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# Sexual Trauma, Attachment, and Dissociation in Eating Disorder Populations

Kelly Cauley Rivinius  
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LOMA LINDA UNIVERSITY  
School of Behavioral Health  
in conjunction with the  
Department of Psychology

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Sexual Trauma, Attachment, and Dissociation in Eating Disorder Populations

by

Kelly Cauley Rivinius, M.A.

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Project submitted in partial satisfaction of  
the requirements for the degree of  
Doctor of Psychology

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June 2013

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**APPROVAL PAGE  
TO BE REPLACED**

## ACKNOWLEDGMENTS

“But the excellence of knowledge is that wisdom gives life to those who have it.”

(Ecclesiastes 7:12b)

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## TABLE OF CONTENTS

Approval Page.....	iii
Acknowledgements.....	iv
List of Figures.....	vii
List of Tables .....	viii
List of Abbreviations .....	ix
Abstract.....	x
Chapters:	
1. Introduction.....	1
Dissociation and Trauma .....	1
Aims of Study/Research Objectives .....	3
Trauma and Dissociation in Eating Disorder Populations .....	10
2. Materials and Methods.....	14
Participants.....	14
Measures .....	14
Adult Attachment Scale .....	15
Dissociative Experiences Scale, Second Edition .....	16
Trauma Symptom Checklist .....	16
Procedure .....	17
Hypotheses.....	17
Hypothesis 1.....	17
Hypothesis 2.....	17
Hypothesis 3.....	18
3. Results and Discussion .....	20
Analyses .....	20
Data Screening .....	20
Bootstrapping.....	23
Multiple Mediations in Parallel .....	25

Moderated Mediations in Parallel.....	25
Limitations of the Study.....	27
Treatment Recommendations .....	28
4. Conclusions.....	30
References.....	31
Appendices.....	39

## LIST OF FIGURES

### Figures

1. Conceptual Model of Attachment Style Mediating the Relationship Between Sexual Trauma and Dissociation .....18
2. Conceptual Model of the Moderating Relationship of Secure Attachment to the Mediating Relationship of Insecure Attachment to Dissociation due to Sexual Trauma .....19
3. Relationship of Sexual Trauma to Dissociation and Attachment .....25
4. Mediating Relationship of Attachment to the Relationship Between Sexual Trauma and Dissociation .....26
5. Moderating Relationship of Secure Attachment to the Mediating Relationship of Insecure Attachment to Dissociation due to Sexual Trauma .....27



## LIST OF TABLES

### Tables

1.	Percentage of Sample in Each Eating Disorder Diagnostic Category .....	20
2.	Percentage of Sample At, Below, and Above Dissociative Criteria Cut-off .....	21
3.	Percentage of Sample At, Below, and Above Total Trauma Score Cut-off for Significant Childhood Traumas .....	21
4.	Relationship of Sexual Trauma to Dissociation, Avoidant, Anxious, and Secure Attachments .....	24
5.	Relationship of Avoidant, Anxious, and Secure Attachments to Dissociation.....	24
6.	Interactions between Secure Attachment and Sexual Trauma, Avoidant and Anxious Attachments.....	25

## ABBREVIATIONS

AAS	Adult Attachment Scale
BPD	Borderline Personality Disorder
DES	Dissociative Experiences Scale
DES-II	Dissociative Experiences Scale, Second Edition
DESNOS	Disorders of Extreme Stress Not Otherwise Specified
DID	Dissociative Identity Disorder
EMDR	Eye Movement Desensitization and Reprocessing
HPA	Hypothalamic-Pituitary-Adrenal
HR	Holographic Reprocessing
PTSD	Posttraumatic Stress Disorder
SATI	Sexual Abuse Trauma Index
STAXI	State-Trait Anger Expression Inventory
TSC-40	Trauma Symptom Checklist

## ABSTRACT

Sexual Trauma, Attachment, and Dissociation in Eating Disorder Populations

by

Kelly Cauley Rivinius

Doctor of Psychology, Graduate Program in Psychology  
Loma Linda University, June 2013  
Dr. Kendal Boyd, Chairperson

The current study examined the process by which attachment influences dissociation in the presence of sexual trauma history. Sixty-two female individuals completed measures of attachment, trauma, and dissociation as a part of the intake assessment process the first week of their admission to a partial hospitalization program for treatment of an eating disorder. These archival data (2006 – 2013) were hand scored and coded by the researcher to ensure consistency across measures. Multiple mediations in parallel and moderated mediations in parallel were run using Hayes' (2012) bootstrapping PROCESS macros. Consistent with predictions derived from the literature, sexual trauma significantly predicted insecure attachment, although secure attachment was significantly negatively predicted by sexual trauma. Indirect effects of sexual trauma on dissociative pathology through insecure and secure attachment styles were not significant for participants. These findings may be useful in the application of trauma-focused work for eating disorder diagnoses.

# **CHAPTER 1**

## **INTRODUCTION**

Daydreaming while driving home from work, hitting the runner's stride, and achieving psychological flow all represent dissociative processes. Between these population-normal acts of dissociation and severe dissociative pathology such as dissociative identity disorder (DID) lie other forms of dissociation often disregarded as such by many clinical practitioners: somatic distress, including hypochondriasis, somatization disorder, and conversion disorder; anxiety disorders, such as panic disorders and panic attacks; eating disorders, and other self-harm behaviors, including cutting, self-mutilating, burning, etc. (Liotti, 1992; Fonagy, 1995; Farber, 2008). Although the dissociative spectrum is quite wide, pathological dissociation expresses a break from normal development and indicates severe psychological dysfunction (Waller, Putnam, & Carlson, 1996).

### **Dissociation and Trauma**

Conceptualized by Pierre Janet at the end of the 19<sup>th</sup> century, dissociative processes in response to traumatic experiences went somewhat unrecognized during the greater half of the 20<sup>th</sup> century, although clinical prevalence and severity remained high (Hacking, 1995; Ellenberger, 1970; Papadima, 2006).

Resulting from a disruption in cognitive mapping, including dysfunctions of memory, awareness, and ego, the development of dissociative pathology is predominantly due to the experience and re-living of trauma. In this study, trauma is defined as an experience or collection of experiences in which threat to the psychological,

emotional, physical, and/or sexual integrity of an individual was at stake. As trauma literature often differentiates between “little t” and “big T” traumas, the focus of this study is on the “big T” trauma of sexual abuse.

An individual’s degree and experience of dissociative symptomatology may be characterized by gaps in his or her narratives of attachment, including abuse and personal history, through deficits in speech or evidence of temporary lack of conscious awareness. The person’s speech may be distinguished by intrusive content, often tangential to the topic at hand, and marked by a tone of voice, content of information, and/or developmental level not previously syntonic to the individual (Liotti, 2004).

The body also shows signs of dissociation in response to trauma. Trauma alters the body’s physiologic stress response, contributing to subsequent physical problems (Schwartz & Galperin, 2002), including reduced health of the hypothalamic-pituitary-adrenal (HPA) axis (Gunnar & Cheatham, 2003), creating a feedback loop of sorts that serves to further absorb and maintain distress (Hane & Fox, 2006).

Social and relational aspects of a person’s ego are also affected by dissociation through trauma. Disorders of personality integration, including borderline personality disorder (BPD) and narcissistic personality disorder, have been found to share a strong relationship with dissociative symptomatology as well as trauma (Simeon, Nelson, Elias, Greenberg, & Hollander, 2003; Howell, 2003).

While the symptoms described above do not constitute outwardly discrete alters, or separate personalities, they nevertheless follow a pattern of disrupted cognitive schema, even to the point of dividing the self into opposing objects: the victim self which endures the distress of self-harm, including eating disordered behaviors of restricting,

binging, and purging, and the perpetrator self which inflicts such harm against the self (Farber, 2008; Stein, 2009).

The understanding of how one self may be at once perpetrator and victim against its own entity appears to lie in an exploration of cognitive and attachment disruption in response to trauma.

### **Aims of Study/Research Objectives**

This study aimed to explore the potentially mediating influence of insecure and secure attachment styles and their roles in the development of dissociative pathology in eating disordered populations with histories of sexual trauma. The research question addressed was: What role does attachment style play in the development of pathological dissociation in the presence of sexual trauma in eating disordered populations? Implications for therapeutic practice with individuals with eating disorders and trauma history were also explored.

### **Attachment Theory**

In this study, it was perceived that dissociation and trauma might best be understood by attachment style, specifically secure versus insecure attachment. In this study, secure attachment is defined using Bowlby's construct of the internalization of a secure base beginning with the attachment figure; insecure attachments are defined as avoidant and anxious styles.

Ogawa and colleagues (1997) found that individuals in late adolescence who experienced trauma were likely to develop dissociative pathology. The age at which

trauma began, as well as the length trauma persisted, were significantly related to dissociative pathology. Insecure (avoidant and disorganized) attachment styles between subjects and their mothers were found to lead to dissociative pathology, although individuals who expressed dissociative symptoms while children were more likely to employ dissociation as a normal indication of adjustment and distress while individuals who expressed dissociative symptoms in adolescence were more likely to express pathological degrees of dissociation.

It has been hypothesized by researchers that dissociative symptomatology is more likely to be found in individuals who have a history of sexual abuse as children (Freyd, 1996). This is perhaps due to the individual's likelihood to be sexually abused in childhood by a caregiver or other family member. As a defensive mechanism, dissociative processes may thus be enacted to encourage the growth of the organism both physiologically and cognitively, while temporarily reconciling the hideousness of the abusive acts through dissociation from current mental processes, including self-awareness (Loewenstein, 2004).

While dissociative identity disorder (DID) has been found to relate significantly to sexual and physical maltreatment (Korol, 2008; Braun, 1988), it appears to be the attachment style in concert with abuse and lack of external and family healthy relationships that predict dissociative pathology (Howe, 2006; Kluft, 1984; Lyons-Ruth, Dutra, Schuder, & Bianchi, 2006; Carlson, 1998; Lyons-Ruth, Easterbrooks, & Cibelli, 1997; Van IJzendoorn, Schuengel, & Bakermans-Kranenburg, 1999).

Attachment theories help to elucidate the reasons behind interpersonal maladaptive patterns employed by individuals in adulthood (Blizard, & Bluhm, 1994).

Clinical attachment interview results from a sample of residential adult psychiatric individuals revealed the presence of unresolved trauma to relate to dissociative symptoms as well as posttraumatic stress disorder (PTSD); unresolved loss and unresolved trauma together correlated positively with elevations of borderline and schizotypal personality disorder scales (Riggs, Paulson, Tunnell, Sahl, Atkison, & Ross, 2007). Calamari and Pini (2003) found individuals with significant dissociative pathology as indicated by their scores on the Dissociative Experiences Scale (DES) to also endorse significant anger scores, as measured by the State-Trait Anger Expression Inventory (STAXI). This finding is consistent with earlier research on the role of insecure attachment, including avoidant and anxious attachment style, in the development of dissociative symptomatology. Individuals who were female and scored as insecure-ambivalent also endorsed greater levels on the Dissociative Experiences Scale (DES), and manifested higher levels of propensity toward anger (somewhat different for ambivalent vs. avoidant insecurely attached females). Thus dissociation as well as anger propensity is related to trauma in early life.

Bailey, Moran and Pederson (2007) found that of women who became mothers while still teens, those with unresolved trauma were positively correlated with physical and sexual abuse victimization, as well as overall neglect, while children. Those women who had been overall mistreated as well as sexually abused also had lack of resolution surrounding experiences of loss. For those with unresolved trauma, significant degrees of dissociative symptoms, as well as lack of individuation/differentiation, and interpersonal distress were present. This underscores attachment theory as it relates to dissociative cognitive tendencies in individuals with unresolved trauma.



A 12-year longitudinal study of parent-child attachment revealed the crucial nature of this relationship to the child's understanding of and resolving emotional conflict, especially as these dynamics exist within the family structure (Steele & Steele, 2005).

In healthy attachment relationships, the child is free to explore his or her world without or with very minimal distress, as the attachment figure acts as a secure base for exploration and for containment of distress when it does occur. The child regards the attachment figure as a safe place to retreat when overwhelmed and is soothed and shored up for further exploration when ready (Bowlby, 1969). Additionally, secure attachments formed in infancy have been found to act as moderating mechanisms for resilience in the face of later trauma, as well as the foundation for forming secure attachments in adulthood (Asher & Parker, 1989; Howe, Brandon, Hinings, & Schofield, 1999; Ladd & Golter, 1988).

While during stressful situations, securely attached children turn to their parent for comfort and protection, and then return to exploring their environment (Ainsworth, Blehar, Waters, & Wall, 1978), avoidantly attached infants minimize the expression of negative emotions, and ambivalently attached children maximize the expression of negative emotions and remain angrily or passively focused on the parent at the expense of exploration. These insecure forms of attachment are considered to be adaptive to the difficult child rearing environments that these infants experience (Main, 1990).

Bowlby's (1969) widely recognized work with both humans and animals revealed the crucial nature of secure attachment for a healthy development of the self. When both human and animal subjects were found to experience an insecure type of attachment,

resultant behaviors and dynamics included disorders of affect regulation, specifically anxiety, depression, anger, emotional disconnection, and ultimately social and relational disorders. According to Bowlby, a person's attachment type becomes his or her Internal Working Model, and as a result, he or she comes to expect such dynamics—as instituted by the earliest attachment figure—to continue in other relationships. Building upon Bowlby's work, more recent researchers have found that healthy, secure attachments in early development correspond to an individual's ability to appropriately regulate affect, experience a sense of self-worth, and to see oneself in connection to healthy others (Pearlman, 1998; Saakvitne et al., 2000).

Children who develop within a mutually respectful and loving environment, with a sense of security within such an environment, and enjoy an adequate biological capacity to reciprocate such interaction resolve typical developmental distress in a typically successful fashion and become functioning and capable adults. It is the traumatic experience(s) that disrupts such otherwise normal development of the self as a separate entity and the self as an entity in relationship to other. To view the self as an entity of the mind, brain, and body in complex interconnection with one another illuminates the capacity for an ideally so-structured self to be fragmented into various memories and experiences involving any of these three—but not all together—main elements (Shane, 2005).

When a child is abused as well as nurtured by a caregiver, these polarized roles in the caregiver elicit discrete categories of cognitive organization in the victim. As a result, these discrete organizational responses ultimately lead to a dysfunction of cognitive processes—namely, the awareness of the perpetrator as categorically caregiver and

abuser influences the concept of the self also as discrete entities—and the defensive action of dissociation is created (Liotti, 1992; Main, 1990). As these defensive features compound over time, and, importantly, without the protective mechanism of a secure attachment relationship to buffer their effects, they result in exponentially greater interpersonal problems and ultimately serve to isolate the individual within his or her traumatic past as well as disrupted developmental self (Bowlby, 1969; Wortman, Battle, & Lemkau, 1997). The child is forced to cut off the parts of him- or herself required to pacify or survive in relationship to the caregiver/perpetrator as well as to assign a good label to the part of the caregiver/perpetrator that cares for the child's needs. This splitting occurs not only in the child's relationship to his or her attachment figure and perpetrator but in the child's relationship to him- or herself, in his or her cognitive framework (Blizard, 1997), resulting in complex posttraumatic stress disorder (PTSD) or disorders of extreme stress not otherwise specified (DESNOS) (Pelcovitz, van der Kolk, Roth, Mandel, Kaplan, & Resick, 1997; Van der Kolk et al., 2005; Pearlman, & Courtois, 2005).

Without intervention when trauma has occurred, the individual's affective distress as well as emotional dysregulation and relational internal working model become so entrenched by very virtue of the isolative nature of experiencing trauma without recourse or resolution, that the individual then experiences attachment or relational trauma in addition. This unique and damaging form of trauma as perpetrated by the attachment figure has been seen to lead to deficits in neurophysiology, in particular diminished cognitive abilities, bodily and emotion regulation distress, and identity development (Allen, 2001; Schore, 2003a, 2003b; Pearlman & Courtois, 2005; Siegel, 1999). Parent-

child interactions as they relate to affective containment and mirroring underscore the role of neglect as well as parent-as-child/child-as-parent dynamics in exacerbating the effects of traumatic events experienced years after infancy (Lyons-Ruth, 2003).

Attachment to one's caregiver is so crucial to normal development that an attachment figure's own history of abuse can impact his or her offspring's risk for dissociative symptomatology, as well. In a longitudinal study of intergenerational caregiver loss, abuse, and behavior problems in childhood, those children whose caretakers had themselves experienced loss by death that did not include resolution were found to have a significant increase in behavior problems during middle childhood and early teenage-hood. This correlation was significantly greater—between the caretakers' attachment style and their children's behavior problems—than were other markers of caretakers' pathology (i.e., depression and dissociation in caretakers did not make up as much of the effect in their children's problems in behavior as did attachment style) (Zajac, & Kobak, 2009; Fonagy, 1999). Caregivers who had experienced loss through death within two years prior or subsequent to the child's birth were also likely to have children who developed borderline personality disorder (Liotti, & Pasquini, 2000).

Perpetuating the dissociative dynamic, individuals who have experienced complex trauma have been found to replicate these abusive dynamics in their subsequent relationships with new attachment figures, to the point of choosing romantic partners or other relationships in which individuals with much the same dynamics of abuse play out a similar structure of relationship found in the earliest attachment that enacted the original abuse (Basham & Miehl, 2004; Johnson, 2002).

As child abuse and maltreatment often happen in secret, the isolative nature of the abuse combined with the child's physiologic and emotional dependence on the caregiver/perpetrator can create within the child a propensity toward reenactment—toward themselves or toward others (Stein, 2009). Because an external figure of protection has not been provided to the child, he or she does not form an internal working model of protection and thus does not become his or her own effective protector. Rather, in the absence of a primary attachment figure's protection, the child is left to protect him- or herself against violence perpetrated by others as well as an inward dialogue of criticizing voices (Thomas, 2003). Irwin (1999) states that adaptive responses to abuse from an attachment figure perpetuate revictimization, while secure attachment may protect against this revictimization.

### **Trauma and Dissociation in Eating Disorder Populations**

Schneer (2002) asserts that symptoms of dissociative pathology occur from traumatic events, in an effort for the victim of the trauma to continue to survive, often in relationship to a caregiver who is also the perpetrator of the abuse. Regarding the development of eating disorders as dissociative symptomatology, Schneer indicates that dissociative processes resulting in a haziness of cognitive processing also shed light on the individual's experiences of abuse. The individual who uses eating disordered acts to dissociate from experiences of trauma reveals an inability to contain his or her own affective awareness. This results in an over-containment of affect or an over-expression of affect, as well as a split between appropriate awareness of "good" and "bad" relating to food type as well as amount (too much, too little), an indication of cognitive

disorientation surrounding food as an object of nurture and an inability to understand that which nurtures and that which destroys. This cognitive disorientation related to food is symbolic of a cognitive disorientation related to interpersonal attachment, or a lack of understanding regarding “good” and “bad” attachments, as seen in the reenactment of abusive histories in adult relationships.

Eating disorders are considered by many clinicians and researchers to be self-harm behaviors. For individuals with self-harm behaviors such as eating disorders, attempting suicide, and other forms of self-harm, significant association has been made with these actions and trauma as children, attachment distress, and dissociative symptoms. Sexual and physical abuse as children has been shown to be predictive of cutting and attempting suicide. Attachment distress (i.e., disruption/separation from attachment figure), neglect, and sexual abuse have been correlated with on-going self-harm behaviors, with trauma type and age at trauma influencing the nature and level of severity of self-harm activities, including cutting as correlated to dissociative behaviors. Although traumatic events in a child’s life influence self-harm, an absence of attachment security has been shown to prolong such self-harm behaviors (Van der Kolk, Perry, & Herman, 1991).

When an individual is unable to tolerate pleasant or unpleasant affect, experience a sense of self-worth, and experience him- or herself in healthy relationship to healthy individuals, his or her ability to maintain the self is jeopardized. This jeopardy of the self may result in an additional sense of hopelessness and powerlessness. This lack of hope and power by those who have survived complex experiences of trauma is often dealt with through engagement in dissociative behaviors. These behaviors may also include actions

meant to soothe and contain the self but that are in reality self-injurious, including suicide ideation/attempts, cutting, eating disorders, violence, substance abuse, revictimization, and sexual promiscuity (Kohut, 1971, 1977; Winnicott, 1965; Pearlman, 1998; DePrince, 2005).

It is widely recognized in developmental literature that early abuse, particularly as perpetrated by an attachment figure, has unique and dangerously detrimental impacts on normal development (Briere, 1984; Briere & Elliott, 1994; Courtois, 1988; Herman, 1992; McCann & Pearlman, 1990; Neumann, Houskamp, Pollock, & Briere, 1996; Polusny & Follette, 1995; Van der Kolk et al., 1996).

McGloin & Widom (2001) discovered that nearly 80% of individuals who were abused as children (including neglect as a form of abuse) had not achieved appropriate developmental and interpersonal milestones by early adulthood. Indeed, nearly the same number of individuals who had been abused as children evidenced clinical phenomena falling under at least one and at times multiple disorders of psychiatric functioning (Silverman, Reinherz, & Giaconia, 1996). Early experiences of abuse are associated with borderline personality disorder, substance disorders, manipulation of and violent acts against others, suicidal ideation, intent, and attempt, as well as dissociative identity disorder (Herman, Perry, & van der Kolk, 1989; Johnson, Cohen, Brown, Smailes, & Bernstein, 1999; Kluft, 1996) and severe physiologic distress (Fellitti et al., 1998).

Although eating disorders are considered by many as a form of self-harm (Farber, 2008), and self-harm behaviors often indicate some level of dissociative attempts, eating disordered populations as they relate to dissociative pathology as well as insecure attachment are not highly prevalent in dissociation or attachment literature.

Dissociation does not necessarily present as the popular culture idea of multiple personalities or as dissociative identity disorder (DID). Instead, there are multiple manifestations of dissociative symptoms in response to traumatic events. These include disorders of the self, such as borderline and narcissistic personality disorders (Blizard, 2001). With this in mind, it is understood in this study that personality theory (the integration or disintegration of the self), trauma theory (traumatic bonding, attachment to the abuser), object-relations theory (self-object attachment: internalizing the aggressor; idealization/devaluation; splitting as a defensive mechanism), cognitive theory (developmental events—trauma—as forming cognitive schema), and biology (temperament, predisposition to vulnerabilities to affect regulation), may all be combined with attachment theory to form the rationale for the research question: What role does attachment style play in the development of pathological dissociation as a result of sexual trauma?



## **CHAPTER 2**

### **MATERIALS AND METHODS**

#### **Participants**

Participants for the current study were drawn from a partial hospitalization and intensive outpatient eating disorders program in Southern California, the patient population of which is largely based on community referrals. In addition to the presence of comorbid diagnoses of mood and anxiety disorders, PTSD, and substance disorders, as well as disorders of personality functioning, represented in this group, these individuals received a diagnosis by a board-certified psychiatrist of anorexia nervosa, bulimia nervosa, or eating disorder not otherwise specified. These diagnoses were made on the basis of criteria outlined for each disorder in the *Diagnostic and Statistical Manual of Mental Disorders, 4<sup>th</sup> Edition* (DSM-IV-TR). Only adult individuals' first admission data were used, with a total of 62 female patients included in this study. Inclusion criteria included all individuals over the age of 18 whose data were made available to the researcher. Exclusion criteria included any information obtained at subsequent admissions (i.e., data not collected at first admission).

#### **Measures**

In addition to the clinical diagnoses to determine population (as defined through criteria in the DSM-IV-TR), the Adult Attachment Scale (AAS), the Dissociative Experiences Scale, Second Edition (DES-II), and the Trauma Symptom Checklist (TSC-40) were employed in this study.

### *Adult Attachment Scale*

The AAS was developed by Collins and Read (1990), built on previous attachment work by Hazen and Shaver (1987) and Levy and Davis (1988). It is a research measure designed to determine attachment style as well as interpersonal experience in adults. It is a five-point Likert scale consisting of 18 items with three subscales to determine the following attachment factors: *Close* (how comfortable an individual is with emotional closeness to others), *Depend* (the degree to which an individual perceives he or she may depend on others when in need), and *Anxiety* (the degree to which an individual experiences anxiety regarding perceived or potential abandonment). Alpha coefficients reported in the literature are at acceptable research levels for all subscales (*Close*  $\alpha = .69$ ; *Depend*  $\alpha = .75$ ; *Anxiety*  $\alpha = .72$ ). Test-retest correlations over a period of two months in published studies were at acceptable levels for the *Close* ( $\alpha = .68$ ) and *Depend* ( $\alpha = .71$ ) subscales but at somewhat low levels for the *Anxiety* subscale ( $\alpha = .52$ ).

Consistent with Collins and Feeney's (2004) recommendations and appropriate to the use of attachment as a continuous variable, attachments were determined at varying levels for each individual. Secure attachment was determined by higher scores on the *Close* and *Depend* subscales and a lower score on the *Anxiety* subscale. Anxious attachment was determined with a higher score on the *Anxiety* subscale and moderate scores on the *Close* and *Depend* subscales. Avoidant attachment was determined by lower scores on the *Close*, *Depend*, and *Anxiety* subscales. Inter-sample reliability for this study revealed acceptable alphas for the avoidant ( $\alpha = .68$ ) and anxious scales ( $\alpha = .75$ ) and low levels for the secure scale ( $\alpha = .5$ ). The AAS has demonstrated good construct validity (Collins & Read, 1990).

### ***Dissociative Experiences Scale, Second Edition***

The Dissociative Experiences Scale, Second Edition (DES-II) was designed and revised by Bernstein and Putnam as a measure to screen for levels of dissociative pathology (Bernstein & Putnam, 1986; Carlson & Putnam, 1993). It is a self-report instrument consisting of 28 items that measure various dissociative experiences, ranging from normal, everyday experiences of dissociation, to severe dissociative pathology. Each item's response is indicated by an 11-point Likert scale (0 to 100%), indicating frequency of the dissociative experience indicated. Inter-sample reliability ( $\alpha = .9$ ) and test-retest correlations ( $\alpha = .84$ ) for the DES-II in the literature are high. Accordingly, alpha coefficients for the DES-II in this study were also high ( $\alpha = .95$ ). The DES-II has shown excellent validity in the literature (Ellason, Ross, Mayran, & Sainton, 1994).

### ***Trauma Symptom Checklist***

The Trauma Symptom Checklist (TSC-40) is a research measure used to assess an individual's level of traumatic experiences in his or her history (Briere & Runtz, 1989). It consists of 40 items in a self-report format with six subscales: *Anxiety*, *Depression*, *Dissociation*, *Sexual Abuse Trauma Index (SATI)*, *Sexual Problems*, and *Sleep Disturbance*. The regularity at which an item is experienced over the course of the two months prior to self-report is indicated using a four-point Likert scale (0 = never to 3 = often). The reliability for the TSC-40 in the literature is adequate, with subscale alphas ranging from .66 to .77. Alpha coefficients for the *Sexual Abuse Trauma Index (SATI)* on

the TSC-40 for this study were at acceptable levels ( $\alpha = .63$ ). The TSC-40 has also shown good predictive validity (Briere, 1996).

### **Procedure**

Archival data from the eating disorders clinic database were accessed. Data collection occurred between 2006 and 2013, resulting in a cross-sectional rather than longitudinal study. Raw data were hand-scored and coded by one researcher to ensure adherence to scoring guidelines and consistency across participants. Attachment, dissociation, and trauma symptoms were the variables addressed in the current study.

### **Hypotheses**

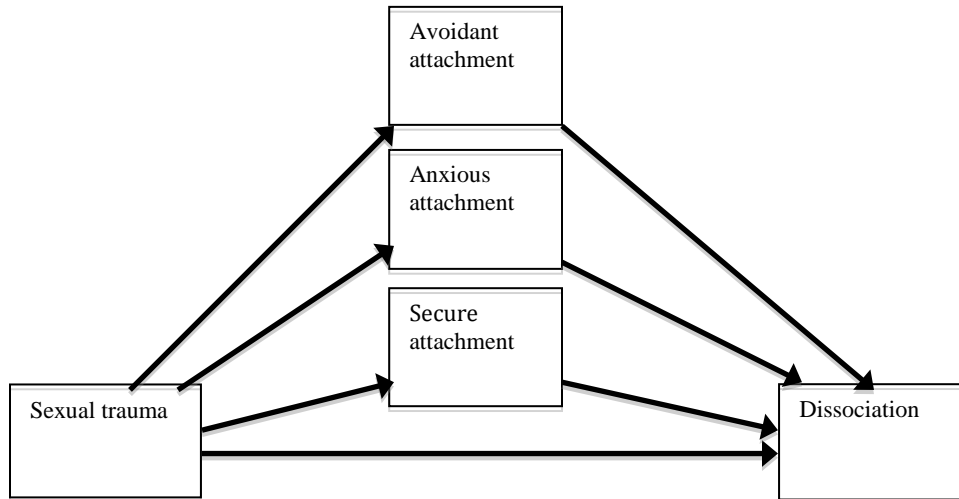
It was hypothesized that this study would yield results similar to those reviewed in the literature regarding attachment style, trauma, and dissociative pathology.

#### ***Hypothesis 1***

Sexual trauma was expected to significantly predict dissociation in individuals with eating disorders.

#### ***Hypothesis 2***

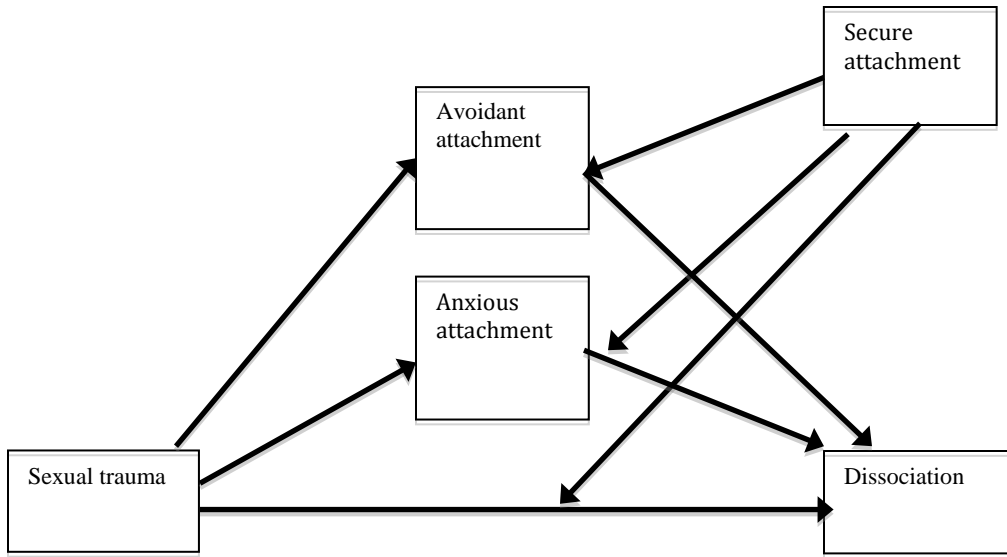
Secure and insecure (in this study, anxious and avoidant) attachments were expected to mediate the relationship between sexual trauma and dissociation in individuals with eating disorders (see Figure 1).



*Figure 1.* Conceptual model of attachment style mediating the relationship between sexual trauma and dissociation

### ***Hypothesis 3***

Levels of secure attachment were expected to moderate insecure attachments and sexual trauma, resulting in decreased dissociation due to sexual trauma in eating disorder diagnoses (please see Figure 2).



*Figure 2.* Conceptual model of the moderating relationship of secure attachment to the mediating relationship of insecure attachment to dissociation due to sexual trauma

## CHAPTER 3

### RESULTS AND DISCUSSION

#### Analyses

##### *Data Screening*

Univariate statistics were run to determine frequencies of diagnostic categories, as well as the representation of individuals in the sample who met cut-off criteria for dissociation and trauma. Table 1 shows the percentage of individuals in each eating disorder diagnostic category.

Table 1  
*Percentage of sample in each eating disorder diagnostic category*

Diagnostic category	Percent represented in sample
Anorexia Nervosa	.03
Anorexia Nervosa, Restricting Type	.24
Anorexia Nervosa, Binge-Purge Type	.2
Bulimia Nervosa	.05
Bulimia Nervosa, Binge-Purge Type	.41
Bulimia Nervosa, Non-Purge Type	.05
Eating Disorder Not Otherwise Specified, Purge Type	.02

The table below reveals the percentage of individuals who evidenced dissociative criteria at, below, and above the cut-off criteria of 25 (see Table 2). As evidenced by these data, a majority (.67) of participants in this study met dissociative criteria at a cut-off of 25 points or higher.

Table 2

*Percentage of sample at, below, and above dissociative criteria cut-off*

Number of dissociative symptoms	Percent represented in sample
0 – 24	.33
25 – 49	.38
50 – 99	.17
100 – 149	.1
150+	.02

As described above, this study defined trauma as the experience or experiences of an individual that threatened the psychological, emotional, physical, and sexual integrity of the person. Although this study looked at sexual trauma in particular, the TSC-40 only provides a cut-off score (70) of symptom endorsement for individuals to meet criteria for significant childhood traumas. A cut-off for the Sexual Abuse Trauma Index (SATI) is not provided. Below is a table of the representation in this sample of individuals who met the required cutoff score of 70 for significant childhood traumas according to their total symptom score on the TSC-40.

Table 3

*Percentage of sample at, below, and above total trauma score cut-off of 70 for significant childhood traumas*

Symptom endorsement	Percent represented in sample
0 – 49	.61
50 – 69	.29
70 – 99	.1

As evidenced by the above univariate statistics, individuals in this study endorsed significantly greater levels of eating disorder pathology and dissociative pathology than



the normal population. Ten percent of individuals in this study also met the cut-off criteria for significant childhood traumatic experiences.

Due to missing data from some of the participants, multiple imputations were run for the AAS in an effort to retain as large of a sample size as possible. Multiple imputation as a statistical method allows for the use of existing values from more complete variables to predict values for missing data. Thus a complete data set, known as an imputed data set, may be formed. The process of imputing occurs multiple times with statistical analysis run on each imputed set of data, which provides multiple analysis results that may then be combined to create a general analysis. Variance in the missing data is retained, with the incorporation of the uncertain qualities created through the estimation of missing data. Variance is accomplished through basing imputed values on variables related to the missing data as well as the reasons for the missing quality of the data. Alternate versions of the missing data with an understanding of the variability between imputed sets accounts for the uncertainty in the imputed sets (Wayman, 2003). Imputations were not run for the DES-II or the TSC-40, as these scales could be accurately interpreted with minimal missingness, whereas the AAS could not. This was an effort to control for potential inflation of correlations and reduction of variance/standard error.

### ***Bootstrapping***

The product-of-coefficients strategy with bootstrapping was used to test strength and significance of the indirect effect. Bootstrapping is a non-parametric method for assessing indirect effects (Preacher & Hayes, 2004; Preacher et al., 2007; Hayes, 2012).

Exact normal distribution may only be found in large samples; however, bootstrapping overcomes several problems with non-normally distributed variables (i.e., problems with inflated power). Bootstrapping was an advantage to this study due to its ability to use relatively small sample sizes while not over-inflating the variability.

The indirect effect was estimated by first regressing anxious, avoidant, and secure attachment styles (M1, M2, M3) separately onto sexual trauma (X), and subsequently regressing dissociation (Y) onto anxious, avoidant, and secure attachment individually and sexual trauma. The indirect effect was then quantified as the product of the mean bootstrapped sample estimates of the regression coefficients ('M# on X' \* 'Y on M# controlling for X'). The standard deviation of the estimate of the indirect effect obtained over 10,000 and 20,000 bootstrapped resamples is the estimated standard error of the mean indirect effect (Preacher & Hayes, 2004). Based on this information, bootstrap confidence intervals were generated for the indirect effect (95% CIs).

### **Multiple Mediations in Parallel**

Multiple mediations in parallel were run using Hayes' (2012) bootstrapping PROCESS macros. As expected, sexual trauma was found to significantly positively predict dissociation, as well as avoidant and anxious attachment styles. Also as expected, secure attachment was significantly negatively predicted by sexual trauma. Please see Table 4 and Figure 3 for a summary of these data.

Table 4

*Relationship of sexual trauma to dissociation, avoidant, anxious, and secure attachments*

Sexual trauma	$\beta$	<i>p</i> -value	CIs
Dissociation	.42	.0030**	[13.2761, 61.546]
Avoidant attachment	.37	.0033**	[.0248, .1188]
Anxious attachment	.37	.0030**	[.0246, .1144]
Secure attachment	-.29	.0235*	[-.0812, -.0061]

\*\*Significant at  $p < .01$

\*Significant at  $p < .05$

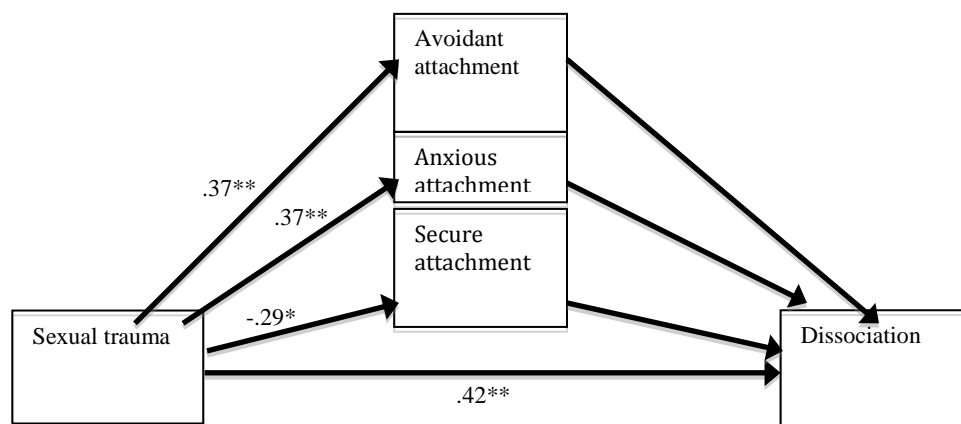


Figure 3. Relationship of sexual trauma and dissociation to attachment

Avoidant attachment did not significantly predict dissociative symptoms.

Interestingly, anxious attachment style appeared to share a non-significant negative

relationship to dissociation. A non-significant negative relationship was also seen

between secure attachment and dissociative symptoms. Please see Table 3 and Figure 4.

Table 5

*Relationship of avoidant, anxious, and secure attachments to dissociation*

Dissociation	$\beta$	<i>p</i> -value	CIs
Avoidant attachment	.003	.7816	[-114.1087, 150.9827]
Anxious attachment	-.006	.5689	[-172.2875, 95.6245]
Secure attachment	.0002	.9681	[-166.9932, 160.4253]

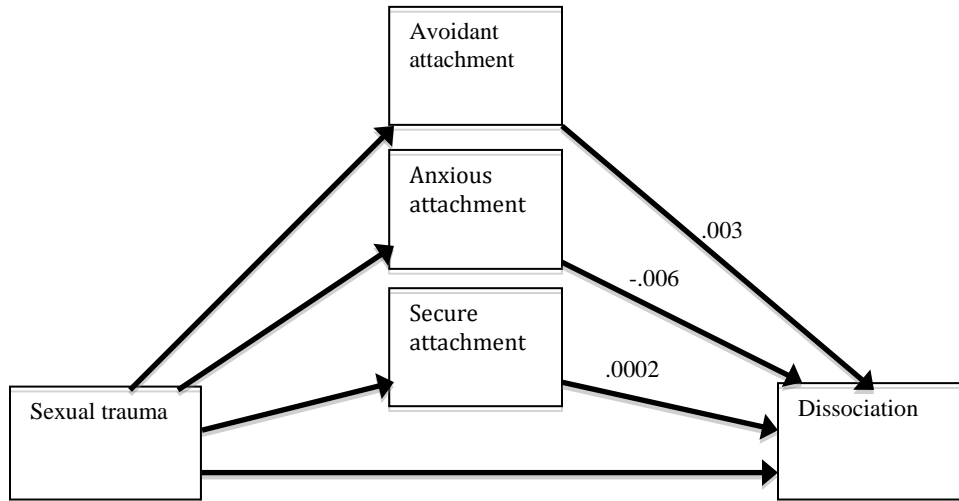


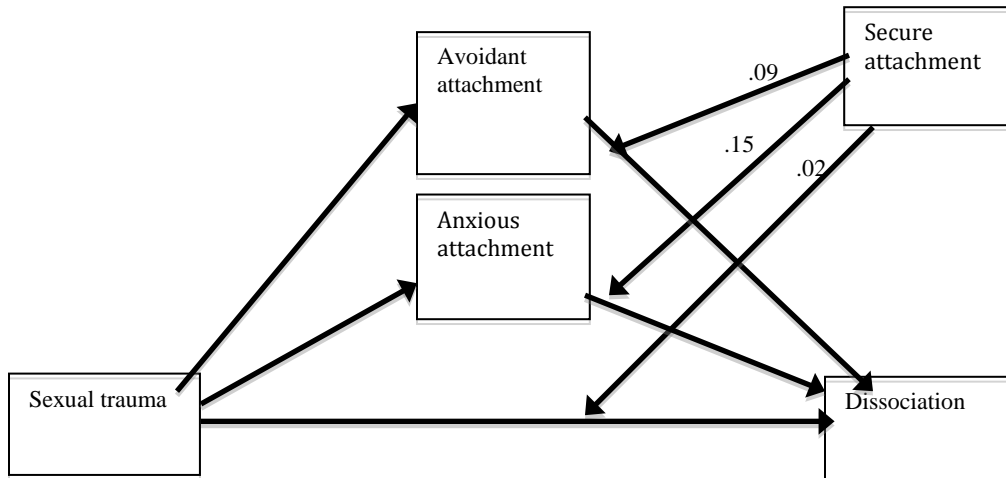
Figure 4. Mediating relationship of attachment to the relationship between sexual trauma and dissociation

### Moderated Mediations in Parallel

Moderated mediations in parallel were run using Hayes' (2012) bootstrapping PROCESS macros, in an effort to understand potential interactions between secure and insecure attachments and sexual trauma. Levels of secure attachment did not significantly moderate the relationship of insecure attachment to dissociation, nor did secure attachment levels alter dissociation due to sexual trauma (please see Table 4 and Figure 5).

Table 5  
*Interactions between secure attachment and sexual trauma, avoidant and anxious attachments*

Secure attachment	$\beta$	<i>p</i> -value	CI <sub>s</sub>
Avoidant X Secure	.09	.6117	[-156.3066, 263.1312]
Anxious X Secure	.15	.4153	[-129.3918, 308.8129]
Sexual trauma X Secure	.02	.5434	[-23.7028, 44.5129]



*Figure 5.* Moderating relationship of secure attachment to the mediating relationship of insecure attachment to dissociation due to sexual trauma

This study yielded results similar to those reviewed in the literature regarding the predictive relationship between sexual trauma and dissociation as well as sexual trauma and insecure attachments. That is, results of this study showed a significant causal path between sexual trauma and dissociation, as well as between sexual trauma and avoidant and anxious attachments, with a significant negative predictive relationship between sexual trauma and secure attachment.

This study did not reveal results as expected for the mediating influences of avoidant, anxious, or secure attachments. Specifically, while avoidant and anxious attachments were expected to potentially increase the risk for the development of dissociation in response to sexual trauma, these relationships were not found to be significant for any of the models studied, although anxious attachment shared a non-significant negative relationship with dissociative symptoms. Likewise, secure attachment did not reveal a potentially protective relationship against the development of dissociative pathology in the presence of sexual trauma. Although secure attachment was

expected to moderate insecure attachments and sexual trauma related to dissociation, these findings also were not significant.

### **Limitations of the Study**

Limitations of this study lie in the use of a measure that yielded somewhat poor inter-sample reliability (i.e., AAS secure subscale,  $\alpha = 0.5$ ). Given theoretical and empirical understandings of eating disorder diagnoses as sharing a high comorbidity with other Axis I and Axis II disorders (Chen, McClosky, Michelson, Gordon, & Coccaro, 2011; Milos, Spindler, Buddeberg, & Cramer, 2003), it is probable that this sample included participants with significantly higher levels of insecure rather than secure attachment. As such, it would stand to reason theoretically that the secure subscale on the AAS would have a lower reliability due to smaller sample size of securely attached endorsements.

Additionally, the use of a measure that captured three types of attachment style (i.e., avoidant, anxious, and secure) did not provide for more nuanced styles of attachment, namely disorganized attachment style. Although secure attachment was used as a potential counterpoint to a disorganized style, it was not possible to determine whether disorganized attachment specifically would yield significant risk for dissociation in response to sexual trauma.

Further limitations are the use of multiple imputations for missing data, as these imputations may inflate the association between variables, making a significant relationship more likely by reducing the variance and standard error. As significance

testing is predicated on the overlap of standard error, significance may be artificially inflated.

### **Treatment Recommendations**

Research into therapeutic interventions with individuals who exhibit dissociative pathology has found an empirical basis for relationship- and phase-oriented treatment (Steele, van der Hart, & Nijenhuis, 2005; Korol, 2008). Specifically, treatment of both PTSD and DID were found to be effective when addressing factors such as motivation, outside relationships, therapeutic relationship, personal and outside resources, Axis I distress, Axis II comorbidities, attachment, and self-harm (Baars, van der Hart, Nijenhuis, Chu, Glas, & Draijer, 2011). Therapy models that endorse an awareness of one's own mind in relationship to the mind of another, such as mentalization-based therapy, as well as awareness into emotions and cognitions, have also been found to be successful (Fonagy, 1999; Fonagy, 1997). Attachment work to decrease dissociation, however, was not supported by the data in this study.

Specific to the findings of this study, the use of evidence-based trauma therapies with eating disorder populations may be indicated. In the presence of complex trauma, in particular, Eye Movement Desensitization and Reprocessing (EMDR) and Holographic Reprocessing (HR) may be most beneficial (Lee, 2013; Solomon, Solomon, & Heide, 2009; Katz et al., 2008).

EMDR (Shapiro, 1989a, 1989b, 2001) provides a framework for Adaptive Information Processing that facilitates the movement of traumatic memories from experiential recurrence to language-facilitated storage. This process is introduced through

the initial establishment of a container for the patient's affective distress (i.e., safe space). The patient then reprocesses past, present, and anticipated experiences of distress while simultaneously attending to a stimulus in the present (i.e., the therapist's moving fingers/light bar and/or tactile or audio stimuli). The patient's maladaptive beliefs are addressed and reprocessed into adaptive beliefs, and subjective distress is tracked by the patient and therapist in an effort to reduce the stimulus value of the trauma to within normal limits.

Holographic Reprocessing (Katz, 2001; Katz et al., 2008) has also been established as an evidence-based treatment for trauma (McIsaac and Eich, 2002, 2004; Kross, Ayduk, & Mischel, 2005). HR combines cognitive and experiential procedures to process trauma through a perceptual change in the individual. The six components of HR include determining the core violation the individual perceives has been experienced; uncovering personal truths the individual holds that may not be adaptive; discovering current maladaptive compensation strategies the person is using; identifying avoidance coping mechanisms the patient is using to guard against an awareness of distress; processing residual negative emotions that may surface between holographic reprocessing sessions; and developing an acquired motivation to address previously negative interpersonal dynamics (Katz, 2001; Katz et al., 2008).



## **CHAPTER FOUR**

### **CONCLUSIONS**

In addition to supporting the results of previous studies into the causal relationship of sexual trauma to dissociative pathology, this study provides results similar to the literature regarding the negative relationship of secure attachment to sexual trauma. The unique offering of this study lies in its use of a population not significantly represented in the literature (i.e., eating disorders). While a rejection of the null hypotheses regarding attachment styles as mediators may have supported further clinical investigation into the use of relationship- and phase-oriented treatments, the causal relationships of sexual trauma to insecure attachments and dissociation revealed in this study support the use of trauma-focused work with eating disorder populations.

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Appendix A

Informed Consent Form



**INSTITUTIONAL REVIEW BOARD**  
**Waiver of Informed Consent/Authorization**  
**RESEARCH PROTECTION PROGRAMS**  
24887 Taylor Street, Suite 202 Loma Linda, CA 92350  
(909) 558-4531 (voice) / (909) 558-0131 (fax) / e-mail:  
irb@llu.edu

IRB# 5-  
13-  
005  
3

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**A. Waiver of Consent:** How does your research meet the following four criteria?

**1. The research risks are minimal: \***

The data used in this study constitute a portion of the overall initial assessment process for each individual upon admission to a partial hospitalization program for treatment of eating disorder diagnoses. The measures have been administered by appropriately trained clinical staff to minimize any potential risk of harm.

*\*The probability and magnitude of harm is not greater than those ordinarily encountered in daily life or during the performance of routine physical or psychological examinations or tests of the general population.*

**2. The waiver will not adversely affect the rights and welfare of the participants:**

The participants whose data are included in this study are adult individuals who have consented to treatment of eating disorder diagnoses within a partial hospitalization setting. These participants have completed the measures used for this study within the context of a larger battery of assessments that provide information pertinent to patients' treatment needs. Patients are not provided with any incentive nor are they under any duress or undue pressure to complete the measures administered.

**3. The research cannot be practicably carried out without the Waiver:**

The data used in this study are de-identified and are not linked to the original individuals' identifiable information. Therefore, this research cannot be practicably carried out without the Waiver of Informed Consent because the subjects cannot be contacted.

**4. Whenever appropriate, subjects will be provided with additional pertinent information:**

Because individual subjects' data are de-identified and thus not linked to their original responses, it is impossible to provide individuals with additional information pertinent to their specific responses. However, the results of this research study will be provided to Valenta, Inc. Eating Disorder Clinic for dissemination as clinic administration deem appropriate.

**B. Waiver of Authorization:** How does your research meet the following 2 criteria?

*(Please refer to the PHI section of your HIPAA Compliance Application and complete this section only if you need a Waiver of Authorization.)*

**1. There is minimal risk to the privacy of the subject because:**

a. These safeguards will be in place to protect identifiers from improper use or disclosure:

*(Mark all that apply)*

- The information will not be disclosed unless it is stripped of all [identifiers](#)  
 Data will be coded prior to any disclosure. If the PI will retain the master list, a Code Access Agreement will be in place prior to release of data

**– AND –**

b. Identifiers will be destroyed\* upon completion of:

*\*Identifiers must be destroyed at the earliest opportunity consistent with the conduct of the research.*

- Data collection  
 Data analysis  
 Specimen processing  
 Other (specify):

**– OR –**

c. Identifiers will be retained indefinitely because:

- this is a longitudinal study  
 of federal requirements (specify):  
 Other (specify):

**2. The research cannot practicably be conducted without access to the PHI because:**

PHI is needed to identify subject eligibility. Explain: PHI is initially required to determine that each subject involved in this study is over the age of 18 and that each subject has completed all three of the research measures used in this study.

PHI is needed to answer the research question. Explain:

Other. Explain:

**I verify that a) my research team will collect only information essential to the study and in accordance with the [Minimum Necessary Standard](#), b) to the greatest extent possible, access to the information will be limited within the research team, and c) I will not re-use or disclose protected health information to any other person or entity, except as required by law, research oversight, or those uses outlined above.**

PI's signature \_\_\_\_\_ Date \_\_\_\_\_

Informed Consent Documents

## Appendix B

### Instruments

Department of Psychology University of California Santa Barbara

August, 2008

Dear Colleagues:

Thank you for your interest in the Adult Attachment Scale. In this document you will find a copy of the original and revised Adult Attachment Scales, along with information on scoring. You'll also find some general information about self-report measures of adult attachment style, and a list of references from our lab.

Please feel free to use the Adult Attachment Scale in your research and, if needed, to translate the scale into a different language. If you do translate the scale, I would greatly appreciate it if you could send me a copy of your translation so that I can (with your permission) make the translation available to future researchers.

Before choosing the Adult Attachment Scale for your research, please be sure to investigate other self-report measures of adult attachment. There have been many developments in the field since my original scale was published, and you may find that newer scales – such as Brennan, Clark, & Shaver's (1988) Experiences in Close Relationships scale (ECR) – are better suited to your needs. I have included some references that will help you locate information on these newer measures.

Thank you for your interest in our work, and good luck with your research.

Sincerely,

Nancy Collins  
Professor, UCSB  
*ncollins@psych.ucsb.edu*

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#### ***Adult Attachment Scale (Collins & Read, 1990)***

Please read each of the following statements and rate the extent to which it describes your feelings about romantic relationships. Please think about all your relationships (past and present) and respond in terms of how you generally feel in these relationships. If you have never been involved in a romantic relationship, answer in terms of how you think you would feel.

Please use the scale below by placing a number between 1 and 5 in the space provided to the right of each statement.

1-----2-----3-----4-----5  
**Not at all** **Very characteristic**  
**characteristic of me** **of me**

- (1) I find it relatively easy to get close to others. \_\_\_\_\_
- (2) I do not worry about being abandoned. \_\_\_\_\_
- (3) I find it difficult to allow myself to depend on others. \_\_\_\_\_
- (4) In relationships, I often worry that my partner does not really love me. \_\_\_\_\_
- (5) I find that others are reluctant to get as close as I would like. \_\_\_\_\_
- (6) I am comfortable depending on others. \_\_\_\_\_
- (7) I do not worry about someone getting too close to me. \_\_\_\_\_
- (8) I find that people are never there when you need them. \_\_\_\_\_
- (9) I am somewhat uncomfortable being close to others. \_\_\_\_\_
- (10) In relationships, I often worry that my partner will not want to \_\_\_\_\_ stay with me.
- (11) I want to merge completely with another person. \_\_\_\_\_
- (12) My desire to merge sometimes scares people away. \_\_\_\_\_
- (13) I am comfortable having others depend on me. \_\_\_\_\_
- (14) I know that people will be there when I need them. \_\_\_\_\_
- (15) I am nervous when anyone gets too close. \_\_\_\_\_
- (16) I find it difficult to trust others completely. \_\_\_\_\_
- (17) Often, partners want me to be closer than I feel comfortable being. \_\_\_\_\_
- (18) I am not sure that I can always depend on others to be there when \_\_\_\_\_ I need them.

**Dissociative Experiences Scale-II (DES-II)**  
**Eve Bernstein Carlson, Ph.D. & Frank W. Putnam, M.D.**

Directions: This questionnaire consists of twenty-eight questions about experiences that you may have in your daily life. We are interested in how often you have these experiences. It is important, however, that your answers show how often these experiences happen to you when you are not under the influence of alcohol or drugs. To answer the questions, please determine to what degree the experience described in the question applies to you, and circle the number to show what percentage of the time you have the experience.

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

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

0% 10 20 30 40 50 60 70 80 90 100%

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

0% 10 20 30 40 50 60 70 80 90 100%

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

0% 10 20 30 40 50 60 70 80 90 100%

4. Some people have the experience of finding themselves dressed in clothes that they don't remember putting on. Circle the number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

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

0% 10 20 30 40 50 60 70 80 90 100%

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

0% 10 20 30 40 50 60 70 80 90 100%

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

0% 10 20 30 40 50 60 70 80 90 100%

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

0% 10 20 30 40 50 60 70 80 90 100%

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

0% 10 20 30 40 50 60 70 80 90 100%

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

0% 10 20 30 40 50 60 70 80 90 100%

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

0% 10 20 30 40 50 60 70 80 90 100%

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

0% 10 20 30 40 50 60 70 80 90 100%

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

0% 10 20 30 40 50 60 70 80 90 100%

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

0% 10 20 30 40 50 60 70 80 90 100%

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

0% 10 20 30 40 50 60 70 80 90 100%

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

0% 10 20 30 40 50 60 70 80 90 100%

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

0% 10 20 30 40 50 60 70 80 90 100%

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

0% 10 20 30 40 50 60 70 80 90 100%

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

0% 10 20 30 40 50 60 70 80 90 100%

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

0% 10 20 30 40 50 60 70 80 90 100%

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

0% 10 20 30 40 50 60 70 80 90 100%

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

0% 10 20 30 40 50 60 70 80 90 100%

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

0% 10 20 30 40 50 60 70 80 90 100%

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

0% 10 20 30 40 50 60 70 80 90 100%

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

0% 10 20 30 40 50 60 70 80 90 100%

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

0% 10 20 30 40 50 60 70 80 90 100%



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

0% 10 20 30 40 50 60 70 80 90 100%

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

0% 10 20 30 40 50 60 70 80 90 100%

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## **Dissociative Experiences Scale II (DES II)**

### **Description and Interpretation**

**Description:** The Dissociative Experiences Scale II (DES II) is a copyright-free, screening instrument. According to its authors, Carlson and Putnam, "it is a brief, self-report measure of the frequency of dissociative experiences. The scale was developed to provide a reliable, valid, and convenient way to quantify dissociative experiences. A response scale that allows subject to quantify their experiences for each item was used so that scores could reflect a wider range of dissociative symptomatology than possible using a dichotomous (yes/no) format." (see Dissociation 6 (1): 16-23)!

**Interpretation:** The Dissociative Experiences Scale II (DES II): When scoring, drop the zero on the percentage e.g. 30%=3; 80%=8 then add up single digits for client score Mean DES Scores Across Populations for Various Studies

General Adult Population 5.4

Anxiety Disorders 7.0

Affective Disorders 9.35

Eating Disorders 15.8

Late Adolescence 16.6

Schizophrenia 15.4

Borderline Personality Disorder 19.2

PTSD 31

Dissociative Disorder (NOS) 36

Dissociative Identity Disorder (MPD) 48

Items from the DES for Each of the Three Main Factors of Dissociation:

**Amnesia Factor:** This factor measures memory loss, i.e., not knowing how you got somewhere, being dressed in clothes you don't remember putting on, finding new things among belongings you don't remember buying, not recognizing friends or family members, finding evidence of having done things you don't remember doing, finding writings, drawings or notes you must have done but don't remember doing. **Items — 3, 4, 5, 8, 25, 26.**

**Depersonalization/Derealization Factor:** Depersonalization is characterized by the recurrent experience of feeling detached from one's self and mental processes or a sense of unreality of the self. Items relating to this factor include feeling that you are standing next to yourself or watching yourself do something and seeing yourself as if you were looking at another person, feeling your body does not belong to you, and looking in a mirror and not recognizing yourself. Derealization is the sense of a loss of reality of the immediate environment. These items include feeling that other people, objects, and the world around them is not real, hearing voices inside your head that tell you

to do things or comment on things you are doing, and feeling like you are looking at the world through a fog, so that people and objects appear far away or unclear.

**Items — 7, 11, 12, 13, 27, 28.**

**Absorption Factor:** This factor includes being so preoccupied or absorbed by something that you are distracted from what is going on around you. The absorption primarily has to do with one's traumatic experiences. Items of this factor include realizing that you did not hear part or all of what was said by another, remembering a past event so vividly that you feel as if you are reliving the event, not being sure whether things that they remember happening really did happen or whether they just dreamed them, when you are watching television or a movie you become so absorbed in the story you are unaware of other events happening around you, becoming so involved in a fantasy or daydream that it feels as though it were really happening to you, and sometimes sitting, staring off into space, thinking of nothing, and being unaware of the passage of time.

**Items — 2, 14, 15, 17, 18, 20.**

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## Trauma Symptom Check-list 33 and 40 (TSC-33 and TSC-40)

John Briere, Ph.D. and Marsha Runtz, Ph.D.

*Please note: Use of this scale is limited to professional researchers.  
The TSC-40 is a research measure, not a clinical test. It is not intended as,  
nor should it be used as, a self-test under any circumstances.*

### TSC-40

**How often have you experienced each of the following in the last two months?**

**0 = Never 3 = Often**

- |   |         |
|---|---------|
| 1. Headaches  | 0 1 2 3 |
| 2. Insomnia (trouble getting to sleep)                | 0 1 2 3 |
| 3. Weight loss (without dieting)                      | 0 1 2 3 |
| 4. Stomach problems                                   | 0 1 2 3 |
| 5. Sexual problems                                    | 0 1 2 3 |
| 6. Feeling isolated from others                       | 0 1 2 3 |
| 7. "Flashbacks" (sudden, vivid, distracting memories) | 0 1 2 3 |
| 8. Restless sleep                                     | 0 1 2 3 |

9. Low sex drive	0 1 2 3
10. Anxiety attacks	0 1 2 3
11. Sexual overactivity	0 1 2 3
12. Loneliness	0 1 2 3
13. Nightmares	0 1 2 3
14. "Spacing out" (going away in your mind)	0 1 2 3
15. Sadness	0 1 2 3
16. Dizziness	0 1 2 3
17. Not feeling satisfied with your sex life	0 1 2 3
18. Trouble controlling your temper	0 1 2 3
19. Waking up early in the morning and can't get back to sleep	0 1 2 3
20. Uncontrollable crying	0 1 2 3
21. Fear of men	0 1 2 3
22. Not feeling rested in the morning	0 1 2 3
23. Having sex that you didn't enjoy	0 1 2 3
24. Trouble getting along with others	0 1 2 3
25. Memory problems	0 1 2 3
26. Desire to physically hurt yourself	0 1 2 3
27. Fear of women	0 1 2 3
28. Waking up in the middle of the night	0 1 2 3
29. Bad thoughts or feelings during sex	0 1 2 3

30. Passing out	0 1 2 3
31. Feeling that things are "unreal"	0 1 2 3
32. Unnecessary or over-frequent washing	0 1 2 3
33. Feelings of inferiority	0 1 2 3
34. Feeling tense all the time	0 1 2 3
35. Being confused about your sexual feelings	0 1 2 3
36. Desire to physically hurt others	0 1 2 3
37. Feelings of guilt	0 1 2 3
38. Feelings that you are not always in your body	0 1 2 3
39. Having trouble breathing	0 1 2 3
40. Sexual feelings when you shouldn't have them	0 1 2 3