

ABSTRACT

ATTACHMENT STYLE, EMOTION DYSREGULATION, PERITRAUMATIC DISSOCIATION, AND AFFECTIVE VULNERABILITIES: A COGNITIVE-AFFECTIVE MODEL

Peritraumatic dissociation is an experience of derealization and depersonalization in response to a traumatic event and is a significant predictor of Posttraumatic Stress Disorder (PTSD). While links between dissociation and anxiety-related pathology have received attention, questions remain regarding moderators and mediators of this relationship. The current study hypothesized that trauma-exposed individuals with low attachment security would experience higher rates of peritraumatic dissociation and affective consequences as a function of emotion dysregulation strategies characteristic of insecure attachment. Primary hypotheses were rejected as the predicted interaction between traumatic effect and insecure attachment on peritraumatic dissociation was not significant. Exploratory analyses showed this interaction could be conditional to the type of trauma experienced. Results indicated that victims of physical/sexual assault with high anxious attachment had higher rates of dissociation that increased difficulties managing distress, but only when victims strongly utilized thought suppression as an attempt to regulate posttraumatic outcomes. This suggests anxiously attached victims of physical/sexual assault dissociate more during a traumatic event and use thought suppression to maladaptively manage residual distress leading to PTSD development. Treatment implications targeting insecure attachment, dissociation, and their relevance to prolonged posttraumatic difficulties are discussed.

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PERITRAUMATIC DISSOCIATION, AND AFFECTIVE
VULNERABILITIES: A COGNITIVE-AFFECTIVE MODEL

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CHAPTER 1: INTRODUCTION

Peritraumatic dissociation is an experience of derealization and disconnection triggered in response to emotionally impactful or life-threatening events. Symptoms of dissociation include feelings of disconnection from the self and/or the environment in which a stressor is originally encountered (Holmes et al., 2005). The individual feels depersonalized within that context, reporting out-of-body experiences and other experiential phenomena implying cognitive and emotional disconnection. Dissociation has been identified as a significant predictor of Posttraumatic Stress Disorder (PTSD; Briere, Scott, & Weathers, 2005; Kaplow, Dodge, Amaya-Jackson, & Saxe, 2005; Marmar, Weiss, & Metzler, 1998; Ozer, Best, Lipsey, & Weiss, 2003), even when controlling for additional predictors such as emotional responses, coping, or perceived life threat (e.g., Kaplow et al., 2005; Ozer et al., 2003). For example, Olde et al. (2005) found that, after a traumatic childbirth, mothers' rates of dissociation predicted subsequent PTSD symptom severity when controlling for increases in negative affect.

Although links between dissociation and anxiety-related pathology have received substantial attention, important questions remain regarding variables that moderate or mediate this relationship. Risk factors for peritraumatic dissociation, such as emotion dysregulation (Marx & Sloan, 2005), attachment insecurity (Twaite & Rodriguez-Srednicki, 2004), and posttraumatic symptom severity (Marshall & Schell, 2002) have been independently evaluated; yet there remains a pressing need for conceptual integration of this diverse pool of predictors. Investigating the nuanced cognitive and affective processes that contribute to dissociation and its consequences will help clarify why this phenomenon arises. A well-rounded model of dissociative processes could address the suite of

psychological factors leading from stressful triggering events, to dissociation (a mediating mechanism), and finally to anxiety related pathology and/or its correlates. The primary aims of the present work include identifying antecedents of dissociation (i.e., dispositional factors that anticipate the magnitude of its occurrence), as well as the consequences of dissociation (i.e., markers of emotional discord following dissociation, especially those known to anticipate PTSD).

CHAPTER 2: LITERATURE REVIEW

Attachment Style as a Predictor of Dissociation

People vary in their likelihood of dissociating in response to stressful life events, suggesting that dispositional vulnerabilities should moderate the magnitude of dissociation experienced. Ursano et al. (1999) examined dissociation rates among 122 victims of serious motor vehicle accidents. Some individuals exhibited evidence of dissociation, while others did not; further, those who dissociated were nearly five times more likely to develop PTSD. Griffin, Resick, and Mechanic (1997) found that, among recent rape victims, only a small percentage fell within the high dissociative range (i.e., dissociated during rape). The high dissociative group reported significantly higher PTSD symptom severity and greater levels of perceived life threat than individuals who did not dissociate. Further, Vietnam veterans with PTSD have different rates of dissociation, even with comparable self-reported levels of combat exposure (Kaufman et al., 2002). Together, this evidence suggests proneness to dissociate during a traumatic event should vary as a function of dispositional factors.

Certain dispositional factors, such as difficulties in handling emotions, may foment higher rates of peritraumatic dissociation. Briere (2006) found that among 618 trauma-exposed individuals, those who had difficulty regulating negative emotions were at significantly higher risk for dissociative symptoms following trauma exposure. Further, multiple kinds of emotion regulation problems, such as avoidant tendencies (Marmar et al., 1994) and thought suppression (Engelhard, Van Den Hout, Kindt, Arntz, & Schouten, 2003) promote emotion dysregulation and could be implicated in processes surrounding dissociation. Emotion dysregulation appears to hinder adaptive cognitive defenses that could help

psychologically shield individuals in stressful contexts and help them avoid dissociation. van der Kolk, Pelcovitz, Roth, and Mandel (1996) found that PTSD, dissociation, and emotion dysregulation were significantly interrelated posttrauma, suggesting a nuanced relationship. These associated psychological features were not only found in individuals with current PTSD, but also individuals who no longer met PTSD criteria and continued to suffer from such symptoms.

While different forms of emotion dysregulation have been independently evaluated in this context, there is need for a unifying framework specifying when certain emotion dysregulation strategies are particularly likely to contribute to dissociative responses to stressful stimuli. Attachment theory may provide this framework because of its emphasis on individual differences in long-standing manners of emotion regulation (Ainsworth, 1967/1979; Bowlby, 1969). According to attachment theory, early infant-caregiver interactions form the foundations of a growing individual's manner of coping with stressful events. The implications of these exchanges vary based of the quality and reliability of caregiver responses to infant distress signals. The extent to which this dynamic interplay confers reliable nurturance and security determines the developing person's cognitive schema for relationships (Ainsworth, Blehar, Waters, & Wall, 1978; Calkins & Hill, 2007). The resulting relationship schemas serve as generalized reference points for the child, driving behavioral expectations regarding caregiver responses under conditions of emotional distress.

Three main attachment styles are identified: secure, insecure anxious, and insecure avoidant (Ainsworth, 1979; Ainsworth, et al., 1978; Bowlby, 1969). The secure attachment style develops in infants whose relationship schemas imply trust that caregivers will respond reliably and comfortingly. These individuals learn to lean on others as secure bases for exploration and distress relief. By contrast,

insecurely attached individuals struggle to rely on others for nurturance and security. For instance, insecure-avoidant infants refrain from crying when separated from an unresponsive caregiver and avoid them during a potential reunion. Insecure-anxious infants are intensely distressed in the absence of their caregiver and show signs of anxiety in their presence. This is theoretically due to an inconsistent caregiver response history. Although these attachment styles are formed by the end of the first year of life (Bowlby, 1988), they remain stable into adulthood and impact relationship formation and the nature of stress responses throughout the life-span (Fraley, 2002; Hamilton, 2000; Moss, Cyr, Bureau, Tarabusky, & Dubois-Comtois, 2005). Accordingly, attachment style is a key determinant of adults' successful emotion regulation under challenging conditions (Ainsworth et al., 1978; Calkins & Hill, 2007; Carlson & Sroufe, 1995; Sroufe, Carlson, Levy, & Egeland, 1999).

Emotion regulation can be defined as the manner by which individuals employ behavioral and cognitive techniques to moderate, enhance, or inhibit emotional expression or arousal (Calkins & Hill, 2007). Adaptive emotion regulatory capacity develops through consistent responsiveness and secure attachment to others (Calkins & Hill, 2007; Cole, Michel, & Teti, 1994). Conversely, insecure attachments (i.e., avoidant or anxious) form the foundation for emotion regulation problems (Cassidy, 1994; Cassidy & Berlin 1994; Cloitre, Stovall-McClough, Zorbas, & Charuvastra, 2008). Consistent unresponsiveness or inconsistent responsiveness from relationship partners during moments of aversive arousal result in persistent concern that emotions cannot be regulated effectively. Importantly, the nature of emotion regulation deficits varies as a function of attachment insecurity type (avoidant vs. anxious). This may have important

implications for the emotional processes by which attachment style moderates the magnitude or likelihood of dissociation.

Avoidant individuals have learned that their distress is routinely avoided by others, and consequently, internalize a tendency to deny their own distress (Shaver & Mikulincer, 2007). As adults, avoidant people respond to emotionally challenging situations by suppressing thoughts of the event, inhibiting expressions of distress, avoiding potential experiential triggers of distress, and a depreciating support-seeking behavior (Benoit, Bouthillier, Moss, Rousseau, & Brunet, 2010; Fraley & Shaver, 1997; Mikulincer, 1998; Mikulincer, Orbach, & Iavnieli, 1998). Two analogous emotion regulation deficits – thought suppression and experiential avoidance – have been observed in the context of dissociation research, though they have not been explicitly tied to avoidant attachment. Thought suppression involves suppressing unwanted target thoughts from consciousness (Wegner & Zanakos, 1994) and has been related to psychopathology (see Aldao, Nolen-Hoeksema, & Schweizer, 2010). Among women who experienced pregnancy loss, thought suppression mediated the relationship between dissociation and acute PTSD symptoms, suggesting that thought suppression is a maladaptive emotion regulation strategy (Engelhard et al., 2003). Experiential avoidance is defined as an unwillingness to express emotions and avoid reminders that revolve around the target experience (Hayes, Wilson, Gifford, Follette, & Strosahl, 1996). Among 532 female students exposed to a campus shooting, experiential avoidant tendencies before the shooting predicted greater rates of dissociation one-month following the shooting (Kumpula, Orcutt, Bardeen, & Varkovitzky, 2011). Taken together, these findings suggest the possibility that avoidant individuals' reliance on thought suppression and experiential avoidance may render them prone to experiencing amplified levels of dissociation in response to stressors.

By contrast, anxiously attached individuals have experienced a history of uncertainty regarding caregiver presence and relief, and consequently struggle with unresolved, perseverative thoughts about aversive feelings (Shaver & Mikulincer, 2007). In adulthood, the result is an emotion regulation style characterized by hyperactivation and excessive attention to emotional experiences, including exaggerated emotional reports and rumination on distressing thoughts (Benoit et al., 2010; Cassidy & Berlin, 1994; Mikulincer, 1998; Mikulincer, Shaver, & Pereg, 2003). Indeed, anxiously attached individuals have been shown to have lower forgiveness rates after a moral transgression than securely attached individuals due to excessive angry rumination (Burnette, Taylor, Worthington, & Forsyth, 2007). Lanciano, Curci, Kafetsios, Elia, and Zammuner (2012) observed maladaptive rumination to be associated with lower emotion organization and management among anxiously attached individuals. In clinical research, ruminative tendencies have been associated with greater dissociation. Rumination – conceptualized as the persistent focus on the causes of one’s psychological distress in a passive manner (Nolen-Hoeksema, 2000) – correlates with anxiety, depression, and other psychopathologies (Aldao et al., 2010). Individuals with PTSD and comorbid depression have been shown to ruminate significantly more than individuals with depression only (Birrer & Michael, 2011). Additionally, rumination among the PTSD-depression group triggered intrusive images of traumatic events while simultaneously making the individual feel worse, illustrating rumination’s emotion dysregulatory impact. Taken together, these findings suggest the possibility that anxiously attached individuals’ reliance on rumination as an emotion regulation strategy may increase their likelihood of dissociating.

In sum, insecure attachment styles form the foundation for emotion regulation difficulties (Cassidy, 1994; Cloitre et al., 2008; Mikulincer, Shaver, & Horesh, 2006) and may predict dissociation as a function of emotion dysregulation strategies (i.e., rumination, experiential avoidance, and thought suppression). Insecure-anxious individuals attempt to regulate emotions by obsessively fixating on them (i.e., ruminating) with no real attempt to relieve the target emotion (see Burnette et al., 2007; Lanciano et al., 2012; Mikulincer, 1998; Mikulincer et al., 2006). Tendencies characteristic of insecure-avoidant individuals suggest they regulate emotions through thought suppression (Mikulincer, Dolev, & Shaver, 2004) and experiential avoidance (Mikulincer & Shaver, 2003). These emotion dysregulation strategies are intended to psychologically shield individuals in stressful contexts; however, they appear to hinder cognitive defenses and may increase the likelihood of dissociation (Engelhard et al., 2003; Kumpula et al., 2011).

These considerations construct a model of peritraumatic dissociation's antecedents. However, to develop a thorough model of the cognitive and affective processes implicated in this phenomenon, it is essential also to consider measurable consequences of dissociation.

Consequences of Dissociation

Prior research has shown that individuals who experience traumatic stressors show diminished belief in their abilities to effectively manage distress and anxiety (Anestis, Tull, Bagge, & Gratz, 2012; Marshall, Miles, & Stewart 2010; Naragon-Gainey, 2010). Two indicators of negative emotional cognitions have received substantial attention in the PTSD literature: distress tolerance (Vujanovic, Bonn-Miller, Potter, Marshall, & Zvolensky, 2011;

Vujanovic et al., 2013) and anxiety sensitivity (Asmundson & Stapleton, 2008; Marshall et al., 2010).

Distress tolerance has been conceptualized as the perceived capacity to endure and overcome negative emotional or otherwise uncomfortable states (Simons & Gaher, 2005; Zvolensky, Vujanovic, Bernstein, & Leyro, 2010). Lower distress tolerance predicts higher PTSD symptomatology (Vujanovic et al., 2011) and greater overall psychopathology (Leyro, Zvolensky, & Bernstein, 2010). Individuals with lower distress tolerance appear more likely to exhibit maladaptive behavioral patterns in order to avoid emotional distress. For instance, Anestis et al. (2012) observed distress tolerance to mediate the relationship between PTSD symptom severity and suicide attempts. Because dissociation introduces individuals to a poignant loss of cognitive control, lower reported distress tolerance may be a natural consequence of dissociative episodes. Indeed, Morgan et al. (2001) found that, compared with individuals trained to handle high levels of acute distress (e.g., Special Forces soldiers), lesser trained standard infantry soldiers dissociated more when exposed to stressful situations.

Another potential consequence of dissociation may be to heighten anxiety sensitivity, a construct defined as the fear of experiencing anxiety and believing it causes illness or even additional anxiety (Reiss & McNally, 1985). Anxiety sensitivity is a significant predictor of PTSD in adults (Marshall et al., 2010) and children (Kılıç, Kılıç, & Yılmaz, 2008), as well as other anxiety-related disorders such as panic disorder (Olatunji & Wolitzky-Taylor, 2009). Asmundson and Stapleton (2008) found that, among 138 active-duty police officers, those who screened positive for probable PTSD showed higher anxiety sensitivity than others. Anxiety sensitivity has also been shown to moderate the

relationship between trauma exposure and posttraumatic stress symptomatology (Feldner, Lewis, Leen-Feldner, Schnurr, & Zvolensky, 2006). Additionally, Kosloff et al. (2006) found that higher dissociative responses predicted higher subsequent anxiety sensitivity among individuals reminded of their mortality.

In sum, it is reasonable to consider that, since dissociation is a cognitively disruptive response to stressors, it is partly responsible for reduced belief in one's ability to tolerate distress and, likewise, increased reported sensitivity to anxiety. Prior work confirms that low distress tolerance and high anxiety sensitivity reliably predict anxiety-related pathology, although research on the association between dissociation and subsequent distress tolerance/anxiety sensitivity is limited.

Placed in the context of the present model, a rich picture emerges regarding the cognitive-affective causes and consequences of peritraumatic dissociation: if a stressful life event amplifies dissociation among insecurely attached individuals with characteristic emotion regulation deficits, this could heighten anxiety sensitivity and lower distress tolerance. Testing this suite of processes may enhance understanding and, ultimately, treatment of PTSD and its complex symptomatology.

Current Study

The current study sought to understand specific dispositional vulnerability factors for peritraumatic dissociation and its predictive, albeit nuanced, relationship with subsequent PTSD development. Utilizing an online crowdsourcing platform, a cross-sectional sample completed a variety of survey measures. Measures examined specific vulnerability factors (i.e., attachment insecurity, stressful life events, emotion dysregulation) for their potential to

instigate peritraumatic dissociation. Participants initially answered questions regarding attachment insecurity, and then indicated their most stressful life event and its traumatic effect (i.e., their posttraumatic stress symptomatology in relation to their most stressful life event; PTSS). Describing their stressful event primed the participant to answer additional questionnaires regarding emotion dysregulation and dissociation (e.g., *with your worst event in mind, answer the following*). Measures of aversive psychological outcomes followed (i.e., anxiety sensitivity and distress tolerance). Questionnaires were counterbalanced and block randomized in order to mirror the theorized processes in the proposed cognitive-affective model (see Figure 1 for a visual representation of the measurement sequence).

The proposed cognitive-affective model generates predictions regarding a variety of complex interactions (i.e., moderation) and explanatory relationships (i.e., mediation) between study variables. The predicted outcomes are divided into a sequential set of hypotheses discussed later in this section, and can broadly be summarized as follows: stress-related dissociation should be most prominent among insecurely attached individuals prone to exhibiting characteristic forms of emotion dysregulation (i.e., rumination for anxiously attached; thought suppression and experiential avoidance for avoidantly attached), and this heightened dissociation should anticipate aversive psychological consequences linked to PTSD symptomatology (i.e., higher anxiety sensitivity, lower distress tolerance).

The proposed cognitive-affective model required that a specific sequence of mediating and moderating outcomes be established. Testing each of these outcomes individually would have been inefficient and increased the probability of Type I error. By contrast, conditional process modeling (CPM) – a statistical

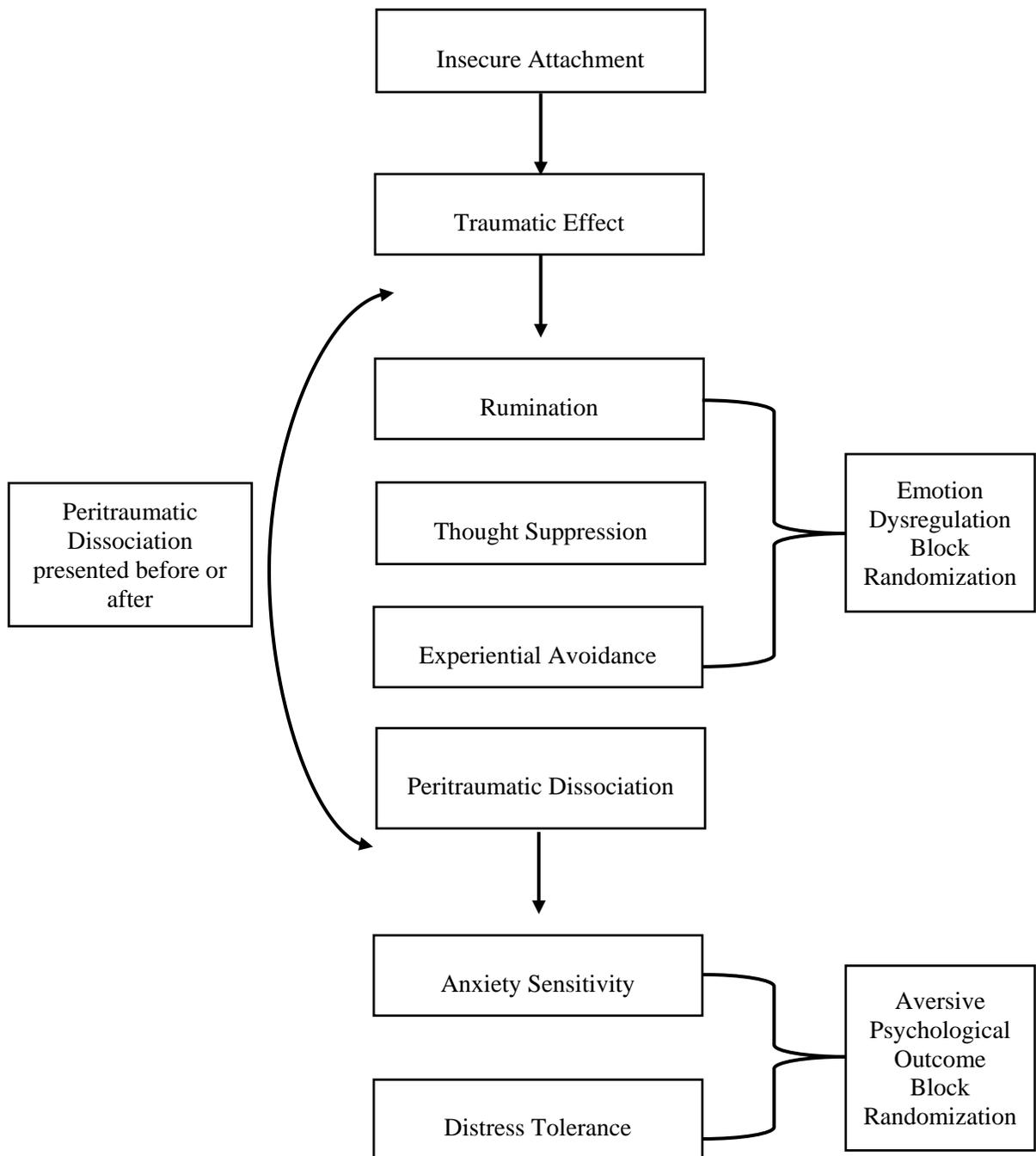


Figure 1. Visual representation of counterbalancing and block randomization of study measures

methodology analogous to structural equation modeling (SEM; Hayes, 2013) – provided a parsimonious method of analyzing moderating and mediating outcomes simultaneously. CPM differs from SEM in the overall goal of each model and the naming of variable types. Whereas SEM attempts to find the best fitting model for a given set of variables, CPM involves estimation and interpretation of effects (direct and indirect) between variables, regardless of fit. In CPM, these variables are considered antecedents (independent/predictor variable, similar to exogenous in SEM) and consequences (dependent variable, similar to endogenous in SEM). In CPM figure representations, antecedent variables have arrows pointing away from them while consequent variables have arrows pointing at them. Arrows that are solid represent direct effects and broken arrows represent indirect effects. For clarification, see Figure 2 for a simple moderated-mediation model representing a light switch causing a light to activate.

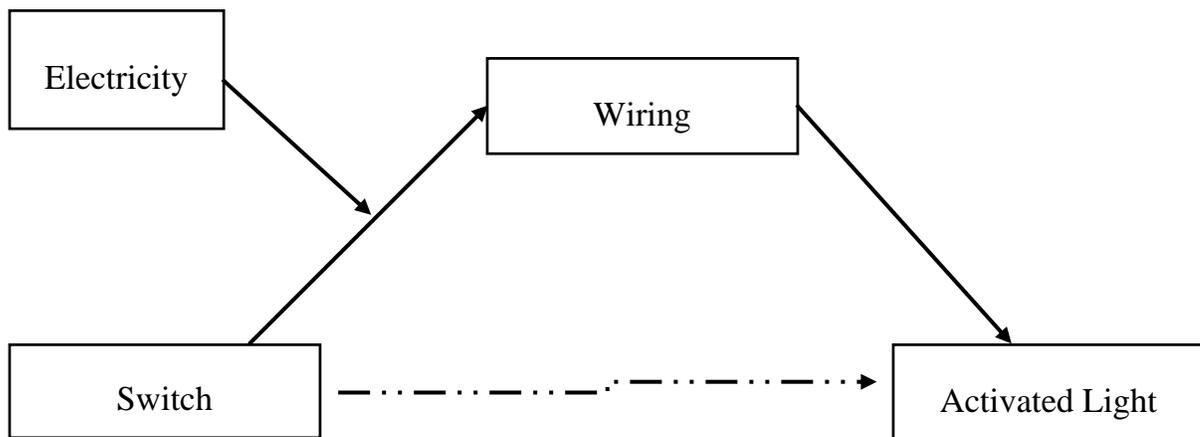


Figure 2. An example of a moderated-mediation conditional process model.

The light switch activates a light because of wiring (mediator) that connects them and this relationship is conditionally based on the amount of electricity

(moderator) moving through those wires. In other words, a light switch activates a light only when a sufficient amount of electricity moves through the wiring that connects them. The nature of conditional process modelling receives thorough review later in the *Analytic Approach* portion of the Methods section.

Hypothesis 1

Among individuals exhibiting relatively insecure attachment, greater traumatic effect of prior negative life events will predict pronounced dissociation.

Due to their history of maladaptive security-seeking thought and behavior, insecurely attached individuals should be ill-equipped to handle the psychological impact of a traumatic event. Consequently, to the extent that insecure individuals have been impacted by a traumatic life event, they should evince pronounced dissociation. Statistically, this would be represented as a two-way interaction between insecure attachment and traumatic effect on dissociation, such that greater traumatic effect among those with more insecure attachment will predict greater dissociation (see Figure 3). This interaction is critical; the subsequent hypotheses (H2 through H4) depend foundationally upon the existence of an attachment insecurity \times traumatic effect interaction on dissociation.

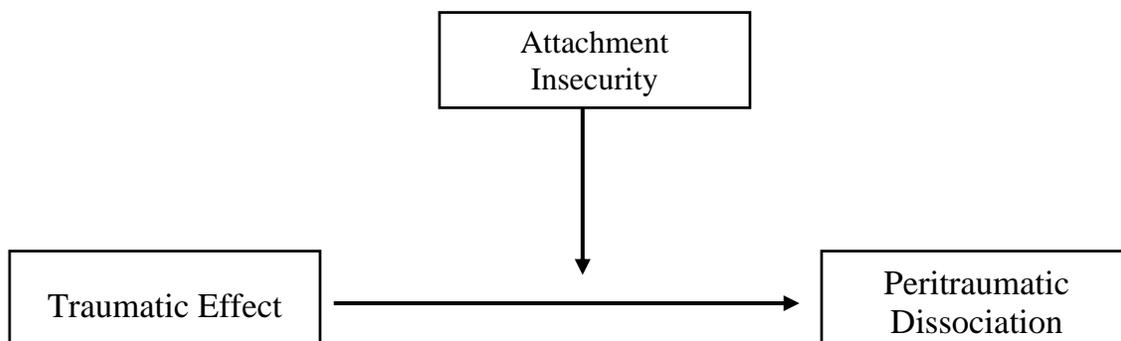


Figure 3. Interaction (moderation) between traumatic effect and insecure attachment predicting dissociation (hypothesis 1).

Hypothesis 2

Pronounced dissociation among insecurely attached individuals with high traumatic effect will mediate aversive psychological outcomes. The heightened dissociation (caused by the interaction predicted in H1) should lead to greater difficulties managing posttraumatic emotions, including high anxiety sensitivity and low distress tolerance. Support for this hypothesis would be obtained by showing that the relationship between traumatic effect and aversive outcomes is statistically explained by the elevated dissociation consequent of the interaction specified in H1 (see Figure 4).

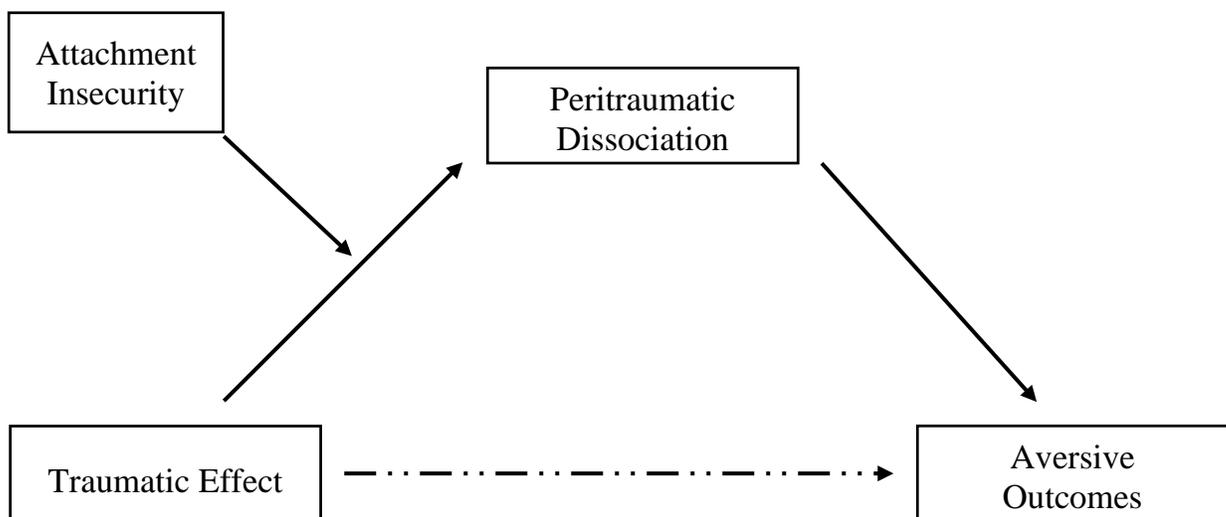


Figure 4. Proposed cognitive-affective model reflecting hypothesis 2

Hypothesis 3

Attachment-specific emotion dysregulation will amplify the interactive influence of insecure attachment and traumatic effect to heighten dissociation and subsequent aversive outcomes. This builds upon H2, adding emotion regulation as another moderating variable. Specifically, the destabilizing interactive effect of

insecure attachment and traumatic effect will be pronounced when individuals exhibit emotion dysregulation tendencies characteristic of their specific form of attachment insecurity (i.e., rumination among more insecure-anxious people; experiential avoidance and/or thought suppression among more insecure-avoidant people). Among individuals who are insecurely attached and have pronounced attachment-specific emotion dysregulation, greater traumatic effect should produce heightened dissociation and aversive consequences of that heightened dissociation. That is, there should be a three-way interaction (attachment insecurity \times attachment-specific emotion dysregulation \times traumatic effect) on dissociation, and level of dissociation should, in turn, mediate aversive outcomes (anxiety sensitivity and/or distress tolerance; see Figure 5).

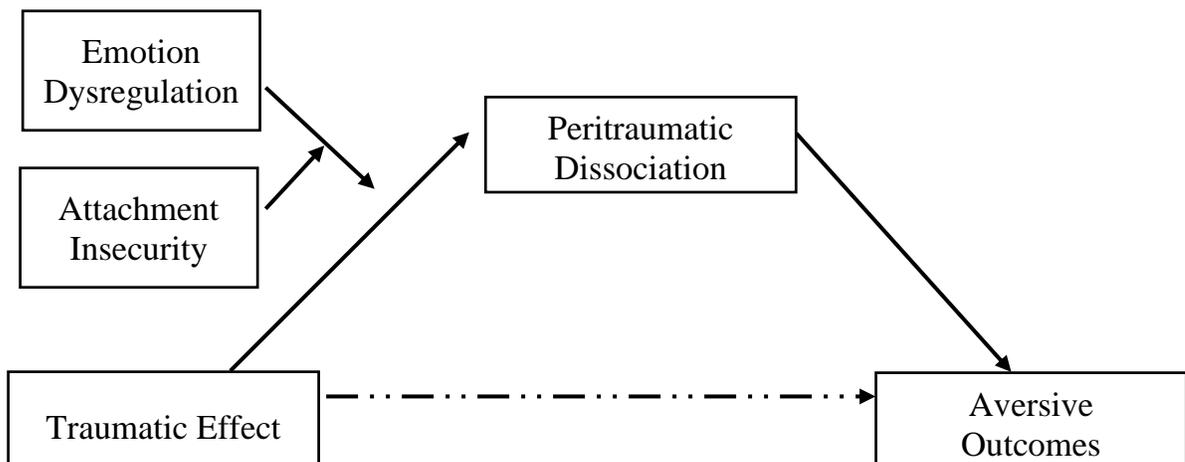


Figure 5. Proposed cognitive-affective model reflecting hypothesis 3

Hypothesis 4

Insecure attachment and high traumatic effect will interactively moderate dissociation (as in H1), and the subsequent relationship between dissociation and aversive outcomes will be moderated by attachment-specific emotion dysregulation. This represents an alternative to the predictions outlined in H3.

Consistent with the earlier literature review, H3 considered emotion dysregulation as a potential antecedent to dissociation. However, emotion dysregulation might alternatively act in conjunction with dissociation to precipitate aversive outcomes. Specifically, in the absence of attachment-specific emotion dysregulation, dissociation may function effectively to shield individuals from the brunt of traumatic ideation and thus not anticipate aversive outcomes. Yet, this potential buffering effect of dissociation may be undermined when attachment-specific emotion dysregulation is pronounced, such that the combination of heightened dissociation and elevated attachment-specific emotion dysregulation does predict increased aversive outcomes. That is, H4 predicts a two-way attachment insecurity \times traumatic effect interaction on dissociation that indirectly increases aversive outcomes by means of a two-way dissociation \times attachment-specific emotion dysregulation interaction (see Figure 6).

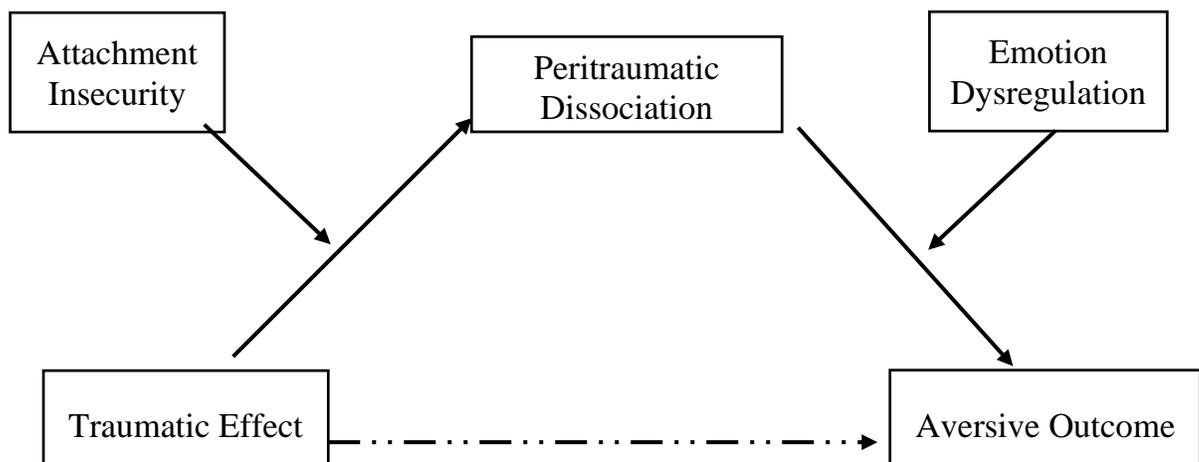


Figure 6. Proposed cognitive-affective model reflecting hypothesis 4

CHAPTER 3: METHODOLOGY

Participants

Four-hundred-and-three participants were recruited through Amazon's Mechanical Turk program (MTurk; nine participants were excluded from analyses for voluntarily not discussing their impactful life event). Of the remaining 394 participants, 205 were male and 188 were female (one participant did not report their gender), with a mean age of 35.89 (Range, 19-66). Participants were 71% Caucasian, 10% Black, 9% Asian, 6% Hispanic/Latino, and <4% Pacific Islander/Other. Regarding religious affiliation, participants were 45% Christian, 27% Agnostic, 19% Atheist, 5% Other, <2% Buddhist, Jewish, Muslim, and Hindu.

Procedure

Participants were offered \$3 to respond to the survey through MTurk. Upon reviewing the project description and providing consent (see Appendix A), participants initially completed survey assessments of attachment style, traumatic life event stress, emotion dysregulation (i.e., rumination, experiential avoidance, thought suppression), peritraumatic dissociation, anxiety sensitivity, and distress tolerance. Discriminant response items (e.g., *please select "moderately" from the options below*) were embedded throughout the survey to ensure participants were accurately reading and responding to questions. Following completion of the survey, a response ID number was generated for the participant. This ID number was only generated upon full completion and was needed to receive payment.

Materials

Experiences and Close Relationships Scale-Revised

Attachment security was measured using the Experiences in Close Relationships Scale – Revised (ECR-R; Fraley, Waller, & Brennan, 2000; see Appendix B). Thirty-six items are presented on a 7-point rating-scale (1 = Strongly Disagree, 7 = Strongly Agree). Items equally assess (18 each) avoidant tendencies (e.g., *I am afraid I will lose my partners love*) and anxious behavior (e.g., *I prefer not to show a partner how I feel deep down*). Internal consistency of the current sample for the anxious ($\alpha = .96$) and avoidant ($\alpha = .93$) subscales was high. Higher overall scores indicate higher attachment insecurity.

Posttraumatic Stress Disorder Checklist for DSM-5 and Criterion A

Posttraumatic symptom severity was measured using the Posttraumatic Stress Disorder Checklist for DSM-5 (Weathers, Litz, Keane, Palmieri, Marx, & Schnurr, 2013; see Appendix C), a 20-item measure. Additionally, Criterion A from the DSM-5 was used to assess trauma exposure (e.g., *Briefly describe your worst stressful experience, How did you experience it?*). Items on the PCL-5 relate to the symptom clusters of PTSD: intrusion (items 1-5), avoidance (items 6-7), alterations in cognitions and mood (items 8-14), alterations in arousal and reactivity (items 15-20). Participants rated how bothered they have been in the past month by each symptom on a 5-point scale (i.e., 0 = Not at all, 4 = Extremely) with higher scores indicating higher symptom severity. The PCL-5 demonstrated high internal consistency ($\alpha = .95$) in the current sample and has previously demonstrated strong test-retest reliability ($r = .82$) over a 1-week period (Blevins, Weathers, Davis, Witte, & Domino, 2015).

The Event Related Rumination Inventory

Rumination, as an emotion dysregulation strategy, was measured using the Event Related Rumination Inventory (ERRI; Cann et al., 2011; see Appendix D), a 20-item questionnaire. Items were rated on a 4-point scale regarding participant experience of the statements (i.e., 0 = not at all, 3 = often). Two subscales (10-items each) measure the intrusive nature (e.g., *I thought about the event when I didn't mean to*) and deliberate thought (e.g., *I force myself to think about my feelings and my experience*) related to the specific event. Contents were modified to direct participants' responses to the event identified by the participants on the PCL-5. Each subscale for the current sample showed high internal consistency (intrusive $\alpha = .95$; deliberate $\alpha = .90$) regarding psychometric reliability. Higher scores indicate higher rumination rates.

Acceptance and Action Questionnaire II

Experiential Avoidance, as an emotion dysregulation strategy, was measured using the Acceptance and Action Questionnaire II (AAQ-II; Bond et al., 2011; see Appendix E), a 7-item questionnaire. Items were rated on a 7-point scale (i.e., 1 = never true, 7 = always true). To keep the topic of thought trained on the traumatic event identified on the PCL-5, items were slightly modified to stay in appropriate context (e.g., *"I'm afraid of my feelings"* was changed to *"I'm afraid of my feelings regarding my worst event"*). Internal consistency for this measure in the current sample was high ($\alpha = .92$) and has previously demonstrated adequate reliability over 3 and 12-months ($r = .81$; $r = .79$; Bond et al., 2011). Higher scores indicate higher experiential avoidance.

White Bear Suppression Inventory

Thought suppression was measured with the White Bear Suppression Inventory (WBSI; Wegner & Zanakos, 1994; see Appendix F), a 15-item questionnaire. Items were rated on a 5-point scale (i.e., 1 = strongly disagree, 5 = strongly agree) on how much participants agreed with the presented statements. Again, to keep the topic of thought consistent (traumatic event identified on the PCL-5), the items were slightly modified to stay within context (e.g., “*I often do things to distract myself from my thoughts*” was changed to “*I often do things to distract myself from my thoughts about my worst event*”). The WBSI for the current sample was internally consistent ($\alpha = .93$), with strong previous reliability over temporal dimensions (12 weeks; $r = .80$; Muris, Merckelbach, & Horselenberg, 1996). Higher scores indicate higher thought suppression.

Peritraumatic Dissociative Experiences Questionnaire

Peritraumatic dissociation was measured on the Peritraumatic Dissociative Experiences Questionnaire (PDEQ; Marmar, Weiss, & Metzler, 1997; see Appendix G), a 10-item scale. Items were rated on a 5-point scale (i.e., 1 = not at all true, 5 = extremely true) as to how relevant the statements applied to the participants’ specific event. The instructions were slightly modified to keep the topic of thought consistent across participants (e.g., “*(...) circle the choice that best describes your experiences and reactions during your worst event and immediately afterward*”). The PDEQ for the current sample was internally consistent ($\alpha = .92$). Higher scores indicate greater rates of peritraumatic dissociation.

Anxiety Sensitivity Index-3

Anxiety sensitivity was measured using the Anxiety Sensitivity Index-3 (ASI-3; Taylor et al., 2007; see Appendix H), an 18-item questionnaire. The ASI-3 measures anxiety sensitivity across three constructs: physical symptoms (items 3, 4, 7, 8, 12, 15), social concerns (items 2, 5, 10, 14, 16, 18), and cognitive dyscontrol (items 1, 6, 9, 11, 13, 17). Items were rated on a 5-point scale (i.e., 1 = very little, 5 = very much) for how much participants' agreed with the anxiety-related statements (e.g., *It scares me when I am unable to keep my mind on a task*). The ASI-3 for the current sample has been demonstrated as internally consistent ($\alpha = .94$). Higher scores indicate higher anxiety sensitivity.

Distress Tolerance Scale

Distress tolerance was measured using the Distress Tolerance Scale (DTS; Simons & Gaher, 2005; see Appendix I), a 15-item questionnaire. The DTS measures distress tolerance over four subscales: tolerance (items 1, 3, 5), absorption (items 2, 4, 15), appraisal (items 6, 7, 9-12), and regulation (items 8, 13-14). Ratings reflect individuals' agreement with specific beliefs about their personal experience of distress, on a 5-point scale (i.e., 1 = strongly agree, 5 = strongly disagree; e.g., *there's nothing worse than feeling distressed or upset*). The DTS for the current sample had strong internal consistency ($\alpha = .95$), and previously demonstrated convergent validity (Simons & Gaher, 2005). To ease statistical interpretation, the DTS was recoded such that higher scores would indicate greater difficulties managing distress.

Analytic Strategy

Hypotheses were tested using SPSS 24.0 and the conditional process macro PROCESS (Hayes, 2013). The PROCESS macro allows SPSS to run a specific set

of regression-based path models (mediation and moderation) by combining statistical analyses into CPMs (moderated mediation; mediated moderation). The PROCESS tests mediation following similar guidelines originally published by Baron and Kenny (1986) while also giving moderational conditional effects (i.e., effect of the moderating variable at -1 standard deviation, mean, +1 standard deviation) following the inputted variables. The variance explained (i.e., R^2) for each subsequent model including additional variables is displayed, culminating in the direct effect (i.e., relationship between X and Y) and indirect effect (i.e., change in relationship between X and Y when including moderators and mediators). A statistical p value is not produced for these indirect effects as PROCESS uses bootstrap resampling to produce 95% confidence intervals that determine the significance of each pathway (confidence intervals that do not contain zero; Hayes, 2013; Hayes & Preacher, 2013). Additionally, all reported regression coefficients are unstandardized following recommendations of Hayes (2013).

CHAPTER 4: RESULTS

Descriptive Statistics and Correlations

Regarding posttraumatic stress symptom severity (PTSS), the current sample, on average ($M = 42.22$, $SD = 17.53$), experienced clinically significant symptoms relative to the recommended cutoff score of 33 (see Weathers et al., 2013). Variables assessed were related in a theoretically consistent manner (see Table 1 for a full summary of correlations, means, and standard deviations of study variables). For instance: higher PTSS scores were related to higher dissociation; higher anxious attachment scores were related to higher rates of rumination; higher avoidant attachment scores were related to higher rates of thought suppression and experiential avoidance; and rates of dissociation related to aversive outcomes (i.e., higher anxiety sensitivity and lower distress tolerance).

Table 1

Descriptive Statistics and Correlations

Variable	1	2	3	4	5	6	7	8	9	<i>M</i>	<i>SD</i>
Insecure	-									2.89	1.12
Anxious	.93**	-								2.97	1.39
Avoidant	.88**	.63**	-							2.83	1.10
PCL-5	.40**	.44**	.26**	-						42.22	17.53
PDEQ	.13*	.16**	.06	.49**	-					2.37	1.01
ERRI	.34**	.35**	.26**	.75**	.42**	-				1.08	.68
AAQ	.56**	.57**	.42**	.76**	.42**	.72**	-			16.79	8.26
WBSI	.35**	.38**	.23**	.68**	.40**	.72**	.66**	-		46.94	13.14
ASI	.39**	.48**	.20**	.52**	.39**	.45**	.56**	.52**	-	2.28	.91
DTI	.44**	.54**	.23**	.51**	.27**	.40**	.57**	.49**	.71**	2.64	1.03

Note. Insecure refers to total ECR-R scale; Anxious, & Avoidant refer to ECR-R subscales; PCL-5 refers to post-traumatic symptom severity; PDEQ refers to peritraumatic dissociation; ERRI refers to rumination; AAQ refers to experiential avoidance; WBSI refers to thought suppression; ASI refers to anxiety sensitivity; DTI refers to distress tolerance. ** $p < .01$, * $p < .05$.

Testing Hypotheses

Hypothesis 1 stated that an interaction (i.e., moderating effect) would occur between traumatic effect and insecure attachment when predicting dissociation. However, this interaction was not significant for insecure-anxious attachment, $b = .001$; $t(390) = .55$, $p = .58$ or insecure-avoidant attachment, $b = .004$; $t(390) = 1.75$, $p = .08$. Because all other hypotheses (H2-H4) were predicated on the existence of this particular interaction, all primary hypotheses were rejected.

Exploratory Analyses

To further analyze these data, exploratory analyses tested a variety of modified conditional process models that were generally related to the primary hypotheses. Based upon participants' brief description of their worst life event (provided on the PCL-5), participants were placed into various trauma categories (e.g., physical/sexual assault, motor accident, suicide-related). Trauma categories were determined using definitions provided in the Life Events Checklist-5 (LEC-5; Weathers et al., 2013; see Appendix K) of various events that meet DSM-V Criterion A for a traumatic event (an event that involved actual or threatened death, personal injury, sexual violence, or extreme stress; American Psychiatric Association, 2013) for a traumatic event. 109 participants had a sudden death of a loved one, 77 were in a motor vehicle accident, 76 experienced a physical/sexual assault, 32 were suicide-related events, 31 involved divorce (see Dreman, [1991] for a review of divorce trauma), 25 were in a natural disaster, 21 had serious physical injury, 9 had an experience of homelessness (see Goodman, Saxe, & Harvey, [1991] for a review of homelessness trauma), and 4 involved combat exposure. This categorical variation was then used to test whether support for the aforementioned hypotheses might be conditional upon the type of trauma experienced.

Physical assault can be defined as physical force used against a victim with the intent of harm or death, and sexual assault as forced sexual actions against a victim's will (Saltzman, Fanslow, McMahon, & Shelley, 1999). Given that attachment insecurity is an interpersonal construct and physical/sexual assault is an interpersonal trauma type, it was reasoned that victims of physical/sexual assault might be a group of particular relevance to our hypotheses. Additionally, physical/sexual assault has been shown to perpetuate higher posttraumatic symptoms than other trauma types (e.g., motor accidents, death of family member/friend; see Kelley, Weathers, McDevitt-Murphy, Eakin, & Flood, 2009). Importantly, physical/sexual assault causing higher posttraumatic symptoms than other trauma types can be explained by insecure attachment severity (Elwood & Williams, 2007; Sandberg, Suess, & Heaton, 2010). Theoretically, this is due to the interpersonal nature of physical/sexual assault; this feature may confirm already strained relationship schemas, and exacerbate emotion dysregulation tendencies held by insecurely attached individuals.

Within the current sample, victims of physical/sexual assault (i.e., individuals who reported experiencing such an event; e.g., *I was raped; attacked by my ex-husband; being sexually abused by my father*; $N = 76$) had significantly higher rates of PTSS ($M = 47.53$, $SD = 18.98$) than the remaining sample ($N = 318$). Additionally, compared to other study participants, victims of physical/sexual assault had higher rates of anxious attachment ($t(392) = 2.29$, $p = .02$), higher rates of dissociation ($t(392) = 2.42$, $p = .02$), marginally higher rates of thought suppression ($t(392) = 1.89$, $p = .06$), and higher intolerance of distress ($t(392) = 2.19$, $p = .03$; see Table 2 for a full comparison). Given the significant differences between victims of this specific trauma type and the remaining sample, the primary hypotheses were tested again substituting general traumatic effect for

victims of physical/sexual assault (coded 1/0 for yes/no). Because participants in the physical/sexual assault category exhibited high anxious-insecure attachment relative to the remaining sample yet did not differ in levels of avoidant-insecure attachment, exploratory analyses concentrated on retesting primary hypotheses examining victims of physical/sexual assault and anxious attachment.

Table 2

Comparing Victims of Physical/Sexual Assault to the Remaining Sample

Variable	<i>t</i>	<i>d</i>	<i>p</i>	Phy/Sex (N=76)		Sample (N=318)	
				<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Anxious	2.29	.29	.02	3.30	(1.47)	2.89	(1.36)
Avoidant	1.37	.17	.17	2.98	(1.11)	2.79	(1.09)
PDEQ	2.42	.30	.02	2.62	(1.06)	2.31	(.99)
WBSI	1.89	.24	.06	49.49	(13.24)	46.33	(13.06)
ERRI	.98	.13	.33	1.15	(.69)	1.06	(.68)
AAQ-II	3.51	.43	.001	19.74	(8.67)	16.09	(8.01)
DTI	2.19	.29	.03	2.87	(.96)	2.58	(1.03)
ASI-3	1.69	.22	.09	2.44	(.90)	2.24	(.91)
PCL-5	2.97	.37	.003	47.53	(19.00)	40.95	(16.95)

Note. Anxious & Avoidant refer to ECR-R subscales; PCL-5 refers to post-traumatic symptom severity; PDEQ refers to peritraumatic dissociation; ERRI refers to rumination; AAQ-II refers to experiential avoidance; WBSI refers to thought suppression; ASI-3 refers to anxiety sensitivity; DTI refers to distress tolerance; *df* = 392

Hypothesis 1 was retested identifying anxious attachment as a moderator of the relationship between physical/sexual assault and peritraumatic dissociation. A hierarchical linear regression was performed on dissociation, with main effects of mean-centered anxious attachment and dummy-coded physical/sexual assault

entered in the first block, and their interaction added in block two. The overall model was significant ($R^2 = .05$, $F(3,390) = 6.52$, $p < .01$). In block one, significant main effects were found for physical/sexual assault ($b = .266$; $t(390) = 2.09$, $p = .04$) and anxious attachment ($b = .108$; $t(390) = 2.97$, $p < .01$). In block two, there was a significant interaction ($b = .19$; $t(390) = 2.14$, $p = .03$), which was then decomposed using simple slopes analysis (Aiken & West, 1991). Among those who suffered physical/sexual assault, anxious attachment predicted greater dissociation ($b = .255$; $t(390) = 3.29$, $p < .01$), whereas this relationship was not significant among those who had not suffered physical/sexual assault ($b = .067$; $t(390) = 1.64$, $p = .10$). Furthermore, simple slopes testing the association between physical/sexual assault exposure and dissociation were examined at low (-1 SD) and high (+1 SD) attachment anxiety. Physical/sexual assault elicited greater dissociation among individuals high in attachment anxiety ($b = .268$; $t(390) = 2.08$, $p = .04$), but not among those low in attachment anxiety ($b = -.04$; $t(390) = -.21$, $p = .83$). The full pattern of results thus showed anxious attachment to amplify the level of dissociation experienced by victims of physical/sexual assault (see Figure 7).

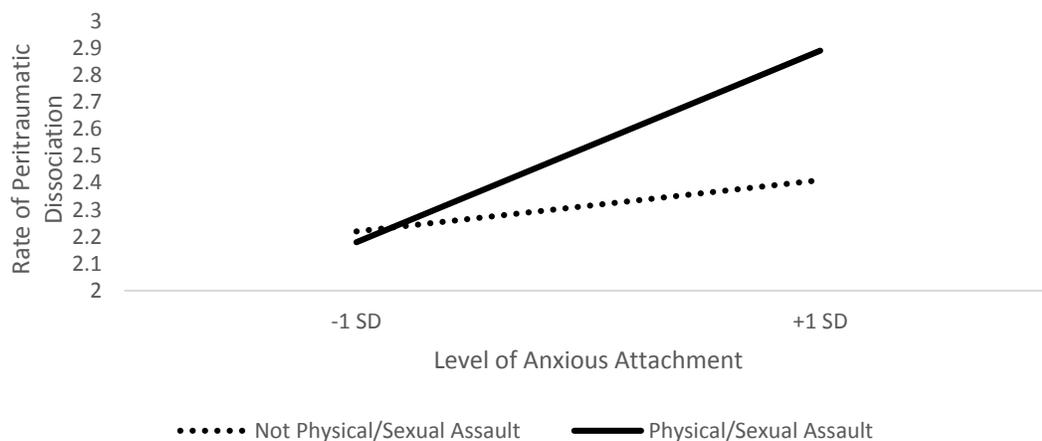


Figure 7. Interaction between physical/sexual assault exposure and anxious attachment on peritraumatic dissociation.

The exploratory rendering of hypothesis 2 states that higher rates of dissociation caused by physical/sexual assault exposure interacting with anxious attachment will mediate the relationship between physical/sexual assault and aversive outcomes. This effect was not present using anxiety sensitivity as the outcome variable; however, this effect was present when distress tolerance was entered as the outcome. That is, the extent to which the relationship between physical/sexual assault and distress tolerance could be explained by dissociation was conditional on levels of anxious attachment. In assessing this type of conditional process, Hayes (2009) prescribed that three effects need to be established: the physical/sexual assault \times anxious attachment interaction predicting dissociation (path a); dissociation predicting distress tolerance when controlling for physical/sexual assault (path b); and the indirect effect of physical/sexual assault on distress tolerance through dissociation when anxious attachment is relatively high (path c'). This procedure is not entirely equivalent to prescriptions by Baron and Kenny (1986); Hayes (2009) noted that, analytically, there is no need to demonstrate a direct relationship between X and Y. Specifically, if the path from X to Y can be explained through a third M variable, then X is understood to relate to Y indirectly through M. The primary aim of this test is to examine whether such an indirect effect is conditional on relatively high anxious attachment.

As Figure 8 reveals, this exploratory test of hypothesis 2 yielded supportive findings. First, results of the exploratory test of hypothesis 1 had demonstrated a significant physical/sexual assault \times anxious attachment interaction on dissociation (path a). Second, support for path b was evinced when a simultaneous regression of distress tolerance on physical/sexual assault and dissociation yielded a significant effect of dissociation ($b = .26$; $t(391) = 5.23$, $p < .01$). Third, anxious

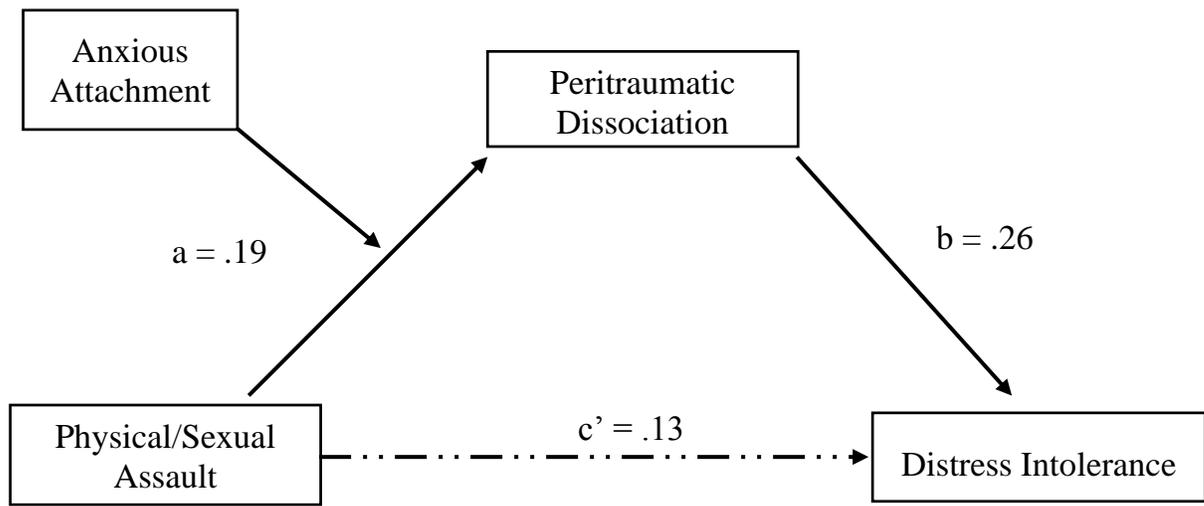


Figure 8. Exploratory hypothesis 2

attachment was observed to condition the indirect effect of physical/sexual assault on distress tolerance through dissociation. This was determined by computing c' at three levels of anxious attachment (-1 SD, M, +1 SD); for path c' to be significant, the indirect effect's 95% confidence interval (produced via 5,000 bias-corrected bootstrapped resamplings) should not contain zero. Confidence intervals contained zero both at low anxious attachment ($b = -.01$; 95% CI [-.136, .114]) and average anxious attachment ($b = .06$; CI [-.007, .139]). By contrast, the confidence interval at high anxious attachment did not contain zero ($b = .13$; 95% CI [.062, .214]; $R^2 = .08$, $F(2,391) = 16.21$, $p < .01$). Results thus showed that, among individuals relatively high in attachment anxiety, experiencing physical/sexual assault elicited pronounced dissociation which, in turn, reduced their capacity to tolerate distress.

An exploratory rendering of hypothesis 3 was carried out next. This analysis tested a theoretical model in which the indirect effect of physical/sexual assault on distress tolerance through dissociation is conditional upon both attachment anxiety and attachment-specific emotion dysregulation. As noted

earlier, support for this model requires a three-way physical/sexual assault \times insecure attachment \times attachment-specific emotion dysregulation interaction on dissociation and its mediating effect to amplify aversive outcomes. Effectively, this builds upon hypothesis 2 by adding attachment-specific emotion dysregulation as a moderator. Rumination is thought to be a characteristic emotion regulation difficulty among anxiously attached individuals; however, the predicted physical/sexual assault \times attachment anxiety \times rumination interaction was not significant ($b = .08$; $t(386) = .59$, $p = .55$). It was noteworthy that participants in the physical/sexual assault category were not significantly higher in rumination than the rest of the sample, though they were higher in experiential avoidance and thought suppression (see Table 2). Accordingly, an exploratory analysis tested two parallel three-way interactions in which experiential avoidance and thought suppression, respectively, replaced the rumination variable. Neither interaction was significant (experiential avoidance: $b = .012$; $t(386) = 1.22$, $p = .22$; thought suppression: $b = .004$; $t(386) = .60$, $p = .55$). Accordingly, this exploratory analysis did not yield support for hypothesis 3.

Next, an exploratory rendering of hypothesis 4 was performed. The difference between hypotheses three and four is subtle but importantly substantive with respect to theorized processes and analyses needed to test for them. Hypothesis 3 proposed that the overall mediational effect ($X \rightarrow M \rightarrow Y$) would be moderated by two variables (attachment anxiety and emotion dysregulation) as they interact with X . By contrast, hypothesis 4 proposed that the overall mediational effect ($X \rightarrow M \rightarrow Y$) would be moderated by one variable (attachment anxiety), but that this moderated mediation would be conditional on a second downstream moderational effect of the $M \rightarrow Y$ association by another variable (emotion dysregulation). Stated theoretically, hypothesis 4 proposes a

model in which: insecure attachment conditions the extent to which prior physical/sexual assault reduces distress tolerance by heightening dissociation, but only to the extent that dissociation is exacerbated by the employment of emotion dysregulation.

Following Hayes (2009), support for hypothesis 4 required demonstrating that the effect of physical/sexual assault on distress tolerance occurs indirectly through dissociation via two distinct two-way interactions: physical/sexual assault \times anxious attachment predicting dissociation (path a) and dissociation \times attachment-specific emotion dysregulation predicting distress tolerance (path b). Further, these effects must be conditional on levels of the moderators in each interaction (path c'; see Figure 9). As noted earlier, physical/sexual assault interacted with anxious attachment to predict greater dissociation (path a). The test of path b initially focused on the role of rumination, as rumination is thought to be a form of emotion dysregulation characteristic of anxiously attached individuals.

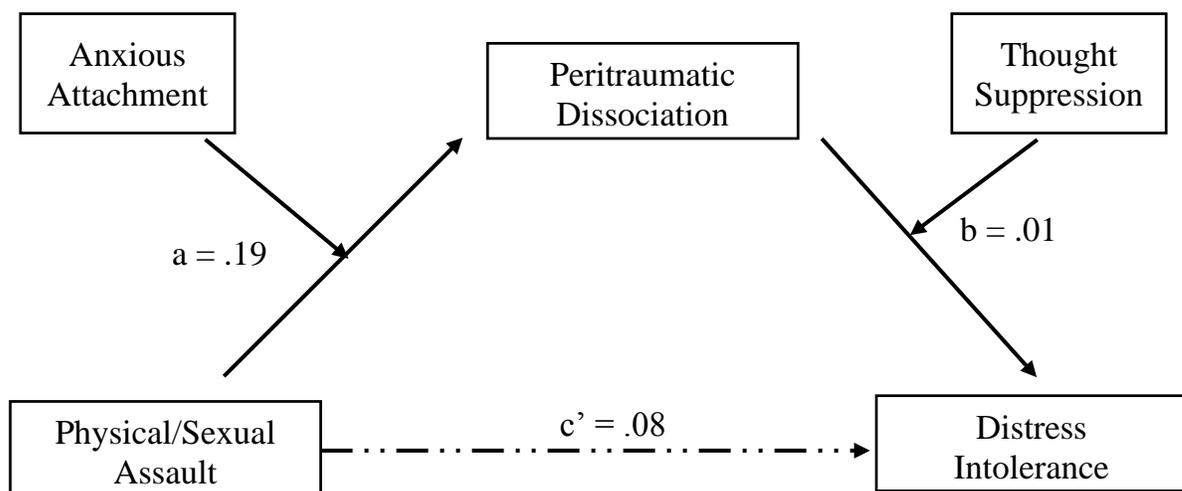


Figure 9. Revised cognitive-affective model explaining antecedents and consequences of peritraumatic dissociation

However, the dissociation \times rumination interaction on distress tolerance was not significant ($b = .04$; $t(389) = .69$, $p = .49$). Experiential avoidance likewise did not interact with dissociation in this analytic context ($b = .002$; $t(389) = .50$, $p = .62$). Thought suppression was the only emotion dysregulation measure observed to significantly interact with dissociation when predicting distress tolerance (path b; $b = .01$; $t(389) = 2.12$, $p = .04$).

Third, the conditional indirect effect of physical/sexual assault on distress tolerance through dissociation was tested by examining c' at varying levels of the two moderators. Nine levels of path c' were obtained, indicating the indirect effect at varying degrees of anxious attachment and thought suppression (see Table 3 for all nine paths of c').

Table 3

Conditional Process Model Summary

<i>Model Summary</i>	<i>b</i>	<i>SE</i>	<i>95% CI</i>
Conditional indirect effects of phy/sex on DTI through PDEQ when:			
Low anx attach & low WBSI	.007	.02	-.028, .041
Low anx attach & average WBSI	-.003	.02	-.061, .032
Low anx attach & high WBSI	-.006	.04	-.104, .068
Average anx attach & low WBSI	-.004	.02	-.051, .023
Average anx attach & average WBSI	.015	.02	-.003, .066
Average anx attach & high WBSI	.035	.03	-.002, .111
High anx attach & low WBSI	-.008	.03	-.074, .052
High anx attach & average WBSI	.034	.03	-.010, .094
High anx attach & high WBSI	.080	.04	.014, .172

Note. Anx Attach – Anxious Attachment; Phy/Sex – Physical/Sexual Assault Exposure (coded 1/0; yes/no); PDEQ – Peritraumatic Dissociation; WBSI – Thought Suppression; DTI – Distress Tolerance; Unstandardized coefficients reported (i.e., “ b ”; see Hayes, 2013); 95% Confidence intervals reported via bootstrap resampling methodology (i.e., 5,000 resamples)

The only case in which the confidence interval surrounding the estimate of path c' did not include zero was when both moderators were set at +1 SD ($b = .08$; 95% CI [.015, .166]; $R^2 = .26$, $F(4,389) = 34.35$, $p < .01$). Accordingly, the

indirect effect of physical/sexual assault on distress tolerance through dissociation was conditional on high levels of anxious attachment, as long as relatively high thought suppression functioned to amplify the effect of dissociation on distress tolerance.

CHAPTER 5: CONCLUSION

The current study sought to understand nuanced mechanisms that contribute to peritraumatic dissociation and its potential role in the development of risk factors for PTSD. It was hypothesized that attachment insecurity would act as a dispositional antecedent to dissociation following traumatic exposure, forming foundations of problematic emotional responses. Emotion dysregulation characteristic of specific insecure attachment styles was hypothesized to either interact with attachment insecurity as a secondary antecedent, or to exacerbate the relationship between dissociation and aversive psychological outcomes associated with PTSD development (i.e., anxiety sensitivity and distress tolerance).

In the full sample, the expected interaction between traumatic effect and attachment insecurity on dissociation levels was not significant. This hindered examination of subsequent primary hypotheses; however, evidence supporting the proposed cognitive-affective model was subsequently obtained through additional exploratory analyses concentrating on specific trauma categories (rather than general traumatic effect). Traumatic effect was reorganized into a categorical variable representing trauma type (e.g., physical/sexual assault, motor vehicle accident, suicide related). The experience or non-experience of physical/sexual assault was identified as a quasi-independent variable of interest. Results showed that, among individuals who experienced physical/sexual assault, those exhibiting relatively high anxious attachment exhibited greater dissociation and consequent distress tolerance, as long as their dissociative tendency was coupled with a penchant toward thought suppression.

Although support was not obtained for the primary hypothesis that general levels of traumatic effect would function as a predictor of dissociation and its

consequences, there appeared to be a sound theoretical basis for the restriction of the predicted effects to individuals in the physical/sexual assault category.

Physical/sexual assault appears distinct from the other trauma types reported by participants in this study (e.g., natural disasters, motor vehicle accidents). Whereas being mugged, abused, or raped entails distinctly distressing interpersonal contact, experiences such as being in a flood or car accident are not primarily characterized by violent and intentional interpersonal acts. In a physical or sexual assault, the extreme proximity of perpetrator to victim may significantly undermine the stability of victims' mental state. It makes sense that the psychological impact of such events should be pronounced among insecure-anxious individuals: those whose attachment history has instilled intense ambivalence about whether others are available for help or associated with unmitigated distress. Of course, this reasoning is *post hoc* in the present research; further study and replication efforts are needed to determine the reliability of this effect.

In broadening the characterization of the present findings, it is useful to conceptualize traumas as events that undermine normal, everyday beliefs in the benevolence of forces in the world (Janoff-Bulman, 1989). Individuals' broad outlook on reality – their worldview – may function as a psychological buffer against the sort of anxiety that traumatic events can produce (Pyszczynski, & Kesebir, 2011). However, under stressful conditions, individuals whose worldview is not wholly secure (e.g., those with an anxious attachment style) may be less able to sustain a benevolent and protective worldview. Among such people, experiencing interpersonal trauma may have pronounced, psychologically shattering effects that precipitate posttraumatic difficulties (Edmondson et al., 2011; Janoff-Bulman, 1989; Janoff-Bulman & Frieze, 1983). The present findings are consistent with that account. Similarly, Weber and Federico (2007) observed

anxiously attached individuals to perceive the world as a very dangerous place in which others cannot be trusted. Experiencing a physical/sexual assault might confirm the interpersonal malevolence implied in the worldview of anxiously attached individuals, revealing to them that the world *is in fact* very dangerous and that others *cannot in fact* be trusted. In this sense, the present findings may be taken to show that traumatic events confirm anxiously attached individuals' malevolent relationship schemas, that this confirmation is psychologically disruptive, and that peritraumatic dissociation is a central mechanism by which this disruption manifests. Consistent with research linking anxiety buffer disruption to peritraumatic dissociation among trauma survivors (Abdollahi, Pyszczynski, Maxfield, & Luszczynska, 2011), the present findings showed certain kinds of shattering events to provoke dissociation among anxiously attached people.

It was hypothesized that traumatized and anxiously attached individuals would exhibit pronounced rumination, and that this ruminative tendency would exacerbate negative effects of dissociation. This prediction followed from prior indications that anxiously attached individuals' trouble with emotion regulation stems from their proneness to affective hyperactivation and fixation on sources of distress (Burnette et al., 2007). However, results showed that, among anxiously attached individuals who had experienced physical/sexual assault, it was proneness to thought suppression – rather than rumination – that amplified the linkage between dissociation and lowered tolerance of distress. Thought suppression's moderating influence in this context reflected the unique impact of that form of emotion dysregulation to aggravate aversive consequences of dissociation. Why so?

Deeper consideration of the nature of dissociation and thought suppression suggests an answer. Dissociation involves separating thoughts of the reality of a trauma from painful emotions (Herman, 1999). This has the potential to be a protective shielding process that diminishes the brute force of a traumatic event long enough to permit adaptive action (e.g., fleeing). However, the protection potentially afforded by dissociation may be undermined by unique features of ironic processes considered to comprise thought suppression. Specifically, Wegner and Smart (1997) suggested that thought suppression involves unconscious monitoring of undesired thoughts; this unconscious monitoring has the ironic consequence of causing initially suppressed, undesired thoughts to be readily primed on the edge of consciousness – a so-called rebound effect. In the present study, it is possible that thought suppression precipitated rebound hyperaccessibility of traumatic ideation which, in turn, undermined the role of dissociation in segregating trauma-related thoughts and emotions. As observed, the consequence was reduced distress tolerance.

It is also fruitful to broadly consider the moderating role of thought suppression (i.e., its interaction with dissociation in predicting distress tolerance) as a downstream effect linked specifically to anxious attachment style. As mentioned earlier, anxiously attached people respond to distress by fixating on the cause of distress. However, if the cause of distress is the reactivation of trauma-related thoughts primed by unconscious monitoring, this could create an unconstructive cycle of unmanaged distress. For example, if an anxiously attached individual has their malevolent worldview confirmed by an encounter with physical or sexual assault, this may increase dissociation as a defensive effort to shield the self from painful emotions; however, the unconscious monitoring implicated in thought suppression processes might make those undesired thoughts

primed for reactivation, undermining dissociation's protective function and fomenting reductions in distress tolerance. Considered differently, perhaps ironic monitoring that accompanies thought suppression reflects a pernicious form of rumination, owing to the unconscious and thus uncontrolled role of monitoring in promoting rebound hyperaccessibility. This may help explain why distress tolerance was a predictable aversive outcome in the present study, but anxiety sensitivity was not. Whereas anxiety sensitivity reflects agitation regarding specific behavioral and somatic indicators, distress tolerance may be less domain specific, encompassing a broader and more monolithic concept of weakness that gets elicited by the decentering combination of dissociation and hyperaccessible concerns.

In sum, when coupled with psychological disjunctions characteristic of dissociation, unconscious monitoring may undermine perceived capacities for distress tolerance. As noted earlier, this process may have implications for susceptibility to PTSD development (Anestis, Tull, Bagge, & Gratz, 2012), and may therefore have important treatment implications.

Implications for Exposure Therapy

Extant research has highlighted linkages between anxious attachment and a myriad of aversive outcomes, including social anxiety (Eng, Heimberg, Hart, Schneier, & Liebowitz, 2001), depressive symptoms (Fowler, Allen, Oldham, & Frueh, 2013) and alexthymia (i.e., impairment in regulating and communicating emotion; Oskis et al., 2013). The present study additionally suggests a linkage between anxious attachment and unconscious monitoring processes tied to thought suppression, one which may have important clinical implications related to dissociation and PTSD symptomatology.

Discovery of this linkage may have important applied significance in the domain of exposure therapy. Exposure therapy involves in-person and image-based exposure to trauma-related stimuli, and has established empirical support as an effective treatment for PTSD (Institute of Medicine US, 2008). The overall goal of exposure therapy is to desensitize trauma sufferers from their experience and teach them how to express and engage their underlying emotions and memories in a safe, adaptive way. In other words: teach the victim not to avoid the trauma-related emotions and memories, and instead to effectively process them through cognitive reappraisal (i.e., restructure the understanding of the trauma), enhanced emotion regulation, and guidance. The present findings converge with recommendations in relevant literatures suggesting this treatment strategy should be modified for individuals with high levels of dissociation and insecure attachment styles. Foa and Kozak (1986) suggested that elevated levels of dissociation can cause resistance to emotionally engaging trauma-related stimuli. Further, Schmahl, Peper, and Bohus (2009) suggested that dissociative symptoms block emotional learning. Both consequences present roadblocks for the success of exposure therapy, as the very idea behind the treatment is teaching trauma victims to adaptively engage trauma-related stimuli.

Further, for this adaptive engagement to happen, the victim must learn to address and manage the emotions that manifest following exposure to the trauma-related stimuli. Given the present finding that anxious attachment interacted with physical/sexual assault to produce greater dissociation, and given that dissociation blocks the emotional learning and engagement needed to recover, perhaps addressing insecure attachment would be an additional advantageous step in treatment. Indeed, Cloitre, Koenen, Cohen, and Han (2002) developed a “phase-oriented” exposure treatment program for victims of childhood physical/sexual

assault that targets dissociation and compromised attachment styles. This phase-based treatment is organized to address difficulties regulating emotions, modulate insecure attachments, work on social interactions, and then advance to exposure treatment. The findings of the current study bolster recommendations for this line of treatment for victims of physical/sexual assault by highlighting the importance of insecure attachment as a vulnerability factor for dissociation and its aversive consequences.

Limitations

The current study had several limitations. First, the more promising results were based on *post hoc* analyses, and therefore need direct replication. Second, this study was correlational in nature, which begs the question of whether similar results would be obtained by adopting an experimental approach. For instance, to more firmly establish causality, future research should manipulate whether participants experience activated thoughts of physical assault to determine whether such an induction amplifies dissociation and distress tolerance among anxiously attached individuals who exhibit heightened thought suppression as they dissociate. Relatedly, the current study lacked a true control group, as trauma victims were compared to other trauma victims. The lack of a true comparison/control group limits the ability to effectively compare the current results to a non-traumatized sample. Future research should compare victims of physical/sexual assault to victims of intrapersonal trauma and non-traumatized, mentally healthy individuals to assess true differences.

Third, the design of the present study was cross-sectional in nature, raising the question of whether similar results would be obtained in a longitudinal assessment. A longitudinal assessment would offer the benefits of examining these

mechanisms over time. The moderating effect of anxious attachment to amplify dissociation is theorized to happen *during* the physical/sexual assault. By contrast, the moderating effect of thought suppression on the relationship between dissociation and distress tolerance is theorized to happen *after* the traumatic event. Establishing such effects in a longitudinal context would reinforce characterization of this timeline, and likewise could explain dissociation's predictive significance for PTSD through lowered distress tolerance over a temporal dimension.

Fourth, all study measures were self-reported and could be improved upon using structured or semi-structured clinical interviews. Perhaps such interviews would yield a more reliable and deeper understanding of the severity of a traumatic experience, background of the victim, and other potential influences (e.g., if the trauma was early-onset, late-onset, chronic). Clinical interview methodologies could shed light on varied nature of traumatic experiences, which may help expand the currently proposed cognitive-affective model. For example, experiencing a traumatic event in childhood may have different implications for dissociation than experiencing a traumatic event in adulthood (Ehring & Quack, 2010). Further, experiencing multiple lifetime traumas has a unique cumulative effect on psychological stability (e.g., Sledjeski, Speisman, & Dierker, 2008).

Future Directions

The present results provided preliminary support for the proposed cognitive-affective model, according to which the association between dissociation and constructs linked to PTSD is conditionally based on a complex pattern of moderated mediation. Results pointed to the centrality of interpersonal trauma when implicating attachment style in the sequence of processes that promote dissociation, and associated thought suppression and its ironic capacity to

amplify the accessibility of negative thoughts in the process by which dissociation undermines capacities to tolerate distress.

It will be important to test whether the present model could be expanded to improve its capacity to predict dissociative responses and aversive consequences connected to various traumatic events, including those that are not so clearly interpersonal. Traumatic events are deeply varied in nature. Physical/sexual assault, robbery, tragic death of a loved one, war, and motor vehicle accidents are among common civilian traumas experienced (Frans, Rimmö, Åberg, & Fredrikson, 2005), with each having disparate variables of interest (e.g., intrapersonal, loss of social support, fear of driving). Surely, variables other than those measured in the present study could interact with attachment style and dissociation, for a variety of reasons. Extending the cognitive-affective model in efforts to predict antecedents and consequences of dissociation in the context of varied trauma types would increase the model's predictive and applied utility.

Additionally, the present findings highlight anxious attachment as a traumatic vulnerability; however, avoidant attachment remains of important interest. Avoidant attachment compounded with interpersonal trauma types that theoretically highlight avoidance (e.g., sudden loss of loved one) could compound the maladaptive tendencies of that attachment style. For example, an avoidantly attached individual confronted with the loss of a loved one could be prone to evading the situation (e.g., experiential avoidance) and to resist confronting the reality of perceived abandonment (e.g., thought suppression). As with anxiously attached victims of physical/sexual assault, sudden death of a loved one could confirm the worldview of avoidant attachment that attachment figures do not care for the victim and abandon them in times of distress. As with testing various

trauma types, examining potential interactions with avoidant attachment would further the utility of the model.

Conclusion

The presently proposed cognitive-affective model of causes and consequences of dissociation presents an empirical basis for understanding processes that contribute to PTSD development. By identifying moderators and consequences of peritraumatic dissociation, the present platform may be useful for clinicians seeking advances in effective PTSD treatment. Results demonstrated a nuanced role of attachment insecurity and contextual dependency on trauma type. Accordingly, future research should further explore both the role of avoidant attachment and the model's applicability across trauma types. Doing so may aid the search for effective clinical treatment of various trauma sufferers whose difficulties are linked to dissociative experience.

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APPENDICES

APPENDIX A: INFORMED CONSENT

Informed Consent Form

You are invited to participate in a survey conducted by Dr. Kosloff of the Department of Psychology, California State University, Fresno, and his graduate student Gabriel Anderson. If you decide to respond to this survey, please carefully read the information stated below prior to providing consent. This document describes the survey and your rights as a participant in this research.

In this survey, you will be asked to complete a brief set of questionnaires taking approximately 30 minutes.

There are no obvious risks of participating in this research beyond those involved in routine psychological tests. However, some of the items may contain information that could potentially cause you to experience discomfort. Your participation in this project is completely voluntary. If you decide to participate, you are free to withdraw your consent and to discontinue participation without penalty and at any time (including right now).

We cannot guarantee that research participants will receive any benefits from participating in this study, but everyone who helps with this work will be contributing directly to our knowledge of psychology.

Absolute confidentiality of data and records will be maintained. Names will not be maintained with data protocols, and informed consent forms will be kept separate from data. All raw data and forms will be kept under locked secure conditions, and destroyed five years after collection.

The Committee on the Protection of Human Subjects at California State University, Fresno has reviewed and approved the present research. If you have any additional questions later, Dr. Kosloff (559-278-3043) will be happy to answer them. Questions regarding the rights of research participants may be directed to Dr. Kris Clarke, Chair, CSUF Committee on the Protection of Human Subjects, (559) 278-2985.

YOU ARE MAKING A DECISION WHETHER OR NOT TO PARTICIPATE. YOUR SIGNATURE INDICATES THAT YOU HAVE DECIDED TO PARTICIPATE, HAVING READ THE INFORMATION PROVIDED ABOVE.

*****ELECTRONIC SIGNATURE*****

**APPENDIX B: EXPERIENCE IN CLOSE RELATIONSHIPS-
REVISED**

Experience in Close Relationships-Revised

Instructions: The statements below concern how you feel in emotionally intimate relationships. We are interested in how you *generally* experience relationships, not just in what is happening in a current relationship. Respond to each statement by clicking a circle to indicate how much you agree or disagree with the statement. Each statement is rated on a scale from 1 to 7, with 1=Strongly Disagree and 7=Strongly Agree.

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree or Disagree	Somewhat Agree	Agree	Strongly Agree
1	2	3	4	5	6	7

1. I'm afraid that I will lose my partner's love.
2. I often worry that my partner will not want to stay with me.
3. I often worry that my partner doesn't really love me.
4. I worry that romantic partners won't care about me as much as I care about them.
5. I often wish that my partner's feelings for me were as strong as my feelings for him or her.
6. I worry a lot about my relationships.
7. When my partner is out of sight, I worry that he or she might become interested in someone else.
8. When I show my feelings for romantic partners, I'm afraid they will not feel the same about me.
9. I rarely worry about my partner leaving me.
10. My romantic partner makes me doubt myself.
11. I do not often worry about being abandoned.
12. I find that my partner(s) don't want to get as close as I would like.
13. Sometimes romantic partners change their feelings about me for no apparent reason.
14. My desire to be very close sometimes scares people away.
15. I'm afraid that once a romantic partner gets to know me, he or she won't like who I really am.
16. It makes me mad that I don't get the affection and support I need from my partner.
17. I worry that I won't measure up to other people.
18. My partner only seems to notice me when I'm angry.
19. I prefer not to show a partner how I feel deep down.
20. I feel comfortable sharing my private thoughts and feelings with my partner.
21. I find it difficult to allow myself to depend on romantic partners.
22. I am very comfortable being close to romantic partners.
23. I don't feel comfortable opening up to romantic partners.
24. I prefer not to be too close to romantic partners.
25. I get uncomfortable when a romantic partner wants to be very close.
26. I find it relatively easy to get close to my partner.
27. It's not difficult for me to get close to my partner.
28. I usually discuss my problems and concerns with my partner.
29. It helps to turn to my romantic partner in times of need.
30. I tell my partner just about everything.
31. I talk things over with my partner.
32. I am nervous when partners get too close to me.
33. I feel comfortable depending on romantic partners.
34. I find it easy to depend on romantic partners.
35. It's easy for me to be affectionate with my partner.
36. My partner really understands me and my needs.

APPENDIX C: POSTTRAUMATIC STRESS DISORDER
CHECKLIST FOR DSM-V AND CRITERION A

PCL-5 and Criterion A

Part 1

Instructions: This questionnaire asks about problems you may have had after a very stressful experience involving actual or threatened death, serious injury, or sexual violence. It could be something that happened to you directly, something you witnessed, or something you learned happened to a close family member or close friend. Some examples are a serious accident; fire; disaster such as a hurricane, tornado, or earthquake; physical or sexual attack or abuse; war; homicide; or suicide.

First, please answer a few questions about your worst event, which for this questionnaire means the event that currently bothers you the most. This could be one of the examples above or some other very stressful experience. Also, it could be a single event (for example, a car crash) or multiple similar events (for example, multiple stressful events in a war-zone or repeated sexual abuse).

Briefly identify the worst event (if you feel comfortable doing so)

How long ago did it happen? (please estimate if you are not sure)

Did it involve actual or threatened death, serious injury, or sexual violence?

- Yes
 No

How did you experience it?

- It happened to me directly
 I witnessed it
 I learned about it happening to a close family member or close friend
 I was repeatedly exposed to details about it as part of my job (for example, paramedic, police, military, or other first responder)
 Other, please describe

If the event involved the death of a close family member or close friend, was it due to some kind of accident or violence, or was it due to natural causes?

- Accident or violence
 Natural Causes
 Not applicable (The event did not involve the death of a close family member or close friend)

Part 2

Below is a list of problems that people sometimes have in response to a very stressful experience. Keeping your worst event in mind, please read each problem carefully and then circle one of the numbers to the right to indicate how much you have been bothered by that problem in the past month.

Not at All	A little Bit	Moderately	Quite a bit	Extremely
0	1	2	3	4

In the past month, how much were you bothered by:

1. Repeated, disturbing, and unwanted memories of the stressful experience?
2. Repeated, disturbing dreams of the stressful experience?
3. Suddenly feeling or acting as if the stressful experience were actually happening again (as if you were actually back reliving it)?
4. Feeling very upset when something reminded you of the stressful experience?
5. Having strong physical reactions when something reminded you of the stressful experience (for example, heart pounding, trouble breathing, sweating)?
6. Avoiding memories, thoughts or feelings relate to the stressful experience?
7. Avoiding external reminders of the stressful experience (for example, people, places, conversations, activities, objects, or situations)?
8. Trouble remembering important parts of the stressful experience?
9. Having strong negative beliefs about yourself, other people, or the world (for example, having thoughts such as: I am bad, there is something seriously wrong with me, no one can be trusted, the world is completely dangerous)?
10. Blaming yourself or someone else for the stressful experience or what happened after it?
11. Having strong negative feelings such as fear, horror, anger, guilt, or shame?
12. Loss of interest in activities that you used to enjoy?
13. Feeling distant or cut off from other people?
14. Trouble experiencing positive feelings (for example, being unable to feel happiness or have loving feelings for people close to you)?
15. Irritable behavior, angry outbursts, or acting aggressively?
16. Taking too many risks or doing things that could cause you harm?
17. Being “superalert” or watchful or on guard?
18. Feeling jumpy or easily startled?
19. Having difficulty concentrating?
20. Trouble falling or staying asleep?

APPENDIX D: THE EVENT RELATED RUMINATION
INVENTORY

The Event Related Rumination Inventory

After an experience like the one you reported as being most stressful or traumatic, people sometimes, but not always, find themselves having thoughts about their experience event though they don't try to think about it. Indicate for the following items how often, if at all, you had the experiences described during the weeks immediately after the event.

Not at All			Often
0	1	2	3

1. I thought about the event when I did not mean to
2. Thoughts about the event came to mind and I could not stop thinking about them
3. Thoughts about the event distracted me or kept me from being able to concentrate
4. I could not keep images or thoughts about the event from entering my mind
5. Thoughts, memories, or images of the event came to mind even when I did not want them
6. Thoughts about the event caused me to relive my experience
7. Reminders of the event brought back thoughts about my experience
8. I found myself automatically thinking about what had happened
9. Other things kept leading me to think about my experience
10. I tried not to think about the event, but could not keep the thoughts from my mind.
11. I thought about whether I could find meaning from my experience
12. I thought about whether changes in my life have come from dealing with my experience
13. I forced myself to think about my feelings about my experience
14. I thought about whether I have learned anything as a result of my experience
15. I thought about whether the experience has changed my beliefs about the world
16. I thought about the experience might mean for my future
17. I thought about whether my relationships with others have changed following my experience
18. I forced myself to deal with my feelings about the event
19. I deliberately thought about how event had affected me.
20. I thought about the event and tried to understand what happened.

APPENDIX E: ACCEPTANCE AND ACTION
QUESTIONNAIRE II (MODIFIED)

Acceptance and Action Questionnaire II (Modified)

Below you will find a list of statements. *Keeping your event in mind*, please rate how true each statement is for you by circling a number next to it. Use the scale below to make your choice

Never True	Very seldom true	Seldom true	Sometimes true	Frequently true	Almost always true	Always true
1	2	3	4	5	6	7

1. My painful experiences and memories *about the event* make it difficult for me to live a life that I would value
2. I'm afraid of my feelings *regarding the event*.
3. I worry about not being able to control my worries and feelings *regarding the event*.
4. My painful memories *regarding the event* prevent me from having a fulfilling life.
5. Emotions *related to the event* cause problems in my life
6. It seems like most people are handling their lives better than I am
7. Worries *about the event* get in the way of my success

APPENDIX F: WHITE BEAR SUPPRESSION INVENTORY
(MODIFIED)

White Bear Suppression Inventory (Modified)

Keeping in mind your event used in the previous questionnaires, please answer the following:

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

1. I often do things to distract myself from my thoughts *about the event*
2. There are things *about the event* that I try to not think about
3. I wish that I could stop thinking of *the event*
4. Sometimes I stay busy just to keep thoughts *of the event* from intruding on my mind
5. My thoughts *about the event* frequently return to one idea
6. There are images *of the event* that come to mind that I cannot erase
7. I have thoughts *about the event* that I cannot stop
8. There are thoughts *about the event* that keep jumping into my head
9. Sometimes I really wish I could stop thinking *about the event*
10. Sometimes my mind races so fast that I wish I could stop it
11. There are many thoughts *about the event* that I have that I don't tell anyone
12. Sometimes I wonder why I have the thoughts *regarding the event*
13. I often have thoughts *about the event* that I try to avoid
14. I always try put *the event* out of my mind
15. *I prefer* not to think about the event

APPENDIX G: PERITRAUMATIC DISSOCIATIVE
EXPERIENCES QUESTIONNAIRE (MODIFIED)

Peritraumatic Dissociative Experiences Questionnaire (Modified)

Instructions: Please complete the items below by circling the choice that best describes your experiences and reactions *during your worst event and immediately afterward*. If an item does not apply to the experience, please circle “Not at all true.”

Not at all true	Slightly true	Somewhat true	Very true	Extremely True
1	2	3	4	5

1. I had moments of losing track of what was going on. I “blanked out” or “spaced out” or in some way felt that I was not part of what was going on
2. I found that I was on “automatic pilot”. I ended up doing things that I later realized I hadn’t actively decided to do.
3. My sense of time changed. Things seemed to be happening in slow motion
4. What was happening seemed unreal to me, like I was in a dream, or watching a movie or play.
5. I felt as though I were a spectator watching what was happening to me, as if I were floating above the scene or observing it as an outsider.
6. There were moments when my sense of my own body seemed distorted or changed. I felt disconnected from my own body, or it was unusually large or small.
7. I felt as though things that were actually happening to others were happening to me – like I was in danger when I really wasn’t
8. I was surprised to find afterwards that a lot of things happened at the time I was not aware of, especially things I ordinarily would have noticed.
9. I felt confused; That is, there were moments when I had difficulty making sense of what was happening
10. I felt disoriented; that is, there were moments when I felt uncertain about where I was or what time it was.

APPENDIX H: ANXIETY SENSITIVITY INDEX-3

Anxiety Sensitivity Index-3

Very Little				Very Much
1	2	3	4	5

1. When my stomach is upset, I worry that I might be seriously ill.
2. When I notice my heart skipping a beat, I worry that there is something seriously wrong with me.
3. When I feel pain in my chest, I worry that I'm going to have a heart attack.
4. When my chest feels tight, I get scared that I won't be able to breathe properly.
5. When my throat feels tight, I worry that I could choke to death.
6. It scares me when my heart beats rapidly.
7. When my thoughts seem to speed up, I worry that I might be going crazy.
8. When my mind goes blank, I worry there is something terribly wrong with me.
9. When I feel "spacey" or spaced out I worry that I may be mentally ill.
10. When I have trouble thinking clearly, I worry that there is something wrong with me.
11. When I cannot keep my mind on a task, I worry that I might be going crazy.
12. It scares me when I am unable to keep my mind on a task.
13. I worry that other people will notice my anxiety.
14. When I tremble in the presence of others, I fear what people might think of me.
15. It scares me when I blush in front of people.
16. When I begin to sweat in a social situation, I fear people will think negatively of me.
17. I think it would be horrible for me to faint in public.
18. It is important for me not to appear nervous.

APPENDIX I: DISTRESS TOLERANCE SCALE

Distress Tolerance Scale

Directions: Think of times that you felt distressed or upset. Select the item from the menu that best describes your beliefs about feeling distressed or upset.

Strongly Agree	Mildly Agree	Agree and Disagree Equally	Mildly Disagree	Strongly Disagree
1	2	3	4	5

1. Feeling distressed or upset is unbearable to me
2. When I feel distressed or upset, all I can think about is how bad I feel
3. I can't handle feeling distressed or upset
4. My feelings of distress are so intense that they completely take over
5. There's nothing worse than feeling distressed or upset
6. I can tolerate being distressed or upset as well as most people
7. My feelings of distress or being upset are not acceptable
8. I'll do anything to avoid feeling distressed or upset
9. Other people seem to be able to tolerate feeling distressed or upset better than I can
10. Being distressed or upset is always a major ordeal for me
11. I am ashamed of myself when I feel distressed or upset
12. My feelings of distress or being upset scare me
13. I'll do anything to stop feeling distressed or upset
14. When I feel distressed or upset, I must do something about it immediately
15. When I feel distressed or upset, I cannot help but concentrate on how bad the distress actually feels

APPENDIX J: DEMOGRAPHICS

Demographics

Please answer the following:

1. How old are you? _____
2. What is your sex?
 - a. Male
 - b. Female
3. What race/ethnicity are you?
 - a. Asian
 - b. Black, Non-Hispanic
 - c. Hispanic/Latino
 - d. Native Hawaiian/Pacific Islander
 - e. White, Non-Hispanic
 - f. Other (please indicate: _____)
4. Which one of the following religious categories best describes the beliefs that you currently have (not necessarily what religion you grew up with)?
 - a. Agnostic (unsure about God's existence)
 - b. Atheist (don't believe in God)
 - c. Buddhist
 - d. Christian
 - e. Hindu
 - f. Jewish
 - g. Muslim
 - h. Other (please indicate: _____)
5. Indicate your political orientation on the following scale:

Very Liberal	-	Somewhat liberal	-	Neither Liberal or Conservative	-	Somewhat Conservative	-	Very Conservative
1	2	3	4	5	6	7	8	9

6. Are you in a relationship?
 - a. Yes, I am married
 - b. Yes, I am engaged
 - c. Yes, but I am neither married nor engaged
 - d. No
7. How would you classify your relationship?
 - a. I am in a relationship with a member of the opposite sex
 - b. I am in a relationship with a member of the same sex, who is a male
 - c. I am in a relationship with a member of the same sex, who is a female
 - d. I am not in a relationship
8. How long have you and your current relationship partner been together?
 - a. How long? _____
 - b. Not in a relationship
9. How many relationships have you been in (not including the current relationship you might be in)?
 - a. 0
 - b. 1
 - c. 2
 - d. 3

- e. 4
- f. 5
- g. 6 or more

10. Roughly, how long ON AVERAGE did all of your previous relationships last?
- a. How long? _____
 - b. Not in a relationship