The model was a good fit, $\chi^2(5) = 3.3$, $p = .65$, *RMSEA* = 0.001; *SRMR* = 0.01; *CFI* = 1.00, but only cognitive resource usage was significantly associated with behavioral response effectiveness, *Estimate* = 10, *S.E.* = .04, $p < .01$.

Figure 4c

Emotional Suppression and Cognitive Resource Usage as Mediators in the Associations between Victimization History, Mood Condition, and Behavioral Response Effectiveness



Exploratory analyses. Because significant associations were not observed between mood condition and the dependent variables (risk recognition latency, behavioral response latency, and behavioral response effectiveness), but a significant path was found between victimization status and risk recognition latency after controlling for attention to the vignette, in vivo emotional suppression was examined as a mediator in relationship between victimization status and risk recognition latency after controlling for attention to the vignette. Model fit was good, $\chi^2(1) = .65$, $p = .42$, *RMSEA* = 0.001; *SRMR* = 0.01; *CFI* = 1.00, and emotional suppression during the vignette (*Estimate* = .08, *S.E.* = .04, $p < .05$) as well as attention to the vignette (*Estimate* = -.13, *S.E.* = .06, $p < .05$) both contributed significantly to risk recognition latency. However, victimization status was not associated with emotional suppression during the vignette (*Estimate* = -.05, *S.E.* = .04, *p* =ns) or with risk recognition latency (*Estimate* = -.06, *S.E.* = .04, *p* = ns).

A similar model was examined for cognitive resource usage. However, model fit was poor as indicated by a significant chi square value and a CFI value below 0.95, $\chi^2(1) = 4.93$, $p < .05$, *RMSEA* = 0.08; *SRMR* = 0.04; *CFI* = 0.74. Cognitive resource usage (*Estimate* = -.11, *S.E.* = .04, $p < .01$) and attention to the vignette (*Estimate* = -.13, *S.E.* = .06, $p < .05$) both contributed significantly to risk recognition latency. However, victimization status was not associated with cognitive resource usage (*Estimate* = .04, *S.E.* = .04, *p* = ns) or with risk recognition latency (*Estimate* = -.05, *S.E.* = .04, *p* =ns). Because victimization status was not associated with behavioral response latency or behavioral response effectiveness in earlier analyses, these models were not tested.

Analyses with covariates. As proposed, after testing the mediation model depicted in figure 2c, the possible covariates (e.g., experiential avoidance [AAQ], PTSD [PCL], dissociation

[DES], and alcohol use [AUDIT]) were included independently and simultaneously in the model to examine whether the inclusion of these covariates altered the hypothesized mediation model.

Experiential avoidance. When examined as a covariate in a model predicting risk recognition latency, model fit was good, $\chi^2(1) = .65$, $p = .42$, *RMSEA* = 0.001; *SRMR* = 0.01; *CFI* = 1.00. However, experiential avoidance (AAQ) did not contribute to risk recognition (*Estimate* = .05, *S.E.* = .04, p = ns) and emotional suppression (*Estimate* = .09, *S.E.* = .04, $p <$ .05) and cognitive resource usage (*Estimate* = -.11, *S.E.* = .04, $p <$.01) remained the only statistically significant predictors of risk recognition latency. When examined as a covariate in a model predicting behavioral response latency, model fit was good, $\chi^2(1) = .01$, $p = .93$, *RMSEA* = 0.001; *SRMR* = 0.001; *CFI* = 1.00. However, only cognitive resource usage contributed significantly to behavioral response latency, *Estimate* = .08, *S.E.* = .04, $p <$.05. Similarly, when AAQ was included in a model predicting behavioral response effectiveness, model fit was good, $\chi^2(1) = .01$, $p = .94$, *RMSEA* = 0.001; *SRMR* = 0.001; *CFI* = 1.00, but only cognitive resource usage contributed significantly to behavioral response effectiveness, *Estimate* = .10, *S.E.* = .04, p <.05.

Trauma exposure (TLEQ) and PTSD (PCL). When TLEQ was examined as a covariate in a model predicting risk recognition latency, model fit was good, $\chi^2(1) = .001$, $p = .99$, *RMSEA* = 0.001; *SRMR* = 0.001; *CFI* = 1.00. However, TLEQ did not contribute to risk recognition (*Estimate* = .02, *S.E.* = .05, p = ns) and emotional suppression (*Estimate* = .09, *S.E.* = .04, $p <$ .05) and cognitive resource usage (*Estimate* = -.11, *S.E.* = .04, $p <$.01) remained the only statistically significant predictors of risk recognition latency. When examined as a covariate in a model predicting behavioral response latency, model fit was good, $\chi^2(1) = .001$, $p = .99$, *RMSEA* = 0.001; *SRMR* = 0.001; *CFI* = 1.00. However, only cognitive resource usage contributed

significantly to behavioral response latency, *Estimate* = .08, *S.E.* = .04, p <.05. Similarly, when TLEQ was included in a model predicting behavioral response effectiveness, model fit was good, $\chi^2(1) = .001$, $p = .99$, *RMSEA* = 0.001; *SRMR* = 0.001; *CFI* = 1.00, but only cognitive resource usage contributed significantly to behavioral response effectiveness, *Estimate* = .10, *S.E.* = .04, p <.05.

When PCL was examined as a covariate in a model predicting risk recognition latency, model fit was good, $\chi^2(1) = .001$, $p = .97$, *RMSEA* = 0.001; *SRMR* = 0.001; *CFI* = 1.00. However, PCL did not contribute to risk recognition (*Estimate* = .02, *S.E.* = .05, p = ns) and emotional suppression (*Estimate* = .09, *S.E.* = .04, $p < .05$) and cognitive resource usage (*Estimate* = -.11, *S.E.* = .04, p <.01) remained the only statistically significant predictors of risk recognition latency. When examined as a covariate in a model predicting behavioral response latency, model fit was good, $\chi^2(1) = .001$, $p = .97$, *RMSEA* = 0.001; *SRMR* = 0.001; *CFI* = 1.00. However, only cognitive resource usage contributed significantly to behavioral response latency, *Estimate* = .08, *S.E.* = .04, p <.05. Similarly, when PCL was included in a model predicting behavioral response effectiveness, model fit was good, $\chi^2(1) = .001$, $p = .97$, *RMSEA* = 0.001; *SRMR* = 0.001; *CFI* = 1.00, but only cognitive resource usage contributed significantly to behavioral response effectiveness, *Estimate* = .10, *S.E.* = .04, p <.05.

Dissociation (DES). When DES was examined as a covariate in a model predicting risk recognition latency, model fit was good, $\chi^2(1) = .002$, $p = .96$, *RMSEA* = 0.001; *SRMR* = 0.001; *CFI* = 1.00. However, DES did not contribute to risk recognition (*Estimate* = .001, *S.E.* = .04, p = ns) and emotional suppression (*Estimate* = .09, *S.E.* = .04, $p < .05$) and cognitive resource usage (*Estimate* = -.11, *S.E.* = .04, p <.01) remained the only statistically significant predictors of risk recognition latency. When examined as a covariate in a model predicting behavioral

response latency, model fit was good, $\chi^2(1) = .002$, $p = .96$, *RMSEA* = 0.001; *SRMR* = 0.001; *CFI* = 1.00. However, only cognitive resource usage contributed significantly to behavioral response latency, *Estimate* = .08, *S.E.* = .04, $p < .05$. Similarly, when DES was included in a model predicting behavioral response effectiveness, model fit was good, $\chi^2(1) = .001$, $p = .97$, *RMSEA* = 0.001; *SRMR* = 0.001; *CFI* = 1.00, but only cognitive resource usage contributed significantly to behavioral response effectiveness, *Estimate* = .10, *S.E.* = .04, $p < .05$.

Alcohol use (AUDIT). When AUDIT was examined as a covariate in a model predicting risk recognition latency, model fit was good, $\chi^2(1) = .002$, $p = .97$, *RMSEA* = 0.001; *SRMR* = 0.001; *CFI* = 1.00. However, AUDIT did not contribute to risk recognition (*Estimate* = .08, *S.E.* = .06, *p* = ns) and emotional suppression (*Estimate* = .09, *S.E.* = .04, $p < .05$) and cognitive resource usage (*Estimate* = -.11, *S.E.* = .04, $p < .01$) remained the only statistically significant predictors of risk recognition latency. When examined as a covariate in a model predicting behavioral response latency, model fit was good, $\chi^2(1) = .002$, $p = .97$, *RMSEA* = 0.001; *SRMR* = 0.001; *CFI* = 1.00. However, only cognitive resource usage contributed significantly to behavioral response latency, *Estimate* = .08, *S.E.* = .04, $p < .05$. Similarly, when AUDIT was included in a model predicting behavioral response effectiveness, model fit was good, $\chi^2(1) = .001$, $p = .97$, *RMSEA* = 0.001; *SRMR* = 0.001; *CFI* = 1.00, but only cognitive resource usage contributed significantly to behavioral response effectiveness, *Estimate* = .10, *S.E.* = .04, $p < .05$.

Simultaneous covariate model. The final models included all proposed covariates. Although model fit was good, $\chi^2(1) = .002$, $p = .97$, *RMSEA* = 0.001; *SRMR* = 0.001; *CFI* = 1.00, AAQ (*Estimate* = .07, *S.E.* = .05, *p* = ns), TLEQ (*Estimate* = .03, *S.E.* = .05, *p* = ns), PTSD (*Estimate* = -.086, *S.E.* = .05, *p* = ns), DES (*Estimate* = -.001, *S.E.* = .05, *p* = ns), and AUDIT (*Estimate* = .06, *S.E.* = .06, *p* = ns) did not contribute significantly to risk recognition latency. In

fact, only emotional suppression (*Estimate* = .09, *S.E.* = .04, $p < .05$) and cognitive resource usage (*Estimate* = -.11, *S.E.* = .04, $p < .01$) remained statistically significant predictors. When examined as covariates in a model predicting behavioral response latency, model fit was good, $\chi^2(1) = .06$, $p = .80$, *RMSEA* = 0.001; *SRMR* = 0.001; *CFI* = 1.00. However, only cognitive resource usage contributed significantly to behavioral response latency, *Estimate* = .08, *S.E.* = .04, $p < .05$. Finally, when all covariates were examined in a model predicting behavioral response effectiveness, model fit was good, $\chi^2(1) = .07$, $p = .79$, *RMSEA* = 0.001; *SRMR* = 0.001; *CFI* = 1.00, but only cognitive resource usage contributed significantly to behavioral response effectiveness, *Estimate* = .02, *S.E.* = .01, $p < .05$.

Hypotheses 5a and 5b. It was hypothesized that women with victimization histories, particularly revictimized women, would report greater experiential avoidance (AAQ) and increased habitual use of emotional suppression (ERQ suppression) when compared to control participants. MANOVA was utilized to explore mean differences in experiential avoidance and habitual emotional suppression across the three victimization groups. Indeed, follow-up pairwise analyses revealed that revictimized and singly victimized women reported greater experiential avoidance when compared to non-victimized women. Further, singly victimized women reported greater use of experiential avoidance when compared to non-victimized women. However, no significant differences in emotional suppression emerged between any of the victimization groups (see Table 10).

Table 10

Mean Differences Between Victimization Groups on Experiential Avoidance and Habitual Emotional Suppression

	Non-victimized	Singly victimized	Revictimized	*MANOVA F*

	(*n* = 375)	(*n* = 224)	(*n* = 69)	*(p)*
AAQ	36.7 (6.6)	38.5 (6.2)	40.6 (7.1)	12.5 (.001)
ERQ Suppression	3.04 (1.2)	3.2 (1.3)	3.2 (1.4)	1.33 (.27)

Additionally, increased experiential avoidance and heightened habitual use of emotional suppression were hypothesized to predict increased use of suppression during the audiotaped sexual assault vignette. To test the hypothesis that habitual emotion regulation predicts context-specific emotion regulation, emotional suppression during the vignette was regressed on experiential avoidance and habitual emotional suppression. The model was significant, $F(2, 665) = 3.8$, $p < .05$, and both experiential avoidance, $B = -.02$, *S.E.* = .01, $t = -.08$, $p < .05$, and the habitual use of emotional suppression, $B = .10$, *S.E.* = .04, $t = 2.4$, $p < .05$, contributed significantly to the use of emotional suppression during the vignette.

Discussion

The purpose of the present study was to examine whether a history of prior sexual victimization and exposure to negative mood-inducing stimuli interact to predict poor risk responses, and if so, whether emotion dysregulation and cognitive resource usage mediated those associations. More specifically, poor sexual risk recognition (e.g., difficulty identifying danger in a sexually risky situation) has been shown to prospectively predict sexual assault among female college students (e.g., Marx et al., 2001). Thus, understanding factors that may increase difficulties with risk detection could aid in the development of treatment and prevention programs. In past research, a history of sexual victimization has been associated with poor risk responding (e.g., Wilson et al., 1999). Further, there is evidence from the social psychology literature that mood states may impact interpersonal decision-making (e.g., Forgas, 2008). Given

that women with prior victimization histories are prone to experience more frequent and distressing negative mood states (Henderson, Hargreaves, Gregory, & Williams, 2002), it was hypothesized here that these factors would both independently predict poor risk responses and also interact to influence the ability to detect sexual risk.

Prior to evaluating the study hypotheses, a brief discussion of the descriptive findings is warranted. First, the primary dependent variable was derived from an audiotaped dating interaction that has been used in several past studies (e.g., Marx et al., 2001; Soler-Baillo et al., 2005; Wilson et al., 1999). However, the response latencies obtained in the present study are substantially shorter than those garnered from past research. Specifically, the overall sample means for the present study centered around 103 seconds, when the woman in the vignette is verbally refusing the man's advances and the man is apologizing. With the exception of one recent study (Loiselle and Fuqua, 2008), means for other studies have mostly ranged from 129 to 154 seconds (Soler-Baillo et al., 2005, Wilson et al., 1999), which extends to the verbal pressuring and refusals portion of the vignette. The Loiselle and Fuqua study reported a response latency of 92 seconds, which is shorter than the mean latency obtained in the current study. In the present investigation, the instructions for the vignette itself (e.g., the background about how long the couple has been dating and the instructions to press the button when the man has gone too far) are identical to the procedures described in past research; however, it is possible that some other procedural aspect of the study (e.g., the level of detail regarding sexual experiences in the consent form or the study title describing dating attitudes as a focus of the study) may have differed significantly enough from past research to trigger such a discrepancy in findings. Although it also is possible that exposure to the mood films may have substantially influenced risk recognition latency, women in the neutral condition would be expected to evidence means

that more closely approximate those found in other studies. However, this was not the case; therefore, it also is unlikely that this difference explains the discrepancy. Finally, the earlier studies reporting longer risk recognition latencies were conducted at universities located in urban environments; however, the Loiselle and Fuqua study as well as the current study were both conducted nearly a decade later at Midwestern universities. Therefore, it is possible that cohort effects or geographic differences might account for these discrepancies in findings.

It also is possible that social desirability impacted risk recognition latencies. This explanation would suggest that women who score higher on measures of social desirability would evidence shorter risk recognition latencies, perhaps so as not to appear promiscuous. However, associations between the Marlow-Crowne social desirability score and risk recognition latency, response latency, and response effectiveness were not significant (*r*s ranged from -.04 to .07), which indicates that social desirability is likely not a viable explanation.

Approximately 46% of the current sample reported experiencing some form of sexual victimization during childhood, adolescence, or adulthood, which is consistent with other studies using college women (Gidycz et al., 1995). Also congruent with Gidycz's work, the present study found evidence of sexual revictimization with approximately 28% of women victimized during childhood or adolescence also reporting victimization during adulthood (compared with only 20% of those not reporting childhood or adolescent victimization). Similarly, rates of trauma exposure and posttraumatic stress disorder symptoms corroborated those reported in other studies (for review see Borsari, Read, & Campbell, 2008). However, the high proportion of college women reporting sexual victimization and exposure to other traumatic sequelae underscores the continuing need research in these areas, particularly work that identifies risk factors that could be addressed in treatment outcome or revictimization prevention studies.

One factor that has been linked both to risk for sexual revictimization as well as to poor risk recognition and behavioral responses is a history of prior sexual victimization. Indeed, the first hypothesis was that a history of sexual victimization would be associated with longer risk recognition latencies and less adaptive behavioral responses to such risk. Despite past research revealing links between victimization and risk responses (e.g., Wilson et al., 1999), in the present study, a relationship between sexual victimization and risk recognition latencies was only observed after controlling for attention to the dating interaction. Unexpectedly, after controlling for attention to the vignette, revictimized women were found to identify risk *sooner* than those without such a history. This finding suggests a number of possible explanations. First, consistent with studies revealing information processing biases among trauma survivors with PTSD (e.g., Bryant & Harvey, 1995; McNally, Kaspi, Riemann, & Zeitlin, 1990), women with prior abuse experiences may be primed to attune to potentially threatening situations. Congruent with this notion, Wilson and colleagues actually found that college women with sexual assault histories who also evidenced heightened posttraumatic stress symptoms (particularly hyperarousal symptoms) exhibited mean risk recognition latencies that were similar to non-victims; however, women with victimization experiences and lower levels of PTSD symptoms had longer latencies. In the current study, however, this trend did not emerge. In fact, total PTSD as well as all of the PTSD clusters were not found to predict risk recognition. Further, attention to the vignette was not associated with PTSD or any of the PTSD clusters at the bivariate level. Thus, it is unlikely that the attentional difficulties are associated with posttraumatic stress symptoms or trauma-related information processing biases.

Another possibility is that some women with victimization histories simply chose not to attend to the vignette so they would not have to expose themselves to negative stimuli. These

women may score higher on measures of experiential avoidance that assess the tendency to avoid negative thoughts, feelings, and experiences. Similarly, it might be expected that women with a tendency to dissociate in the face of distressing stimuli would report paying less attention to the interpersonal dating scenario. However, attention to the vignette was not associated with the AAQ or DES scores. Therefore, this explanation does not account for the finding.

A final possibility is that the dependent variable itself is flawed. As noted earlier, the response latencies observed in the current study are substantially shorter than those obtained by other researchers (e.g., Marx et al., 2001, Soler-Baillo et al., 2005; Wilson et al., 1999). Thus it is possible that this vignette does not assess risk recognition as intended. In the current study, a small number of participants appeared to be commenting on the suitability of the man as a dating partner rather than risk for sexual victimization. For instance, one participant provided an example compliment that she thought sounded better than what the man had actually said. Another participant commented that the man in the vignette sounded like a "know-it-all" when discussing the movie. Therefore, it is possible that participants were responding to aspects of the vignette that did not correspond to sexual risk recognition. Further, drawing from comments in past studies that have used this vignette and others like it (e.g., Gidycz, McNamara, & Edwards, 2006), the ecological validity of such a vignette may be compromised by the nature of the instruction to indicate when the man has "gone too far," as such warnings are not commonplace experiences among women in most dating situations.

A second major goal of this study was to examine whether negative mood impacted risk recognition abilities. Drawing on the social psychology literature showing that negative mood states can influence a number of interpersonal interactions and social decisions, it was hypothesize that women experiencing negative mood would be less likely to attend to

environmental cues signifying threat or danger. However, no significant associations emerged between mood condition assignment and risk recognition or response latencies. The mood manipulation check indicated that the negative mood film was successful both in inducing negative mood as well as in maximizing negative mood differences between those assigned to the negative and neutral mood conditions. There is evidence that some individuals are more amenable to mood induction procedures than others (Scherrer & Dobson, 2009). Therefore, it is possible that the results were obscured by inattention to the negative mood stimuli or a lack of change in negative affect. However, when attention to the mood film was included as a covariate in analyses, significant associations between mood condition and risk recognition still were not observed. Further, when risk recognition was regressed on the negative affect change score, the mood condition assignment, and their interaction term, significant findings still did not emerge.

It also is possible that the dating vignette itself minimized negative mood differences between women in the neutral and negative conditions. To rule out this possibility, it would have been useful to administer mood questions, such as those from the PANAS, immediately following the vignette. In the present study, however, a third PANAS was administered later, after completing the memory recall task and several additional questionnaires. Although group differences diminished—suggesting that exposure to the vignette itself was somewhat upsetting—women in the negative mood condition still reported significantly higher negative affect when compared to women in the neutral mood condition (mean [SD] for women in the negative condition was 20.0 [8.2] versus 18.2 [7.4] for women in the neutral condition). These findings suggest that significant differences between the negative and neutral mood conditions remained even at the end of the study; therefore, it is unlikely that the vignette completely obscured differences between the negative and neutral mood conditions.

Recent literature suggests that, contrary to hypotheses, negative mood states actually may increase awareness of surroundings and decrease reliance on prior knowledge (Forgas, 2008). Based on these recent findings, it might be expected that women in the negative mood condition would evidence shorter risk recognition latencies because they were more attuned to surroundings. However, this pattern of findings was not observed either. In fact, there simply does not appear to be an association between negative mood and risk recognition and adaptive responding. It is possible that the type of mood induced in the present study does not predict difficulties with sexual risk detection or responding. Perhaps more personal emotions such as those elicited by trauma narratives involving script-driven imagery (for examples see Frewen et al., 2008; McChargue, Klanecky, Walsh, & DiLillo, 2008), are more likely to result in the type of distress that might impair one's ability to detect and respond to sexual risk cues.

Although the expected main effects did not emerge, it remained possible that sexual victimization status and negative mood might interact to predict poor risk responding. However, mood and victimization history did not interact to predict poor risk responding. As proposed, models examining emotional suppression and cognitive resource usage as independent and simultaneous mediators were also evaluated. Interestingly, the model fit for all three models was good, and significant associations emerged between the proposed intervening variables, both emotional suppression and cognitive resource usage, and risk recognition. However, in all models, the path from the interaction term (victimization status by mood condition) to the proposed mediator was not significant, precluding the evaluation of possible intervening variable relationships.

Consistent with the final study hypothesis, sexually victimized women evidenced greater general problems with experiential avoidance when compared to non-victimized women. This

effect was enhanced depending on the severity of the sexual victimization such that women reporting revictimization endorsed the greatest difficulties with experiential avoidance when compared to singly- and non-victimized women. Singly victimized women also reported more difficulties with experiential avoidance when compared to non-victimized women, suggesting that victimization may in part account for an unwillingness to experience unpleasant thoughts, feelings, or emotions. Experiential avoidance has been conceptualized as a trait that develops early in childhood and persists throughout much of the lifespan (e.g., Hayes et al., 2004). Further, CSA survivors have been shown to report greater levels of experiential avoidance, which, in turn, has been shown to predict negative outcomes including adult psychological distress and risky sexual behavior (Batten et al., 2005). Finally, among general trauma survivors, experiential avoidance also has been linked to the development and maintenance of PTSD symptoms (e.g., Tull et al. 2007); therefore, researchers and clinicians may want to consider new intervention strategies that might help survivors re-shape typical emotional responding patterns.

In addition to the limitations already noted, several others should be acknowledged as well. First, although efforts were made to increase the ethnic diversity of the sample, future studies should focus on examining these constructs among more ethnically diverse women. Although often confounded with socioeconomic status, studies have suggested that the prevalence of sexual victimization among women from different ethnic backgrounds as well as the consequences of such victimization may be quite varied (e.g., Bohn, 2003; Romero, Wyatt, Loeb, Carmona, & Solis, 1999; West, Williams, & Siegel, 2000). Therefore, it is possible that emotion regulation processes may also differ across individuals from various ethnic or socioeconomic backgrounds. Further, among minority individuals, perceived racism has been linked to chronic negative mental and physical health outcomes (e.g., coronary heart disease,

high blood pressure) via passive coping and habitual emotional suppression (for a recent review, see Okazaki, 2009). Based on findings from the current study, habitual suppression may predict suppression during a risky interpersonal situation. Thus, it could be especially important to target this difficulty among minority women to reduce the incidence of sexual victimization. Second, although sexual victimization is a significant concern among university women, the present findings may not generalize to women from community, clinical, or correctional settings. Indeed, studies have suggested that women from other settings may experience more frequent and severe sexual victimization (for review, see Classen et al., 2005).

Summary of Major Findings

Although the hypotheses for the present study were largely unsupported, important information about the potential processes underlying poor risk recognition was illuminated. For example, findings from this study suggest that attentional deployment during dating interactions may be an important construct to assess and consider in future studies. More specifically, self-reported attention to the vignette as well as cognitive resource usage during the vignette both factored into longer risk recognition latencies, suggesting that reduced cognitive activity during a risky dating scenario may increase problems with sexual risk recognition. Further, although a model of poor risk recognition was not elucidated, there is evidence that the situation-specific emotion regulation variables of suppression and cognitive resource usage were associated with risk recognition impairment in expected ways. More specifically, women who used greater emotional suppression *in vivo* had longer risk recognition latencies, and women who were able to recall more details from the vignette (signifying less cognitive resource usage) had shorter risk recognition latencies. These findings comport with other laboratory studies linking increased use of emotional suppression to negative outcomes during interpersonal tasks (Butler et al., 2003).

Further, the findings that both emotional suppression and cognitive resource usage were associated with longer risk recognition latencies is consistent with theory postulating that difficulties emotion regulation may produce impairments in sexual risk detection (Marx et al., 2005).

Finally, women with victimization experiences were more likely to report increased levels of experiential avoidance, which is consistent with Batten and colleagues' (2005) findings that CSA survivors report heightened experiential avoidance when compared to non-victims. Further, habitual emotional suppression and experiential avoidance were both predictive of greater in vivo use of suppression during the vignette. Little previous research has explored how habitual emotion regulation impacts emotion regulation strategies used in a particular context. Therefore, this is one of the first studies to suggest that clinicians can train clients to reshape their habitual emotion regulation strategies with the goal that these changes may generalize to important specific situations such as a sexually risky dating interaction.

Future Directions

The results of the present study point to a number of potential directions for future research. For example, as noted previously, it will be important to consider mood induction techniques that might result in specific personalized emotional states that are bothersome enough to compromise emotion regulation abilities and lead to risk recognition impairments and/or sexual victimization. A focus group study that gleans details about emotions leading up to a prior assault experience may shed light on the specific emotions that might be relevant to risk perception.

Although the present study used a vignette to elicit risk responses that have previously been shown to relate in predicted ways to both prior victimization and later revictimization

(Marx et al., 2001; Wilson et al., 1999), failure to obtain similar findings here raise questions about its validity. Further, participant responses in the present study suggest that women may be responding to aspects of the vignette that concern dating standards more than sexual risk issues. Thus, it also may be important for future studies to use a different risk scenario or stimulus. Numerous researchers have developed promising written vignettes to assess sexual risk recognition (e.g., Cue Davis, Stoner, Norris, George, & Masters, 2009; Messman-Moore & Brown, 2006; VanZile-Tamsen et al., 2005). These stimuli may tap into sexual risk recognition deficits in a manner that avoids possible pitfalls associated with the audiotaped stimulus (e.g., tone of voice, specific comments made, etc).

Further, despite indications that sexual victimization is a significant concern among university women, victimization experiences reported in the present study were less severe (in terms of the nature of the acts, frequency, duration) than those reported by community, clinical, and incarcerated women (e.g., Classen et al., 2005). It is possible that women with less severe victimization histories may not experience the anticipated difficulties regulating negative mood state or the expected delays in risk recognition. However, these associations may be present among women with more severe victimization histories. Thus, utilizing a sample known to have more pervasive and severe victimization may yield more significant findings among these constructs.

Although the theoretical rationale for examining emotional suppression as a potentially important process in the association between prior victimization, negative mood, and risk perception was based on sound empirical research (Egloff et al., 2006; Feldner et al., 2003; Richards et al., 2003), emotional suppression comprises only one component of the complex process that is emotion regulation. Indeed, a number of other forms of emotion dysregulation

(e.g., difficulties identifying emotions or tolerating distress) also could contribute to poor risk recognition and should be examined in future research on these topics.

It also will be important to more thoroughly assess alcohol use in a future study of this kind. Women using alcohol have been shown to perceive lower levels of risk in sexual situations when compared to women not using alcohol (Testa, VanZile-Tamsen, Livingston, & Buddie, 2006). Moreover, using the same Marx and Gross (1995) vignette employed here, women who consume alcohol in a laboratory have been shown to take longer to recognize risk when compared to women receiving a placebo. In a separate study with this vignette, alcohol was not shown to relate to risk recognition latency; however, women who consumed alcohol in the laboratory were more likely to describe less resistant role play refusals when compared to women who did not consume alcohol (Pumphrey-Gordon & Gross, 2007). These findings coupled with the literature linking alcohol use to risk for sexual victimization (for review see Abbey et al., 2004) suggest that *in vivo* alcohol use may play a critical role in the these processes.

Finally, it will be important for future studies to assess sexual motives as these factors have been shown to increase risky sexual behavior (Cooper, Shapiro, & Powers, 1998). More specifically, using sex for certain reasons (e.g., to reduce negative affect or increase positive affect through feelings of intimacy) has been shown to mediate links between links between past abuse and revictimization (Orcutt et al., 2005). When examined in relation to alcohol use, sex expectancies have been shown to relate to impairments in risk perception (Maisto, Carey, Carey, & Gordon, 2002; Pumphrey-Gordon & Gross, 2007). Finally, from a developmental perspective, the ability to prioritize and pursue goals by flexibly implementing emotion regulation strategies that are appropriate to the specific context is considered a critical indicator of adaptive emotion

regulation (Diamond & Aspinwall, 2003). Therefore, understanding participants' interpersonal goals in a specific dating context (e.g., wanting sexual intimacy but not wanting intercourse) may better illuminate the types of emotion regulation necessary to navigate the situation to achieve those goals.

Clinical Implications

As noted in the Introduction, current revictimization prevention and intervention programs have met with only modest success (Breitenbecher & Gidycz, 1998; Marx et al., 2001; Yeater & O'Donahue, 2002), perhaps because such programs are primarily educational in nature and have failed to address potential mood state influences and emotion regulation difficulties. Although the present study failed to find a relationship between negative mood state and impaired risk recognition and responding, findings suggest that emotional suppression and cognitive resource usage should be potential targets for interventions geared towards improving sexual risk recognition. Such an intervention might build on emotion-focused interventions for trauma survivors (e.g., Skills Training in Affective and Interpersonal Regulation [STAIR]; Cloitre et al., 2002) by training women to: 1) identify tendencies to emotionally suppress, 2) engage in more adaptive forms of emotion regulation (e.g., cognitive reappraisal) to more quickly and effectively reduce highly distressing negative emotions and reduce cognitive resource usage, 3) scan the environment for danger cues and 4) implement effective defensive action to avoid assault.

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APPENDIX

University of Nebraska Lincoln

HUMAN RESEARCH PROTECTIONS
Institutional Review Board

January 12, 2007

Katie Walsh
Dr. David DiLillo
Psychology
335 North 14th Street, 321
Lincoln, NE 68503

IRB# 2006-11-150 EB

TITLE OF PROJECT: **Impact of Life Events and Emotions on Risk of Sexual Assault**

Dear Katie:

This letter is to officially notify you of the approval of your project by the Institutional Review Board (IRB) for the Protection of Human Subjects. It is the Board's opinion that you have provided adequate safeguards for the rights and welfare of the participants in this study. Your proposal seems to be in compliance with this institution's Federal Wide Assurance 00002258 and the DHHS Regulations for the Protection of Human Subjects (45 CFR 46).

Date of EB Review: 11/22/06.

You are authorized to implement this study as of the Date of Final Approval: 1/11/07. This approval is Valid Until: 11/21/07.

- Enclosed are the IRB approved Consent forms for this project. Please use these forms when making copies to distribute to your participants. If it is necessary to create a new informed consent form, please send us your original so that we may approve and stamp it before it is distributed to participants.

We wish to remind you that the principal investigator is responsible for reporting to this Board any of the following events within 48 hours of the event:

- Any serious event (including on-site and off-site adverse events, injuries, side effects, deaths, or other problems) which in the opinion of the local investigator was unanticipated, involved risk to subjects or others, and was possibly related to the research procedures;
- Any serious accidental or unintentional change to the IRB-approved protocol that involves risk or has the potential to recur;
- Any publication in the literature, safety monitoring report, interim result or other finding that indicates an unexpected change to the risk/benefit ratio of the research;
- Any breach in confidentiality or compromise in data privacy related to the subject or others; or
- Any complaint of a subject that indicates an unanticipated risk or that cannot be resolved by the research staff.

For projects which continue beyond one year from the starting date, the IRB will request continuing review and update of the research project. Your study will be due for continuing review as indicated above. The investigator must also advise the Board when this study is finished or discontinued by completing the enclosed Protocol Final Report form and returning it to the Institutional Review Board.

If you have any questions, please contact Shirley Horstman, IRB Administrator, at 472-9417 or email at [illegible].

Sincerely,

Dan R. Hoyt, Chair
for the IRB

Shirley Horstman
IRB Administrator

cc: Faculty Advisor

209 Alexander Building West / 312 N. 14th Street / P.O. Box 880408 / Lincoln, NE 68588-0408 / (402) 472-6965 / FAX (402) 472-6048

CAMI - CSA

It is now commonly known that many people have sexual experiences during childhood or adolescence. These experiences may occur with other children, adolescents, or adults and can include a wide range of behaviors including witnessing sexual activity, touching or being touched in a sexual way, and sexual intercourse.

In this section we would like to ask you about some of the sexual experiences you may have had before you turned 18. First, read through the list of sexual experiences below. Then, answer the following three questions.

- **Someone intentionally exposed his or her genitals to you or masturbated in front of you.**
- **Someone kissed, touched, or fondled your body in a sexual way or you touched or fondled them.**
- **Someone attempted to have sexual intercourse with you (oral, anal, or vaginal).**
- **You and another person actually had sexual intercourse (oral, anal, or vaginal).**

1. Before you were 18, did ANY of the above ever happen with anyone against your will or when you did not want it to happen?
(1) Yes
(2) No

2. Before you were 18, did ANY of the above ever happen with an immediate family member or other relative? (Please EXCLUDE any voluntary sexual play that may have occurred with a similar age peer—for example "playing doctor.")
(1) Yes
(2) No

3. Before you were 18, did ANY of the above ever happen with anyone who was more than 5 years older than you? (Please EXCLUDE any VOLUNTARY activities that occurred with a dating partner.)
(1) Yes
(2) No

If you answered YES to ANY of the questions above (1-3) please continue to the next page.

If you answered NO to all of these questions please skip to the next questionnaire.

If you said YES to any of the questions on the previous page, please select up to 3 people with whom the activities you reported occurred. (Please write the number for each person in the blanks below).

First Person: _____ Second Person: _____ Third Person: _____

(1)	Father	(15)	Male acquaintance	(29) Grandmother
(2)	Stepfather	(16)	Male friend of the family	(30) Step Grandmother
(3)	Foster father	(17)	Male babysitter	(31) Aunt
(4)	Brother	(18)	Male teacher	(32) Female cousin
(5)	Half brother	(19)	Male neighbor	(33) Other female relative
(6)	Step brother	(20)	Male stranger	(34) Female friend of yours
(7)	Foster brother	(21)	Other male (non-family)	(35) Female acquaintance
(8)	Grandfather	(22)	Mother	(36) Female family friend
(9)	Step Grandfather	(23)	Stepmother	(37) Female babysitter
(10)	Uncle	(24)	Foster mother	(38) Female teacher
(11)	Male cousin	(25)	Sister	(39) Female neighbor
(12)	Other male relative	(26)	Step sister	(40) Female stranger
(13)	Male religious leader	(27)	Half sister	(41) Other nonfamily fem.
(14)	Male friend of yours	(28)	Foster sister	

Please continue to the next page.

Thank you for responding to the previous questions. We would now like to ask you more detailed questions about the experiences that occurred with each of the individuals you mentioned.

Using the scale below, please indicate how many times (if at all) each of the following activities occurred with each person you mentioned on the previous page.

	First Person	Second Person	Third Person
1. He/she kissed you in sexual way.	**(1) Never (2) 1-2 times (3) 3-5 times (4) 6-10 times (5) over 10 times**	**(1) Never (2) 1-2 times (3) 3-5 times (4) 6-10 times (5) over 10 times**	**(1) Never (2) 1-2 times (3) 3-5 times (4) 6-10 times (5) over 10 times**
2. He/she intentionally showed you	**(1) Never (2) 1-2 times (3) 3-5 times (4) 6-10 times (5) over 10 times**	**(1) Never (2) 1-2 times (3) 3-5 times (4) 6-10 times (5) over 10 times**	**(1) Never (2) 1-2 times (3) 3-5 times (4) 6-10 times (5) over 10 times**
3. You undressed or showed him/her	**(1) Never (2) 1-2 times (3) 3-5 times (4) 6-10 times (5) over 10 times**	**(1) Never (2) 1-2 times (3) 3-5 times (4) 6-10 times (5) over 10 times**	**(1) Never (2) 1-2 times (3) 3-5 times (4) 6-10 times (5) over 10 times**
4. He/she took pictures of you while	**(1) Never (2) 1-2 times (3) 3-5 times (4) 6-10 times (5) over 10 times**	**(1) Never (2) 1-2 times (3) 3-5 times (4) 6-10 times (5) over 10 times**	**(1) Never (2) 1-2 times (3) 3-5 times (4) 6-10 times (5) over 10 times**
5. You watched him/her engage in	**(1) Never (2) 1-2 times (3) 3-5 times (4) 6-10 times (5) over 10 times**	**(1) Never (2) 1-2 times (3) 3-5 times (4) 6-10 times (5) over 10 times**	**(1) Never (2) 1-2 times (3) 3-5 times (4) 6-10 times (5) over 10 times**
6. He/she masturbated in front of you.	**(1) Never (2) 1-2 times (3) 3-5 times (4) 6-10 times (5) over 10 times**	**(1) Never (2) 1-2 times (3) 3-5 times (4) 6-10 times (5) over 10 times**	**(1) Never (2) 1-2 times (3) 3-5 times (4) 6-10 times (5) over 10 times**
7. You masturbated in front of him or	**(1) Never (2) 1-2 times (3) 3-5 times (4) 6-10 times (5) over 10 times**	**(1) Never (2) 1-2 times (3) 3-5 times (4) 6-10 times (5) over 10 times**	**(1) Never (2) 1-2 times (3) 3-5 times (4) 6-10 times (5) over 10 times**

8. He/she touched or fondled your	**(1) Never** **(2) 1-2 times** **(3) 3-5 times** **(4) 6-10 times** **(5) over 10 times**	**(1) Never** **(2) 1-2 times** **(3) 3-5 times** **(4) 6-10 times** **(5) over 10 times**	**(1) Never** **(2) 1-2 times** **(3) 3-5 times** **(4) 6-10 times** **(5) over 10 times**
9. He/she touched or fondled your	**(1) Never** **(2) 1-2 times** **(3) 3-5 times** **(4) 6-10 times** **(5) over 10 times**	**(1) Never** **(2) 1-2 times** **(3) 3-5 times** **(4) 6-10 times** **(5) over 10 times**	**(1) Never** **(2) 1-2 times** **(3) 3-5 times** **(4) 6-10 times** **(5) over 10 times**
10. He/she touched or fondled your	**(1) Never** **(2) 1-2 times** **(3) 3-5 times** **(4) 6-10 times** **(5) over 10 times**	**(1) Never** **(2) 1-2 times** **(3) 3-5 times** **(4) 6-10 times** **(5) over 10 times**	**(1) Never** **(2) 1-2 times** **(3) 3-5 times** **(4) 6-10 times** **(5) over 10 times**
11. You touched or fondled his or her	**(1) Never** **(2) 1-2 times** **(3) 3-5 times** **(4) 6-10 times** **(5) over 10 times**	**(1) Never** **(2) 1-2 times** **(3) 3-5 times** **(4) 6-10 times** **(5) over 10 times**	**(1) Never** **(2) 1-2 times** **(3) 3-5 times** **(4) 6-10 times** **(5) over 10 times**
12. You touched or fondled his/her	**(1) Never** **(2) 1-2 times** **(3) 3-5 times** **(4) 6-10 times** **(5) over 10 times**	**(1) Never** **(2) 1-2 times** **(3) 3-5 times** **(4) 6-10 times** **(5) over 10 times**	**(1) Never** **(2) 1-2 times** **(3) 3-5 times** **(4) 6-10 times** **(5) over 10 times**
13. He/she put his or her mouth on	**(1) Never** **(2) 1-2 times** **(3) 3-5 times** **(4) 6-10 times** **(5) over 10 times**	**(1) Never** **(2) 1-2 times** **(3) 3-5 times** **(4) 6-10 times** **(5) over 10 times**	**(1) Never** **(2) 1-2 times** **(3) 3-5 times** **(4) 6-10 times** **(5) over 10 times**
14. He/she touched your genitals or	**(1) Never** **(2) 1-2 times** **(3) 3-5 times** **(4) 6-10 times** **(5) over 10 times**	**(1) Never** **(2) 1-2 times** **(3) 3-5 times** **(4) 6-10 times** **(5) over 10 times**	**(1) Never** **(2) 1-2 times** **(3) 3-5 times** **(4) 6-10 times** **(5) over 10 times**
15. You put your mouth on his or her	**(1) Never** **(2) 1-2 times** **(3) 3-5 times** **(4) 6-10 times** **(5) over 10 times**	**(1) Never** **(2) 1-2 times** **(3) 3-5 times** **(4) 6-10 times** **(5) over 10 times**	**(1) Never** **(2) 1-2 times** **(3) 3-5 times** **(4) 6-10 times** **(5) over 10 times**
16. He/she inserted a finger or object	**(1) Never** **(2) 1-2 times** **(3) 3-5 times** **(4) 6-10 times** **(5) over 10 times**	**(1) Never** **(2) 1-2 times** **(3) 3-5 times** **(4) 6-10 times** **(5) over 10 times**	**(1) Never** **(2) 1-2 times** **(3) 3-5 times** **(4) 6-10 times** **(5) over 10 times**

17. You inserted a finger or object	**(1) Never** **(2) 1-2 times** **(3) 3-5 times** **(4) 6-10 times** **(5) over 10 times**	**(1) Never** **(2) 1-2 times** **(3) 3-5 times** **(4) 6-10 times** **(5) over 10 times**	**(1) Never** **(2) 1-2 times** **(3) 3-5 times** **(4) 6-10 times** **(5) over 10 times**
18. He/she *attempted* to have	**(1) Never** **(2) 1-2 times** **(3) 3-5 times** **(4) 6-10 times** **(5) over 10 times**	**(1) Never** **(2) 1-2 times** **(3) 3-5 times** **(4) 6-10 times** **(5) over 10 times**	**(1) Never** **(2) 1-2 times** **(3) 3-5 times** **(4) 6-10 times** **(5) over 10 times**
19. He/she *actually* had vaginal	**(1) Never** **(2) 1-2 times** **(3) 3-5 times** **(4) 6-10 times** **(5) over 10 times**	**(1) Never** **(2) 1-2 times** **(3) 3-5 times** **(4) 6-10 times** **(5) over 10 times**	**(1) Never** **(2) 1-2 times** **(3) 3-5 times** **(4) 6-10 times** **(5) over 10 times**

20. How old were you when the sexual activities began?

First Person	**Second Person**	**Third Person**
Age: _____	Age: _____	Age: _____

21. How old do you think the other individual(s) was when these activities began?

First Person	**Second Person**	**Third Person**
Age: _____	Age: _____	Age: _____

22. How old were you the last time these activities occurred?

First Person	**Second Person**	**Third Person**
Age: _____	Age: _____	Age: _____

23. Why did these activities end?

First Person	**Second Person**	**Third Person**
Age: _____	Age: _____	Age: _____

(1) Activities have not ended
(2) You moved away or left the household
(3) The other person moved away or left the household
(4) The other person stopped the activities voluntarily
(5) The activities became known by another family member or friend
(6) You confronted or resisted the other person
(7) The other person became involved with someone else
(8) You became involved with someone else
(9) The activities came to the attention of authorities
(10) Other (please explain below)

_____

Please indicate if any of the following were used to get you to participate in these sexual activities.

	First Person	Second Person	Third Person
24. Were you promised things like money, gifts, or special treatment?	**(1) Yes (2) No**	**(1)Yes (2) No**	**(1) Yes (2) No**
25. Did he/she threaten to tell your parents or someone else?	**(1) Yes (2) No**	**(1)Yes (2) No**	**(1) Yes (2) No**
26. Were you told that you would be physically hurt?	**(1) Yes (2) No**	**(1)Yes (2) No**	**(1) Yes (2) No**
27. Were you held down or was some other type of physical force was used?	**(1) Yes (2) No**	**(1)Yes (2) No**	**(1) Yes (2) No**
28. Were you led to believe nothing was wrong with the activities or that it was a game?	**(1) Yes (2) No**	**(1)Yes (2) No**	**(1) Yes (2) No**
29. Were you told the activities would benefit you in some way (e.g. teach you about sex)?	**(1) Yes (2) No**	**(1)Yes (2) No**	**(1) Yes (2) No**
30. Were you told that you would be punished in some way?	**(1) Yes (2) No**	**(1)Yes (2) No**	**(1) Yes (2) No**
31. Were you continually pestered or pressured verbally?	**(1) Yes (2) No**	**(1)Yes (2) No**	**(1) Yes (2) No**
32. Did you become intoxicated voluntarily and then were unable to resist?	**(1) Yes (2) No**	**(1)Yes (2) No**	**(1) Yes (2) No**
33. Were you was promised alcohol or drugs in exchange for sexual activities?	**(1) Yes (2) No**	**(1)Yes (2) No**	**(1) Yes (2) No**
34. Were you given alcohol or drugs without your knowledge and became unable resist?	**(1) Yes (2) No**	**(1)Yes (2) No**	**(1) Yes (2) No** **to**
35. Were you threatened that someone or something that you cared about? would be hurt?	**(1) Yes (2) No**	**(1)Yes (2) No**	**(1) Yes (2) No**
36. Did someone use his/her status or authority to get you to do these things?	**(1) Yes (2) No**	**(1)Yes (2) No**	**(1) Yes (2) No**
37. Did this person tell you not to tell anyone about these activities?	**(1) Yes (2) No**	**(1)Yes (2) No**	**(1) Yes (2) No**

38. In 3-4 sentences, please describe what happened with:

Person 1 _____

_____

_____

_____

_____

Person 2 _____

_____

_____

_____

_____

Person 3 _____

_____

_____

_____

_____

Using the following scale [hand scale to sub], please indicate the emotions or feelings that you experienced as a result of the sexual activities you described above.

Didn't feel this way at all **Felt this way a lot**
1 2 3 4 5

		First Person					**Second Person**					**Third Person**				
39.	**Scared**	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
40.	**Loved**	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
41.	**Guilty**	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
42.	**Cared for**	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
43	**Exploited**	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
44.	**Special**	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
45.	**Angry**	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
46.	**Confused**	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
47.	**Disgust**	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
48.	**Curious**	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
49.	**Physical pleasure**	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
50.	**Numb or detached**	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
51.	**Ashamed or embarrassed**	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
52.	**Enjoyment**	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5

Using the scale below, please indicate how strongly you agree or disagree with the following statements.

(1) = Strongly Disagree
(2) = Disagree
(3) = Agree
(4) = Strongly Agree

	First Person	Second Person	Third Person
53. I blame a loved one for not protecting me from the unwanted sexual contact.	_____	_____	_____
54. I think the other person involved in the sexual contact was the person responsible for it.	_____	_____	_____
55. I feel responsible for the sexual contact occurring.	_____	_____	_____

	First Person	Second Person	Third Person
56. Do you consider these experiences to be abusive?	(1) Yes (2) No	(1) Yes (2) No	(1) Yes (2) No

57. Why or why not?

First Person:_____

Second Person:_____

Third Person:_____

	First Person	Second Person	Third Person
58. Have you ever told anyone about these experiences?	(1) Yes (2) No	(1) Yes (2) No	(1) Yes (2) No
59. If you are married or currently involved in a committed romantic relationship have you told your partner about these experiences?	(1) Yes (2) No (3) Not involved	(1) Yes (2) No (3) Not involved	(1) Yes (2) No (3) Not involved

60. Why or why not? _____

_____

	First Person	Second Person	Third Person
61. Have you ever sought counseling or therapy to help you deal with these experiences?	(1) Yes (2) No	(1) Yes (2) No	(1) Yes (2) No

Sexual Experiences Survey Short Form Victimization (SES-SFV)

The following questions concern sexual experiences that you may have had outside of prison that were unwanted. We know that these are personal questions, so we do not ask your name or other identifying information. Your information is completely confidential. We hope that this helps you to feel comfortable answering each question honestly. Place a check mark in the box ☐ showing the number of times each experience has happened to you. If several experiences occurred on the same occasion--for example, if one night someone told you some lies and had sex with you when you were drunk, you would check both boxes a and c. The past 12 months refers to the past year going back from today. Since age 14 refers to your life starting on your 14th birthday and stopping one year ago from today.

	Sexual Experiences	**How many times in the past 12 months?**	**How many times since age 14?**
1.	**Someone fondled, kissed, or rubbed up against the private areas of my body (lips, breast/chest, crotch or butt) or removed some of my clothes without my consent *(but did not attempt sexual penetration)* by:**	0 1 2 3+	0 1 2 3+
	a. Telling lies, threatening to end the relationship, threatening to spread rumors about me, making promises I knew were untrue, or continually verbally pressuring me after I said I didn't want to.	☐ ☐ ☐ ☐	☐ ☐ ☐ ☐
	b. Showing displeasure, criticizing my sexuality or attractiveness, getting angry but not using physical force, after I said I didn't want to.	☐ ☐ ☐ ☐	☐ ☐ ☐ ☐
	c. Taking advantage of me when I was too drunk or out of it to stop what was happening.	☐ ☐ ☐ ☐	☐ ☐ ☐ ☐
	d. Threatening to physically harm me or someone close to me.	☐ ☐ ☐ ☐	☐ ☐ ☐ ☐
	e. Using force, for example holding me down with their body weight, pinning my arms, or having a weapon**.**	☐ ☐ ☐ ☐	☐ ☐ ☐ ☐

2.	**Someone had oral sex with me or made me have oral sex with them without my consent by:**	0 1 2 3+	0 1 2 3+
	a. Telling lies, threatening to end the relationship, threatening to spread rumors about me, making promises I knew were untrue, or continually verbally pressuring me after I said I didn't want to.	☐ ☐ ☐ ☐	☐ ☐ ☐ ☐
	b. Showing displeasure, criticizing my sexuality or attractiveness, getting angry but not using physical force, after I said I didn't want to.	☐ ☐ ☐ ☐	☐ ☐ ☐ ☐
	c. Taking advantage of me when I was too drunk or out of it to stop what was happening.	☐ ☐ ☐ ☐	☐ ☐ ☐ ☐
	d. Threatening to physically harm me or someone close to me.	☐ ☐ ☐ ☐	☐ ☐ ☐ ☐
	e. Using force, for example holding me down with their body weight, pinning my arms, or having a weapon.	☐ ☐ ☐ ☐	☐ ☐ ☐ ☐

		How many times in the past 12 months?	How many times since age 14?
3.	**If you are a male, check box and skip to item 4** ☐ **A man put his penis into my vagina, or someone inserted fingers or objects without my consent by:**	0 1 2 3+	0 1 2 3+
	a. Telling lies, threatening to end the relationship, threatening to spread rumors about me, making promises I knew were untrue, or continually verbally pressuring me after I said I didn't want to.	☐ ☐ ☐ ☐	☐ ☐ ☐ ☐
	b. Showing displeasure, criticizing my sexuality or attractiveness, getting angry but not using physical force, after I said I didn't want to.	☐ ☐ ☐ ☐	☐ ☐ ☐ ☐
	c. Taking advantage of me when I was too drunk or out of it to stop what was happening.	☐ ☐ ☐ ☐	☐ ☐ ☐ ☐
	d. Threatening to physically harm me or someone close to me.	☐ ☐ ☐ ☐	☐ ☐ ☐ ☐
	e. Using force, for example holding me down with their body weight, pinning my arms, or having a weapon.	☐ ☐ ☐ ☐	☐ ☐ ☐ ☐

4.	**A man put his penis into my butt, or someone inserted fingers or objects without my consent by:**	0 1 2 3+	0 1 2 3+
	a. Telling lies, threatening to end the relationship, threatening to spread rumors about me, making promises I knew were untrue, or continually verbally pressuring me after I said I didn't want to.	☐ ☐ ☐ ☐	☐ ☐ ☐ ☐
	b. Showing displeasure, criticizing my sexuality or attractiveness, getting angry but not using physical force, after I said I didn't want to.	☐ ☐ ☐ ☐	☐ ☐ ☐ ☐
	c. Taking advantage of me when I was too drunk or out of it to stop what was happening.	☐ ☐ ☐ ☐	☐ ☐ ☐ ☐
	d. Threatening to physically harm me or someone close to me.	☐ ☐ ☐ ☐	☐ ☐ ☐ ☐
	e. Using force, for example holding me down with their body weight, pinning my arms, or having a weapon.	☐ ☐ ☐ ☐	☐ ☐ ☐ ☐

5.	**Even though it did not happen, someone TRIED to have oral sex with me, or make me have oral sex with them without my consent by:**	0 1 2 3+	0 1 2 3+
	a. Telling lies, threatening to end the relationship, threatening to spread rumors about me, making promises I knew were untrue, or continually verbally pressuring me after I said I didn't want to.	☐ ☐ ☐ ☐	☐ ☐ ☐ ☐
	b. Showing displeasure, criticizing my sexuality or attractiveness, getting angry but not using physical force, after I said I didn't want to.	☐ ☐ ☐ ☐	☐ ☐ ☐ ☐
	c. Taking advantage of me when I was too drunk or out of it to stop what was happening.	☐ ☐ ☐ ☐	☐ ☐ ☐ ☐
	d. Threatening to physically harm me or someone close to me.	☐ ☐ ☐ ☐	☐ ☐ ☐ ☐
	e. Using force, for example holding me down with their body weight, pinning my arms, or having a weapon.	☐ ☐ ☐ ☐	☐ ☐ ☐ ☐

		How many times in the past 12 months?	How many times since age 14?
6.	**If you are male, check this box and skip to item 7.** ☐ **Even though it did not happen, a man TRIED to put his penis into my vagina, or someone tried to stick in fingers or objects without my consent by:**	0 1 2 3+	0 1 2 3+
	a. Telling lies, threatening to end the relationship, threatening to spread rumors about me, making promises I knew were untrue, or continually verbally pressuring me after I said I didn't want to.	☐ ☐ ☐ ☐	☐ ☐ ☐ ☐
	b. Showing displeasure, criticizing my sexuality or attractiveness, getting angry but not using physical force, after I said I didn't want to.	☐ ☐ ☐ ☐	☐ ☐ ☐ ☐
	c. Taking advantage of me when I was too drunk or out of it to stop what was happening.	☐ ☐ ☐ ☐	☐ ☐ ☐ ☐
	d. Threatening to physically harm me or someone close to me.	☐ ☐ ☐ ☐	☐ ☐ ☐ ☐
	e. Using force, for example holding me down with their body weight, pinning my arms, or having a weapon.	☐ ☐ ☐ ☐	☐ ☐ ☐ ☐

7.	**Even though it did not happen, a man TRIED to put his penis into my butt, or someone tried to stick in objects or fingers without my consent by:**	0 1 2 3+	0 1 2 3+
	a. Telling lies, threatening to end the relationship, threatening to spread rumors about me, making promises I knew were untrue, or continually verbally pressuring me after I said I didn't want to.	☐ ☐ ☐ ☐	☐ ☐ ☐ ☐
	b. Showing displeasure, criticizing my sexuality or attractiveness, getting angry but not using physical force, after I said I didn't want to.	☐ ☐ ☐ ☐	☐ ☐ ☐ ☐
	c. Taking advantage of me when I was too drunk or out of it to stop what was happening.	☐ ☐ ☐ ☐	☐ ☐ ☐ ☐
	d. Threatening to physically harm me or someone close to me.	☐ ☐ ☐ ☐	☐ ☐ ☐ ☐
	e. Using force, for example holding me down with their body weight, pinning my arms, or having a weapon.	☐ ☐ ☐ ☐	☐ ☐ ☐ ☐

8. I am: Female ☐ Male ☐ My age is _____ years and _____months.

9. Did any of the experiences described in this survey happen to you 1 or more times? Yes ☐ No ☐

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

Female only ☐
Male only ☐
Both females and males ☐
I reported no experiences ☐

10. Have you ever been raped? Yes ☐ No ☐

PANAS

This scale consists of a number of words that describe different feelings and emotions. Read each item and then mark the appropriate answer next to that word. Indicate to what extent you currently feel this way. Use the following scale to record your answers.

	(1) = Not at all	(2) = A little	(3) = Moderately	(4) = Quite a bit	(5) = Extremely
ted					
Distressed					
Excited					
Upset					
Strong					
Guilty					
Scared					
Hostile					
Enthusiastic					
Proud					
Irritable					
Alert					
Ashamed					
Inspired					
Nervous					
Determined					
Attentive					
Jittery					
Active					
Afraid					

ERQ

We would like to ask you some questions about your emotional life. In particular, how you control and manage your emotions. The questions below involve two different aspects of your emotional life. One is your **emotional experience**, or what you feel like on the inside. The other is your **emotional expression**, or how you show your emotions in the way you talk, behave, and gesture. For each item, please answer using the following scale:

1 2 3 4 5 6 7
Strongly ----------neutral----------Strongly
Disagree Agree

1. ____When I want to feel more positive emotion (such as joy or amusement), I change what I'm thinking about.
2. ____ I keep my emotions to myself.
3. ____When I want to feel less negative emotion (such as sadness or anger), I change what I'm thinking about.
4. ____When I am feeling positive emotions, I am careful not to express them.
5. ____When I'm faced with a stressful situation, I make myself think about it in a way that helps me stay calm.
6. ____I control my emotions by not expressing them.
7. ____When I want to feel more positive emotion, I change the way I think about the situation.
8. ____I control my emotions by changing the way I think about the situation I'm in.
9. ____When I am feeling negative emotions, I make sure not to express them.
10. ____When I want to feel less negative emotion, I change the way I'm thinking about the situation.

Vignette-specific ERQ

Instructions: Please answer the questions below on a scale from 0 to 6

0 1 2 3 4 5 6
not at all----------slightly----------moderately----------extremely

Cognitive Reappraisal

1. I tried to see the situation in the vignette as positive as possible.___
2. I viewed the situation in the vignette as a challenge.___
3. I thought of the situation in the vignette in a way that made me stay calm.___

Expressive Suppression

1. While listening to the vignette, I controlled my emotions.___
2. During the vignette, I showed my emotions.___
3. Others could see my emotions during the vignette.___

AAQ

Instructions: Below, you will find a list of statements. Please rate how true each statement is for you using the following scale:

1	2	3	4	5	6	7
Never True	**Very Rarely True**	**Seldom True**	**Sometimes True**	**Frequently True**	**Almost Always True**	**Always True**

1. I am often able to take action on a problem even if I am uncertain what is the right thing to do.
2. I often catch myself daydreaming about things I've done and what I would do differently next time.
3. When I feel depressed or anxious I am unable to take care of my responsibilities.
4. I rarely worry about getting my anxieties, worries, and feelings under control.
5. I'm not afraid of my feelings.
6. When I evaluate something negatively I usually realize this is just a reaction, not an objective fact.
7. When I compare myself to other people, it seems like most of them are handling their lives better than I do.
8. Anxiety is bad.
9. If I could magically remove all the painful experiences I've had in my life, I would do so.

PCL

INSTRUCTIONS: Below is a list of problems and complaints that people sometimes have in response to stressful experiences. Please read each one carefully and circle a number to indicate how much you have been bothered by that problem in the past month.

1. Repeated, disturbing memories, thoughts, or images of a stressful experience?

   1 2 3 4 5

   Not at all A little bit Moderately Quite a bit Extremely

2. Repeated, disturbing dreams of a stressful experience?

   1 2 3 4 5

   Not at all A little bit Moderately Quite a bit Extremely

3. Suddenly acting or feeling as if a stressful experience were happening again (as if you were reliving it)?

   1 2 3 4 5

   Not at all A little bit Moderately Quite a bit Extremely

4. Feeling very upset when something reminded you of a stressful experience?

   1 2 3 4 5

   Not at all A little bit Moderately Quite a bit Extremely

5. Having physical reactions (e.g., heart pounding, trouble breathing, sweating) when something reminded you of a stressful experience?

   1 2 3 4 5

   Not at all A little bit Moderately Quite a bit Extremely

6. Avoiding thinking about or talking about a stressful experience or avoiding having feelings related to it?

   1 2 3 4 5

   Not at all A little bit Moderately Quite a bit Extremely

7. Avoiding activities or situations because they reminded you of a stressful experience?

1 2 3 4 5

Not at all A little bit Moderately Quite a bit Extremely

8. Trouble remembering important parts of a stressful experience?

1 2 3 4 5

Not at all A little bit Moderately Quite a bit Extremely

9. Loss of interest in activities that you used to enjoy?

1 2 3 4 5

Not at all A little bit Moderately Quite a bit Extremely

10. Feeling distant or cut off from other people?

1 2 3 4 5

Not at all A little bit Moderately Quite a bit Extremely

11. Feeling emotionally numb or being unable to have loving feelings for those close to you?

1 2 3 4 5

Not at all A little bit Moderately Quite a bit Extremely

12. Feeling as if your future will somehow be cut short?

1 2 3 4 5

Not at all A little bit Moderately Quite a bit Extremely

13. Trouble falling or staying asleep?

1 2 3 4 5

Not at all A little bit Moderately Quite a bit Extremely

14. Feeling irritable or having angry outbursts?

1 2 3 4 5

Not at all A little bit Moderately Quite a bit Extremely

15. Having difficulty concentrating?

1 2 3 4 5

Not at all A little bit Moderately Quite a bit Extremely

16. Being "super-alert" or watchful or on guard?

1 2 3 4 5

Not at all A little bit Moderately Quite a bit Extremely

17. Feeling jumpy or easily startled?

1 2 3 4 5

Not at all A little bit Moderately Quite a bit Extremely

DES

Please indicate how frequently you have the following experiences when you are NOT under the influence of alcohol or drugs.

1. Some people have the experience of driving or riding in a car or bus or subway and suddenly realizing that they don't remember what has happened during all or part of the trip. Indicate what percentage of the time this happens to you.

0%-----10------20------30------40-------50-------60-------70-------80-------90-------100%
(Never) (Always)

2. Some people find that sometimes they are listening to someone talk and they suddenly realize that they did not hear part or all of what was said. Indicate what percentage of the time this happens to you.

0%-----10------20------30------40-------50-------60-------70-------80-------90-------100%
(Never) (Always)

3. Some people have the experience of finding themselves in a place and having no idea how they got there. Indicate what percentage of the time this happens to you.

0%-----10------20------30------40-------50-------60-------70-------80-------90-------100%
(Never) (Always)

4. Some people have the experience of finding themselves dressed in clothes that they don't remember buying. Indicate what percentage of the time this happens to you.

0%-----10------20------30------40-------50-------60-------70-------80-------90-------100%
(Never) (Always)

5. Some people have the experience of finding new things among their belongings that they do not remember buying. Indicate what percentage of the time this happens to you.

0%-----10------20------30------40-------50-------60-------70-------80-------90-------100%
(Never) (Always)

6. Some people sometimes find that they are approached by people that they do not know who call them by another name or insist that they have met them before. Indicate what percentage of the time this happens to you.

0%-----10------20------30------40-------50-------60-------70-------80-------90-------100%
(Never) (Always)

7. Some people sometimes have the experience of feeling as though they are standing next to themselves or watching themselves do something and they actually see themselves as if they were looking at another person. Indicate what percentage of the time this happens to you.

0%-----10------20------30------40-------50-------60-------70-------80-------90-------100%
(Never) (Always)

8. Some people are told that they sometimes do not recognize friends or family members. Indicate what percentage of the time this happens to you.

0%-----10------20------30------40-------50-------60-------70-------80-------90-------100%
(Never) (Always)

9. Some people find that they have no memory for some important events in their lives (for example, a wedding or graduation). Indicate what percentage of the time this happens to you.

0%-----10------20------30------40-------50-------60-------70-------80-------90-------100%
(Never) (Always)

10. Some people have the experience of being accused of lying when they do not think that they have lied. Indicate what percentage of the time this happens to you.

0%-----10------20------30------40-------50-------60-------70-------80-------90-------100%
(Never) (Always)

11. Some people have the experience of looking in a mirror and not recognizing themselves. Indicate what percentage of the time this happens to you.

0%-----10------20------30------40-------50-------60-------70-------80-------90-------100%
(Never) (Always)

12. Some people have the experience of feeling that other people, objects, and the world around them are not real. Indicate what percentage of the time this happens to you.

0%-----10------20------30------40-------50-------60-------70-------80-------90-------100%
(Never) (Always)

13. Some people sometimes have the experience of feeling that their body does not seem to belong to them. Indicate what percentage of the time this happens to you.

0%-----10------20------30------40-------50-------60-------70-------80-------90-------100%
(Never) (Always)

14. Some people have the experience of sometimes remembering a past event so vividly that they feel as if they were reliving that event. Indicate what percentage of the time this happens to you.

0%-----10------20------30------40-------50-------60-------70-------80-------90-------100%
(Never) (Always)

15. Some people have the experience of not being sure whether things that they remember happening really did happen or whether they just dreamed them. Indicate what percentage of the time this happens to you.

0%-----10------20------30------40-------50-------60-------70-------80-------90-------100%
(Never) (Always)

16. Some people have the experience of being in a familiar place but finding it strange and unfamiliar. Indicate what percentage of the time this happens to you.

0%-----10------20------30------40-------50-------60-------70-------80-------90-------100%
(Never) (Always)

17. Some people find that when they are watching television or a movie they become so absorbed in the story that they are unaware of other events happening around them. Indicate what percentage of the time this happens to you.

0%-----10------20------30------40-------50-------60-------70-------80-------90-------100%
(Never) (Always)

18. Some people sometimes find that they become so involved in a fantasy or daydream that it feels as though it were really happening to them. Indicate what percentage of the time this happens to you.

0%-----10------20------30------40-------50-------60-------70-------80-------90-------100%
(Never) (Always)

19. Some people find that they sometimes are able to ignore pain. Indicate what percentage of the time this happens to you.

0%-----10------20------30------40-------50-------60-------70-------80-------90-------100%
(Never) (Always)

20. Some people find that they sometimes sit staring off into space, thinking of nothing, and are not aware of the passage of time. Indicate what percentage of the time this happens to you.

0%-----10------20------30------40-------50-------60-------70-------80-------90-------100%
(Never) (Always)

21. Some people sometimes find that when they are alone they talk out loud to themselves. Indicate what percentage of the time this happens to you.

0%-----10------20------30------40-------50-------60-------70-------80-------90-------100%
(Never) (Always)

22. Some people find that in one situation they may act so differently compared with another situation that they feel almost as if they were two different people. Indicate what percentage of the time this happens to you.

0%-----10------20------30------40-------50-------60-------70-------80-------90-------100%
(Never) (Always)

23. Some people sometimes find that in certain situations they are able to do things with amazing ease and spontaneity that would usually be difficult for them (for example, sports, work, social situations, etc.). Indicate what percentage of the time this happens to you.

0%-----10------20------30------40-------50-------60-------70-------80-------90-------100%
(Never) (Always)

24. Some people sometimes find that they cannot remember whether they have done something or have just thought about doing that thing (for example, not knowing whether they have just mailed a letter or have just thought about mailing it). Indicate what percentage of the time this happens to you.

0%-----10------20------30------40-------50-------60-------70-------80-------90-------100%
(Never) (Always)

25. Some people find evidence that they have done things that they do not remember doing. Indicate what percentage of the time this happens to you.

0%-----10------20------30------40-------50-------60-------70-------80-------90-------100%
(Never) (Always)

26. Some people sometimes find writings, drawings, or notes among their belongings that they must have done but cannot remember doing. Indicate what percentage of the time this happens to you.

0%-----10------20------30------40-------50-------60-------70-------80-------90-------100%
(Never) (Always)

27. Some people sometimes find that they hear voices inside their head that tell them to do things or comment on things that they are doing. Indicate what percentage of the time this happens to you.

0%-----10------20------30------40-------50-------60-------70-------80-------90-------100%
(Never) (Always)

28. Some people sometimes feel as if they are looking at the world through a fog so that people and objects appear far away or unclear. Indicate what percentage of the time this happens to you.

0%-----10------20------30------40-------50-------60-------70-------80-------90-------100%
(Never) (Always)

AUDIT

Please circle the response that best describes your experiences during the last year.

1. How often do you have a drink containing alcohol?
    a. Never
    b. Monthly or less
    c. 2-4 times per month
    d. 2-3 times per week
    e. 4 or more times a week

2. How many drinks containing alcohol do you have on a typical day when you drink?
    a. 1 or 2
    b. 3 or 4
    c. 5 or 6
    d. 7 to 9
    e. 10 or more

3. How often do you have 5 or more drinks on one occasion?
    a. Never
    b. Less than monthly
    c. Monthly
    d. Weekly
    e. Daily or almost daily

4. How often during the last year have you found that you were not able to stop drinking once you had started?
    a. Never
    b. Less than monthly
    c. Monthly
    d. Weekly
    e. Daily or almost daily

5. How often during the last year have you failed to do what was normally expected of you because of drinking?
    a. Never
    b. Less than monthly
    c. Monthly
    d. Weekly
    e. Daily or almost daily

6. How often during the last year have you needed a first drink in the morning to get yourself going after a heavy drinking session?
    a. Never
    b. Less than monthly
    c. Monthly

d. Weekly
e. Daily or almost daily

7. How often during the last year have you had a feeling of guilt or remorse after drinking?
    a. Never
    b. Less than monthly
    c. Monthly
    d. Weekly
    e. Daily or almost daily

8. How often during the last year have you been unable to remember things from the night before because of drinking?
    a. Never
    b. Less than monthly
    c. Monthly
    d. Weekly
    e. Daily or almost daily

9. Have you or someone else been injured because of your drinking?
    a. No
    b. Yes, but not in the last year
    c. Yes, during the last year

10. Has a relative, friend, doctor or other health care worker been concerned about your drinking or suggested you cut down?
    a. No
    b. Yes, but not in the last year
    c. Yes, during the last year

11. During the last year, how often have you consumed alcohol until you felt intoxicated?
    a. Never
    b. Monthly or less
    c. 2-4 times per month
    d. 2-3 times per week
    e. 4 or more times a week

Marlowe-Crowne 10-Item Social Desirability Scale

Listed below are a number of statements concerning personal attitudes and traits. Read each item and decide whether each is true or false as it pertains to you personally.

1. I never hesitate to go out of my way to help someone in trouble. T / F
2. I have never intensely disliked anyone. T / F
3. There have been times when I was quite jealous of the good fortune of others. T / F
4. I would never think of letting someone else be punished for my wrongdoings. T / F
5. I sometimes feel resentful when I don't get my way. T / F
6. There have been times when I have felt like rebelling against people in authority even though I knew they were right. T / F
7. I am always courteous, even to people who are disagreeable. T / F
8. When I don't know something, I don't at all mind admitting it. T / F
9. I can remember "playing sick" to get out of something. T / F
10. I am sometimes irritated by people who ask favors of me. T / F

Demographic Questionnaire

1. **What is your current age? _____**

2. **Have you ever been married or are you currently living with someone?**
   - (1) Never Married
   - (2) Married
   - (3) Cohabitating
   - (4) Divorced or separated
   - (5) Widowed

3. **What is your religious affiliation, if any?**
   - (1) Protestant (Baptist, Methodist, Lutheran, Church of Christ, etc.)
   - (2) Catholic
   - (3) Jewish
   - (4) Non-affiliated
   - (5) Other

4. **What is your ethnicity?**
   - (1) Caucasian/Euro-American
   - (2) African American
   - (3) Hispanic/Latino American
   - (4) Asian American
   - (5) Native American
   - (6) Hawaiian Islander
   - (7) Other

   If other, please explain_____

5. **Are you currently a full time student?**
   - (1) Yes
   - (2) No

6. **What is your current household income?**

(1)	Less than $10,000	(7)	Between $61,000 - $70,000
(2)	Between $10,000 - $20,000	(8)	Between $71,000 - $80,000
(3)	Between $21,000 - $30,000	(9)	Between $81,000 - $90,000
(4)	Between $31,000 - $40,000	(10)	Between $91,000- $100,000
(5)	Between $41,000 - $50,000	(11)	Between $100,000-$150,000
(6)	Between $51,000 - $60,000	(12)	Above $150,000

7. **What was the average yearly household income in your family as you were growing up?**

(1)	Less than $10,000	(7)	Between $61,000 - $70,000
(2)	Between $10,000 - $20,000	(8)	Between $71,000 - $80,000
(3)	Between $21,000 - $30,000	(9)	Between $81,000 - $90,000
(4)	Between $31,000 - $40,000	(10)	Between $91,000- $100,000
(5)	Between $41,000 - $50,000	(11)	Between $100,000-$150,000
(6)	Between $51,000 - $60,000	(12)	Above $150,000

8. **Using the scale below, what was the highest level of education completed by your father?** (By father we mean the main male caregiver that you lived with as a child.) **_____**

9. **Using the scale below, what was the highest level of education completed by your mother?** (By mother we mean the main female caregiver that you lived with as a child.) _____

   - (1) Less than high school

(2) Finished high school or obtained GED
(3) Some college
(4) Two years of college
(5) Associate of Arts Degree
(6) M.F.A. Degree or equivalent
(7) BA or BS Degree
(8) Some graduate education
(9) Professional Degree (e.g. law)
(10) Master's Degree
(11) M.D. / Ph.D. / Ed.D.

10. Using the scale below, what was your father's occupation as you were growing up? _____

11. Using the scale below, what was your mother's occupation as you were growing up?_____

(1) Unemployed, dependant upon public assistance
(2) Farm laborer or Service Worker (e.g., dishwasher, car wash attendant, private house cleaner)
(3) Unskilled Workers (e.g., bartender, garbage collectors, construction worker)
(4) Semiskilled Workers (e.g., animal caretakers, child care providers, barbers/hairdressers, bus driver, railroad conductors, meat cutters)
(5) Skilled workers (e.g., carpenters, electrician, firefighters, mail handlers, LPNs, railroad engineers, police person or detectives)
(6) Small Business Owner Skilled Service Workers (e.g., auctioneers, bank tellers, dental assistants, health trainers)
(7) Technicians or Semiprofessionals (e.g., advertising agent, air traffic controller, dental hygienists, opticians, photographers, secretaries)
(8) Professionals/Administrators (e.g., accountants, clergymen, RNs, pharmacists, secondary school teachers, pilots)
(9) Higher Executive/M.D or Ph.D. (e.g., astronomer, architect, civil engineers, attorneys, psychologists, college or university professors)

12. Before you were 18, did you ever live with anyone who abused alcohol on a regular basis?
(1) Yes
(2) No

13. Before you were 18, did anyone in your household have a mental illness such as depression, severe anxiety, schizophrenia, manic-depression, or any other psychiatric illness?
(1)Yes
(2) No

14. Before you were 18, were your parents ever separated or divorced?
(1) Yes
(2) No

15. Before you were 18, was anyone you lived with ever put in jail for any reason?
(1) Yes
(2) No

16. Did either of your parents die before you reached the age of 18?
(1) Yes
(2) No

17. Were you ever in a life-threatening accident of any kind before you reached the age of 18?

(1) Yes
(2) No

18. Were you ever in a life-threatening tornado, hurricane, fire, or other natural disaster before you reached the age of 18?
(1) Yes
(2) No

19. Before you reached the age of 18, were you ever the victim of a crime that resulted in physical injury or that had the potential to be life-threatening?
(1) Yes
(2) No

20. To the best of your knowledge, were your parents or immediate caregivers ever investigated because of a charge of child abuse or neglect?
(1) Yes
(2) No

21. Were you ever removed from your home because of abuse, neglect, or because your parents financially unable to care for you?
(0) No, I was never removed from the home.
(1) Yes, once.
(2) Yes, two to five times.
(3) Yes, five to ten times.

23. What was the date of the first day of your last menstrual period? _____/_____/_____