HIM 1990-2015

2011

The role of attachment in the relationship between child maltreatment and later emotional and behavioral functioning

Amanda F. Lowell
University of Central Florida

Part of the [Psychology Commons](#)

Find similar works at: <https://stars.library.ucf.edu/honorstheses1990-2015>

University of Central Florida Libraries <http://library.ucf.edu>

This Open Access is brought to you for free and open access by STARS. It has been accepted for inclusion in HIM 1990-2015 by an authorized administrator of STARS. For more information, please contact STARS@ucf.edu.

Recommended Citation

Lowell, Amanda F., "The role of attachment in the relationship between child maltreatment and later emotional and behavioral functioning" (2011). *HIM 1990-2015*. 1152.
<https://stars.library.ucf.edu/honorstheses1990-2015/1152>

**THE ROLE OF ATTACHMENT
IN THE RELATIONSHIP BETWEEN CHILD MALTREATMENT
AND LATER EMOTIONAL AND BEHAVIORAL FUNCTIONING**

by

AMANDA F. LOWELL

A thesis submitted in partial fulfillment of the requirements
for the Honors in the Major Program in Psychology
in the College of Sciences
and in the Burnett Honors College
at the University of Central Florida
Orlando, Florida

Spring Term 2011

Thesis Chair: Dr. Kimberly Renk

© 2011 Amanda F. Lowell

ABSTRACT

Childhood maltreatment is an experience that is likely to have lasting effects on individuals' emotional and behavioral functioning throughout their lifetimes. In particular, childhood maltreatment often is implicated in the etiology of numerous unfavorable psychological outcomes. Other research also suggested that there is a relationship between child maltreatment and the style of attachment that individuals exhibit post-abuse. Lastly, an association exists between individuals' attachment styles and their emotional and behavioral functioning. Despite substantial documentation of these relationships, few studies examine childhood maltreatment, attachment, and emotional and behavioral functioning collectively. As a result, this study examined the relationships among childhood maltreatment, attachment relationships, and later emotional and behavioral functioning, including eating behaviors. In addition, this study examined the role that attachment serves in the relationship between child maltreatment and later functioning. One hundred participants completed five questionnaires assessing experiences of childhood maltreatment, attachment relationships, emotional and behavioral functioning, and eating behaviors. Results of this study indicated that those individuals who report childhood maltreatment are more likely to report unfavorable emotional and behavioral functioning, whereas those who report childhood maltreatment but who exhibit a secure attachment style to either a parent or a peer are less likely to exhibit unfavorable emotional and behavioral functioning. Further, both the experience of childhood maltreatment and attachment were significant predictors of individuals' emotional and behavioral functioning. Finally, attachment contributed unique significant variance to the relationship between childhood maltreatment and emotional and behavioral functioning, particularly participants' internalizing

and total problems. Such findings suggested that secure attachment may serve as a protective factor against problematic emotional and behavioral symptoms as children reach emerging adulthood, even when individuals have had childhood maltreatment experiences earlier in their lives. The importance of studying the relationships among these variables is discussed.

DEDICATIONS

To my mother for being such a loving, encouraging, supportive parent (and friend).

ACKNOWLEDGMENTS

I would like to extend my deepest gratitude to those who have aided in the successful completion of this project. I truly appreciate all of the help and suggestions put forth enthusiastically by my dedicated and knowledgeable committee members. Most importantly, I must thank Dr. Renk for her unending devotion to this research endeavor as well as her enduring faith in my abilities. I have learned so much from you through this experience, and I am unbelievably thrilled that I am able to continue under your mentorship in graduate school. I cannot imagine a more perfect fit. I also cannot thank you enough for the opportunities you have given me and the knowledge you have instilled in me. You are a true inspiration.

I would also like to thank profusely Amanda Havill for her partnership in this project. Thank you for being by my side every step of the way. I am so thankful for the support you have shown. I could not have chosen a better partner, or a better friend.

TABLE OF CONTENTS

INTRODUCTION	1
Child Maltreatment and Abuse	2
The Relationship Between Child Maltreatment and Later Functioning	4
The Relationship Between Child Maltreatment and Problematic Eating Behaviors	6
The Importance of Mediators in the Study of Maltreatment	7
Attachment as a Potential Mediator in the Relationship	9
Hypotheses	12
METHODS	14
Participants	14
Measures	15
Procedure	17
RESULTS	19
Descriptive Information	19
Relationships Among Child Maltreatment, Attachment,	19
Predicting the Emotional and Behavioral Functioning of Individuals	21
DISCUSSION	25
APPENDIX A: IRB APPROVAL LETTER	37
APPENDIX B: INFORMED CONSENT	39

APPENDIX C: DEMOGRAPHICS QUESTIONNAIRE	43
APPENDIX D: INVENTORY OF PARENT AND PEER ATTACHMENT	46
APPENDIX E: ACHENBACH ADULT SELF-REPORT	50
APPENDIX F: EATING ATTITUDES TEST	55
APPENDIX G: CHILDHOOD TRAUMA QUESTIONNAIRE	57
APPENDIX H: POST PARTICIPATION INFORMATION	59
REFERENCES	61

LIST OF TABLES

Table 1. Participant Demographic Information	30
Table 2. Descriptive Statistics for Variables of Interest	31
Table 3. Correlations Among Child Maltreatment, Attachment, Emotional and Behavioral Functioning, and Eating Behavior Ratings	32
Table 4. Summary of Regression Analyses for the Childhood Trauma Questionnaire.....	33
Table 5. Hierarchical Regression Analyses	35

INTRODUCTION

Childhood maltreatment is an experience that is likely to have lasting effects on individuals' emotional and behavioral functioning throughout their lifetimes. Previous research indicated that the experience of childhood maltreatment is an important predictor in the etiology of a multitude of unfavorable psychological outcomes, including eating disorders (Gross & Keller, 1992; Mullen, Martin, Anderson, Romans, & Herbison, 1996; Silverman, Reinherz, & Giaconia, 1996; Springer, Sheridan, Kuo, & Carnes, 2007). Other research also suggested that there is a relationship between child maltreatment and the style of attachment that individuals exhibit post-abuse. Lastly, an association exists between individuals' attachment styles and their emotional and behavioral functioning. Although these relationships are noted, few studies examine childhood maltreatment, attachment, and emotional and behavioral functioning collectively. As a result, these relationships deserve further study.

In examining these variables, a mediational model may provide interesting explanations for certain psychological outcomes, particularly problematic eating behaviors. In particular, assessing attachment as a potential mediator in the relationship between the experience of childhood maltreatment and problematic emotional and behavioral functioning and eating behaviors might offer additional knowledge concerning how childhood maltreatment experiences are related to individuals' emotional and behavioral functioning. Therefore, studying the interrelationships among these variables may provide vital knowledge that can be applied to interventions intended to treat emotional and behavioral problems, including problematic eating behaviors. Consequently, the current study will examine the relationships among the experience of childhood maltreatment, attachment, and the emotional and behavioral functioning,

particularly problematic eating behaviors, of individuals who experienced maltreatment during their childhoods.

Child Maltreatment and Abuse

Research conducted by the U. S. Department of Health and Human Services (2008) suggested that an estimated 772,000 children were victims of abuse and neglect in 2008. Of these children, 71.1% were victims of neglect, 16.1% were victims of physical abuse, 9.1% were victims of sexual abuse, and 7.3% were victims of psychological maltreatment (i.e., emotional abuse and emotional neglect). Victimization rates of both sexes were nearly equal, with 48.3% of boys and 51.3% of girls experiencing some form of childhood maltreatment (U. S. Department of Health and Human Services, 2008). Thus, various forms of childhood maltreatment are unfortunately widespread in today's society, suggesting the need for further understanding of such a serious issue.

Child maltreatment is defined by both federal and state laws. Thus, each state has its own method of defining and identifying child abuse and neglect. The Federal *Child Abuse Prevention and Treatment Act* (CAPTA) provides a broad set of minimum criteria that each state must incorporate into its statutory definitions of child maltreatment. These minimum criteria suggested that abuse should encompass “any recent act or failure to act on the part of a parent or caretaker, which results in death, serious physical or emotional harm, sexual abuse, or exploitation, or an act or failure to act which presents an imminent risk of serious harm” (U. S. Department of Health and Human Services Administration for Children & Families, 2009, p. 1). For example, the state of Florida's definition of abuse includes “any willful act or threatened act that results in any physical, mental, or sexual injury or harm that causes or is likely to cause the

child's physical, mental, or emotional health to be significantly impaired. Abuse of a child includes acts or omissions" (U. S. Department of Health and Human Services Administration for Children & Families, 2009, p. 25).

To fully understand the correlates of such difficult childhood experiences, definitions for each specific type of maltreatment should be considered. CAPTA defines physical abuse as "any nonaccidental physical injury to the child" (U. S. Department of Health and Human Services Administration for Children & Families, 2009, p. 2). This type of abuse can include a variety of physical acts that result in "a physical impairment of the child" or that "create a substantial risk of harm to the child's health or welfare" (U. S. Department of Health and Human Services Administration for Children & Families, 2009, pp. 2-3). CAPTA defines sexual abuse as "the employment, use, persuasion, inducement, enticement, or coercion of any child to engage in, or assist any other person to engage in, any sexually explicit conduct or simulation of such conduct for the purpose of producing a visual depiction of such conduct; or the rape, and in cases of caretaker or interfamilial relationships, statutory rape, molestation, prostitution, or other form of sexual exploitation of children, or incest with children" (U. S. Department of Health and Human Services Administration for Children & Families, 2009, p. 1).

Further, CAPTA's definition of emotional abuse includes "injury to the psychological capacity or emotional stability of the child as evidenced by an observable or substantial change in behavior, emotional response, or cognition, or as evidenced by anxiety, depression, withdrawal, or aggressive behavior" (U. S. Department of Health and Human Services Administration for Children & Families, 2009, p. 3). Lastly, CAPTA defines neglect as "the failure of a parent or other person with responsibility for the child to provide needed food,

clothing, shelter, medical care, or supervision such that the child's health, safety, and well-being are threatened with harm" (U. S. Department of Health and Human Services Administration for Children & Families, 2009, p. 3). Each specific type of maltreatment may demonstrate differential relationships with the other variables examined in this study.

The Relationship Between Child Maltreatment and Later Functioning

With such a high incidence of child maltreatment, research examined closely the myriad of short-term and long-term effects from such maltreatment. Although it is impossible to determine the exact causes of child maltreatment and its direct consequences, much research focused on the relationship of child maltreatment and a variety of difficulties in the emotional and behavioral functioning of men and women. In fact, studies documented high rates of comorbid psychiatric disorders in individuals who have experienced child maltreatment. For example, in one study, researchers reported that 80% of men who have been abused physically, 58.3% of women who have been abused physically, and 69.6% of women who have been abused sexually meet criteria for multiple *DSM-III-R* psychiatric disorders (Silverman, Reinherz, & Giaconia, 1996).

When examining psychiatric disorders, certain symptoms appear to be relatively common in those individuals who have been abused. For example, Gross and Keller (1992) reported that men and women who have been abused both physically and psychologically present with more depression relative to those who have not been abused and those who have experienced only one type of abuse (either physical or psychological). Similarly, Briere and Runtz (1988) indicated that co-occurring psychological and physical abuse is related to anxiety, depression, somatization, and suicidal ideation. Further, one study examining the long-term consequences of

childhood physical abuse in a large population-based sample also indicated that adults who report having been abused physically as children have a higher likelihood of reporting depression, anxiety, and anger (Springer, Sheridan, Kuo, & Carnes, 2007). Overall, another longitudinal study reported that, regardless of the type of abuse that is experienced, both men and women exhibit higher rates of major depression, post-traumatic stress disorder, and antisocial behavior following experiences of childhood abuse (Silverman et al., 1996).

In addition to depressive and anxiety symptoms, other types of problematic outcomes are related to experiences of childhood maltreatment as well. For example, research suggested that women who experience any kind of maltreatment (i.e., physical, emotional, or sexual) are more likely than their non-abused counterparts to exhibit mental health, interpersonal, and sexual difficulties as adults (Mullen, Martin, Anderson, Romans, & Herbison, 1996). Another study extended such findings to men as well, indicating that men and women who report being abused psychologically or psychologically and physically score lower on a self-esteem measure relative to participants who were not abused and relative to participants who were abused physically (Gross & Keller, 1992). Silverman, Reinherz, and Giaconia (1996) further demonstrated that men and women who report experiencing either sexual or physical abuse as children or adolescents display significantly lower functioning across a variety of domains (i.e. withdrawal, somatic complaints, anxiety, depression, social problems, thought problems, attention problems, delinquent behavior, aggressive behavior, suicidal ideation) relative to their non-abused counterparts at both the ages of 15- and 21-years.

The relationship between child maltreatment and suicidal ideation/behavior also was documented. Research indicated that women who have experienced sexual abuse have a three

times higher risk of suicidal behavior and that women who have experienced emotional abuse have a two times higher risk of suicidal behavior than women in a non-abused control group (Mullen et al., 1996). In another study, researchers reported that, by the age of 15-years, 70% of female participants who have been abused physically and 87.5% of female participants who have been abused sexually report suicidal thoughts. In contrast, by the age of 21-years, 25% of female participants who have been abused physically and 26.1% of female participants who have been abused sexually report previous suicide attempts (Silverman et al., 1996). Thus, the experience of childhood maltreatment has been related to a variety of emotional and behavioral outcomes.

The Relationship Between Child Maltreatment and Problematic Eating Behaviors

In addition to these outcomes, research suggested that there may be an association between child maltreatment and problematic eating behaviors. For example, previous research indicated that those who have been abused physically are significantly more likely to report symptoms of eating disorders (e.g., bingeing, worrying about weight, jogging, using laxatives, using diuretics, using diet pills, fasting, vomiting) than their non-abused peers (Hernandez, 1995), with childhood physical abuse affecting eating behaviors directly (Kennedy et al., 2007). Similarly, Mitchell and Mazzeo (2005) indicated that childhood physical abuse and neglect are related significantly to eating disorder symptomatology in men.

Further, several studies described a relationship between childhood emotional maltreatment and problematic eating behaviors. For example, Kent, Waller, and Dagnan (1999) and Kennedy and colleagues (2007) reported that childhood emotional abuse is a significant predictor of eating psychopathology. These authors also suggested that childhood emotional abuse appears to be the most influential form of childhood trauma when it comes to eating

psychopathology. Sexual abuse also is related to problematic eating behaviors. For example, Hernandez (1995) reported that individuals who were abused sexually (e.g., extrafamilial sexual abuse, incest) are significantly more likely to report symptoms of eating disorders than their non-abused peers. Further, compared with a non-abused control group, female psychiatric patients who have experienced childhood sexual abuse reported much higher levels of anorexic and bulimic symptoms (Mercado, Martinez-Toboas, & Pedrosa, 2008).

Not surprisingly, studies demonstrated that individuals who have experienced multiple forms of abuse have less favorable outcomes. Mullen and colleagues (1996) reported that women who have been abused physically, emotionally, or sexually are more likely than their non-abused counterparts to have histories of eating disorders, and women who have experienced two forms of abuse have an even higher likelihood of a history of eating disorders. Additionally, eating psychopathology was most severe for individuals who report multiple forms of childhood abuse, regardless of the type of abuse that was experienced (Messman-Moore & Garrigus, 2007). These findings suggested that there is an additive effect of experiencing more than one type of abuse.

The Importance of Mediators in the Study of Maltreatment and Problematic Emotional and Behavioral Functioning

Given the aforementioned literature, research suggested clearly that the experience of childhood maltreatment and problematic emotional and behavioral functioning are related. Nonetheless, there is very little understanding of the mechanisms that may explain this relationship. Consistently, Wright (2007) suggested that, because previous research focused on simply documenting the damaging impact of abuse, future research must examine the possible explanations for these long-term negative effects. For such research, mediation and moderation

models may prove to be helpful. For example, much of the literature examining the relationship between child maltreatment and problematic eating behaviors discusses the mediating role of a multitude of factors (Hankin, 2006; Hund & Espelage, 2005, 2006; Kent & Waller, 2000; Kent, Waller, & Dagnan, 1999; Mazzeo & Espelage, 2002; Mazzeo, Mitchell, & Williams, 2008; Mitchell & Mazzeo, 2005).

In particular, in their review of childhood emotional abuse and problematic eating behaviors, Kent and Waller (2000) suggested that mediators are significant in this field of research because individuals often exhibit disordered eating behaviors in an effort to alleviate the negative psychological effects of maltreatment. These authors also indicated that mediating and moderating factors are crucial because researching child maltreatment as a single-causal model of eating disorders is ineffective. Given such theorizing, it should be no surprise that depression appears to mediate the relationship between childhood abuse and eating disorder symptomatology (Mazzeo & Espelage, 2002; Mitchell & Mazzeo, 2005). Kent and colleagues (1999) also reported that the relationship between childhood emotional abuse and problematic eating behaviors is mediated fully by anxiety and dissociation. Additionally, several studies indicated that, although childhood physical abuse, emotional abuse, and neglect are not related directly to problematic eating behaviors, factors such as depression, anxiety, and alexithymia mediate the relationship between such maltreatment and problematic eating behaviors (Hund & Espelage, 2006; Mazzeo & Espelage, 2002; Mazzeo, Mitchell, & Williams, 2008). Anxiety and self-esteem also mediated the relationship between childhood neglect and eating psychopathology (Kennedy, Ip, Samra, & Gorzalka, 2007). Thus, mediators are clearly important in understanding these relationships.

Attachment as a Potential Mediator in the Relationship
Between Child Maltreatment and Emotional and Behavioral Functioning

Of particular interest in the current study is the relationship among child maltreatment, the formation of attachment, and difficulties in emotional and behavioral functioning. In fact, attachment is beginning to receive attention as an explanatory variable in the relationship between the experience of childhood maltreatment and the emotional and behavioral outcomes that may be experienced later in life. For example, in her invited commentary on the mediating processes between sexual abuse and psychological distress, Banyard (2003) described how recent research is attempting to explain the long-term negative effects of child maltreatment using variables such as family relationships and attachment.

In order to examine the relationship between childhood maltreatment and attachment, it is first imperative to investigate the origins and theoretical foundations of attachment theory. Attachment research was pioneered by John Bowlby in the 1950s as he began to observe directly the behaviors of infants and their attachment figures. Bowlby noticed a change in the infants' behavior when infants became separated from their attachment figures. He attributed this change to the attachment bonds that had developed in the relationship between infants and their attachment figures (Ainsworth & Bowlby, 1991). Accordingly, Bowlby described these changes in behavior (called *attachment behavior*) as an attempt to maintain an attachment to a caregiver who the infant perceives as being better equipped to cope with threats (Bowlby, 1988). Bowlby also indicated that characteristics of these early attachments are related to each individual's internal working models, or the mental representations that infants will use in their interactions with all other significant others in the future (e.g., Stern, 1985).

In response to Bowlby's work, Mary Ainsworth developed a conceptualization of attachment classifications. Ainsworth, Blehar, Waters, and Wall (1978) established a method of assessing attachment behaviors in a laboratory setting called the *Strange Situation*. With this method, infants are exposed to eight episodes of gradually increasing stress aimed at triggering attachment behaviors. The range of attachment behaviors exhibited by these infants once they have been reunited with their caregivers enabled Ainsworth to describe three patterns of attachment behaviors: *Secure*, *Anxious Avoidant*, and *Ambivalent or Resistant*. In particular, *Secure Attachment* is related to positive outcomes throughout individuals' lives. In infancy, those who exhibit secure attachment use their caregivers as a secure base for exploration, appear distressed when separated from their caregivers, and then warmly greet their caregivers upon being reunited (Ainsworth et al., 1978). Both *Anxious Avoidant* and *Ambivalent or Resistant* patterns of attachment are considered insecure attachment styles and are related to more negative outcomes. Infants who exhibit *Anxious Avoidant Attachment* appear indifferent when separated from their caregivers and ignore their caregivers upon being reunited (Ainsworth et al., 1978). Infants who exhibit *Ambivalent or Resistant Attachment* show intense distress upon being separated from their caregivers; however, once infants and their caregivers are reunited, infants seek out their caregivers, but they do not settle down (Ainsworth et al., 1978).

Noting that some infants cannot be classified into one of these three classifications, Mary Main developed a fourth category of attachment called *Disorganized/Disoriented Attachment* (Main, 1996, 2000; Main & Solomon, 1986). Infants who exhibit this pattern of attachment behave in a conflicting and anomalous manner when separated from their caregivers and appear to have no consistent method for coping with being separated from or being reunited with their

caregivers (Main & Solomon, 1986). Interestingly, Main and Solomon (1986) indicated that many disorganized/disoriented infants appear fearful of their caregivers. Not surprisingly, research indicated that disorganized/disoriented attachment is related significantly to childhood maltreatment (Carlson, Cicchetti, Barnett, & Braunwald, 1989; Lyons-Ruth, Alpern, Repacholi, 1993). Such findings were not completely new, as Bowlby (1979) suggested that individuals who are raised in an “atypical family environment” (i.e., an abusive environment) often will exhibit psychiatric disturbances. Similarly, Main (2000) stated that disorganized/disoriented attachment appears to be particularly predictive of unfavorable psychological outcomes. Given this aforementioned literature, it is important to examine the relationships among childhood maltreatment, attachment, and later emotional and behavioral functioning.

In fact, a handful of studies investigated the mediating role of attachment in the relationship between child maltreatment and psychological symptoms. For example, Hankin (2005) reported that an insecure attachment style mediates the relationship between child maltreatment and depressive symptoms. Attachment also mediated the relationship between childhood sexual abuse and psychological adjustment (Roche, Runtz, & Hunter, 1999). This study reported that women who are abused sexually exhibit more post-traumatic stress symptoms than women who are not abused. In addition, the authors explained that attachment style is of particular importance in the study of psychological adjustment because sexual abuse is related highly to both psychological adjustment and adult attachment styles (Roche et al., 1999).

Additionally, some studies described a relationship between attachment patterns and eating disorders. Cole-Detke and Kobak (1996) posited that, because *deactivating* (i.e., insecure) attachment strategies are related to individuals’ beliefs that they have a low probability of

gaining access to their attachment figures, these individuals focus on a more attainable goal (i.e., changing their appearance) in an attempt to divert attention away from distressful attachment issues. Similarly, nearly all of the participants across multiple studies who exhibited problematic eating behaviors also exhibited insecure patterns of attachment (Latzer, Hochdorf, Bachar, & Canetti, 2002; Ringer & Crittenden, 2007). Further, compared with a nonclinical control group, participants with eating disorders reported more parental rejection and insecure attachment experiences (Terenio, Soares, Martins, Celani, & Sampaio, 2008). Despite the wealth of research surrounding childhood maltreatment and attachment, childhood maltreatment and emotional and behavioral functioning (e.g., eating behavior), and attachment and emotional and behavioral functioning, there is a lack of collective information concerning all three variables, particularly the mediating role of attachment in the relationship between childhood abuse and problematic eating behaviors. As a result, these relationships deserve to be examined further.

Hypotheses

The current study examined the relationships among child maltreatment, attachment, and later emotional and behavioral functioning, including problematic eating behaviors. Additionally, this study examined attachment as a mediator in the relationship between childhood maltreatment and later problematic emotional and behavioral functioning. It was postulated that the variables examined in the current study would be related significantly. Specifically, it was hypothesized that those individuals who were abused physically, sexually, or emotionally would be more likely to report unfavorable emotional and behavioral outcomes and problematic eating behaviors. However, it was thought that those who were abused physically, sexually, or emotionally but who exhibited secure attachment would be less likely to exhibit unfavorable

emotional and behavioral functioning and problematic eating behaviors. Such findings may suggest that secure attachment may serve as a protective factor for individuals' later emotional and behavioral functioning in the context of childhood maltreatment. In addition, it was hypothesized that those who have been abused and who exhibit lower attachment security would be more likely to report unfavorable emotional and behavioral functioning and problematic eating behaviors. Further, it was expected that both the experience of childhood maltreatment and attachment would serve as significant predictors of individuals' emotional and behavioral functioning and problematic eating behaviors. Finally, it was hypothesized that attachment would serve as a mediator in the observed relationship between the experience of childhood maltreatment and emotional and behavioral functioning.

METHODS

Participants

A power analysis with an alpha level of .05 and a medium effect size suggests that approximately 107 participants would be needed to identify an effect with eight predictors in a regression analysis (Cohen, 1992). Correspondingly, attempts were made to recruit 107 participants for the current study. Given that individuals with childhood maltreatment experiences are of interest for this study, significantly more participants than were needed were sampled for this study. Participants were undergraduate Psychology students from a large Southeastern university recruited via an online extra credit system (Sona Systems). There was no exclusion of participants as a result of any demographic characteristics, including, but not limited, to gender or ethnicity. It should be noted, however, that participants had to be 18-years of age or older. Additionally, validity questions were added to the online survey in order to eliminate participants who responded with various response biases. All participants who answered incorrectly one or more validity questions were considered invalid. Of the 494 participants recruited, a total of 213 participants were considered invalid, and 281 participants were considered valid. Due to time constraints, a total of 100 valid participants were included in the analyses examined here.

Participants in this study ranged in age from 18- to 45- years ($M=21.21$ -years, $SD=4.75$ -years). Females composed 83% of the sample, whereas males composed 14% of the sample; 3% of the sample did not report their gender. The majority of participants were Caucasian (73%). A small number of participants were Hispanic (14%), African American (5%), Asian American (3%), and Multi-racial (3%). Some participants (2%) did not report their ethnicity. The

distribution of participants' class standing was fairly even, representing Freshmen (31%), Sophomores (15%), Juniors (32%), Seniors (20%), and Non-Degree Seeking individuals (2%). See Table 1 for complete demographics data.

Measures

Demographics. A demographics questionnaire was used for the current study to gather information regarding participants' gender, age, ethnicity, year in college, frequency of contact with their mothers, and frequency of contact with their fathers, among other things.

Child Maltreatment. Childhood maltreatment was measured using the *Childhood Trauma Questionnaire (CTQ)*; Bernstein & Fink, 1998). The CTQ is a retrospective self-report measure that assesses five types of childhood maltreatment experiences: physical abuse, sexual abuse, emotional abuse, emotional neglect, and physical neglect. The measure also contains three items on a minimization/denial scale to assess for participants who are underreporting experiences of maltreatment. This measure consists of 28 items (i.e., five items for each maltreatment scale and three items for the minimization/denial scale) that are rated on a 1 (*Never*) to 5 (*Very Often*) Likert scale. Thus, the scores for each maltreatment scale can range from 0 (low experience of maltreatment) to 25 (high experience of maltreatment). The CTQ exhibited high test-retest reliability and high internal consistency in previous studies (Cronbach's alphas ranged from .79 to .94). This measure also had high face validity, good convergent validity with the Childhood Trauma Interview, and good discriminant validity with social desirability and verbal intelligence measures in a previous study (Bernstein et al., 1994).

Attachment. Attachment security was assessed using the *Inventory of Parent and Peer Attachment (IPPA; Armsden & Greenberg, 1987)*. This self-report measure utilizes a five-point Likert-scale response format that ranges from *Almost always or always true* to *Almost never or never true*. This measure consists of three subscales that yield three attachment scores. Specifically, 28 items assess attachment to mothers, 28 items assess attachment to fathers, and 25 items assess attachment to peers. The IPPA additionally measures three dimensions of attachment for each attachment figure, including degree of mutual trust (e.g., “When we discuss things, my mother considers my point of view”), quality of communication (e.g., “I tell my mother about my problems and troubles”), and degree of alienation (e.g., “I get upset a lot more than my mother knows about”). The measure is scored by reverse-scoring negatively worded items and subsequently summing the response values from the Likert-scale for each subscale. For our study, low scores indicate a more secure attachment relationship, whereas high scores indicate a less secure attachment relationship to the given attachment figure. This measure has evidence of its reliability (e.g., Cronbach’s alphas are .87 for attachment to mothers, .89 for attachment to fathers, and .92 for attachment to peers) and validity (e.g., test-retest reliabilities are .93 for attachment to parents and .86 for attachment to peers; Armsden & Greenberg, 1987).

Emotional and Behavioral Functioning. Current emotional and behavioral functioning was evaluated using the *Achenbach Adult Self-Report for Ages 18-59 (ASR; Achenbach, 2009)*. This widely-used measure consists of four normed sets of scales each comprised of multiple subscales. The four scales include: adaptive functioning, empirically based syndromes, DSM-oriented scales, and substance use. Participants were asked to rate their behavior over the past six months on a 3-point Likert scale (0 = *Not True*, 1 = *Somewhat or Sometimes True*, 2 = *Very True*

or Often True). The scores on the problem items were summed and converted to standard scores to yield normalized T scores scores, including specifically an Internalizing Problems (e.g., depression, anxiety, withdrawal) score, an Externalizing Problems (e.g., rule-breaking, aggression) score, and a Total Problems score. According to analyses conducted with normative samples, this measure had high reliability (test-retest reliabilities are .89 for Internalizing Problems, .91 for Externalizing Problems, and .94 for Total Problems; Cronbach's alpha are .93 for Internalizing Problems, .89 for Externalizing Problems, and .97 for Total Problems) and high validity (Achenbach, 2009).

Eating Behaviors. Eating behaviors were measured using the *Eating Attitudes Test 26* (EAT-26; Garner, Olmsted, Bohr, & Garfinkel, 1982). The EAT-26 contains 26 items related to eating behaviors and is a shortened version of the original Eating Attitudes Test which contains 40 items. The two versions of the EAT are correlated highly ($r = .98$). The shortened version of the self-report measure consists of three subscales of eating disorder symptoms including Dieting (e.g., "Am terrified about being overweight"), Bulimia and Food Preoccupation (e.g., "Feel that food controls my life"), and Oral Control (e.g., "Avoid eating when I am hungry"). This measure had high reliability (the Cronbach's alpha is .90) and acceptable validity (Garner et al., 1982).

Procedure

Upon approval from the Institutional Review Board at the University of Central Florida, participants were recruited for the current study through Sona Systems, the online extra credit system in the Department of Psychology. All participants were at least 18-years of age and received extra credit toward a Psychology class of their choice for their participation in the study.

Individuals who wished to participate had the option to either complete the selected measures online anonymously via Sona Systems or to electronically sign up for a data collection time-slot that would be held in the faculty supervisor's research laboratory in the Psychology Building (for those who were not comfortable with the online administration). Participants were either electronically or physically presented with a consent document and assured complete confidentiality and anonymity. Upon agreeing to participate, the selected measures were administered. Participants had the option to elect to withdraw from the study at any time without penalty. A researcher was available by phone for those participants who completed the measures online and was present at each in-person data collection session to answer any questions that the participants had. Upon completion of the measures, participants were provided with a debriefing form and the option of receiving a summary of the findings once the current study was concluded.

With regard to in-person data collection sessions, contact sheets and consent forms were immediately removed and separated from the questionnaires once participants completed and returned their questionnaire packets to the researcher. The questionnaire packets, the contact sheets, and the consent forms were stored securely in a locked filing cabinet in the faculty supervisor's research laboratory in order to maintain confidentiality and anonymity. All data was analyzed collectively, and no single packet was selected for individual examination.

RESULTS

Descriptive Information

To examine the relative standing of the participants on the variables in this study, means and standard deviations were calculated. See Table 2 for the ranges, means, and standard deviations on these variables. Overall, on the CTQ, there was little variance in participants' reported levels of child maltreatment. Relative to the range of scores available for this measure, participants reported low levels of physical neglect ($M = 6.64$, $SD = 2.94$), physical abuse ($M = 6.94$, $SD = 3.30$), emotional neglect ($M = 9.43$, $SD = 4.70$), emotional abuse ($M = 8.60$, $SD = 4.33$), sexual abuse ($M = 5.96$, $SD = 3.14$), and minimization and denial ($M = 9.80$, $SD = 3.39$). Relative to the range of scores available for the IPPA measure, participants reported a moderate level of attachment to mothers ($M = 55.58$, $SD = 21.03$), a moderate level of attachment to fathers ($M = 67.42$, $SD = 24.16$), and a moderate level of attachment to peers ($M = 49.10$, $SD = 16.06$). Relative to the clinical cut-offs designated for the ASR, participants endorsed Nonclinical levels of internalizing problems ($M = 54.91$, $SD = 11.91$), externalizing problems ($M = 52.07$, $SD = 9.36$), and total problems ($M = 53.32$, $SD = 10.14$). Participants also reported low levels of eating disorder symptoms ($M = 9.33$, $SD = 9.26$).

Relationships Among Child Maltreatment, Attachment, Emotional and Behavioral Functioning, and Eating Behavior

To examine the relationships among child maltreatment, attachment, emotional and behavioral functioning, and eating behaviors, correlations among the variables were examined. These correlations provided evidence for the hypotheses regarding the relationships among the variables examined in this study. See Table 3 for a correlation matrix of these findings.

With regard to the relationship between child maltreatment and attachment, there were significant relationships between the experience of physical neglect and attachment to mothers ($r = .31, p < .002$) and attachment to fathers ($r = .23, p < .03$). There also was a significant relationship between physical abuse and attachment to mothers ($r = .21, p < .04$). Physical abuse also was related marginally to attachment to fathers ($r = .19, p < .07$). In addition, emotional neglect was related significantly to attachment to mothers ($r = .57, p < .001$) and attachment to fathers ($r = .44, p < .001$). Emotional abuse was related significantly to attachment to mothers ($r = .40, p < .001$), attachment to fathers ($r = .49, p < .001$), and attachment to peers ($r = .22, p < .03$). Sexual abuse was related significantly to attachment to mothers ($r = .29, p < .004$), and attachment to fathers ($r = .29, p < .006$).

With regard to the relationship between child maltreatment and emotional and behavioral functioning, there were significant relationships between the experience of physical neglect and internalizing problems ($r = .29, p < .003$), externalizing problems ($r = .37, p < .001$), and total problems ($r = .39, p < .001$). There also were significant relationships between physical abuse and externalizing problems ($r = .30, p < .003$) and total problems ($r = .33, p < .001$). Additionally, emotional neglect was related significantly to internalizing problems ($r = .38, p < .001$), externalizing problems ($r = .32, p < .001$), and total problems ($r = .38, p < .001$). Emotional abuse was related significantly to internalizing problems ($r = .38, p < .001$), externalizing problems ($r = .37, p < .001$), and total problems ($r = .48, p < .001$). Sexual abuse was related marginally to internalizing problems ($r = .19, p < .06$) but was not related to externalizing problems ($r = .15, p < .14$) or total problems ($r = .13, p < .19$).

With regard to the relationship between child maltreatment and problematic eating behaviors, emotional neglect was related significantly to overall eating disorder symptoms ($r = .26, p < .01$). However, physical neglect ($r = .17, p < .10$), physical abuse ($r = .11, p < .29$), emotional abuse ($r = .15, p < .15$), and sexual abuse ($r = -.01, p < .89$) were not related to eating behaviors.

With regard to the relationship between attachment and emotional and behavioral functioning, there was a significant relationship between attachment to mothers and internalizing problems ($r = .21, p < .04$), externalizing problems ($r = .25, p < .01$), total problems ($r = .22, p < .03$), and overall eating disorder symptoms ($r = .25, p < .02$). Attachment to fathers also was related significantly to internalizing problems ($r = .33, p < .002$) and total problems ($r = .26, p < .02$). In addition, attachment to peers was related significantly to internalizing problems ($r = .43, p < .001$) and total problems ($r = .45, p < .001$).

Predicting the Emotional and Behavioral Functioning of Individuals who Have Experienced Child Maltreatment

Finally, a series of regression analyses were conducted to examine the remaining hypotheses for this study. First, regression analyses were conducted to determine which variables were significant predictors of individuals' emotional and behavioral functioning, including their problematic eating behaviors. In this analysis, child maltreatment and attachment served as predictor variables, and individuals' emotional and behavioral functioning as well as their eating behaviors served as the criterion variables. These analyses were examined for evidence of mediation using Baron and Kenny's (1986) procedure. These analyses help to clarify the relationships among the experience of childhood maltreatment, attachment, and later

emotional and behavioral functioning. The results of these regression analyses can be found in Tables 4 and 5.

Child Maltreatment Predicting Emotional and Behavioral Functioning. Participants' experience of child maltreatment predicted significantly their internalizing problems, $F(6, 92) = 5.90, p < .001, R^2 = .28$. In particular, internalizing problems were predicted significantly by the emotional abuse ($p < .001$) subscale of the CTQ. Participants' experience of child maltreatment also predicted significantly their externalizing problems, $F(6, 92) = 3.20, p < .007, R^2 = .17$. Additionally, participants' experience of child maltreatment predicted significantly their total problems, $F(6, 92) = 5.55, p < .001, R^2 = .27$. In particular, total problems were predicted significantly by the emotional abuse ($p < .003$) subscale of the CTQ and predicted marginally by the physical neglect ($p < .09$) subscale of the CTQ.

Child Maltreatment Predicting Problematic Eating Behaviors. Participants' experience of child maltreatment did not predict significantly their eating behaviors as measured by the Eating Attitudes Test, $F(6, 88) = 1.18, p < .32, R^2 = .08$.

Child Maltreatment Predicting Attachment Security. Participants' experience of child maltreatment predicted significantly their attachment to their mothers, $F(6, 89) = 7.29, p < .001, R^2 = .33$. In particular, attachment to mothers was predicted significantly by the emotional neglect ($p < .001$) subscale of the CTQ. Participants' experience of child maltreatment also predicted significantly their attachment to their fathers, $F(6, 82) = 9.55, p < .001, R^2 = .41$. In particular, attachment to fathers was predicted significantly by the physical abuse ($p < .02$) and the emotional abuse ($p < .009$) subscales of the CTQ. Finally, participants' experience of child

maltreatment did not predict significantly their attachment to their peers, $F(6, 92) = 1.71, p < .13, R^2 = .10$.

Child Maltreatment and Attachment Predicting Emotional and Behavioral Functioning.

When examining child maltreatment and attachment collectively as predictors of participants' emotional and behavioral functioning, child maltreatment variables were entered in Block 1 and attachment variables were entered in Block 2 so that incremental variance could be examined. (Eating behaviors were no longer considered given the lack of significance in the previous regression equation.).

For internalizing problems, participants' experience of child maltreatment predicted significantly their internalizing problems, $F(6, 80) = 6.07, p < .001, R^2 = .31$, when the abuse variables were entered in Block 1. In particular, participants' endorsements of emotional abuse ($p < .003$) served as a significant individual predictor. When attachment variables were entered in Block 2, the regression equation remained significant, $F(9, 77) = 10.03, p < .001, R^2 = .54$. In this case, participants' endorsements of emotional abuse ($p < .03$) as well as participants' attachment to their peers ($p < .001$) served as individual predictors. Thus, although attachment to peers provided unique incremental variance in predicting participants' internalizing problems, it did not serve as a mediator in the relationship between experiences of childhood maltreatment and internalizing problems (because childhood maltreatment did not predict attachment to peers in an earlier regression equation).

For externalizing problems, participants' experience of child maltreatment predicted significantly their externalizing problems, $F(6, 80) = 2.86, p < .01, R^2 = .18$, when abuse variables were entered in Block 1. However, no specific form of maltreatment served as a

significant individual predictor. When the attachment variables were entered in Block 2, the regression equation remained significant, $F(9, 77) = 2.11, p < .04, R^2 = .20$. In this case, no specific form of maltreatment or attachment served as a significant individual predictor. Unfortunately, no variables served as a mediator in the relationship between experiences of childhood maltreatment and internalizing problems.

For total problems, participants' experience of child maltreatment predicted significantly their total problems, $F(6, 80) = 5.35, p < .001, R^2 = .29$. In particular, participants' endorsements of emotional abuse ($p < .01$) served as a significant individual predictor. When the attachment variables were entered in Block 2, the regression equation remained significant, $F(9, 77) = 6.09, p < .001, R^2 = .42$. In this case, participants' endorsements of emotional abuse ($p < .06$) as well as participants' attachment to their peers ($p < .001$) served as significant individual predictors. Although attachment to peers provided unique incremental variance in predicting participants' total problems, it did not serve as a mediator in the relationship between experiences of childhood maltreatment and total problems (because childhood maltreatment did not predict attachment to peers in an earlier regression equation).

DISCUSSION

The purpose of the current study was to provide a deeper understanding of attachment as one potential process involved in the development of unfavorable emotional and behavioral functioning and problematic eating behaviors post-abuse. Because previous research suggested that there are relationships between abuse and psychopathology (Briere & Runtz, 1988; Gross & Keller, 1992; Mullen et al., 1996; Silverman et al., 1996; Springer et al., 2007), abuse and problematic eating behaviors (Hernandez, 1995; Kennedy et al., 2007; Kent et al., 1999; Mercado et al., 2008; Messman-Moore & Garrigus, 2007; Mitchell & Mazzeo, 2005), abuse and attachment relationships (Bowlby, 1979; Carlson, Cicchetti, Barnett, & Braunwald, 1989; Lyons-Ruth, Alpern, & Repacholi, 1993; Main, 2000), and attachment relationships and psychopathology (Cole-Detke & Kobak, 1996; Hankin, 2005; Latzer et al., 2002; Ringer & Crittenden, 2007; Roch et al., 1999; Tereno et al., 2008), this study analyzed these relationships collectively.

Overall, the results of this study suggested that participants' experience of childhood maltreatment as well as their attachment to mothers, fathers, and peers were related significantly to their later emotional and behavioral functioning. Further, participants' attachment served as a significant predictor of later emotional and behavioral functioning, even when each form of child maltreatment was entered into the hierarchical regression equations. In particular, attachment to peers contributed unique incremental variance to the relationship between the experience of childhood maltreatment and later emotional and behavioral functioning, particularly internalizing problems and total problems. Thus, it appears as though having more secure attachment relationships with others is related to a decreased likelihood of later emotional and behavioral

problems exhibited by individuals who may have experienced childhood maltreatment. In particular, the findings of this study suggested that having more secure attachment relationships with peers is related to decreased internalizing problems. These findings were consistent with those of several previous studies. For example, the current study supported previous research (Springer et al., 2007) noting that those who have been abused are more likely to exhibit symptoms of depression and anxiety (i.e., internalizing problems). However, what makes this study unique from Springer and colleagues (2007) and many other studies is the current study's use of attachment as a variable of importance in the relationship between child maltreatment and later emotional and behavioral functioning.

Surprisingly, the findings of this study do not support the hypothesis that the experience of childhood maltreatment and attachment serve as significant predictors of individuals' problematic eating behaviors or the hypothesis that attachment will serve as a mediator in the relationship between the experience of childhood maltreatment and disordered eating behaviors. These findings contradict those of Kent and colleagues (1999) and Kennedy and colleagues (2007), whose studies stated that the occurrence of childhood maltreatment predicts significantly problematic eating behaviors. It may be the case that the variables of childhood maltreatment and eating behaviors did not exhibit enough variance to derive these same types of findings. These relationships will be examined further using the full sample that was collected for this study and will need to be addressed in future studies that seek to understand these relationships. With a more thorough examination, it may be that a more robust understanding of the relationships among childhood maltreatment, attachment, and emotional and behavioral functioning will be gained. Such a robust understanding is particularly important when

considering the target sample of this study. In order to gather enough participants who have experienced child maltreatment, a very large sample was needed. However, due to time constraints, only the responses of 100 participants could be calculated, entered, and examined. Thus, only 100 participants were included currently in the correlation and regression analyses. In the future, analysis will include minimally the 281 participants that endorsed all of the validity questions correctly and were considered to have valid responses.

The findings of this study should be interpreted within the context of its limitations. First, although the overall sample size was large, the number of participating females was disproportionate to the number of participating males. As a result, not enough males provided information for meaningful data analyses of male versus female differences in this data set. With a larger male sample, it would be possible to examine more meaningful gender differences in this study's variables. For example, one point of interest would be to determine if attachment is more or less likely to mediate the relationship between child maltreatment and later functioning in males versus females. A larger male sample size also may provide insight as to whether attachment may actually serve as a mediator between child maltreatment and externalizing behaviors. According to the current analyses, child maltreatment was not a significant predictor of externalizing behaviors. However, much research showed that males have a significantly higher likelihood of exhibiting externalizing problems than females and that this gender gap increases with age (Hicks et al., 2007). Therefore, including more males in the analyses may indicate that maltreatment is a significant predictor of externalizing problems. The inclusion of more male participants also may reveal that attachment is a mediator in the relationship between childhood maltreatment and externalizing behavior.

Additionally, due to the use of a convenience sample of university students, participants may not be representative of the general population. Specifically, the participants were mostly college-age Caucasian females who had achieved a relatively high level of education. Thus, the demographic characteristics of this sample may be associated with the findings of this study, thus decreasing the findings' generalizability. Additionally, the measures used in this study were retrospective in nature. In order to determine the long-term effects of child maltreatment in a short period of time, retrospective self-report data is ideal because it is collected easily and quickly. Nonetheless, although retrospective self-report data is certainly convenient, many researchers do not consider it as trustworthy as prospective data.

Despite these limitations, the results of this study expand the body of literature regarding the role that attachment may play in the development of unfavorable emotional and behavioral outcomes post-abuse. In this study, participants' experiences of childhood maltreatment and attachment were significant predictors of their current emotional and behavioral functioning. Main (2000) summarized Bowlby's suggestion that unfavorable early experiences (i.e., abusive experiences) may lead to several subsequent contradictory internal working models, which are implicated in the development of psychopathology. Therefore, in order to prevent potentially unfavorable outcomes of abuse (e.g., internalizing and externalizing problems), psychological services may choose to focus attention on prevention programs that foster secure attachment relationships between young children and supportive, non-abusive caregivers. Additionally, because attachment plays a role in individuals' physical and psychological health throughout their lifetimes (Main, 2000), psychological services also may aim to improve emerging adults' attachment relationships to friends, significant others, and sexual partners by attempting to alter

dysfunctional internal working models that were caused by childhood maltreatment. As the research conducted in this study has the possibility to benefit directly victims of abuse, it is important to continue this line of research by examining more closely the complex relationships among child maltreatment, attachment, and later emotional and behavioral functioning.

Table 1. Participant Demographic Information

Variables	(N=100)
Age (in years)	
Range	18-45
Mean (Standard Deviation)	21.21 (4.75)
Sex (percent)	
Male	14
Female	83
No Answer	3
Ethnicity (percent)	
Caucasian	73
Hispanic	14
African American	5
Asian American	3
Multi-Racial	3
No Answer	2
Class Standing (percent)	
Freshman	31
Sophomore	15
Junior	32
Senior	20
Non-Degree Seeking	2

Table 2. Descriptive Statistics for Variables of Interest

Variables (Range)	<i>M</i>	<i>SD</i>
<i>Child Maltreatment</i>		
Physical Neglect (5-24)	6.64	2.94
Physical Abuse (5-22)	6.94	3.30
Emotional Neglect (5-24)	9.43	4.70
Emotional Abuse (5-24)	8.60	4.33
Sexual Abuse (5-25)	5.96	3.14
Minimization/Denial Subscale (3-15)	9.80	3.39
<i>Attachment</i>		
IPPA Mother Subscale (27-118)	55.58	21.03
IPPA Father Subscale (27-122)	67.42	24.16
IPPA Peer Subscale (27-121)	49.10	16.06
<i>Emotional and Behavioral Functioning</i>		
Internalizing Problems (30-84)	54.91	11.91
Externalizing Problems (30-91)	52.07	9.36
Total Problems (29-91)	53.32	10.14
<i>Eating Behaviors</i>		
Eating Attitudes Total Subscale (0-53)	9.33	9.26

Table 3. Correlations Among Child Maltreatment, Attachment, Emotional and Behavioral Functioning, and Eating Behavior Ratings

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Physical Neglect	-												
2. Physical Abuse	.59**	-											
3. Emotional Neglect	.60**	.49**	-										
4. Emotional Abuse	.58**	.66**	.73**	-									
5. Sexual Abuse	.44**	.21*	.31**	.39**	-								
6. Minimization/Denial	-.52***	-.48***	-.80***	-.67***	-.37***	-							
7. IPPA Mother Subscale	.31**	.21*	.57**	.40**	.29**	-.46***	-						
8. IPPA Father Subscale	.23*	.19	.44**	.49**	.29**	-.57***	.25*	-					
9. IPPA Peer Subscale	.12	.03	.17	.22*	-.02	-.13	.09	.26*	-				
10. Internalizing Problems	.29**	.07	.38**	.38**	.19	-.02*	.21*	.33**	.43**	-			
11. Externalizing	.37**	.30**	.32**	.37**	.15	-.25*	.25*	.13	.16	.46**	-		
12. Total Problems	.39**	.33**	.38**	.48**	.13	-.31**	.22*	.26*	.45**	.73**	.81**	-	
13. Eating Attitudes Total	.17	.11	.26*	.15	-.01	-.17	.25*	-.04	-.03	.19	.26*	.28**	-

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

Table 4. Summary of Regression Analyses for the Childhood Trauma Questionnaire

Regression/Variables	<i>B</i>	<i>SE B</i>	β
<i>Child Maltreatment Predicting Attachment</i>			
Attachment to Mothers: $F(6, 89) = 7.29, p < .001, R^2 = .33$			
Physical Neglect	-.52	.86	-.08
Physical Abuse	-.42	.77	-.07
Emotional Neglect	2.55	.71	.59***
Emotional Abuse	.07	.70	.02
Sexual Abuse	1.02	.65	.16
Minimization/Denial	.15	.89	.03
Attachment to Fathers: $F(6, 82) = 9.55, p < .001, R^2 = .41$			
Physical Neglect	-.41	.99	-.05
Physical Abuse	-2.07	.88	-.30*
Emotional Neglect	-.75	.86	-.15
Emotional Abuse	2.14	.80	.40**
Sexual Abuse	.63	.95	.07
Minimization/Denial	-4.14	1.09	-.58
Attachment to Peers: $F(6, 92) = 1.71, p < .13, R^2 = .10$			
Physical Neglect	.83	.79	.15
Physical Abuse	-1.34	.70	-.28
Emotional Neglect	-.01	.65	-.003
Emotional Abuse	1.30	.64	.35*
Sexual Abuse	-.92	.59	-.18
Minimization/Denial	-.24	.81	-.05
<i>Child Maltreatment Predicting Emotional and Behavioral Functioning</i>			
Internalizing Problems: $F(6, 92) = 5.90, p < .001, R^2 = .28$			
Physical Neglect	.68	.52	.17
Physical Abuse	-.68	.46	-.19
Emotional Neglect	.12	.43	.05
Emotional Abuse	1.49	.43	.54***
Sexual Abuse	-.18	.39	-.05
Minimization/Denial	.16	.54	.05
Externalizing Problems: $F(6, 92) = 3.20, p < .007, R^2 = .17$			
Physical Neglect	.68	.44	.22
Physical Abuse	.05	.39	.02
Emotional Neglect	.12	.36	.06
Emotional Abuse	.59	.36	.28

Sexual Abuse	-.11	.33	-.04
Minimization/Denial	.28	.45	.10
Total Problems: $F(6, 92) = 5.55, p < .001, R^2 = .27$			
Physical Neglect	.78	.45	.23
Physical Abuse	-.23	.40	-.07
Emotional Neglect	.04	.37	.02
Emotional Abuse	1.13	.37	.48**
Sexual Abuse	-.37	.34	-.12
Minimization/Denial	.21	.46	.07
<hr/> <i>Child Maltreatment Predicting Eating Behavior</i>			
Eating Behavior: $F(6, 88) = 1.18, p < .32, R^2 = .08$			
Physical Neglect	.31	.50	.09
Physical Abuse	-.02	.42	-.01
Emotional Neglect	.59	.39	.30
Emotional Abuse	-.06	.38	-.03
Sexual Abuse	-.34	.36	-.12
Minimization/Denial	.17	.48	.06

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

Table 5. Hierarchical Regression Analyses

Variables	<i>B</i>	<i>SE B</i>	β
<i>Internalizing Problems</i>			
Block 1. $F(6, 80) = 6.07, p < .001, R^2 = .31$			
Physical Neglect	.60	.55	.15
Physical Abuse	-.80	.49	-.22
Emotional Neglect	.18	.48	.07
Emotional Abuse	1.37	.45	.50**
Sexual Abuse	.42	.53	.09
Minimization/Denial	-.01	.61	-.00
Block 2. $F(9, 77) = 10.03, p < .001, R^2 = .54$			
Physical Neglect	.32	.47	.08
Physical Abuse	-.19	.43	-.05
Emotional Neglect	.18	.43	.07
Emotional Abuse	.86	.40	.31*
Sexual Abuse	.65	.45	.14
Minimization/Denial	.15	.55	.04
Attachment to Mother	-.01	.06	-.01
Attachment to Father	.01	.05	.01
Attachment to Peers	.38	.06	.51***
<i>Externalizing Behavior Problems</i>			
Block 1. $F(6, 80) = 2.86, p < .01, R^2 = .18$			
Physical Neglect	.64	.47	.20
Physical Abuse	.02	.42	.01
Emotional Neglect	.18	.41	.09
Emotional Abuse	.49	.38	.23
Sexual Abuse	.12	.45	.03
Minimization/Denial	.22	.52	.08
Block 2. $F(9, 77) = 2.11, p < .04, R^2 = .20$			
Physical Neglect	.59	.48	.19
Physical Abuse	.10	.45	.04
Emotional Neglect	.06	.44	.03
Emotional Abuse	.45	.41	.21

Sexual Abuse	.14	.46	.04
Minimization/Denial	.12	.57	.04
Attachment to Mother	.04	.06	.08
Attachment to Father	-.03	.05	-.07
Attachment to Peers	.08	.07	.13
<hr/> <i>Total Behavior Problems</i>			
Block 1. $F(6, 80) = 5.35, p < .001, R^2 = .29$			
Physical Neglect	.71	.48	.21
Physical Abuse	-.33	.42	-.11
Emotional Neglect	.08	.41	.04
Emotional Abuse	1.01	.39	.43*
Sexual Abuse	.10	.46	.03
Minimization/Denial	.04	.53	.01
Block 2. $F(9, 77) = 6.09, p < .001, R^2 = .42$			
Physical Neglect	.52	.44	.15
Physical Abuse	.01	.41	.00
Emotional Neglect	.08	.41	.04
Emotional Abuse	.73	.38	.31
Sexual Abuse	.27	.43	.07
Minimization/Denial	.05	.53	.02
Attachment to Mother	-.01	.06	-.02
Attachment to Father	-.02	.05	-.05
Attachment to Peers	.25	.06	.39***

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

APPENDIX A: IRB APPROVAL LETTER

APPENDIX A: IRB APPROVAL LETTER

University of Central Florida Institutional Review Board
Office of Research & Commercialization
12201 Research Parkway, Suite 501
Orlando, Florida 32826-3246
Telephone: 407-823-2901 or 407-882-2276
www.research.ucf.edu/compliance/irb.html

Approval of Human Research

From: **UCF Institutional Review Board #1
FWA00000351, IRB00001138**

To: **Amanda Lowell and Co-PI: Amanda M. Havill**

Date: **January 13, 2011**

Dear Researcher:

On 1/13/2010, the IRB approved the following human participant research until 1/12/2012 inclusive:

Type of Review: UCF Initial Review Submission Form
Expedited Review Category #7

Project Title: Childhood Experiences and Later Functioning

Investigator: Amanda Lowell

IRB Number: SBE-11-07368

Funding Agency:

Research ID: N/A

The Continuing Review Application must be submitted 30 days prior to the expiration date for studies that were previously expedited, and 60 days prior to the expiration date for research that was previously reviewed at a convened meeting. Do not make changes to the study (i.e., protocol, methodology, consent form, personnel, site, etc.) before obtaining IRB approval. A Modification Form **cannot** be used to extend the approval period of a study. All forms may be completed and submitted online at <https://iris.research.ucf.edu>.

If continuing review approval is not granted before the expiration date of 1/12/2012, approval of this research expires on that date. When you have completed your research, please submit a Study Closure request in iRIS so that IRB records will be accurate.

Use of the approved, stamped consent document(s) is required. The new form supersedes all previous versions, which are now invalid for further use. Only approved investigators (or other approved key study personnel) may solicit consent for research participation. Participants or their representatives must receive a copy of the consent form(s).

In the conduct of this research, you are responsible to follow the requirements of the Investigator Manual.

On behalf of Joseph Bielitzki, DVM, UCF IRB Chair, this letter is signed by:

Signature applied by Joanne Muratori on 01/13/2011 02:15:00 PM EST

A handwritten signature in black ink that reads 'Joanne Muratori'.

IRB Coordinator

APPENDIX B: INFORMED CONSENT

APPENDIX B: INFORMED CONSENT

Childhood Experiences and Later Functioning

Informed Consent

Principal Investigators: Amanda Havill and Amanda Lowell, Honors Thesis Students

Faculty Supervisor: Kimberly Renk, Ph.D.

Investigational Site: University of Central Florida, Department of Psychology

Introduction: Researchers at the University of Central Florida (UCF) study many topics. To do this, we need the help of people who agree to take part in a research study. You are being invited to take part in a research study, which will include up to 400 undergraduates from the University of Central Florida. You must be 18-years of age or older to be included in the research study.

The persons doing this research, Amanda Havill and Amanda Lowell, are Undergraduate Psychology students completing their Honors in the Major projects at the University of Central Florida. Because the researchers are students, Kimberly Renk, Ph.D., an Associate Professor of Psychology at UCF is serving as their supervisor for this research study.

What you should know about a research study:

- Someone will explain this research study to you.
- A research study is something you volunteer for.
- Whether or not you take part is up to you.
- You should take part in this study only because you want to.
- You can choose not to take part in the research study.
- You can agree to take part now and later change your mind.
- Whatever you decide it will not be held against you.
- Feel free to ask all the questions you want before you decide.

Purpose of the research study: The purpose of this research study is to examine how individuals' experiences from childhood are related to their functioning later in life. In fact,

early experiences based in parent-child interactions, particularly in the context of disciplinary interactions, may have long-term effects on individuals that can be related to their functioning in many different ways (e.g., symptoms of depression, problems with eating behaviors, difficulties in school). The manner in which individuals attach to others and receive different forms of social support may be critical to the level of functioning that is achieved, even when individuals have had different childhood experiences. Little is known about attachment and social support as intervening factors in predicting different levels of functioning, however, particularly with regard to emotional and behavioral functioning and academic success. As a result, there is a need to further examine the relationships of these variables to individuals' childhood experiences and their later functioning.

What you will be asked to do in the study: As part of this study, you will be asked to complete eight brief questionnaires that will take approximately one hour of your time. Sona Systems provides a link to the surveys. Alternatively, you will be able to complete a hard copy if you are unable to access the study online. Your responses as part of this study will be used to examine the relationships among childhood experiences in the context of parent-child interactions, social support, and academic achievement as well as the relationships among childhood experiences in the context of parent-child interactions, attachment style, and emotional and behavioral functioning.

Location: Research for this project will be conducted in one of two methods in a location of your choice. You may choose to fill out the questionnaires either on a secure online survey site or attend a group data collection session. If you complete the hard copy of questionnaires in a data collection session, you will be returning these questionnaires to the principal investigators immediately upon completion.

Time Required: We expect that you will participate in this research study for approximately one hour.

Risks: Although there are no anticipated risks that accompany your participation in this research study, it should be noted that some of the questionnaires that you will complete may bring up negative or unpleasant experiences from your childhood. Should you have a negative emotional reaction to any of the material presented, please notify the investigators or the faculty investigator listed on this form. In addition, you should consider contacting the University of Central Florida Student Counseling Center at 407-823-2811.

Benefits: One benefit of participating in this project is that you will learn first-hand what it is like to participate in a research project and you may learn more about yourself. For example, by completing the questionnaire packet, you will increase your awareness of your childhood experiences and emotional and behavioral functioning.

Compensation or Payment: Participants can expect to spend approximately one hour completing eight questionnaires and will receive extra credit toward a Psychology course of their choice through Sona Systems.

Confidentiality: We will limit your personal data collected in this study to people who have a need to review this information. This only includes basic demographic information. No names and identifying information will be collected. We cannot promise complete secrecy. Organizations that may inspect and copy your information include the IRB and other representatives of UCF. You can be assured that we will not be able to link your identity to your responses, however, as we will not be asking you for your name as part of this consent process. Upon completion of the online surveys, your responses will be linked with an identification number only. The principal investigators will then transfer your survey responses from the secure online server to an SPSS database that only the investigators will be able to access via a password protected computer. Your online survey responses then will be deleted from the secure online server. Thus, your responses will be entirely anonymous. If you elect to complete a paper packet, your completed packet will be stored in a locked filing cabinet in a locked psychology laboratory in the Psychology Building at the University of Central Florida. Only research team members will handle your surveys. The completed packets will be entered into a database using a research identification number only.

Study contact for questions about the study or to report a problem: If you have questions, concerns, or complaints or think the research has hurt you, talk to Kimberly Renk, Ph.D., Faculty Supervisor, Department of Psychology, at 407-823-2218 or by email at krenk@mail.ucf.edu.

IRB contact about your rights in the study or to report a complaint: Research at the University of Central Florida involving human participants is carried out under the oversight of the Institutional Review Board (UCF IRB). This research has been reviewed and approved by the IRB. For information about the rights of people who take part in research, please contact: Institutional Review Board, University of Central Florida, Office of Research & Commercialization, 12201 Research Parkway, Suite 501, Orlando, FL 32826-3246 or by telephone at (407) 823-2901. You may also talk to them for any of the following:

- Your questions, concerns, or complaints are not being answered by the research team.
- You cannot reach the research team.
- You want to talk to someone besides the research team.
- You want to get information or provide input about this research.

Withdrawing from the study: There are no adverse consequences for choosing to withdraw from your participation in the study. The person in charge of the research study or the sponsor can remove you from the research study without your approval if you are not 18-years of age or older.

If you agree to participate in this research study, please click continue below.

APPENDIX C: DEMOGRAPHICS QUESTIONNAIRE

APPENDIX C: DEMOGRAPHICS QUESTIONNAIRE

Demographics Questionnaire

Please circle, check, or fill in an answer to each of the following questions.

1. **Gender:** Male Female
2. **Age:** _____
3. **Your ethnicity:** _____
4. **Year in college:** Freshman Sophomore Junior Senior
Graduate Non-degree seeking Other: _____
5. **Have you been out of school for more than one semester since high school?** (Not including summer session.) Yes No
6. **What is your current marital status?** Single Married Divorced
Living with Partner Other: _____
7. **Do you have any children (biological or adopted)?** Yes No
8. **a.) Do you live with your parent(s)?** Yes No
**If "Yes", continue to #9.
b.) If "No", do your parents pay for your living expenses (rent, utilities)?
Yes In part No
**If "Yes", continue to #9.
c.) If "No", do you pay your own living expenses?
Yes In part No
9. **a.) How frequent is your contact with the person you consider you mother?**
_____ At least once a day.
_____ Less often than once a day, but at least once a week.
_____ Less often than once a week, but at least once every two weeks.
_____ Less often than every two weeks, but at least once a month.
_____ Less often than once a month.
_____ None.
b.) Is this your biological mother? Yes No
10. **a.) How frequent is your contact with the person you consider your father?**
_____ At least once a day.
_____ Less often than once a day, but at least once a week.
_____ Less often than once a week, but at least once every two weeks.
_____ Less often than every two weeks, but at least once a month.

_____ Less often than once a month.

_____ None.

b.) Is this your biological father? Yes No

11. **What is your mother's occupation?** _____
What was the last grade that your mother completed in school? _____
12. **What is your father's occupation?** _____
What was the last grade that your father completed in school? _____
13. **What is your family's average yearly income?** _____
14. **What was your high school grade point average (GPA)?** _____
15. **What is your current university GPA?** _____
16. **What did you score on the Standardized Aptitude Test (SAT)?** _____
Was this on the 1600 or 2400 scale? _____
(If you did not take this test, please leave blank)
17. **What did you score on the Academic Comprehensive Test (ACT)?** _____
(If you did not take this test, please leave blank)

APPENDIX D: INVENTORY OF PARENT AND PEER ATTACHMENT

APPENDIX D: INVENTORY OF PARENT AND PEER ATTACHMENT

IPPA

Instructions: For each of the following questions, please respond with how you feel currently.

	Almost Always Or Always True 1	Often True 2	Sometimes True 3	Seldom True 4	Never True 5
1. My mother respects my feelings.				1	2
2. I feel my mother is successful as mother.				1	2
3. I wish I had different mother.				1	2
4. My mother accepts me as I am.				1	2
5. I have to rely on myself when I have a problem to solve.				1	2
6. I like to get my mother's point of view on things I'm concerned about.				1	2
7. I feel it's no use letting my feelings show.				1	2
8. My mother senses when I'm upset about something.				1	2
9. Talking over my problems with my mother makes me feel ashamed or foolish.				1	2
10. My mother expects too much from me.				1	2
11. I get upset easily at home.				1	2
12. I get upset a lot more than my mother knows about.				1	2
13. When we discuss things, my mother considers my point of view.				1	2
14. My mother trusts my judgment.				1	2
15. My mother has their own problems, so I don't bother them with mine.				1	2
16. My mother helps me to understand myself better.				1	2
17. I tell my mother about my problems and troubles.				1	2
18. I feel angry with my mother.				1	2
19. I don't get much attention at home.				1	2
20. My mother encourages me to talk about my difficulties.				1	2
21. My mother understands me.				1	2
22. I don't know whom I can depend on these days.				1	2
23. When I am angry about something, my mother tries to understand me.				1	2
24. I trust my mother.				1	2
25. My mother doesn't understand what I'm going through these days.				1	2
26. I can count on my mother when I need to get something off my chest.				1	2
27. I feel that no one understands me.				1	2
28. If my mother knows something is bothering me, she asks me about it.				1	2

	Almost Always Or Always True 1	Often True 2	Sometimes True 3	Seldom True 4	Never True 5
1. My father respects my feelings.				1	2
2. I feel my father is successful as father.				1	2
3. I wish I had different father.				1	2
4. My father accepts me as I am.				1	2
5. I have to rely on myself when I have a problem to solve.				1	2
6. I like to get my father's point of view on things I'm concerned about.				1	2
7. I feel it's no use letting my feelings show.				1	2
8. My father senses when I'm upset about something.				1	2
9. Talking over my problems with my father makes me feel ashamed or foolish.				1	2
10. My father expects too much from me.				1	2
11. I get upset easily at home.				1	2
12. I get upset a lot more than my father knows about.				1	2
13. When we discuss things, my father considers my point of view.				1	2
14. My father trusts my judgment.				1	2
15. My father has their own problems, so I don't bother them with mine.				1	2
16. My father helps me to understand myself better.				1	2
17. I tell my father about my problems and troubles.				1	2
18. I feel angry with my father.				1	2
19. I don't get much attention at home.				1	2
20. My father encourages me to talk about my difficulties.				1	2
21. My father understands me.				1	2
22. I don't know whom I can depend on these days.				1	2
23. When I am angry about something, my father tries to understand me.				1	2
24. I trust my father.				1	2
25. My father doesn't understand what I'm going through these days.				1	2
26. I can count on my father when I need to get something off my chest.				1	2
27. I feel that no one understands me.				1	2
28. If my father knows something is bothering me, he asks me about it.				1	2

Almost Always Or Always True 1	Often True 2	Sometimes True 3	Seldom True 4	Never True 5	
1. I like to get my friends' point of view on things I'm concerned about	1	2	3	4	5
2. My friends sense when I'm upset about something.	1	2	3	4	5
3. When we discuss things, my friends consider my point of view.	1	2	3	4	5
4. Talking over my problems with my friends makes me feel ashamed or foolish.	1	2	3	4	5
5. I wish I had different friends.	1	2	3	4	5
6. My friends understand me.	1	2	3	4	5
7. My friends encourage me to talk about my difficulties.	1	2	3	4	5
8. My friends accept me as I am.	1	2	3	4	5
9. I feel the need to be in touch with my friends more often.	1	2	3	4	5
10. My friends don't understand what I'm going through these days.	1	2	3	4	5
11. I feel alone or apart when I am with my friends.	1	2	3	4	5
12. My friends listen to what I have to say.	1	2	3	4	5
13. I feel my friends are good friends.	1	2	3	4	5
14. My friends are fairly easy to talk to.	1	2	3	4	5
15. When I am angry about something, my friends try to be understanding.	1	2	3	4	5
16. My friends help me to understand myself better.	1	2	3	4	5
17. My friends are concerned about my well-being.	1	2	3	4	5
18. I feel angry with my friends.	1	2	3	4	5
19. I can count on my friends when I need to get something off my chest.	1	2	3	4	5
20. I trust my friends.	1	2	3	4	5
21. My friends respect my feelings.	1	2	3	4	5
22. I get upset a lot more than my friends know.	1	2	3	4	5
23. It seems as if my friends are irritated with me for no reason.	1	2	3	4	5
24. I tell my friends about my problems and troubles.	1	2	3	4	5
25. If my friends know something is bothering me, they ask me about it.	1	2	3	4	5

APPENDIX E: ACHENBACH ADULT SELF-REPORT

APPENDIX E: ACHENBACH ADULT SELF-REPORT

Please print your answers.

ADULT SELF-REPORT FOR AGES 18-59

For office use only
ID# _____

YOUR FULL NAME First Middle Last

YOUR GENDER

☐ Male ☐ Female

YOUR AGE

ETHNIC GROUP OR RACE

TODAY'S DATE

Mo. ____ Date ____ Yr. ____

YOUR BIRTHDATE

Mo. ____ Date ____ Yr. ____

Please fill out this form to reflect **your** views, even if other people might not agree. You need not spend a lot of time on any item. Feel free to print additional comments. **Be sure to answer all items.**

YOUR USUAL TYPE OF WORK, even if not working now. Please be specific—for example, auto mechanic; high school teacher; homemaker; laborer; lathe operator; shoe salesman; army sergeant; student (indicate what you are studying & what degree you expect).

Your work _____ Spouse or partner's work _____

PLEASE CHECK YOUR HIGHEST EDUCATION

☐ 1. No high school diploma and no GED	☐ 7. Some graduate school but no graduate degree
☐ 2. General Equivalency Diploma (GED)	☐ 8. Master's Degree
☐ 3. High school graduate	☐ 9. Doctoral or Law Degree
☐ 4. Some college but no college degree	☐ Other education (specify): _____
☐ 5. Associate's Degree	
☐ 6. Bachelor's or RN Degree	

I. FRIENDS:

A. About how many close friends do you have? (Do not include family members.)

☐ None ☐ 1 ☐ 2 or 3 ☐ 4 or more

B. About how many times a month do you have contact with any of your close friends? (Include in-person contacts, phone, letters, e-mail.)

☐ Less than 1 ☐ 1 or 2 ☐ 3 or 4 ☐ 5 or more

C. How well do you get along with your close friends?

☐ Not as well as I'd like ☐ Average ☐ Above average ☐ Far above average

D. About how many times a month do any friends or family visit you?

☐ Less than 1 ☐ 1 or 2 ☐ 3 or 4 ☐ 5 or more

II. SPOUSE OR PARTNER:

What is your marital status? ☐ Never been married ☐ Married but separated from spouse
☐ Married, living with spouse ☐ Divorced
☐ Widowed ☐ Other—please describe: _____

At any time in the past 6 months, did you live with your spouse or with a partner?

☐ No—please skip to page 2.

☐ Yes—Circle 0, 1, or 2 beside items A-H to describe your relationship **during the past 6 months**:

0 = Not True 1 = Somewhat or Sometimes True 2 = Very True or Often True

- 0 1 2 A. I get along well with my spouse or partner
- 0 1 2 B. My spouse or partner and I have trouble sharing responsibilities
- 0 1 2 C. I feel satisfied with my spouse or partner
- 0 1 2 D. My spouse or partner and I enjoy similar activities

- 0 1 2 E. My spouse or partner and I *disagree* about living arrangements, such as where we live
- 0 1 2 F. I have trouble with my spouse or partner's family
- 0 1 2 G. I like my spouse or partner's friends
- 0 1 2 H. My spouse or partner's behavior annoys me

Copyright 2003 T. Achenbach
ASEBA, University of Vermont
1 South Prospect St., Burlington, VT 05401-3456
www.ASEBA.org

**Please be sure you have answered all items.
Then see other side.**

1-03 Edition - 111

UNAUTHORIZED COPYING IS ILLEGAL

Page 1

Please print. Be sure to answer all items.

III. FAMILY:

Compared with others, how well do you:

		Worse than Average	Variable or Average	Better than Average	No Contact
A. Get along with your brothers?	☐ I have no brothers	☐	☐	☐	☐
B. Get along with your sisters?	☐ I have no sisters	☐	☐	☐	☐
C. Get along with your mother?	☐ Mother is deceased	☐	☐	☐	☐
D. Get along with your father?	☐ Father is deceased	☐	☐	☐	☐
E. Get along with your biological or adopted children?	☐ I have no children				
1. Oldest child	☐ Not applicable	☐	☐	☐	☐
2. 2nd oldest child	☐ Not applicable	☐	☐	☐	☐
3. 3rd oldest child	☐ Not applicable	☐	☐	☐	☐
4. Other children	☐ Not applicable	☐	☐	☐	☐
F. Get along with your stepchildren?	☐ I have no stepchildren	☐	☐	☐	☐

IV. JOB: At any time in the past 6 months, did you have any paid jobs (including self-employment and military service)?

☐ No—please skip to Section V.

☐ Yes—please describe your job(s): _____

Circle 0, 1, or 2 beside items A-I to describe your work experience *during the past 6 months*:

0 = Not True

1 = Somewhat or Sometimes True

2 = Very True or Often True

0 1 2	A. I work well with others	0 1 2	F. I do things that may cause me to lose my job
0 1 2	B. I have trouble getting along with bosses	0 1 2	G. I stay away from my job even when I'm not sick or not on vacation
0 1 2	C. I do my work well	0 1 2	H. My job is too stressful for me
0 1 2	D. I have trouble finishing my work	0 1 2	I. I worry too much about work
0 1 2	E. I am satisfied with my work situation		

V. EDUCATION: At any time in the past 6 months, did you attend school, college, or any other educational or training program?

☐ No—please skip to Section VI.

☐ Yes—what kind of school or program? _____

What degree or diploma are you seeking? _____ Major? _____

When do you expect to receive your degree or diploma? _____

Circle 0, 1, or 2 beside items A-E to describe your educational experience *during the past 6 months*:

0 = Not True

1 = Somewhat or Sometimes True

2 = Very True or Often True

0 1 2	A. I get along well with other students	0 1 2	D. I am satisfied with my educational situation
0 1 2	B. I achieve what I am capable of	0 1 2	E. I do things that may cause me to fail
0 1 2	C. I have trouble finishing assignments		

VI. Do you have any illness, disability, or handicap? ☐ No ☐ Yes—please describe:

VII. Please describe your concerns or worries about family, work, education, or other things: ☐ No concerns

VIII. Please describe the best things about yourself:

Please print your answers. Be sure to answer all items.

IX. Below is a list of items that describe people. For each item, please circle 0, 1, or 2 to describe yourself over the past 6 months. Please answer all items as well as you can, even if some do not seem to apply to you.

0 = Not True	1 = Somewhat or Sometimes True	2 = Very True or Often True
0 1 2 1. I am too forgetful		0 1 2 37. I get in many fights
0 1 2 2. I make good use of my opportunities		0 1 2 38. My relations with neighbors are poor
0 1 2 3. I argue a lot		0 1 2 39. I hang around people who get in trouble
0 1 2 4. I work up to my ability		0 1 2 40. I hear sounds or voices that other people think aren't there (describe): _____
0 1 2 5. I blame others for my problems		
0 1 2 6. I use drugs (other than alcohol and nicotine) for nonmedical purposes (describe): _____		0 1 2 41. I am impulsive or act without thinking
		0 1 2 42. I would rather be alone than with others
0 1 2 7. I brag		0 1 2 43. I lie or cheat
0 1 2 8. I have trouble concentrating or paying attention for long		0 1 2 44. I feel overwhelmed by my responsibilities
0 1 2 9. I can't get my mind off certain thoughts (describe): _____		0 1 2 45. I am nervous or tense
		0 1 2 46. Parts of my body twitch or make nervous movements (describe): _____
0 1 2 10. I have trouble sitting still		
0 1 2 11. I am too dependent on others		0 1 2 47. I lack self-confidence
0 1 2 12. I feel lonely		0 1 2 48. I am not liked by others
0 1 2 13. I feel confused or in a fog		0 1 2 49. I can do certain things better than other people
0 1 2 14. I cry a lot		0 1 2 50. I am too fearful or anxious
0 1 2 15. I am pretty honest		0 1 2 51. I feel dizzy or lightheaded
0 1 2 16. I am mean to others		0 1 2 52. I feel too guilty
0 1 2 17. I daydream a lot		0 1 2 53. I have trouble planning for the future
0 1 2 18. I deliberately try to hurt or kill myself		0 1 2 54. I feel tired without good reason
0 1 2 19. I try to get a lot of attention		0 1 2 55. My moods swing between elation and depression
0 1 2 20. I damage or destroy my things		56. Physical problems without known medical cause:
0 1 2 21. I damage or destroy things belonging to others		0 1 2 a. Aches or pains (not stomach or headaches)
0 1 2 22. I worry about my future		0 1 2 b. Headaches
0 1 2 23. I break rules at work or elsewhere		0 1 2 c. Nausea, feel sick
0 1 2 24. I don't eat as well as I should		0 1 2 d. Problems with eyes (not if corrected by glasses) (describe): _____
0 1 2 25. I don't get along with other people		
0 1 2 26. I don't feel guilty after doing something I shouldn't		0 1 2 e. Rashes or other skin problems
0 1 2 27. I am jealous of others		0 1 2 f. Stomachaches
0 1 2 28. I get along badly with my family		0 1 2 g. Vomiting, throwing up
0 1 2 29. I am afraid of certain animals, situations, or places (describe): _____		0 1 2 h. Heart pounding or racing
		0 1 2 i. Numbness or tingling in body parts
0 1 2 30. My relations with the opposite sex are poor		0 1 2 57. I physically attack people
0 1 2 31. I am afraid I might think or do something bad		0 1 2 58. I pick my skin or other parts of my body (describe): _____
0 1 2 32. I feel that I have to be perfect		
0 1 2 33. I feel that no one loves me		0 1 2 59. I fail to finish things I should do
0 1 2 34. I feel that others are out to get me		0 1 2 60. There is very little that I enjoy
0 1 2 35. I feel worthless or inferior		0 1 2 61. My work performance is poor
0 1 2 36. I accidentally get hurt a lot, accident-prone		0 1 2 62. I am poorly coordinated or clumsy

Please print your answers. Be sure to answer all items.

0 = Not True	1 = Somewhat or Sometimes True	2 = Very True or Often True
0 1 2	63. I would rather be with older people than with people of my own age	0 1 2 93. I talk too much
0 1 2	64. I have trouble setting priorities	0 1 2 94. I tease others a lot
0 1 2	65. I refuse to talk	0 1 2 95. I have a hot temper
0 1 2	66. I repeat certain acts over and over (describe): _____	0 1 2 96. I think about sex too much
	_____	0 1 2 97. I threaten to hurt people
0 1 2	67. I have trouble making or keeping friends	0 1 2 98. I like to help others
0 1 2	68. I scream or yell a lot	0 1 2 99. I dislike staying in one place for very long
0 1 2	69. I am secretive or keep things to myself	0 1 2 100. I have trouble sleeping (describe): _____
0 1 2	70. I see things that other people think aren't there (describe): _____	
	_____	0 1 2 101. I stay away from my job even when I'm not sick or not on vacation
0 1 2	71. I am self-conscious or easily embarrassed	0 1 2 102. I don't have much energy
0 1 2	72. I worry about my family	0 1 2 103. I am unhappy, sad, or depressed
0 1 2	73. I meet my responsibilities to my family	0 1 2 104. I am louder than others
0 1 2	74. I show off or clown	0 1 2 105. People think I am disorganized
0 1 2	75. I am too shy or timid	0 1 2 106. I try to be fair to others
0 1 2	76. My behavior is irresponsible	0 1 2 107. I feel that I can't succeed
0 1 2	77. I sleep more than most other people during day and/or night (describe): _____	0 1 2 108. I tend to lose things
	_____	0 1 2 109. I like to try new things
0 1 2	78. I have trouble making decisions	0 1 2 110. I wish I were of the opposite sex
0 1 2	79. I have a speech problem (describe): _____	0 1 2 111. I keep from getting involved with others
	_____	0 1 2 112. I worry a lot
0 1 2	80. I stand up for my rights	0 1 2 113. I worry about my relations with the opposite sex
0 1 2	81. My behavior is very changeable	0 1 2 114. I fail to pay my debts or meet other financial responsibilities
0 1 2	82. I steal	0 1 2 115. I feel restless or fidgety
0 1 2	83. I am easily bored	0 1 2 116. I get upset too easily
0 1 2	84. I do things that other people think are strange (describe): _____	0 1 2 117. I have trouble managing money or credit cards
	_____	0 1 2 118. I am too impatient
0 1 2	85. I have thoughts that other people would think are strange (describe): _____	0 1 2 119. I am not good at details
	_____	0 1 2 120. I drive too fast
0 1 2	86. I am stubborn, sullen, or irritable	0 1 2 121. I tend to be late for appointments
0 1 2	87. My moods or feelings change suddenly	0 1 2 122. I have trouble keeping a job
0 1 2	88. I enjoy being with people	0 1 2 123. I am a happy person
0 1 2	89. I rush into things without considering the risks	
0 1 2	90. I drink too much alcohol or get drunk	124. <i>In the past 6 months</i> , about how many times per day did you use tobacco (including smokeless tobacco)? _____ times per day.
0 1 2	91. I think about killing myself	125. <i>In the past 6 months</i> , on how many days were you drunk? _____ days.
0 1 2	92. I do things that may cause me trouble with the law (describe): _____	126. <i>In the past 6 months</i> , on how many days did you use drugs for nonmedical purposes (including marijuana, cocaine, and other drugs, except alcohol and nicotine)? _____ days.

APPENDIX F: EATING ATTITUDES TEST

APPENDIX F: EATING ATTITUDES TEST

Eating Attitudes Test (EAT-26)[©]

Instructions: This is a screening measure to help you determine whether you might have an eating disorder that needs professional attention. This screening measure is not designed to make a diagnosis of an eating disorder or take the place of a professional consultation. Please fill out the below form as accurately, honestly and completely as possible. There are no right or wrong answers. All of your responses are confidential.

Part A: Complete the following questions:

		Gender:	Male	Female
Height	Feet :	Inches:		
Current Weight (lbs.):	Highest Weight (excluding pregnancy):			
Lowest Adult Weight:	Ideal Weight:			

Part B: Check a response for each of the following statements:

	Always	Usually	Often	Some times	Rarely	Never
1. Am terrified about being overweight.	☐	☐	☐	☐	☐	☐
2. Avoid eating when I am hungry.	☐	☐	☐	☐	☐	☐
3. Find myself preoccupied with food.	☐	☐	☐	☐	☐	☐
4. Have gone on eating binges where I feel that I may not be able to stop.	☐	☐	☐	☐	☐	☐
5. Cut my food into small pieces.	☐	☐	☐	☐	☐	☐
6. Aware of the calorie content of foods that I eat.	☐	☐	☐	☐	☐	☐
7. Particularly avoid food with a high carbohydrate content (i.e. bread, rice, potatoes, etc.)	☐	☐	☐	☐	☐	☐
8. Feel that others would prefer if I ate more.	☐	☐	☐	☐	☐	☐
9. Vomit after I have eaten.	☐	☐	☐	☐	☐	☐
10. Feel extremely guilty after eating.	☐	☐	☐	☐	☐	☐
11. Am preoccupied with a desire to be thinner.	☐	☐	☐	☐	☐	☐
12. Think about burning up calories when I exercise.	☐	☐	☐	☐	☐	☐
13. Other people think that I am too thin.	☐	☐	☐	☐	☐	☐
14. Am preoccupied with the thought of having fat on my body.	☐	☐	☐	☐	☐	☐
15. Take longer than others to eat my meals.	☐	☐	☐	☐	☐	☐
16. Avoid foods with sugar in them.	☐	☐	☐	☐	☐	☐
17. Eat diet foods.	☐	☐	☐	☐	☐	☐
18. Feel that food controls my life.	☐	☐	☐	☐	☐	☐
19. Display self-control around food.	☐	☐	☐	☐	☐	☐
20. Feel that others pressure me to eat.	☐	☐	☐	☐	☐	☐
21. Give too much time and thought to food.	☐	☐	☐	☐	☐	☐
22. Feel uncomfortable after eating sweets.	☐	☐	☐	☐	☐	☐
23. Engage in dieting behavior.	☐	☐	☐	☐	☐	☐
24. Like my stomach to be empty.	☐	☐	☐	☐	☐	☐
25. Have the impulse to vomit after meals.	☐	☐	☐	☐	☐	☐
26. Enjoy trying new rich foods.	☐	☐	☐	☐	☐	☐

Part C: Behavioral Questions:

In the past 6 months have you:

	Never	Once a month or less	2-3 times a month	Once a week	2-6 times a week	Once a day or more
A	☐	☐	☐	☐	☐	☐
B	☐	☐	☐	☐	☐	☐
C	☐	☐	☐	☐	☐	☐
D	☐	☐	☐	☐	☐	☐
E	☐	☐	☐	☐	☐	☐

* Defined as eating much more than most people would under the same circumstances and feeling that eating is out of control

[©] Copyright: EAT-26: (Garner et al. 1982, *Psychological Medicine*, 12, 871-878); adapted by D. Garner with permission.

APPENDIX G: CHILDHOOD TRAUMA QUESTIONNAIRE

APPENDIX G: CHILDHOOD TRAUMA QUESTIONNAIRE

Childhood Trauma Questionnaire (Bernstein and Fink, 1998)

Please rate the frequency of each item during your childhood on a scale of 1 (Never) to 5 (Very Often) by completing the following sentence:

When I grew up...

Item No.	Items	Frequency				
		Never				Very Often
1.	I didn't have enough to eat.	1	2	3	4	5
2.	I knew that there was someone to take care of me and protect me.	1	2	3	4	5
3.	People in your family called me things like "stupid," "lazy," or "ugly."	1	2	3	4	5
4.	My parents were too drunk or high to take care of the family.	1	2	3	4	5
5.	There was someone in my family who helped me feel that I was important or special.	1	2	3	4	5
6.	I had to wear dirty clothes.	1	2	3	4	5
7.	I felt loved.	1	2	3	4	5
8.	I thought that my parents wished I had never been born.	1	2	3	4	5
9.	I got hit so hard by someone in my family that I had to see a doctor or go to the hospital.	1	2	3	4	5
10.	There was nothing I wanted to change about my family.	1	2	3	4	5
11.	People in my family hit me so hard that it left me with bruises or marks.	1	2	3	4	5
12.	I was punished with a belt, a board, a cord, or some other hard object.	1	2	3	4	5
13.	People in my family looked out for each other.	1	2	3	4	5
14.	People in my family said hurtful or insulting things to me.	1	2	3	4	5
15.	I believe that I was physically abused.	1	2	3	4	5
16.	I had the perfect childhood.	1	2	3	4	5
17.	I got hit or beaten so badly that it was noticed by someone like a teacher, neighbor, or doctor.	1	2	3	4	5
18.	I felt that someone in my family hated me.	1	2	3	4	5
19.	People in my family felt close to each other.	1	2	3	4	5
20.	Someone tried to touch me in a sexual way, or tried to make me touch them.	1	2	3	4	5
21.	Someone threatened to hurt me or tell lies about me unless I did something sexual with them.	1	2	3	4	5
22.	I had the best family in the world.	1	2	3	4	5
23.	Someone tried to make me do sexual things or watch sexual things.	1	2	3	4	5
24.	Someone molested me.	1	2	3	4	5
25.	I believe that I was emotionally abused.	1	2	3	4	5
26.	There was someone to take me to the doctor if I needed it.	1	2	3	4	5
27.	I believe that I was sexually abused.	1	2	3	4	5
28.	My family was a source of strength and support.	1	2	3	4	5

APPENDIX H: POST PARTICIPATION INFORMATION

APPENDIX G: POST PARTICIPATION INFORMATION

PROJECT: Childhood Experiences and Later Functioning
INVESTIGATORS: Amanda Havill, Amanda Lowell, & Kimberly Renk, Ph.D.

Thank you for participating in this research project. This project is being conducted so that we may find out more about the relationships among childhood experiences in the context of parent-child interactions, social support, and academic achievement as well as the relationships among childhood experiences in the context of parent-child interactions, attachment style, and emotional and behavioral functioning. As part of your participation, you completed several questionnaires inquiring about your childhood experiences (particularly those inquiring about discipline-related interactions as well as other difficult interactions), the social support that you have experienced, your attachment to other individuals, your academic performance, and your current emotional and behavioral functioning. The responses to these questionnaires will be used to explore the relationships among these variables. In particular, we are expecting that the effects of social support may reduce the long-term effects of difficult childhood experiences on later academic performance. We also are anticipating that positive attachment to others may provide a buffer against the long-term effects of difficult childhood experiences on later emotional and behavioral functioning. If so, these relationships may serve as a point of intervention for those who are experiencing difficulties.

If you would like more information about difficult childhood experiences, social support, attachment, academic performance, and emotional and behavioral functioning, please refer to the following sources:

Duncan, R. D. (2000). Childhood maltreatment and college drop-out rates: Implications for child abuse researchers. *Journal of Interpersonal Violence*, 15, 987-995.

Kent, A., & Waller, G. (2000). Childhood emotional abuse and eating psychopathology. *Clinical Psychology Review*, 20(7), 887-903.

Muller, R. T., Gragtmans, K., & Baker, R. (2008). Childhood physical abuse, attachment, and adult social support: Test of a mediational model. *Canadian Journal of Behavioural Science*, 40, 80-89.

Wright, M. O., Crawford, E., & Del Castillo, D. (2009). Childhood emotional maltreatment and later psychological distress among college students: The mediating role of maladaptive schemas. *Child Abuse and Neglect*, 33, 59-68.

If you have any further questions about this research study, please contact Kimberly Renk, Ph.D., by phone (407-823-2218) or e-mail (krenk@mail.ucf.edu). If you feel that you would benefit from talking with a counselor about your own childhood experiences, please contact the UCF Counseling Center at 407-823-2811.

REFERENCES

- Achenbach, T. M. (2009). *ASEBA: Development, findings, theory, and applications*. Burlington, VT: University of Vermont Research Center for Children, Youth and Families.
- Ainsworth, M., & Bowlby, J. (1991). An ethological approach to personality development. *American Psychologist*, 46(4), 333-341.
- Ainsworth, M., Blehar, M., Waters, E., & Wall, S. (1978). *Patterns of attachment: A psychological study of the strange situation*. Oxford England: Lawrence Erlbaum.
- Armsden, G. C., & Greenberg, M. T. (1987). The inventory of parent and peer attachment: individual differences and their relationship to psychological well-being in adolescence. *Journal of Youth and Adolescence*, 16, 427-454.
- Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 51, 1173-1182.
- Bernstein, D. P., & Fink, L. (1998). *Childhood trauma questionnaire: A retrospective self-report manual*. San Antonio, TX: The Psychological Corporation.
- Bernstein, D. P., Fink, L., Handelsman, L., & Foote, J. (1994). Initial reliability and validity of a new retrospective measure of child abuse and neglect. *The American Journal of Psychiatry*, 151(8), 1132-1136.
- Bowlby, J. (1979). *The making and breaking of affectional bonds*. London: Tavistock Publications Limited.
- Bowlby, J. (1988). *A secure base: Parent-child attachment and healthy human development*. London, England: Routledge.

- Briere, J., & Runtz, M. (1988). Multivariate correlates of childhood psychological and physical maltreatment among university women. *Child Abuse & Neglect*, 12(3), 331-341.
- Carlson, V., Cicchetti, D., Barnett, D., & Braunwald, K. (1989). Disorganized/disoriented attachment relationships in maltreated infants. *Developmental Psychology*, 25(4), 525-531.
- Cohen, J. (1992). A power primer. *Psychological Bulletin*, 112, 155-159.
- Cole-Detke, H., & Kobak, R. (1996). Attachment processes in eating disorder and depression. *Journal of Consulting and Clinical Psychology*, 64(2), 282-290.
- Garner, D., Olmsted, M., Bohr, Y., & Garfinkel, P. (1982). The Eating Attitudes Test: Psychometric features and clinical correlates. *Psychological Medicine: A Journal of Research in Psychiatry and the Allied Sciences*, 12(4), 871-878.
- Gross, A., & Keller, H. (1992). Long-term consequences on childhood physical and psychological maltreatment. *Aggressive Behavior*, 18(3), 171-185.
- Hankin, B. (2005). Childhood maltreatment and psychopathology: Prospective tests of attachment, cognitive vulnerability, and stress as mediating processes. *Cognitive Therapy and Research*, 29(6), 645-671.
- Hernandez, J. (1995). The concurrence of eating disorders with histories of child abuse among adolescents. *Journal of Child Sexual Abuse*, 4(3), 73-85.
- Hicks, B. M., Blonigen, D. M., Kramer, M. D., Krueger, R. F., Patrick, C. J., Iacono, W. G., & McGue, M. (2007). Gender differences and developmental change in externalizing disorders from late adolescence to early adulthood: A longitudinal twin study. *Journal of Abnormal Psychology*, 116(3), 433-447.

- Hund, A., & Espelage, D. (2006). Childhood emotional abuse and disordered eating among undergraduate females: Mediating influence of alexithymia and distress. *Child Abuse & Neglect*, 30(4), 393-407.
- Kennedy, M., Ip, K., Samra, J., & Gorzalka, B. (2007). The role of childhood emotional abuse in disordered eating. *Journal of Emotional Abuse*, 7(1), 17-36.
- Kent, A., & Waller, G. (2000). Childhood emotional abuse and eating psychopathology. *Clinical Psychology Review*, 20(7), 887-903.
- Kent, A., Waller, G., & Dagnan, D. (1999). A greater role of emotional than physical or sexual abuse in predicting disordered eating attitudes: The role of mediating variables. *International Journal of Eating Disorders*, 25(2), 159-167.
- Latzer, Y., Hochdorf, Z., Bachar, E., & Canetti, L. (2002). Attachment style and family functioning as discriminating factors in eating disorders. *Contemporary Family Therapy: An International Journal*, 24(4), 581-599.
- Lyons-Ruth, K., Alpern, L., & Repacholi, B. (1993). Disorganized infant attachment classification and maternal psychosocial problems as predictors of hostile-aggressive behavior in the preschool classroom. *Child Development*, 64(2), 572-585.
- Main, M. (1996). Introduction to the special section on attachment and psychopathology: 2. Overview of the field of attachment. *Journal of Consulting and Clinical Psychology*, 64(2), 237-243.
- Main, M. (2000). Attachment theory. *Encyclopedia of psychology*, Vol. 1 (pp. 289-293). Washington, DC: American Psychological Association.

- Main, M., & Solomon, J. (1986). Discovery of an insecure-disorganized/disoriented attachment pattern. *Affective development in infancy* (pp. 95-124). Westport, CT US: Ablex Publishing.
- Mazzeo, S., & Espelage, D. (2002). Association between childhood physical and emotional abuse and disordered eating behaviors in female undergraduates: An investigation of the mediating role of alexithymia and depression. *Journal of Counseling Psychology*, 49(1), 86-100.
- Mazzeo, S., Mitchell, K., & Williams, L. (2008). Anxiety, alexithymia, and depression as mediators of the association between childhood abuse and eating disordered behavior in African American and European American women. *Psychology of Women Quarterly*, 32(3), 267-280.
- Mercado, R., Martínez-Taboas, A., & Pedrosa, O. (2008). Childhood sexual abuse, eating disturbance and dissociation: A study in Puerto Rico. *Journal of Psychological Trauma*, 7(4), 298-309.
- Messman-Moore, T., & Garrigus, A. (2007). The association of child abuse and eating disorder symptomatology: The importance of multiple forms of abuse and revictimization. *Journal of Aggression, Maltreatment & Trauma*, 14(3), 51-72.
- Mitchell, K., & Mazzeo, S. (2005). Mediators of the association between abuse and disordered eating in undergraduate men. *Eating Behaviors*, 6(4), 318-327.
- Mullen, P., Martin, J., Anderson, J., & Romans, S. (1996). The long-term impact of the physical, emotional, and sexual abuse of children: A community study. *Child Abuse & Neglect*, 20(1), 7-21.

- Ringer, F., & Crittenden, P. (2007). Eating disorders and attachment: The effects of hidden family processes on eating disorders. *European Eating Disorders Review*, 15(2), 119-130.
- Roche, D., Runtz, M., & Hunter, M. (1999). Adult attachment: A mediator between child sexual abuse and later psychological adjustment. *Journal of Interpersonal Violence*, 14(2), 184-207.
- Silverman, A., Reinherz, H., & Giaconia, R. (1996). The long-term sequelae of child and adolescent abuse: A longitudinal community study. *Child Abuse & Neglect*, 20(8), 709-723.
- Springer, K., Sheridan, J., Kuo, D., & Carnes, M. (2007). Long-term physical and mental health consequences of childhood physical abuse: Results from a large population-based sample of men and women. *Child Abuse & Neglect*, 31(5), 517-530.
- Stern, D. (1985). *The interpersonal world of the infant*. New York: Basic Books.
- Tereno, S., Soares, I., Martins, C., Celani, M., & Sampaio, D. (2008). Attachment styles, memories of parental rearing and therapeutic bond: A study with eating disordered patients, their parents and therapists. *European Eating Disorders Review*, 16(1), 49-58.
- U. S. Department of Health and Human Services. (2008). *Child maltreatment 2008*. Washington, DC: US Government Printing Office. Retrieved September 2010 from <http://www.acf.hhs.gov/programs/cb/pubs/cm08/index.htm>.
- U. S. Department of Health and Human Services Administration for Children & Families (2009). *Definitions of child abuse and neglect: Summary of state laws*. Washington, DC: US

Government Printing Office. Retrieved November, 2010 from Child Welfare Gateway.

Web Site: <http://www.childwelfare.gov/>