

5-2007

The Effects of Attachment Relationships on the Development of Effects of Empathy or Depersonalization in Adolescence

John Lamanna

Western Kentucky University, john.lamanna@wku.edu

Follow this and additional works at: <http://digitalcommons.wku.edu/theses>



Part of the [Cognitive Psychology Commons](#), and the [Social Psychology Commons](#)

Recommended Citation

Lamanna, John, "The Effects of Attachment Relationships on the Development of Effects of Empathy or Depersonalization in Adolescence" (2007). *Masters Theses & Specialist Projects*. Paper 26.
<http://digitalcommons.wku.edu/theses/26>

This Thesis is brought to you for free and open access by TopSCHOLAR®. It has been accepted for inclusion in Masters Theses & Specialist Projects by an authorized administrator of TopSCHOLAR®. For more information, please contact topscholar@wku.edu.

THE EFFECTS OF ATTACHMENT RELATIONSHIPS ON THE DEVELOPMENT
OF EMPATHY OR DEPERSONALIZATION IN ADOLESCENCE

A Thesis
Presented to
The Faculty of the Department of Psychology
Western Kentucky University
Bowling Green, Kentucky

In Partial Fulfillment
Of the Requirements for the Degree
Specialist in Education

By
John Michael Lamanna

May 2007

**THE EFFECTS OF ATTACHMENT RELATIONSHIPS ON THE
DEVELOPMENT OF EMPATHY OR DEPERSONALIZATION IN
ADOLESCENCE**

Date Recommended _____

Director of Thesis

Dean, Graduate Studies and Research Date

Acknowledgements

I would like to begin by acknowledging my thesis chair, Dr. Melissa Hakman. Thank you for your guidance, patience, support, and assistance. I would not have been able to complete this project without your feedback and encouragement. Thank you for helping me turn this idea into a reality. In addition, I would like to thank my other thesis committee members, Dr. Carl Myers and Dr. Reagan Brown. Your recommendations and objective viewpoints were both insightful and informative. I would also like to extend my thanks to Dr. Phillip Shaver, Dr. Kim Bartholomew, and all other attachment researchers who were kind enough to answer my questions in regards to the rationale of this study. Thanks are also extended to Dave Wilhelm for assisting in data collection.

Additionally, I would like to thank my practicum supervisor, Shelly Tisdale, and my internship supervisor, Douglas Schneider. I am extremely grateful to you both for your support and guidance over these past two years. Both of you have provided me with a high standard of professionalism to strive towards as I become a school psychologist. Thank you for demonstrating excellence in all that you do.

I would also like to thank my wonderful fiancée, Jennifer Jonda, for supporting me over these past two years. I could not have done it without you. Thank you for making my world so much brighter. Thanks are also extended to my mom, sister, and friends in Ohio who provided me with my own safe haven when I needed a break from my work. Finally, I would like to thank the eight amazing students that I worked with at Western Kentucky University. You will never know how much I enjoyed being around such wonderful people. Thanks to everyone for instilling in me the confidence to accomplish my educational goals at Western Kentucky University.

Table of Contents

	Page
List of Tables.....	iii
Abstract.....	iv
Introduction.....	3
Literature Review.....	4
Measurement Issues.....	12
Empathy.....	16
Dissociation.....	26
Conceptualization of the Present Study.....	35
Method.....	38
Results.....	47
Discussion.....	57
References.....	63
Appendix A.....	75
Appendix B.....	85
Appendix C.....	87
Appendix D.....	92
Appendix E.....	94

List of Tables

	Page
Table 1 Demographic Information Reported By Group Location.....	39-40
Table 2 Descriptive Statistics of Independent and Dependent Variables By Group Location.....	49
Table 3 Intercorrelations Among Target Variables.....	51
Table 4 T Tests of Target Dependent Variables Comparing the TF and CS Groups....	56

THE EFFECTS OF ATTACHMENT RELATIONSHIPS ON THE DEVELOPMENT
OF EMPATHY OR DEPERSONALIZATION IN ADOLESCENCE

John Lamanna

May 2007

95 Pages

Directed by: Dr. Melissa Hakman, Dr. Carl Myers, and Dr. Reagan Brown

Department of Psychology

Western Kentucky University

Abstract

Research on attachment theory supports the notion that our early attachment relationships are integral to empathic development, and that early negative attachment relationships can promote depersonalization rather than empathy. The purpose of the present study was to investigate the effects of separations from one's primary caregiver(s) on the development of empathy or depersonalization in adolescence. Adolescents who have been separated from their biological parent(s) due to abuse and/or neglect were expected to differ on self-reported levels of empathy, dissociation, hostility, and depression when compared to adolescents who have not had such involuntary separations in their life. After performing descriptive, correlational, and inferential analyses, results indicated that there was not a significant difference between the groups on self-reported levels of empathy, dissociation, hostility, or depressive symptomatology. It is important to note, though, that more than half of the youth who were involuntarily separated from their biological parent(s) continued to view at least one of their parents as a positive attachment figure, and there was not a significant difference between groups on the number of positive attachments reported. The findings in this study were interpreted as supportive of the applications of attachment theory to past empathy research, since differences on the dependent variables were not expected if there were not differences in

attachment between the two groups. The results also supported the seminal work of John Bowlby by affirming the role of perception and the cognitive appraisal of attachment figures on attachment security. Furthermore, the results validated the use of the Social Networks Questionnaire (SNQ) and supported its use, in conjunction with the Social Support Questionnaire-Short Form (SSQ6), to assess attachment relationships.

Introduction

The importance of understanding the effect of attachment relationships on development is integral to promoting optimal adjustment in children and adolescents. Garbarino (1999), in his examination of youth violence, believes that the negative connections with primary caregivers in childhood are a major risk factor for violent behavior later in development. He theorizes that children who are rejected, neglected, and/or abused are unable to understand the emotions of others due to the masking of their own feelings. Feelings of shame, depression, anxiety, and hostility are inappropriately expressed through violent behaviors. The lack of empathy due to negative early relationships is believed to promote feelings of depersonalization and dissociation, which can make it easier to commit acts of violence since these individuals cannot understand another person's feelings or emotions and they fail to see the humanity of their victims (Garbarino, 1999).

Research and theory in the area of attachment supports the views stated above; however, the literature does not coalesce on the connections between empathy and dissociation in relation to the effect of attachment relationships. The purpose of the present study was to investigate the effects of separations from one's primary caregiver(s) on the development of empathy or depersonalization in adolescence.

The literature review to follow will provide an in-depth discussion of attachment research applied to empathy and dissociation. A review of attachment theory itself will precede it, along with a short discussion of the methodological issues in assessing attachment. This will be followed by specific details of the study, including a discussion of the results.

Literature Review

Attachment theory evolved from an amalgam of research and theory by John Bowlby and Mary Ainsworth between 1944 and 1980. Bowlby's trilogy, *Attachment and Loss* (Bowlby, 1969/1982; Bowlby, 1973; Bowlby, 1980) and Ainsworth's original research studies (Ainsworth, 1963; Ainsworth, 1964; Ainsworth, Blehar, Waters, & Wall, 1978) provided the basic ideas behind the theory of attachment (Cassidy, 1999). This section will provide background information on attachment, specifically the work of John Bowlby and Mary Ainsworth, as well as internal working models, attachment styles, and the function of attachment behavior and the behavioral systems underlying it.

Attachment can generally be defined as the dyadic relationship between two individuals (e.g., child and parent), in which interactions and behaviors serve to protect one individual (i.e., the child) from danger until that individual can become more self-reliant (Marvin & Britner, 1999). Attachment behaviors are those behaviors, such as crying or crawling, which promote proximity to the attachment figure (e.g., the parent). They are organized into the attachment behavioral system and utilized whenever the principal caregiver exceeds the desired proximity of the less independent individual (Cassidy, 1999). Cassidy (1999) reported that Bowlby and Ainsworth made a distinction between attachment behaviors, the attachment behavioral system, and attachment bonds. An attachment bond is "a bond that one individual has to another individual who is perceived as stronger and wiser" (p. 12). Attachment bonds are a type of affectional bond that are further distinguished by the seeking of security and comfort by one individual in the relationship (e.g., the child) with the other individual (e.g., the parent).

Attachments to caregivers are generally believed to form within the first year of life, based on the prior interactions between the parent(s) and the child and the child's development (Marvin & Britner, 1999). Based on these interactions and early experiences, the child is believed to form an Internal Working Model (IWM), which is a mental representation of the primary attachment figure, the self, and the environment (Cassidy, 1999). Bowlby (1988) stated that these internal working models may create predictable pathways for later development and cognition; although, current relationships can always have an impact on one's appraisal of "self" and "other."

Development of Attachment Theory

John Bowlby. Bowlby's theory of attachment developed in response to the current beliefs in the 1950s which stated that attachments were the result of hunger drives, and that the pleasure associated with feeding became connected to the mother's presence to form an attachment (Cassidy, 1999). Bowlby's early research (e.g., Bowlby, 1944; Bowlby, 1951) emphasized the importance of the parent-child bond in the emotional development of the child. Bowlby (1944) found that the prolonged separation from the primary attachment figure resulted in an "affectionless" group in a sample of children who were institutionalized for stealing. Specifically, he found that institutionalized children who were deprived of maternal care also lacked feeling and exhibited hostile or antisocial behavior.

The groundwork for Bowlby's theory of attachment grew out of his early work with James Robertson. They identified three phases that children pass through during separations from their caregivers (Robertson, 1962). The first phase is protest, and it is marked by such extreme emotions as fear, anger, and distress in response to the danger

felt by the separation from the caregiver and attempts to reestablish contact. Despair, or deep mourning, is the second phase. Here, the child interprets the separation from their caregiver as a loss of the attachment figure. The child begins to withdraw and disengage from people, suggesting hopelessness about the caregiver's return (Kobak, 1999).

Hostile behavior has also been shown to increase during this phase (Heinicke & Westheimer, 1966). The last phase is detachment, in which the child no longer rejects alternate caregivers and appears apathetic at the caregiver's return. This phase can continue following reunions, and it is a reflection of fear regarding whether the caregiver may leave again (Heinicke & Westheimer, 1966; Kobak, 1999).

Bowlby integrated his early work on separation distress with other studies (e.g., Lorenz, 1957) in order to explain attachment behaviors, as well as fear behaviors, in terms of a survival advantage (Kobak, 1999). He proposed that attachment behaviors (e.g., running, walking, or crawling towards an attachment figure) are organized into a system of interchangeable behaviors that lead to desired proximity to the caregiver. This attachment behavioral system is activated whenever the child exceeds a comfortable distance from his or her caregiver (Cassidy, 1999).

Bowlby (1969/1982) postulated that this attachment behavioral system interacted with other behavioral systems. These other systems include the exploratory behavioral system, the fear behavioral system, the sociable behavioral system, and the caregiving system (Cassidy, 1999). Four of the behavioral systems (attachment, exploratory, fear, and sociable) normally work together to create a balance that teaches children effective coping skills within the protective bond of the attachment figure. In positive environments these systems also become more elaborate as one develops, leading to

adaptive development. But, in negative environments there is no balance among the four systems, which can lead to maladaptive development (Marvin & Britner, 1999).

The exploratory behavioral system offers information about the environment and is believed to be inactive when the attachment behavioral system is activated. When the infant's attachment system is not activated (e.g., the child is within a comfortable proximity to the caregiver), exploration occurs. This is thought to be a reflection of the infant's belief in the physical accessibility and responsiveness of the attachment figure (Cassidy, 1999). In other words, the child is more likely to explore the environment when they have a secure attachment to their caregiver.

The fear behavioral system, like the attachment behavioral system, functions to protect the young child and is activated by stimuli that increase the likelihood of danger, causing an increase in attachment behavior and the seeking out of the caregiver to ensure protection (Cassidy, 1999). The relationship between these two systems will be highlighted again in a discussion of dissociative responses in children, in which the behavioral system of traumatized children is believed to collapse due to a fear of their caregiver and a desire to seek their proximity.

The sociable system is an affectional system that involves peers and others, of which one may or may not have an attachment bond. The system is most likely to be activated when the attachment behavioral system is not activated, when a child is confident about the location of their attachment figure (Cassidy, 1999). In other words, children are more likely to be sociable when they have a secure attachment to their caregiver and are not concerned with their own attachment needs.

The caregiving system refers to parental behaviors (e.g., retrieval, calling, grasping) enacted to promote proximity and comfort when the parent believes that the child may be in danger. The function of the caregiving system is the protection of the child so when the caregiving system is activated, the attachment behavioral system should be deactivated (Cassidy, 1999). In a later section, the caregiving system will be highlighted as instrumental in the development of empathy just as it is instrumental to exploration.

The addition of a cognitive component to attachment security was able to account for the three phases of separation (protest represents fear and anger to reunite, despair is the result of unsuccessful reunification, and detachment is a way of coping with loss), as well as extend Bowlby's theory into childhood and beyond. Bowlby (1969/1982) stated that if one is confident in the availability of the attachment figure, he will be less prone to fear. Also, confidence in the availability of the attachment figure, or lack thereof, builds up during one's development and leads to expectations of how to respond during frightening situations and how to interpret a caregiver's response. These expectations become a central part of one's personality, although they are affected by appraisals of availability in current attachment relationships (Kobak, 1999).

Bowlby emphasized that disruptions in attachment relationships are only threatening when they are perceived as affecting the availability of an attachment figure. Open communication is one aspect of availability that can greatly affect how one perceives disruptions (Kobak, 1999). Results have shown that open communication can often disconfirm perceived threats to availability and eliminate disruptive events (Kobak, 1999). One's appraisal of caregiver responsiveness also influences the impact of

disruptions. When there is a lack of confidence in caregiver responsiveness, children develop insecure strategies (e.g., avoidant or anxious) to maintain proximity to their caregiver. For example, avoidant infants (who expect to be rejected from their attachment figure) will avoid their caregivers in order to reduce further conflict or rejection following the separation. Anxious infants (who are uncertain of their caregiver's responsiveness) will demonstrate angry resistant or passive behavior to increase proximity to their attachment figure. The interplay of one's attachment strategies, communication with caregiver, and disruptive events is most likely the strongest predictor of maladaptive adjustment in development (Kobak, 1999).

Bowlby also discussed the importance of emotional reactions to disruptions and believed that emotions, such as love, anxiety, and grief, are strongly associated with attachment. This is probably because of evolutionary pressures to maintain attachments due to the positive emotions associated with them, which enhances reproductive fitness. As mentioned previously, the attachment behavioral system also involves internal working models, which are cognitive representations of self, other, and the environment. These models are used to anticipate the future and to determine which attachment behaviors to use in a specific situation with a specific person (Cassidy, 1999). It is believed that fear, anger, and sadness accompany one's appraisal of an attachment figure's availability. In addition, there is a link between dysfunctional communication, negative emotions, and psychopathology such that when negative emotions result from poor communication, these emotions are often distorted in an attempt to control them. This can lead to childhood phobias and anxiety disorders (Bowlby, 1973; Kobak, 1999). Thus, threats to availability and distorted communication can lead to symptomatic

expressions of fear, anger, and sadness (Kobak, 1999). Hostility and depression will be highlighted again in later studies (e.g., Main & George, 1985) as indicators of separation, rejection by the caregiver, and/or abuse, and can be useful in delineating attachment security or insecurity.

Mary Ainsworth. The work of Mary Ainsworth (e.g., Ainsworth et al., 1978) also eloquently illustrates the interplay of the attachment, exploration, and fear systems, as well as the infant's use of the mother as a secure base from which to explore. Ainsworth's strange situation research consisted of eight 3-minute episodes involving an observer, a stranger, and a child-mother dyad. Through varying episodes involving different people (or no people) in the laboratory playroom with the child, Ainsworth et al. (1978) demonstrated the importance of the attachment behavioral system in daily situations. Ainsworth et al. showed that as the attachment behavioral system became more active (e.g., by first leaving the child with a stranger and later on leaving the child alone), the exploratory behavioral system became more inactive. The presence of the mother (versus a stranger) increased the quality of the child's play and exploration, thus demonstrating the child's use of the mother as a secure base from which to explore. This provided the critical evidence necessary to show the importance of the attachment relationship (Kobak, 1999).

Ainsworth et al. (1978) discovered individual differences in infants' responses to separations in the strange situation. This suggested that infants entered the strange situation with different cognitive expectations (i.e., internal working models) about how their parents would respond to them when in distress. Ainsworth believed that separation distress stemmed more from the child's appraisal of the mother's departure than from the

actual physical absence of the caregiver. An infant's model of a particular parent, based on previous experiences, guides the infant's expectations about the caregiver's availability and can impact the infant's view of "comfortable" proximity to the attachment figure (Kobak, 1999).

The individual differences found in Ainsworth's strange situation research (e.g., Ainsworth et al., 1978) resulted in three classification groups, or "attachments," based on the infant's behavior towards the caregiver upon being reunited. The first group is known as secure, which refers to those infants that use the mother as a secure base for exploration. Upon reunification, this type of infant actively greets the parent, seeks contact if upset, and returns to exploration soon after. The second group is avoidant, which is marked by very little use of the parent as a secure base from which to explore. This type of infant explores a lot and appears to be more interested in toys than in the caregiver. Avoidant infants actively ignore the caregiver upon reunification. The third group is known as anxious or preoccupied attachment. Here, infants do not engage in exploration and are irritable or passive throughout the strange situation. This type of infant has ambivalent reactions to caregiver reunification (alternates between desiring contact and angrily rejecting the caregiver) and does not find comfort in the attachment figure. A fourth group of infant classification was later added by Main and Solomon (1990). This classification group, known as disorganized or disoriented, lacks a coherent attachment strategy and may show fear of their caregiver. This type of infant lacks any apparent goals or intentions and may appear confused and disoriented (Solomon & George, 1999). The frightened reactions of these infants to their caregivers may reflect a history of abuse or severe punishment (Main & Hesse, 1990). The differences in

attachment styles, based on the work of Bowlby and Ainsworth, will be reviewed in the literature as predictors of varied outcomes in interpersonal relationships, including empathy and depersonalization.

In conclusion, the attachment theory of John Bowlby has remained relatively unchanged after almost half a century (Cassidy, 1999). The seminal work of John Bowlby laid the foundation for understanding attachment through the role of emotions and behavioral systems. The work of Ainsworth provided a cognitive component to these behaviors, a framework for understanding differences in attachments, and information regarding the effect of behaviors on attachment relationships. Attachments have been linked to social competence (e.g., Armsden & Greenberg, 1987), school adaptation and achievement (e.g., Cotterell, 1992; Ryan, Stiller, & Lynch, 1994), empathy (e.g., Kohn, 2000; Mikulincer & Shaver, 2005), anger (e.g., Lyons-Ruth, Alpern, & Repacholi, 1993), depression (e.g., Stemmler & Peterson, 2005), and depersonalization (e.g., Calamari & Pini, 2003; Kobak, Little, Race, & Acosta, 2001).

Measurement Issues

Research indicates that there are two different ways of assessing attachment relationships. One assessment method focuses on parenting, and is based on the interview and observation methods originally used by Ainsworth and Main in the past (e.g., Ainsworth et al., 1978; George, Kaplan, & Main, 1984). Researchers using this assessment method typically use the strange situation task (Ainsworth et al., 1978) and the Adult Attachment Interview (AAI; George, Kaplan, & Main, 1984) to classify adults and their infants into four different, but related, attachment styles. The “avoidant” style recognized in infants is classified as “dismissing” in adults, according to this stream of

research. “Anxious” infants are related to caregivers who are “preoccupied” with their attachment-related issues. “Secure” infants correspond to “free and autonomous” adults, and “disorganized” infants are associated with “unresolved” attachment losses and traumas in adults (Ainsworth et al., 1978; George, Kaplan, & Main, 1984).

The other branch of attachment research focuses on romantic relationships and is based on the work of Hazan and Shaver (1987), among others. This line of research uses self-report measures of attachment in adulthood and only recognizes three attachment styles: secure, avoidant, and anxious. Because of variability in categorization, Brennan, Clark, and Shaver (1998) encouraged the use of a common metric with the creation of a self-report measure of romantic attachment based on all other existing measures. This study was based on the work of Bartholomew (1990), who recognized four attachment styles (secure, preoccupied, dismissing, and fearful) related to two dimensions (view of self and other). According to this conceptualization, “secure” individuals have positive models of both self and others, “preoccupied” individuals have a negative view of self and a positive view of others, “dismissing” individuals have a positive view of self and a negative view of others, and “fearful” individuals have negative models of both self and others. Models of self are defined as self-worth and the degree of anxiety and dependency on other’s approval in close relationships. Models of others involve the expected availability and support from others and are related to one’s tendency to seek out or avoid closeness in relationships. Thus, models of self are associated with anxiety, and models of others are associated with avoidance, the two dimensions underlying Bartholomew’s model.

Brennan, Clark, and Shaver (1998) created their self-report measure by combining attachment constructs from all existing self-report measures of attachment and performing a factor analysis of those constructs. Two 18-item scales were then formed by reducing the constructs to two factors, which corresponded to Bartholomew's underlying factors of avoidance and anxiety and became known as the Experiences In Close Relationships Scale (ECR). Since its conception, the ECR has been both revised and adapted. An adapted version, called the Relationships Structures (RS) Questionnaire, is a 10-item self-report measure that can assess attachment patterns in a variety of close relationships (e.g., mother, father, best friend), in addition to relationships with romantic partners (Fraley, Niedenthal, Marks, Brumbaugh, & Vicary, in press).

There are concerns about the use of categories or styles instead of dimensions in examining and understanding attachment. Using categories leads one to assume that each style is independent, and it promotes the belief of a single etiology (e.g., just early experiences). In addition, decreased power and reliability and validity issues are also a concern. The use of categories may also lead researchers to observe patterns that do not exist or cause them to overlook natural patterns that do exist (Fraley & Waller, 1998). However, Bartholomew (1990) found that methods employing the use of categories or dimensions assess similar underlying constructs, even if assessed in different ways. Thus, despite the differences in domain, method, dimensionality, and categorization, both methods are compatible with the basic idea of the effect of attachment experiences on individuals throughout their life (Bartholomew & Shaver, 1998). Although a two dimension model is endorsed in the present study, it is more convenient to present past studies using their categorical models of attachment styles so as to reduce verbosity.

Thus, “secure” or “free and autonomous” individuals will refer to those with low avoidance and low anxiety. “Avoidant” and “dismissing” will be in reference to individuals with high avoidance and low anxiety. “Anxious” and “preoccupied” should be understood to be those with low avoidance and high anxiety, and “disorganized/disoriented,” “unresolved,” and “fearful” all refer to those individuals who are high on both avoidance and anxiety. This last clarification requires further elaboration. Although Bartholomew (1990) was the first to propose the fearful category of attachment based on her two dimensional model, both Crittenden (1988) and Main and Solomon (1990) argued for a fourth category of infant attachment, which was described as being a mix of avoidance and anxiety. Thus, the fearful classification in adults, as identified by Bartholomew (1990), is viewed by this researcher as being parallel to disorganized/disoriented attachment in infancy and unresolved attachment in adults since their underlying characteristics all involve high avoidance and high anxiety.

Current attachment theorists (e.g., Allen & Land, 1999; Hazan & Zeifman, 1999; Trinke & Bartholomew, 1997) focus on five characteristics of attachments beyond infancy. These characteristics include (a) proximity seeking behavior, (b) use of the attachment figure as a secure base from which to explore the environment, (c) use of the attachment figure as a safe haven when faced with a perceived threat, (d) separation protest when involuntarily separated from the attachment figure, and (e) a strong emotional tie with the person.

Trinke and Bartholomew (1997) developed and validated the Attachment Network Questionnaire (ANQ) (now called the Social Networks Questionnaire) to assess multiple attachments and a proposed attachment hierarchy of individuals in one’s life.

Trinke and Bartholomew showed support for the reliability and validity of the Attachment Network Questionnaire (ANQ) and the existence of multiple attachments, as well as convergence between their method of assessing attachment bonds and judgments based on coders. Moderate correlations between the number of attachment figures and the number of social supports, as measured by the short form of the Social Support Questionnaire (SSQ6), were also found. This provides additional evidence that the ANQ measures secure and insecure attachment bonds while other measures (i.e., the SSQ6) target only secure attachments. The researchers formed this conclusion after reporting that there was a positive correlation between self-reported attachment security and the SSQ6 but no correlation between attachment security and the number of people listed on the ANQ. Thus, the SSQ6 may provide additional evidence to a self-reported secure attachment figure on the ANQ, and it will be utilized in the present study for that reason.

Empathy

Empathy can be defined as one's ability to take the perspective of another person in order to assist that person in relieving their distress (Batson, 1991). Empathy can involve a feeling of sorrow, a feeling that matches someone else's feeling, and/or an expression of understanding and support. Empathy can be further defined by its distinction from sympathy and personal distress. Sympathy is a response to one's distress marked by pity or concern only (which is a term sometimes used interchangeably with empathy), whereas personal distress is a response in which one's goal is to improve their own mood (Kohn, 1990). Personal distress revolves around reducing one's own worry and discomfort, which occurs in response to another person's distress, and it is not associated with effective helping behavior (Batson, 1991). Empathy has also been associated with compassion, caregiving, self-transcendence, and altruism (Mikulincer,

Shaver, Gillath, & Nitzberg, 2005). The ability to empathize with others has recently become of great interest to attachment researchers, who purport that there is a relationship between attachment and empathy in that one's views of self and others affect individuals' ability to provide support to others in an empathic manner. A review of the literature will provide support for this application of attachment theory.

Measures of empathy. Clinical measures of empathy differ greatly according to their operational definitions, which can vary in their assessment of role taking, non-affective outcomes (i.e., social judgment of situations), and/or affective outcomes. Davis (1996) believes that multidimensional measures of empathy may be best for adults. The Interpersonal Reactivity Index (IRI, Davis, 1980) views empathy as composed of four separate facets, including perspective taking, empathic concern, personal distress, and fantasy. Perspective taking assesses the ability to take on the psychological point of view of another person. The empathic concern scale assesses the affective outcomes of sympathy and compassion in response to unfortunate others. The personal distress scale of the IRI looks at the degree of discomfort in response to others' distress. The fantasy scale is designed to assess the ability to imagine oneself in fictional situations. This measure is ideal because it examines role taking in regards to perception, cognition, and affect, using social situations and fictional scenarios.

Theory and early research. Attachment theory and research, originally based on the work of Bowlby, has explored the link between attachment relationships and empathic responses. Although researchers (e.g., Gillath et al., 2004; Mikulincer et al., 2005) admit that attachment relationships do not exclusively affect empathy, their work has shown that attachment security (i.e., positive conceptions of self and other) fosters

compassion, altruism, and the willingness to help someone in distress. Possible explanations for the link between attachment security and empathy focus on the direct and indirect role of attachment figures throughout development (e.g., Barnett, Howard, King, & Dino, 1980; Kohn, 1990; Mikulincer et al., 2005; Waters, Wippman, & Sroufe, 1979). Recently, studies have implicated a relationship between the attachment behavioral system and the caregiving system in understanding empathic responses (see Mikulincer & Shaver, 2005a for a review). A review of the literature, beginning with and based on the work of Bowlby (1969/1982), will provide further details on the link between attachment and empathy.

The work of Bowlby (1969/1982) highlights the role of the caregiving system in understanding empathic behavior. According to attachment theory, the caregiving system is designed by evolution to provide a safe haven and a secure base to an attachment relationship partner in order to reduce their distress and to provide protection and support for their partner's development (e.g., the child). In the parent-child relationship, the child's attachment system and the parent's caregiving system are believed to have the same goals (i.e., creating a safe environment to foster growth). Empathy is viewed as the underlying means for a caregiver to achieve this goal, since it requires one to focus his or her attention on another person's distress, rather than on his or her own emotional state (Mikulincer et al., 2005). This, in turn, can promote the ability to empathize with others as one develops.

Theory and research outside of the attachment area of study also imply that empathy may be directly affected by the environmental influences in one's upbringing. Kohn (1990) and Davis (1996) argue that if one is raised by warm, caring, and empathic

parents then this will serve as a model to children, which will foster the development of compassion and empathic interaction. Adults who take the time to explain to a child how behaviors can help or harm others can also foster the development of empathy and prosocial behavior (Kohn, 1990). Kohn (1990) and Davis (1996) also agree that there is a link between secure attachment, autonomy, and prosocial behavior. Here, children whose own emotional needs are satisfied by a secure attachment relationship with their parents are believed to be less preoccupied with their own emotional needs. This autonomy allows a child to be open to others' needs because he or she assumes that the world is a safe and benevolent place. Thus, he or she can be more responsive to others' needs because they are more confident about reaching out to people around them. These ideas are all consistent with current research findings and theory on empathy (e.g., Gillath et al., 2004).

Studies have investigated the effects of secure attachment relationships on empathy for young children, older adolescents, and adults. Waters, Wippman, and Sroufe (1979) and Kestenbaum, Farber, and Sroufe (1989) both assessed attachment security in young children between the ages of 1-2, and subsequently assessed their empathic behavior 2-3 years later. Both studies found an association between attachment security and empathic development. Securely attached infants were rated later on as more sympathetic to their peers' distress (Waters et al., 1979), and they were rated higher than anxiously attached children in regards to offering comfort and displaying concern to peers who were suffering (Kestenbaum et al., 1989). Thus, one's ability to care for others early on may be influenced by how much care one receives, and whether or not children have an adequate model of care can predict how they will support others in times

of need.

Research studies on adolescents and adults produced similar associations between attachment security and empathy. Eisenberg-Berg and Mussen (1978) examined maternal child-rearing practices in relation to the empathic development of 72 high school adolescents (grades 9, 11, and 12). They found that the mothers of highly empathic boys were reported to be less punitive and more egalitarian and affectionate. Similarly, Barnett, Howard, King, and Dino (1980) had 72 undergraduate college students who scored at the upper and lower extremes on an empathy measure in a previous study (Mehrabian & Epstein, 1972) report on the past behaviors of their parents. Results showed that the parents of high empathy students were more affectionate, and they encouraged more discussion of feelings than the parents of low empathy students. Another example of the association between attachment security and empathy was the work of Westmaas and Silver (2001). Here, 241 female undergraduate students between the ages of 17 and 24 years completed self-report measures of attachment and later completed measures on anxiety, supportiveness, and rejection following exposure to a confederate who displayed a specific attachment style and was supposedly diagnosed with cancer. Results showed that participants who scored high on attachment avoidance were less inclined to provide support to a cancer victim. Participants who scored high on attachment anxiety reported greater discomfort in interacting with the cancer victim. Based on this research, it was apparent that differences in attachment security resulted in different responses in empathic situations. It appears that having a model of care and support during development can impact persons' views of self and others and promote empathy, such that their confidence in themselves and trust in others can be influenced by

their early relationship with their caregivers.

One criticism of these studies was due to their correlational nature, which does not conclusively show that attachment security was active while participants were involved in empathic situations (Mikulincer & Shaver, 2005a). In order to improve these studies, cognitive priming techniques have been implemented in current studies of empathy. These techniques (e.g., subliminal presentations of attachment security words, such as love and support) momentarily activate thoughts of attachment security. It is believed that activation of attachment security leads people to respond similarly to those who have a secure attachment style (Mikulincer et al., 2001). Research implicates that there exists both a global attachment schema, based on past experiences, and a relationship-specific attachment schema based on a current or specific attachment relationship (Collins & Read, 1994). Just as a relationship-specific view of the world can temporarily dominate one's responses to attachment constructs, contextual activation via cognitive priming techniques can be used to activate a sense of security for a participant in a study (Mikulincer & Shaver, 2001).

Current research studies. Mikulincer and Shaver (2005a) discussed five recent studies on attachment and empathy, which will now be reviewed here. Although their work on attachment relationships is voluminous, it is beyond the scope of this literature review to provide comprehensive review of their work. Only those research studies that are most pertinent to empathy theory and research will be discussed here.

Mikulincer and Shaver (2001) examined the effects of the contextual activation of the sense of attachment on reactions towards people who are different from oneself or do not belong to the same social group. This entailed five studies involving undergraduate

students from Bar-Ilan University in Israel. The sample sizes ranged from 80 to 148 students, and the median age in all five studies was 23 (ranging from 18-34 across all five studies). It was demonstrated that the contextual activation of a sense of having a secure base increased people's willingness to interact with out-group members, reduced their negative reactions to strangers, and fostered a more tolerant view of unfamiliarity and novelty. It is believed that this sense of security deactivates one's fear system, which is typically activated when one is around unfamiliar people or places, causing one to seek proximity to an attachment figure. With the contextual activation of one's sense of security there is no need to activate the fear system, making one more comfortable in new situations.

In a similar study, Mikulincer et al. (2001) examined empathic reactions to others' needs by assessing dispositional (i.e., global, chronic) attachment security and by activating attachment security and insecurity. Here, five studies involving undergraduate students in Israel were used again (ages ranged from 17-36 across all five studies, with the median ages being 23 or 24 years). Dispositional attachment security was assessed with the Experiences in Close Relationships (ECR) scale (Brennan, Clark, & Shaver, 1998) and attachment security and insecurity was activated using cognitive priming techniques. Participants rated their feelings of compassion and personal distress following the activation of attachment security or insecurity and after the assessment of dispositional attachment. The results showed that the contextual activation of attachment and the chronic sense of attachment security were related to higher empathic responses. Also, dispositional attachment anxiety and avoidance were inversely related to compassionate reactions, and attachment anxiety was positively related to personal

distress. These findings were consistent with the work of Westmaas and Silver (2001) in regards to differences in empathic responses associated with differences in attachment security.

It is believed that attachment security (dispositional or activated) results in positive representations of self and other. This allows a person to feel empowered about her ability to help others, and it serves to foster benevolence and altruism towards others. Attachment anxiety, which is associated with negative models of self, was related to the inhibition of empathy and the strengthening of personal distress. When faced with another person's distress, it appears that anxiously attached individuals cannot overcome their own self-focus to provide help to another person. Attachment avoidance, which is associated with negative models of others, was related to the inhibition of both empathy and personal distress. The indifferent reaction of individuals with an avoidant attachment style may be the result of the distancing of themselves from potential sources of pain and/or negative emotion, which is consistent with the traditional views of avoidant infants (Marvin & Britner, 1999).

Mikulincer et al. (2003) conducted a study similar to Mikulincer et al. (2001) that examined attachment security and the self-transcendent values of benevolence and universalism. Benevolence involves concern for people who are close to oneself, whereas universalism involves concern for all humanity. Dispositional attachment and cognitively primed attachment security were assessed in regards to these values, and the results were consistent with prior research. Contextual and chronic attachment security were significantly related to the endorsement of self-transcendent values, meaning that those who have secure attachments are more likely to care for others and trust others.

Avoidant attachment, which was assessed again using the ECR, was inversely associated with both benevolence and universalism, meaning that these individuals are self-reliant and do not seek out relationships with others or care as much about others. No relation was found between attachment anxiety and self-transcendent values, possibly because these individuals, when cognitively primed with attachment security, increase their views of self. Self-transcendence, as well as avoidant attachment, appears to be related only to one's model of others, not to one's model of self. Thus, the effects of an insecure attachment on empathy can be delineated by attachment styles, with avoidance being related to detachment and anxiety being related to personal distress.

Gillath et al. (2004) examined associations between attachment style and altruistic behavior in the form of volunteerism. Avoidant attachment was negatively associated with volunteer activities, whereas anxious attachment was associated with self-serving reasons for volunteering (e.g., the need for affection or social validation). Secure attachment was associated with altruistic and exploration-oriented reasons for volunteering. These findings, along with prior research linking attachment security to tolerance of out-group members, compassion, and self-transcendence, suggest the effect of the attachment behavioral system on the caregiving system (Mikulincer & Shaver, 2001; Mikulincer et al., 2001; Mikulincer et al., 2003).

Mikulincer et al. (2005) examined attachment security and altruism using assessments of dispositional attachment and cognitive priming techniques. Five studies were conducted, with samples taken from the University of California, Davis and Bar-Ilan University in Israel for each study. Sample sizes for both universities were made up of undergraduate students (ranging from 90-120 students) with median ages ranging from

20-23 years. In these studies, participants were given the opportunity to take the place of a confederate in distress, to see if attachment security truly fostered empathy and altruistic helping. The results showed that the activation of attachment security increased participants' willingness to take the distressed confederate's place. High avoidant attachment scores were negatively associated with empathic reactions to others' suffering, while high anxiety attachment scores were associated with personal distress, not helping, in response to another person's distress. This study indicates that those individuals with a secure attachment are more likely to demonstrate empathic behavior, while avoidant individuals suppress their concern for others and anxious individuals become encompassed with their own worries.

Overall, the research studies presented here (e.g., Gillath et al., 2004; Mikulincer et al., 2001; Mikulincer et al., 2003; Mikulincer & Shaver, 2001; Mikulincer et al., 2005) indicate that attachment security makes altruistic caregiving more likely by providing the foundation for empathy. This is believed to occur because attachment security takes attention away from one's own attachment behavioral system and allows one to focus on other people, via the caregiving system, which operates through empathy and compassion. This is consistent with the seminal work of Bowlby (1988) who believed that a secure base promotes genuine concern for others. It is also believed that attachment security facilitates the caregiving system through positive working models regarding attachment figures in times of need (Mikulincer & Shaver, 2005b). The sense of having an available and adequate attachment figure promotes psychological well-being and resiliency towards emotional balance in times of distress.

Insecure attachment strategies, on the other hand, promote defensive maneuvers

in order to compensate for the absence of attachment security. These strategies are aimed at protecting one's ego in order to provide some type of emotional balance (Higgins, 1998). Under these conditions, the caregiving system is activated only for self-enhancing purposes and does not reflect truly altruistic behavior (Mikulincer et al., 2005). Thus, attachment avoidance is associated with less compassion, empathy, and altruism compared to securely attached individuals. For these individuals, help or care is provided only if it benefits their own mood or brings them joy in some way. Anxiously attached individuals display personal distress when confronted with a person in need, but this does not translate into altruistic action. The need for attachment security consumes the anxiously attached individual so that they do not have the mental resources to take the perspective of the distressed person. This also inhibits the caregiving system by limiting it to self-enhancing goals (Mikulincer et al., 2005). These insecure attachment strategies are also related to one's models of self and of others (i.e., positive or negative), which helps to explain why these individuals cannot divert attention away from their own emotional state in order to help others.

Dissociation

Dissociation can be defined as a response to trauma or distress in which one separates from a traumatic experience in order to avoid overwhelming feelings or emotions. It is a self-protective strategy in which the failure to integrate information, experience, and perception is used to experience less pain by placing the traumatic situation into a separate identity or ego state (Garbarino, 1999; Putnam, 1996; van der Kolk, 1996). Although the link between trauma and dissociation is both known and documented in research (e.g., Carrion & Steiner, 2000; Garbarino, 1999; Putnam, 1996;

van der Kolk, 1996), recent research has demonstrated the role of attachment disorganization as a mediator of this relationship (Carlson, 1998; Liotti, 1992; Ogawa, Sroufe, Weinfield, Carlson, & Egeland, 1997). Research findings suggest that attachment disorganization can result in greater depersonalization and less empathy, due to the dissociative response to distressing situations indicative of individuals with a disorganized attachment strategy.

Clinical measures of dissociation tap four of five experiences that are associated with dissociation: amnesia, depersonalization and derealization, absorption and enthrallment, identity alteration, and passive influence (Putnam, 1996). Amnesia refers to lapses in memory due to gaps in information processing caused by dissociation. Depersonalization and derealization are related to a sense of feeling disconnected from one's body and the world, as well as being unable to see another person's individuality and/or humanity. Absorption and enthrallment reflect a blurring of fantasy and reality. Identity alteration involves feeling disconnected from parts of oneself and experiencing emotion and behavior as feelings that are not one's own. Passive influence is described as an inability to control one's body and sensations (Armstrong, Putnam, Carlson, Libero, & Smith, 1997; Garbarino, 1999; Putnam, 1996).

Research has demonstrated a relationship between dissociation and trauma, with dissociation serving as a coping mechanism. Carrion and Steiner (2000) reported a significant association between dissociation and a history of trauma stemming from physical abuse and neglect. Using a group of 64 adolescent juvenile delinquents as their sample, they found that 28.3% met the criteria for a dissociative disorder. Almost 97% of the sample had a history of trauma, and the results were explained in terms of the use of

dissociation as a defense against trauma or as a personality trait rather than as a syndrome. Although all of the participants reported dissociative symptoms, depersonalization was the most commonly reported experience among the adolescents.

Similarly, van der Kolk (1996) believes that trauma causes limitations in the ability to regulate emotional arousal. The inability to interpret and communicate emotions, due to the effects of dissociation as a strategy for dealing with trauma, leads to psychopathology in that emotions become expressed by dysfunctions of the body (e.g., aggression), negative self-concept (e.g., body image), and negative views of others (e.g., distrust). Garbarino (1999) believes that trauma can cause us to compartmentalize and shut off our feelings, the effect of which is an inability to recognize the feelings of others. The self-protective strategy of dissociation, then, is used to protect traumatized individuals from their feelings of victimization and unworthiness. However, this can cause a lack of empathy and a proneness to depersonalization, which will be elaborated on more fully later in this review.

As stated in an earlier section, disorganized attachment (also known as disorganized/disoriented attachment) refers to attachment responses to the primary caregiver that are characterized by odd, fearful, contradictory, or conflicted behaviors. This classification group was added to Bowlby and Ainsworth's original delineation of three attachment styles after the work of Main and Solomon (1986, 1990), among others. Disorganized/disoriented attachments of infants were classified by a display of one or more of the following behaviors: simultaneous or sequential contradictory behaviors (e.g., strong attachment behavior to the caregiver and avoidant behavior of the caregiver), incomplete or misdirected movements and expressions (e.g., crying and moving away

from their caregiver), repetitive or strange movements or positions (e.g., crying and falling huddled to the floor), freezing or stilling movements and expressions, apprehension around the caregiver, or disorganized/disoriented behaviors such as multiple rapid changes in affect (Lyons-Ruth & Jacobvitz, 1999).

The theory surrounding disorganized attachment is that the infant's behavior stems from his or her view of the attachment figure as being "frightening" and can be seen as a way of coping. This can be the result of direct abuse or neglect, or it can be due to the traumatic reactions of caregivers who display frightening behaviors. The end result of a disorganized attachment is a paradox in which the infant fears the caregiver and wants to seek proximity to the caregiver to alleviate that fear. This causes a collapse in the behavioral and attentional strategies of the infant, causing the demonstration of the disorganized behavior previously described (Lyons-Ruth & Jacobvitz, 1999).

Research on the causes of infant disorganized attachment focus on two areas: abuse and/or neglect by the primary caregiver, and the frightening behavior of the caregiver due to unresolved conflict or loss in the past. The research that will be elaborated on here will demonstrate that trauma, in the form of abuse/neglect or frightening behavior, is associated with disorganized attachment behavior and the paradox theorized to cause the odd and contradictory behaviors seen in infants who have had traumatic experiences.

Research on abuse and neglect in infancy has demonstrated a strong association between maltreatment and subsequent disorganized behavior. George and Main (1979), using a small sample of physically abused and non-abused toddlers, found that the abused toddlers demonstrated "rejected" behavior similar to disorganized infant behavior in the

strange situation. This included a failure to approach friendly adults, avoidance of adults, and hitting or threatening the caregiver. This disorganized behavior (e.g., shifts in attention away from the caregiver) can be viewed as a way children reduce the arousal of fear yet still maintain proximity to their caregiver.

Straker and Jacobson (1981) compared physically abused and non-abused youths between the ages of five and ten years old, with results emphasizing an association between abuse and empathy. Physically abused children were significantly less empathic and significantly more emotionally maladjusted. It is believed that participants who were abused are less likely to learn empathic responses or altruism, resulting in the emotional maladjustment described earlier by Garbarino (1999) and van der Kolk (1996).

Main and George (1985) showed that not only do physically abused toddlers lack empathy, but they are also more prone to displays of fear, anger, and aggression in response to peer distress as demonstrated in a group day care setting. This study was based on a reexamination of the reports of the social behavior of 10 abused and 10 control children (ages ranged from 1-3 years old). The results were explained in terms of an abused-abusing intergenerational cycle in which abused children become highly abusive towards their caregivers and/or peers. People who have experienced abuse as infants may be vulnerable to fear and anger in response to others' distress in later caregiving situations. None of the abused children in this study showed concern for peer distress but instead reacted with physical attacks, threats, fearful distress, and/or the contradictory response of attacking and comforting the distressed peers. Carlson, Cicchetti, Barnett, and Braunwald (1989) also studied the behavior of abused and/or

neglected infants and found the highest rate of disorganized attachment in maltreated samples at the time (82%).

The research presented thus far is important in order to understand the mediating role of disorganized attachment to the relationship between trauma and dissociation. As indicated, trauma is related to both disorganized attachment behavior and the use of dissociation to escape feelings associated with trauma (e.g., unworthiness, victimization). Disorganized behaviors are viewed as a means to maintain proximity to the caregiver, although they can be socially inappropriate. The tendency to dissociate will result in a lack of feeling, which can make it difficult to understand and respond to another person's feelings as well as easier to view them as less than human. Before demonstrating the link between a disorganized attachment to caregivers and dissociation in adolescence, the "frightening" behaviors of adults will be examined as another cause of disorganized attachment.

The work of Mary Main, among others, demonstrates how the frightening behavior of parents (due to their own unresolved traumatic experiences in the past) also causes the paradox whereby an infant both fears and is attracted to their caregiver (Lyons-Ruth & Jacobvitz, 1999). It has been shown that parents labeled as unresolved by attachment researchers display signs of disorientation and disorganization during the Adult Attachment Interview, a technique that is used to discover one's attachment style based on the adult's memories of their caregiving experiences. This behavior is very similar to infants who display disorganized behavior in the strange situation task (Main, Kaplan, & Cassidy, 1985). Main and Hesse (1990) found that 39% of the parents of disorganized babies had lost a parent through death, and 56% of these parents had

experienced this loss prior to completing high school. Main and Hesse (1990) proposed that the distress of past trauma, if not resolved, leads a parent to engage in frightened or frightening behavior with the infant, and it is this behavior that causes the infant's behavioral system to collapse in response to the caregiver (Hesse & Main, 1999). Thus, the unresolved loss of a caregiver can cause later dissociative responses in the presence of the infant, which can very well lead to disorganized attachment and later dissociative behavior in the child.

Liotti (1992) was the first to propose that disorganized attachment in infancy, due to parental frightened or frightening behavior, increases a child's vulnerability to dissociation. His reasoning, based on the work of Main and Hesse (1990), is that the unresolved loss of a parent distracts that individual's subsequent availability to their own child. The child responds by detaching the caregiver's behavior to reduce the arousal of the attachment behavioral system. The strategy of detachment to cope with unavailability sets the stage for dissociation to be used as a reaction to caregiver behavior, just like abused children who detach to avoid the feelings of victimization and/or unworthiness associated with abuse/neglect. The child forms multiple internal working models of self and other based on these interactions with the caregiver (e.g., self as vulnerable and parent as threatening, self as threatening and parent as vulnerable) depending on whether the parent displays frightened or frightening behavior in the presence of the infant. These multiple models cause dissociation because the child switches from one internal working model to another based on the environmental stimuli (e.g., parent). This transitioning from one mode to another causes altered states of consciousness (Liotti, 1992). The

continued use of dissociation results in interference with everyday functioning because it is used to react to any further experiences with distress (van der Kolk, 1996).

To test this relationship between disorganized attachments in infancy and caregiver relations, Carlson (1998) conducted a longitudinal study of 129 children with disorganized attachment. This study used the strange situation and observations of mother-child interactions for the measurement of disorganized attachment in infants at 18, 24, and 42 months of age. It also employed teacher and self-report ratings, as well as observations of mother-child interactions, to measure dissociation and other indicators of psychopathology in grades 1, 2, 3, and 6 and at age 17 ½ years old. Significant correlations between disorganized attachment in infancy and caregiver relations (i.e., caregiver quality and a history of maltreatment) were found in addition to significant correlations between disorganized attachment and dissociation in adolescence. Those infants who were classified as disorganized in infancy were more likely to display dissociative behaviors in elementary and high school. Her findings strongly suggest the mediating role of disorganized attachment in understanding how trauma affects later dissociation.

Ogawa, Sroufe, Weinfield, Carlson, and Egeland (1997) examined disorganized attachments in infancy and later experiences. It was found that those infants who had a disorganized attachment style and faced later trauma scored higher on the Dissociative Experiences Scale (DES) at age 19 when compared to those with a disorganized attachment style who did not experience later trauma and those who were not classified as disorganized. Once again, it was demonstrated that the developmental environment is integral in the origin and maintenance of dissociation.

West, Adam, Spring, and Rose (2001) provided further support for the mediating role of disorganized attachment by looking at adolescents in treatment centers following family disruptions (e.g., separation, loss, abuse) using the Youth Self-Report and the Adult Attachment Interview. Results showed that current trauma was correlated with dissociation, such that those labeled as unresolved due to their recent experiences reported higher dissociation scores. It is believed that these results, in conjunction with the studies by Carlson (1998) and Ogawa et al. (1997), provide empirical support for the idea that dissociation is possible when the adolescent's attachment system is activated by traumatic experiences.

The results of the studies presented here provide strong support for how the disorganized attachment styles, much like the avoidant and anxious styles of attachment, can affect emotional development. When examining the factors related to a disorganized attachment, it is easy to see why some adolescents may not be able to empathize with others. Much like the personal distress response to empathic opportunities seen in those with anxious attachment styles (Mikulincer et al., 2001), those with a disorganized attachment style appear to respond to others' distress in even more unhelpful ways (e.g., hostility, fear, aggression). It can be suggested that just as one's own attachment needs interfere with caregiving for anxious attachment styles, the fear response associated with disorganized attachment styles may also interfere with caregiving. Research and theory demonstrates that those individuals with disorganized attachment styles use dissociation to avoid their own feelings, making it difficult to be able to understand another person's feelings and to provide help. Instead, these individuals may be prone to violence due to the inability to understand others' feelings and the inability to see them as human beings

(Garbarino, 1999). The lack of a parental model of empathy due to abuse and/or neglect or the frightened and/or frightening behavior of their caregiver leads to negative views of self and others as well as the formation of multiple internal working models to face stress. However, this use of dissociation causes one to be unable to form a coherent sense of self. Thus, it might be reasonably assumed that adolescents with a history of separation, loss, abuse and/or neglect are much more likely to display depersonalization and hostile behaviors instead of an empathic response to others' distress.

Conceptualization of the Present Study

The preceding review of the literature purports that differences in attachment can be understood in terms of early caregiving relations that impact our views of self and others. These early attachment relationships can impact our capacity to demonstrate empathy as opposed to depersonalization when faced with others' distress. The purpose of the present study was to assess the effects of early attachment relationships on the development of empathy or depersonalization in adolescence.

Self-reports of empathy, using the Interpersonal Reactivity Index (IRI, Davis, 1980), were utilized to gain an understanding of the youths' ability to take the perspective of others in regards to perception, cognition, and affect. Self-reports of their reported experiences related to dissociation (e.g., depersonalization, identity alteration) were measured by the Adolescent Dissociative Experiences Scale (A-DES, Armstrong, Putnam, Carlson, Libero, & Smith, 1997). The measures of hostility and depression on the Symptom Checklist-90-Revised (SCL-90-R, Derogatis, 1975) were used to support the attachment measures, since the emotions of anxiety, fear, and anger are included in Bowlby's seminal work in the field of attachment.

The following hypotheses were tested in the present study:

1. Participants who report a current or past involuntary separation from their biological parent(s) are expected to have lower levels of empathy when compared to those adolescents who do not report an involuntary separation from their biological parent(s).
2. Participants who report a current or past involuntary separation from their biological parent(s) are expected to have higher levels of dissociation than those adolescents who do not report an involuntary separation from their biological parent(s).
3. Participants who report a current or past involuntary separation from their biological parent(s) are expected to have higher levels of hostility when compared to those adolescents who do not report an involuntary separation from their biological parent(s).
4. Participants who report a current or past involuntary separation from their biological parent(s) are expected to have higher levels of depressive symptomatology than those adolescents who do not report an involuntary separation from their biological parent(s).

In other words, those adolescents who do not report an involuntary separation from their biological parent(s) are expected to have higher levels of empathy, lower levels of dissociation, and lower levels of hostility and depression when compared to those adolescents who do report such a separation. This is expected because secure, supportive relationships with our primary attachment figure can foster positive internal working models of self and other, allowing the caregiving system to be active to promote

empathy. Those participants with a reported separation are believed to maintain their negative internal working models of self and/or other from their primary caregiving experiences, and the activation of their attachment behavioral system and/or fear behavioral system prevents the caregiving system from promoting empathy, resulting in hostility, depression, and/or dissociation in order to mask the emotions associated with their primary attachment figure.

Method

Participants

A total of 40 adolescents between the ages of 13 and 20 participated in the study. Participants had a mean age of 17.08 years ($SD = 1.95$). Half of the participants were recruited from an adolescent treatment facility in Youngstown, Ohio ($n = 20$). Many of these youth have been removed from the home for abuse and neglect and are now in the custody of various Children's Services Boards. The other half were recruited from Kentucky and Ohio in order to act as a control group for comparative purposes ($n = 20$). The characteristics of each group differed with respect to the demographic information obtained. Participants in the control group (CG) were primarily Caucasian (95%) and included slightly more females ($n = 12$) than males ($n = 8$). The control group was also more varied with respect to place of birth, came from families with a smaller average number of children, and was, on average, a year older than participants in the treatment facility group (TG). The treatment facility group had more varied ethnicity than the control group, included more males ($n = 14$) than females ($n = 6$), and was primarily born in Ohio (75%). Table 1 summarizes the demographic information reported by the participants. Incentives were provided for participation in the form of \$15.00 gift cards to Wal-Mart.

Measures

The Social Networks Questionnaire. The SNQ (Trinke & Bartholomew, 1997) is a measure of multiple attachment figures used primarily for research purposes. The first part of the SNQ involves having the participants list the significant people in their life, those with whom they currently feel a strong emotional tie to, regardless of whether that

Table 1

Demographic Information Reported By Group Location

Variable	Treatment Group	Control Group
Mean Age	16.4	17.7
Gender		
Male	14	8
Female	6	12
Ethnicity		
Caucasian	8	19
African American	9	0
Hispanic	1	0
Other	2	1
Place of Birth		
Ohio	15	8
Kentucky	1	6
Other	4	6
Mean Number of Siblings	4.1	2.5
Mean Highest Grade Level Completed	10.6	11.3
Reported Contact With:		
Biological Mother		
At least once a week	10	19
At least once a month	0	0
Three or four times a year	1	1
Once a year	1	0
Less than once a year	0	0
None	8	0
Biological Father		
At least once a week	3	16
At least once a month	2	2
Three or four times a year	0	1
Once a year	0	0
Less than once a year	0	0
None	15	1

Table 1 (con't.)

Demographic Information Reported By Group Location

Variable	Treatment Group	Control Group
Reported Contact With:		
Biological Siblings		
At least once a week	9	17
At least once a month	2	0
Three or four times a year	1	1
Once a year	0	0
Less than once a year	1	0
None	7	2
Friends		
At least once a week	10	18
At least once a month	2	0
Three or four times a year	1	1
Once a year	0	0
Less than once a year	0	0
None	7	1
Primary Attachment Figure		
Parent	8	13
Sibling	1	2
Romantic Partner	4	2
Friend	4	3
Grandparent	1	0
No one	2	0
Reported involuntary separation from parent(s)	20	0

Note. Treatment Group = Treatment facility group.

tie is positive, negative, or mixed. After providing demographic information about these individuals (e.g., their gender, age, relationship to participant), participants rank them in the order that they would use them (or desire to use them) for questions related to attachment bond components (e.g., safe haven, secure base). Participants do not have to rank all available names for each item (except on item H), but instead they rank only those individuals who meet the criteria for the specific attachment components.

Individuals are considered to be an attachment figure when they are ranked on four out of the eight items (items A or B, C or D, F, and H). The rankings indicate the orientation to the figures for various attachment components, and lower numbers reflect a greater tendency to use an individual as an attachment figure (i.e., a friend who has the lowest mean ranking on relevant items indicates a greater tendency to be used as an attachment figure). The SNQ has adequate internal consistency, with moderate (0.26) to relatively high (0.78) correlations between the items and the total scale. Separate item analyses on the five relationships most commonly listed produced fairly high scale reliabilities, with alpha coefficients ranging from 0.70 to 0.90. Test-retest reliabilities were found for 72 of the original participants in regards to the mean rankings for various relationships.

Correlations between the two sets of mean rankings were high for every relationship, ranging from 0.74 to 0.93 (Trinke & Bartholomew, 1997). The existence of attachment figures, based on the SNQ rankings, was treated as an independent variable for the present study. Descriptive information obtained about the attachment figures was also compared with the social support figures listed on the SSQ6 to establish criteria for the number of positive attachment figures reported (K. Bartholomew, personal communication, November 22, 2006; Trinke & Bartholomew, 1997).

The Social Support Questionnaire-Short Form. The SSQ6 (Sarason, Sarason, Shearin, & Pierce, 1987) is a measure of perceived close emotional support made up of two scales: Number or Perceived Availability and Satisfaction. It is used primarily for research purposes. Participants read six items which assess the number of available others that the individual feels he or she can turn to in times of need (Number or Perceived Availability) and indicate their degree of satisfaction with the perceived available support in each item on a seven point Likert scale ranging from “very dissatisfied” to “very satisfied” (Satisfaction score). Overall Number and Satisfaction scores are obtained by dividing the sum of each score by the number of items (i.e., six) to indicate the mean number of people perceived to be available and the mean satisfaction rating with the support they have. Internal consistency of the SSQ6 is highly satisfactory, with alpha levels ranging from 0.90 to 0.93 for both the Number and Satisfaction scales, based on three samples used in the study. Comparisons were also made between the SSQ6 and the original Social Support Questionnaire (SSQ; Sarason, Levine, Basham, & Sarason, 1983), upon which it is based, to determine whether the relationships with the SSQ and SSQ6 were similar enough to allow the SSQ6 to be adequate as a short form of the SSQ. Similar correlations between the SSQ and SSQ6 were found with various individual difference variables, such as the Social Networks List and the Multiple Adjective Affect Check List. For example, the Number scores for SSQ and SSQ6 correlated 0.43 and 0.39, respectively, with the Social Network List and -0.25 and -0.26, respectively, with the Anxiety subscale of the Multiple Adjective Affect Check List (Sarason, Sarason, Shearin, & Pierce, 1987). Both of these scores were treated as independent variables in the present study. Descriptive information (e.g., names) of

social support figures was compared to descriptive information on the SNQ. This rationale is based on Trinke and Bartholomew's (1997) finding that attachment security was correlated with the SSQ Number score; although, they did not require participants to identify specific persons on the SSQ6 in their study and could not confirm that the individuals listed as social supports matched the individuals listed as attachment figures on the SNQ.

The Interpersonal Reactivity Index. The IRI (Davis, 1980) is a 28 item self-report measure that assesses empathy, yielding four scales: Perspective Taking, Empathic Concern, Personal Distress, and Fantasy. It is used predominantly for research purposes. Response choices vary from 0 to 4, with 0 indicating "does not describe me well" to 4 indicating "describes me very well." Separate scores for each subscale are computed by summing raw scores (ranging from 0-28), and median scores are used to classify samples on the subscales (M. H. Davis, personal communication, February 21, 2006). The IRI has acceptable internal consistency, with alpha levels ranging from 0.70 to 0.78, and test-retest reliability, ranging from 0.61 to 0.81, over a two-month period (Davis, 1980). Davis and Franzoi (1991) also reported substantial test-retest reliabilities, ranging from 0.50 to 0.62, over a two-year period during adolescence. IRI scores were treated as a dependent variable in the present study.

The Adolescent Dissociative Experiences Scale. The A-DES (Armstrong, Putnam, Carlson, Libero, & Smith, 1997) is a 30 item self-report screening measure for pathological dissociation during adolescence. It is used for research and clinical purposes and consists of four scales: Amnesia, Depersonalization and Derealization, Absorption and Entrancement, and Passive Influence. The Depersonalization and Derealization

subscale can be further divided into two additional subscales, the Dissociated Identity and Dissociated Relatedness subscales, using specific items on the A-DES. Item responses can vary from 0 to 10 to indicate the occurrence of dissociative experiences. A response of 0 indicates that “it never happens to you,” and a response of 10 indicates that “it is always happening to you.” Responses between these values indicate the frequency of occurrence of each item. The A-DES is reported to have relatively high internal consistency as well as concurrent validity with the Dissociative Experiences Scale (DES; Bernstein & Putnam, 1986) on which it is based. Smith and Carlson (1996) measured internal consistency on the subscales and the global score and obtained alpha values ranging from 0.64 to 0.92, while Armstrong et al. (1997) obtained alpha values ranging from 0.73 to 0.93. Smith and Carlson correlated scores on the A-DES with scores on the DES for a sample of 46 college students and reported a strong correlation ($r = 0.77$) between the two measures, as well as a high test-retest reliability of the A-DES, $r = 0.77$. Although a total score can be computed using the mean of all the item scores, only the Depersonalization and Derealization subscale, Dissociated Relatedness subscale, and Dissociated Identity subscale were computed as dependent variables for the purpose of this study. These subscales were also computed using the mean of item responses relevant to that subscale.

The Symptom Checklist-90-Revised. The SCL-90-R (Derogatis, 1975) is a 90 item self-report measure of psychological distress used for clinical screening or to measure progress in individuals 13 years of age and older. It contains three global distress indices, including the Global Severity Index, the Positive Symptom Distress Index, and the Positive Symptom Total. Nine subscales are also yielded, including

Somatization, Obsessive-Compulsive, Interpersonal Sensitivity, Depression, Anxiety, Hostility, Phobic Anxiety, Paranoid Ideation, and Psychoticism. Raw scores are converted to T-scores with a mean of 50 and a standard deviation of 10. The SCL-90-R is formatted by a five point Likert scale, with 0 indicating “not at all distressing” and four indicating “extremely distressing” in response to the items. Brophy, Norvell, and Kiluk (1988) examined the factor structure of the SCL-90-R and reported a split-half reliability for the entire test of .94, while Schmitz, Kruse, Heckrath, Alberti, and Tress (1999) and Schmitz, Hartkamp, Brinschwitz, Michalek, and Tress (2000) reported alpha levels for the scales and the Global Severity Index ranging from .78 to .97. Kiger and Murphy (1987) also reported on reliability, with test-retest coefficient alphas ranging from 0.47 to 0.69. Validity studies are able to demonstrate both construct and convergent validity (Margo, Dewan, Fisher, & Greenberg, 1992; McGough & Curry, 1992). McGough and Curry reported correlations between the SCL-90-R and the Children’s Depression Inventory ranging from 0.40 to 0.74, with particularly strong correlations (0.70 – 0.74) on the Depression, Interpersonal Sensitivity, Anxiety, and Global Severity Index dimensions. Margo et al. (1992) reported that the SCL-90-R correlates with the Brief Psychiatric Rating Scale ($r = 0.45$), and it correlates with the Beck Depression Inventory in samples of depressed inpatients and inpatients with depression and other disorders, 0.66 and 0.69, respectively. For the purposes of this study, only the Hostility and Depression subscales were used as dependent variables.

Procedure

After obtaining Human Subjects Review Board approval, as well as consent from the program director of the treatment facility, participants were solicited from the

residential treatment facility. Adolescents were also recruited from Ohio and Kentucky using fliers (see Appendix A) and word of mouth. Adolescents and their legal guardians provided consent (see Appendix A & B). Once consent was obtained, questionnaires were completed in the classrooms located at the treatment facility and classroom settings or other designated areas available for the community sample (e.g., a public library). Participants completed a biographical data sheet (see Appendix C), the Social Networks Questionnaire (SNQ, Trinke & Bartholomew, 1997), the Social Support Questionnaire-Short Form (SSQ6, Sarason, Sarason, Shearin, & Pierce, 1987), the Interpersonal Reactivity Index (IRI, Davis, 1980), the Adolescent Dissociative Experiences Scale (A-DES, Armstrong, Putnam, Carlson, Libero, & Smith, 1997), and the Symptom Checklist-90-Revised (SCL-90-R, Derogatis, 1975). Attempts were made to alter the order of the questionnaires in order to decrease the changes of potential order effects. Upon completion of the study, participants were debriefed (Appendix D) and paid for their time with a \$15.00 gift card to Wal-Mart.

Results

Descriptive Statistics

Descriptive statistics were conducted on variables of interest. The independent variables in the study included the number of attachment figures reported and the number of emotional ties reported on the SNQ, as well as the SSQ6 Number score and Satisfaction score. The SNQ rankings and SSQ6 demographic information were also combined to create criteria for positive attachment figures. Dependent variables included the four IRI scales of empathy (Perspective Taking, Empathic Concern, Fantasy, and Personal Distress), the three scales of the A-DES (Depersonalization/Derealization, Dissociated Identity, and Dissociated Relatedness), and the Hostility and Depression subscales of the SCL-90-R.

Results indicated that the control group (CG) reported much more frequent contact with their family and friends when compared to the treatment facility group (TG). Although all of the treatment facility participants reported an involuntary separation from their biological parent(s), 60% of them still reported a positive attachment to one of their parents despite their separation from them ($n = 12$), and most (90%) of the treatment facility group was able to report at least one positive attachment relationship ($n = 18$). However, the control group had a higher percent of participants (65%) who reported one of their parents as their primary attachment figure when compared to the treatment facility group (40%).

Results indicated that both the treatment facility group and the control group reported mean scores of depression and hostility on the SCL-90-R that are considered average (less than one standard deviation above the mean) when compared to the norm

sample group used in designing the SCL-90-R. Both groups reported an average number of attachments ($M = 5.18$) when compared to the original study by Trinke and Bartholomew (1997) used to validate the SNQ ($M = 5.38$). Both groups reported a mean level of satisfaction indicating that they are “fairly satisfied” overall with the social support figures in their life, although the control group reported a slightly higher number of social support figures ($M = 4.82$) when compared to the treatment group ($M = 3.48$). Both groups reported relatively low levels of dissociation when considering the number of items and ratings available, although there was no established means in the literature to compare to. Overall and group means on the empathy scales of the IRI were variable in regards to the multidimensional factors computed; however, there are not established means in the literature to compare them to. Table 2 summarizes the descriptive analyses conducted on the variables of interest.

Correlational Analyses

Bivariate correlational analyses were used in order to assess the relationships among the independent and the dependent variables. A moderate, positive relationship emerged as significant between the SNQ and SSQ6 Attachment Criteria for positive attachment figures and perspective taking ($r = .32, p < .05$), meaning that higher numbers of positive attachment figures reported were associated with higher levels of empathy. A significant moderate positive correlation was also found between the number of available others that an individual feels he or she can turn to in times of need and perspective taking ($r = .38, p < .05$), indicating that increased numbers of reported social support figures were associated with increased levels of empathy. A significant relationship between the degree of satisfaction with the perceived available support one has and

Table 2

Descriptive Statistics of Independent and Dependent Variables By Group Location

Variable	TG Mean (SD)		CG Mean (SD)	
A-DES: Dissociated Identity	1.54	(2.60)	1.16	(1.28)
A-DES: Dissociated Relatedness	3.33	(3.29)	2.45	(1.97)
A-DES: Depersonalization/ Derealization	2.00	(2.23)	1.56	(1.23)
IRI: Perspective Taking Scale	13.40	(5.27)	17.10	(6.33)
IRI: Empathic Concern Scale	16.75	(5.23)	19.90	(5.00)
IRI: Fantasy Scale	14.35	(6.27)	14.75	(6.00)
IRI: Personal Distress Scale	10.65	(3.90)	11.90	(5.37)
SCL-90-R: Depression	54.10	(10.00)	55.05	(8.22)
SCL-90-R: Hostility	55.90	(10.83)	52.75	(6.24)
SNQ: Number of attachments reported	4.60	(1.27)	5.75	(2.57)
SNQ: Number of emotional ties listed	5.55	(2.33)	11.05	(2.82)
SSQ6: Number Score	3.48	(2.25)	4.82	(2.00)
SSQ6: Satisfaction Score	5.06	(1.35)	5.50	(0.50)
SNQ & SSQ6 Attachment Criteria	2.85	(1.76)	3.65	(1.35)

Note. A-DES = Adolescent Dissociative Experiences Scale, IRI = Interpersonal Reactivity Index, SCL-90-R = Symptom Checklist-90-Revised, SNQ = Social Networks Questionnaire, SSQ6 = Social Support Questionnaire-Short Form; TG = Treatment facility group, CG = Control group.

perspective taking also emerged as moderate and positive ($r = .34, p < .05$), meaning that higher satisfaction with the social support one has was associated with higher levels of empathy.

A significant moderate inverse relationship was found between dissociated relatedness and the number of available others that an individual feels he or she can turn to in times of need ($r = -.35, p < .05$), indicating that lower numbers of social support figures reported were associated with higher levels of dissociation. A moderate, inverse relationship also emerged as significant between dissociated relatedness and the number of attachment figures reported ($r = -.32, p < .05$), meaning that lower numbers of attachment figures reported (including both positive and negative attachments) were associated with higher levels of dissociation. There were no significant negative bivariate correlations between social support and hostility or between social support and depression. There were also no significant negative bivariate correlations between attachment and hostility or between attachment and depression. See Table 3 for additional correlations and a summary of all of the correlations among the variables of interest.

Preliminary Analyses

Initial comparisons between the treatment facility group and the control group were conducted on the independent variables to establish differences between the groups on the number of positive attachments and social support figures reported. The control group reported a significantly higher number of perceived social support figures on the SSQ6 ($M = 4.82, SD = 2.00$) than the treatment facility group ($M = 3.47, SD = 2.24$), $t(38) = 1.99, p < .05$. The control group also reported a significantly higher number of

Table 3

Intercorrelations Among Target Variables

Scale	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Dissociated Relatedness	--													
2. Depersonalization/Derealization	.82**	--												
3. Dissociated Identity	.59**	.92**	--											
4. Perspective Taking	-.14	-.13	-.13	--										
5. Empathic Concern	.22	.13	.07	.54	--									
6. Personal Distress	.24	.31*	.31	.33*	.42**	--								
7. Fantasy	.32*	.29	.21	.42**	.51**	.47**	--							
8. Depression	.51**	.56**	.47**	.13	.26	.16	.22	--						
9. Hostility	.37*	.52**	.53**	-.10	.05	-.05	.10	.65**	--					
10. Positive Attachment Criteria	-.19	-.06	.01	.32*	.08	.10	.08	-.05	.05	--				
11. Attachments	-.32*	-.15	-.06	.04	-.06	.10	-.17	-.09	.02	.58**	--			
12. Emotional Ties	-.13	.07	.11	.15	.15	.12	-.05	.10	-.04	.37*	.48**	--		
13. SSQ6 Number	-.35*	-.21	-.12	.38*	.05	-.02	.12	-.17	.04	.86**	.46**	.36*	--	
14. SSQ6 Satisfaction	.01	.04	.02	.34*	.19	.15	.18	-.01	.22	.50**	.15	.20	.52**	--

Note. Scales 1, 2, and 3 are from the Adolescent Dissociative Experiences Scale (A-DES); scales 4, 5, 6, and 7 are from the Interpersonal Reactivity Index (IRI); scales 8 and 9 are from the Symptom Checklist-90-Revised (SCL-90-R); scales 11 and 12 are from the Social Networks Questionnaire (SNQ); scales 13 and 14 are from the Social Support Questionnaire-Short Form (SSQ6); and scale 10 is from the SNQ and SSQ6.

* $p < .05$. ** $p < .01$.

significant people with whom they have emotional ties with on the SNQ ($M = 11.05$, $SD = 2.82$) than the treatment facility group ($M = 5.55$, $SD = 2.33$), $t(38) = 6.73$, $p < .001$. However, there was no significant difference on the number of attachment figures (positive or negative) reported on the SNQ between the control group ($M = 5.75$, $SD = 2.57$) and the treatment facility group ($M = 4.60$, $SD = 1.27$), $t(38) = 1.79$, $p > .05$. There was also no significant difference between the control group ($M = 3.65$, $SD = 1.35$) and the treatment facility group ($M = 2.85$, $SD = 1.76$) on the number of positive attachments reported, $t(38) = 1.62$, $p > .05$. These results suggest that those adolescents without a past separation from their caregiver reported a greater number of available others to turn to in times of need as well as more individuals with whom they share an emotional tie. However, there was not a difference in the number of attachments or positive attachments reported by those who were separated from their caregivers when compared to those who had no such separation.

Main Analyses

An independent samples t test was conducted using the Bonferonni correction to test Hypothesis 1, which stated that those participants who reported a current or past involuntary separation from their biological parent(s) were expected to report lower levels of empathy when compared to those adolescents who did not report an involuntary separation from their biological parent(s). A Bonferonni correction was advised due to the limitations associated with multiple comparisons ($p = .006$). Results did not indicate a significant difference between the control group ($M = 17.10$, $SD = 6.33$) and the treatment facility group ($M = 13.40$, $SD = 5.27$), on perspective taking, $t(38) = 2.01$, $p > .006$. A significant difference did not emerge between the control group ($M = 19.90$, SD

= 5.00) and the treatment facility group ($M = 16.75$, $SD = 5.23$) on empathic concern, $t(38) = 1.95$, $p > .006$. Similar nonsignificant results emerged between the control group ($M = 11.90$, $SD = 5.37$) and the treatment facility group ($M = 10.65$, $SD = 3.90$) on level of personal distress, $t(38) = .84$, $p > .006$. Results also did not indicate a significant difference between the control group ($M = 14.75$, $SD = 6.01$) and the treatment facility group ($M = 14.35$, $SD = 6.27$) on level of reported fantasy, $t = .21$, $p > .006$. These results suggest that there was not a difference in self-reported levels of empathy reported by those who were separated from their caregivers when compared to those who had no such separation.

In order to test Hypothesis 2, an independent samples t test using the Bonferonni correction was used. Hypothesis 2 stated that those participants who reported a current or past involuntary separation from their biological parent(s) were expected to have higher levels of dissociation than those adolescents who did not report an involuntary separation from their biological parent(s). A Bonferonni correction was advised due to the limitations associated with multiple comparisons ($p = .006$). A significant difference did not emerge between the control group ($M = 1.56$, $SD = 1.23$) and the treatment facility group ($M = 2.00$, $SD = 2.23$) on depersonalization/derealization, $t(38) = .77$, $p > .006$. Results also did not indicate a significant difference between the control group ($M = 1.16$, $SD = 1.28$) and the treatment facility group ($M = 1.54$, $SD = 2.60$) on dissociated identity, $t(38) = .58$, $p > .006$. There was also nonsignificant results between the control group ($M = 2.45$, $SD = 1.96$) and the treatment facility group ($M = 3.33$, $SD = 3.29$) on dissociated relatedness, $t(38) = 1.03$, $p > .006$. These results suggest that there was not a

difference in self-reported levels of dissociation reported by those who were separated from their caregivers when compared to those who had no such separation.

An independent samples *t* test using the Bonferonni correction was conducted to test Hypothesis 3, which stated that those participants who reported a current or past involuntary separation from their biological parent(s) were expected to have higher levels of hostility when compared to those adolescents who did not report an involuntary separation from their biological parent(s). A Bonferonni correction was advised due to the limitations associated with multiple comparisons ($p = .006$). A significant difference did not emerge between the control group ($M = 52.75, SD = 6.24$) and the treatment facility group ($M = 55.90, SD = 10.83$) on hostility, $t(38) = 1.13, p > .006$, suggesting that there was not a difference in self-reported levels of hostility reported by those with a past separation from their primary caregiver compared to those without a reported separation from their primary caregiver.

An independent samples *t* test using the Bonferonni correction was conducted to test Hypothesis 4, which stated that those participants who reported a current or past involuntary separation from their biological parent(s) were expected to have higher levels of depressive symptomatology than those adolescents who did not report an involuntary separation from their biological parent(s). A Bonferonni correction was advised due to the limitations associated with multiple comparisons ($p = .006$). A significant difference did not emerge in levels of depression between the control group ($M = 55.05, SD = 8.22$) and the treatment facility group ($M = 54.10, SD = 10.00$), $t(38) = .33, p > .006$, suggesting that there was not a difference in self-reported levels of depression reported by those with a past separation from their primary attachment figure compared to those

without a reported separation from their primary attachment figure. Table 2 summarizes the means for both groups on all dependent variables, and Table 4 summarizes the obtained results of the control group and treatment facility group on all of the dependent variables.

Table 4

T Tests of Target Dependent Variables Comparing the Treatment Facility Group and Control Group

Variable	<i>t</i>	<i>p</i>
Depersonalization/Derealization	.77	.45
Dissociated Identity	.58	.57
Dissociated Relatedness	1.03	.31
Perspective Taking Scale	2.01	.05
Fantasy Scale	.21	.84
Empathic Concern Scale	1.95	.06
Personal Distress Scale	.84	.41
Hostility	1.13	.27
Depression	.33	.74

Discussion

The purpose of the present study was to investigate the effects of early attachment relationships on the development of empathy or depersonalization in adolescence.

Adolescents who have been separated from their biological parent(s) due to abuse and/or neglect were expected to differ on self-reported levels of empathy, dissociation, hostility, and depression when compared to adolescents who have not had such involuntary separations in their life.

The results of the main analyses indicated that there was not a significant difference between the groups on self-reported levels of empathy, dissociation, hostility, or depression. These findings did not support Hypotheses 1, 2, 3, or 4. However, this is consistent with past research since the youth were not expected to demonstrate differences in empathy, dissociation, hostility, or depression if they did not differ in the number of positive attachments reported (e.g., Mikulincer & Shaver, 2005a). These findings are consistent with the work of Ainsworth et al. (1978), who found that infants entered the strange situation task with internal working models that dictated their views of what was a comfortable distance from their attachment figure. Ainsworth's early work also found that separation distress is a result of one's cognitive appraisal of an attachment figure's availability as opposed to their actual physical absence. The present study supports this latter notion because there was such a large portion of separated youth who continued to view their parents as attachment figures despite their separation from them. Thus, the nonsignificant findings for Hypotheses 1, 2, 3, and 4, which stated that separated youth would be expected to report lower levels of empathy and higher levels of dissociation, hostility, and depression when compared to nonseparated youth, are

consistent with this research because the separated youth would not be expected to demonstrate differences in empathy, dissociation, hostility, or depression when compared to nonseparated youth if they continue to view their primary attachment figures as available despite their physical absence.

Bowlby (1969/1982) also postulated that if one is confident in the availability of their attachment figure, then he will be less likely to enter the stages of separation (protest, despair, detachment) identified by the work of Bowlby and Robertson (Robertson, 1962). The separated youth in the present study were expected to demonstrate some of the emotions associated with separation distress (i.e., fear, anger, depression), yet there was not a significant difference between the groups on self-reported levels of hostility and depression. This further confirms a continued attachment between these separated youth and their parents despite an involuntary separation due to abuse and/or neglect. This is consistent again with Hypotheses 3 and 4, since the separated youth would not be expected to demonstrate separation distress (i.e., hostility or depression) if they still view their primary attachment figure as available.

Bowlby (1988) stated that evidence supports the notion that almost every child forms an attachment, usually to its mother figure, and that a failure to form such an attachment is a sign of severe disturbance. In the absence of a mother figure, it is believed that children will form an attachment to someone they know well. The demographic data collected in the present study suggest that these separated youth may not have had a chance to form a strong attachment to someone besides their primary caregiver. When the participants were asked to report the amount of contact they have with their biological mother, biological father, biological siblings, and friends, half of the

separated youth reported their most frequent contact to be with their biological mother ($n = 10$) or friends ($n = 10$). If these youth have just as much contact with their friends as they do with their mother, perhaps it is easier for them to maintain an attachment to their mother as opposed to forming a primary attachment bond to their friends. As Bowlby (1969/1982) noted, attachment has a survival advantage which triggers attachment behaviors when close proximity to the primary attachment figure is tested. The separated youth in the present study may very well be using what little communication they have with their mother to maintain a positive attachment relationship, especially since communication is reported to be an aspect of availability that affects how one perceives disruptions (Kobak, 1999). This research also supports the nonsignificant findings from Hypotheses 1, 2, 3, and 4, since the separated youth in the present study appear to have been involved in positive attachment relationships with their separated caregivers. Thus, they would not be expected to demonstrate differences in empathy, dissociation, hostility, and depression when compared to nonseparated youth.

Although all twenty participants from the treatment facility group reported an involuntary separation from their biological parent(s), most (60%, $n = 12$) still reported one of their parents as a positive attachment figure and almost half of them (40%, $n = 8$) reported one of their parents to currently be their primary attachment figure. In addition, there was not a significant difference between the groups on the number of positive attachment figures reported. If similar results to Hypotheses 1, 2, 3, and 4 were found and the youth from the treatment facility group identified peers, romantic partners, and other adults as their primary attachment figures, a direct buffering effect of other attachment relationships could have been discussed here as a plausible interpretation.

However, the positive attachment relationships reported by many of these youth to biological parents whose actions directly resulted in their involuntary separation proved to exist beyond these past events.

The present study was based on a previous study by Trinke and Bartholomew (1997) used to validate the Social Networks Questionnaire (SNQ). The results of the present study were consistent with Trinke and Bartholomew's findings in regards to the number of attachment figures reported on average. The mean number of attachments reported in their study was 5.38, while the mean in the present study was 5.18. Trinke and Bartholomew's work also used the Social Support Questionnaire-Short Form (SSQ6) and found a moderate correlation between the number of attachment figures reported on the SNQ and the number of social supports reported on the SSQ6. The present study also found a significant moderate correlation between these two variables, supporting their conclusion that the SNQ targets both secure and insecure attachments while the SSQ6 targets secure attachments only. This rationale allowed the present study to form a criterion for positive attachment relationships using the descriptive information obtained about the attachment figures listed on the SNQ and the social support figures listed on the SSQ6. Trinke and Bartholomew were unable to form this criterion because they did not require participants to identify specific persons on the SSQ6 so they could not confirm that the individuals listed as social supports matched the individuals listed as attachment figures on the SNQ.

The results of the present study were advantageous to the seminal views of attachment as involving more of a cognitive appraisal of availability than the physical availability of an attachment figure. The results were also consistent with applications of

attachment theory to empathy and dissociation. The present study also affirmed past research studies and measures (i.e., SNQ, SSQ6) to be used as another way to assess attachment relationships.

Limitations

Although this study did provide useful and practical information about attachment, there were limitations to this study. One limitation includes the small sample size ($N = 40$) used in this study which may have weakened the ability to find an effect. Another limitation is the lack of a comparable control group in terms of gender and ethnicity. The majority of the youth in the control group were Caucasian females, while the youth in the treatment facility group were primarily male and much more ethnically diverse. These variables can affect generalizability. In addition, the inability to report the length of separations from primary attachment figures and the age at which a separation occurred for the participants in the treatment facility group was also considered to be a limitation, as this descriptive information may have helped to explain the results. Finally, as with any attachment research which utilizes only self-report measures, one must consider that individuals may not have responded honestly when providing such personal information about their relationships with family and friends. Self-report measures also give a limited amount of information regarding attachment unlike the breadth of information yielded from qualitative research methods.

Future Research

Due to the discrepancy between how the separated youth in this study were expected to respond and how they actually did respond on the attachment questionnaires, it would be beneficial for this study to be replicated with additional measures as well as

more descriptive information to understand the participants' backgrounds. For example, measures of global and chronic attachment may be useful to understanding the SNQ rankings provided by the youth to more fully determine if they have a positive attachment to their primary caregiver(s). Additional descriptive information about family composition prior to a separation (i.e., living arrangements) as well as information about the parent(s) that one was separated from, may also be useful in forming more consistent groups of youth with similar backgrounds. The use of more diverse or homogeneous samples in terms of demographic information (e.g., ethnicity, gender) may also permit a future researcher to discuss the results without noting differences in these other variables. Qualitative measures of attachment should also be considered to be a valuable tool in order to more fully determine if positive attachment relationships continue to exist between separated youth and their parent(s).

Conclusion

Although the effects of separations from one's primary caregiver(s) on the development of empathy or depersonalization in adolescence could not be elaborated on more directly in the present study, the results suggest that physical separations alone do not constitute separations that can affect the development of empathy or depersonalization. Indeed, it appears that cognitive representations of the availability of our attachment figures, whether physically present or not, are more relevant to ascertaining any differences between youth who are involuntarily separated from their biological parent(s) and youth who are not separated from their biological parent(s).

References

- Achenbach, T. M. (1991). *Manual for the youth self-report and 1991 profile*. Burlington, VT: University of Vermont.
- Ainsworth, M. D. S. (1963). The development of infant-mother interaction among the Ganda. In B.M. Foss (Ed.), *Determinants of infant behavior* (Vol. 2, pp. 67-112). NY: Wiley.
- Ainsworth, M. D. S. (1964). Patterns of attachment behavior shown by the infant in interaction with his mother. *Merrill-Palmer Quarterly*, *10*, 51-58.
- Ainsworth, M. D. S., Blehar, M. C., Waters, E., & Wall, S. (1978). *Patterns of attachment: A psychological study of the strange situation*. Hillsdale, NJ: Erlbaum.
- Allen, J. P., & Land, D. (1999). Attachment in adolescence. In J. Cassidy & P. R. Shaver (Eds.), *Handbook of attachment* (pp. 319-335). NY: The Guilford Press.
- Armsden, G. C., & Greenberg, M. T. (1987). The Inventory of Parent and Peer Attachment: Relationships to well-being in adolescence. *Journal of Youth and Adolescence*, *16*(5), 427-454.
- Armstrong, J. G., Putnam, F. W., Carlson, E. B., Libero, D. Z., & Smith, S. R. (1997). Development and validation of a measure of adolescent dissociation: The Adolescent Dissociative Experiences Scale. *Journal of Nervous & Mental Disease*, *185*(8), 491-497.
- Barnett, M. A., Howard, J. A., King, L. M., & Dino, G. A. (1980). Antecedents of empathy: Retrospective accounts of early socialization. *Personality and Social Psychology Bulletin*, *6*(3), 361-365.

- Bartholomew, K. (1990). Avoidance of intimacy: An attachment perspective. *Journal of Social and Personal Relationships*, 7, 147-178.
- Bartholomew, K., & Shaver, P. R. (1998). Methods of assessing adult attachment: Do they converge? In J. A. Simpson & W. S. Rholes (Eds.), *Attachment theory and close relationships* (pp. 25- 45). NY: The Guilford Press.
- Batson, C. D. (1991). *The altruism question : Toward a social psychological answer*. Hillsdale, NJ: Erlbaum.
- Bernstein, E. M., & Putnam, F. W. (1986). Development, reliability, and validity of a dissociation scale. *Journal of Nervous & Mental Disease*, 174, 727-734.
- Bowlby, J. (1944). Forty-four juvenile thieves: Their characteristics and home life. *International Journal of Psycho-Analysis*, 25, 19-52, 107-127.
- Bowlby, J. (1951). *Maternal care and mental health* (WHO Monograph No. 2). Geneva: World Health Organization.
- Bowlby, J. (1969/1982). *Attachment and loss: Vol. 1. Attachment*. NY: Basic Books.
- Bowlby, J. (1973). *Attachment and loss: Vol. 2. Separation: Anxiety and anger*. NY: Basic Books.
- Bowlby, J. (1980). *Attachment and loss: Vol. 3. Loss*. NY: Basic Books.
- Bowlby, J. (1988). *A secure base: Parent-child attachment and healthy human development*. NY: Basic Books.
- Brennan, K. A., Clark, C. L., & Shaver, P. R. (1996). *Development of a new multi-item measure of adult romantic attachment: A preliminary report*. Paper presented at the meeting of the International Society for the Study of Personal Relationships, Banff, Alberta, Canada.

- Brennan, K. A., Clark, C. L., & Shaver, P. R. (1998). Self-report measurement of adult attachment: An integrative overview. In J. A. Simpson & W. S. Rholes (Eds.), *Attachment theory and close relationships* (pp. 46-76). NY: The Guilford Press.
- Brophy, C. J., Norvell, N. K., Kiluk, D. J. (1988). An examination of the factor structure and convergent and discriminant validity of the SCL-90R in an outpatient clinic population. *Journal of Personality Assessment*, 52(2), 334-340.
- Calamari, E., & Pini, M. (2003). Dissociative experiences and anger proneness in late adolescent females with different attachment styles. *Adolescence*, 38(150), 287-303.
- Carlson, E. A. (1998). A prospective longitudinal study of attachment disorganization/disorientation. *Child Development*, 69(4), 1107-1128.
- Carlson, V., Cicchetti, D., Barnett, D., Braunwald, K. (1989). Disorganized/disoriented attachment relationships in maltreated infants. *Developmental Psychology*, 25(4), 525-531.
- Carrion, V. G., & Steiner, H. (2000). Trauma and dissociation in delinquent adolescents. *Journal of the American Academy of Child & Adolescent Psychiatry*, 39(3), 353-359.
- Cassidy, J. (1999). The nature of the child's ties. In J. Cassidy & P. R. Shaver (Eds.), *Handbook of attachment* (pp. 3-20). NY: The Guilford Press.
- Collins, N. L., & Read, S. J. (1994). Cognitive representations of attachment: The structure and functioning of working models. In K. Bartholomew & D. Perlman (Eds.), *Attachment processes in adulthood*. Philadelphia: Jessica Kingsley.

- Cotterell, J. L. (1992). The relation of attachments and support to adolescent well-being and school adjustment. *Journal of Adolescent Research, 7*(1), 28-42.
- Crittenden, P. M. (1988). Relationships at risk. In J. Belsky & T. Nezworski (Eds.), *Clinical implications of attachment* (pp. 136-174). Hillsdale, NJ: Erlbaum.
- Davis, M. H. (1980). Individual differences in empathy: A multidimensional approach. *Dissertation Abstracts International, 40*(7-B), 3480.
- Davis, M. H. (1996). *Empathy: A social psychological approach*. Boulder, CO: Westview Press.
- Davis, M. H., & Franzoi, S. L. (1991). Stability and change in adolescent self-consciousness and empathy. *Journal of Research in Personality, 25*(1), 70-87.
- Derogatis, L. R. (1975). *The SCL-90-R*. Baltimore: Clinical Psychometric Research.
- Eisenberg-Berg, N., & Mussen, P. (1978). Empathy and moral development in adolescence. *Developmental Psychology, 14*(2), 185-186.
- Fraley, R. C., & Waller, N. G. (1998). Adult attachment patterns: A test of the typological model. In J. A. Simpson & W. S. Rholes (Eds.), *Attachment theory and close relationships* (pp. 77-114). NY: The Guilford Press.
- Garbarino, J. (1999). *Lost Boys: Why our sons turn violent and how we can save them*. NY: The Free Press.
- George, C., Kaplan, N., & Main, M. (1984). *Adult Attachment Interview Protocol*. Unpublished manuscript, University of California at Berkeley.
- George, C., & Main, M. (1979). Social interactions of young abused children: Approach, avoidance, and aggression. *Child Development, 50*, 306-318.

- Gillath, O., Shaver, P. R., Mikulincer, M., Nitzberg, R. E., Erez, A., & van IJzendoorn, M. H. (2004). Attachment, caregiving, and volunteering: Placing volunteerism in an attachment-theoretical framework. *Personal Relationships, 12*, 425-446.
- Hazan, C., & Shaver, P. R. (1987). Romantic love conceptualized as an attachment process. *Journal of Personality and Social Psychology, 52*, 511-524.
- Hazan, C., & Zeifman, D. (1994). Sex and the psychological tether. In K. Bartholomew & D. Perlman (Eds.), *Advances in personal relationships: Vol. 5. Attachment processes in adulthood* (pp. 151-177). London: Jessica Kingsley.
- Hazan, C., & Zeifman, D. (1999). Pair bonds as attachments: Evaluating the evidence. In J. Cassidy & P. R. Shaver (Eds.), *Handbook of attachment* (pp. 336-354). NY: The Guilford Press.
- Heinicke, C., & Westheimer, I. (1966). *Brief separations*. NY: International Universities Press.
- Hesse, E., & Main, M. (1999). Second-generation effects of unresolved trauma in nonmaltreating parents: Dissociated, frightened, and threatening parental behavior. *Psychoanalytic Inquiry, 19*(4), 481-540.
- Higgins, E. T. (1998). Promotion and prevention: Regulatory focus as a motivational principle. In P. M. Zanna (Ed.), *Advances in experimental social psychology* (Vol. 30, pp. 1-46). NY: Academic Press.
- Howes, C. (1988). Relations between early child care and schooling. *Developmental Psychology, 24*(1), 53-57.

- Kestenbaum, R., Farber, E. A., & Sroufe, L. A. (1989). Individual differences in empathy among preschoolers: Relation to attachment history. In N. Eisenberg (Ed.), *Empathy And related emotional competence. New Directions for Child Development*, No. 44 (pp. 51-64). San Francisco, CA: Jossey-Bass.
- Kiger, J. A., & Murphy, S. A. (1987). A reliability assessment of the Symptom Checklist-90-R: Suitability for postdisaster-bereaved and nonloss study samples. *Western Journal of Nursing Research*, 9(4), 572-588.
- Kobak, R. (1999). The emotional dynamics of disruptions in attachment relationships: Implications for theory, research, and clinical intervention. In J. Cassidy & P. R. Shaver (Eds.), *Handbook of attachment* (pp. 21-43). NY: The Guilford Press.
- Kobak, R., Little, M., Race, E., & Acosta, M. C. (2001). Attachment disruptions in seriously emotionally disturbed children: Implications for treatment. *Attachment and Human Development*, 3(3), 243-258.
- Kohn, A. (1990). *The brighter side of human nature: Altruism and empathy in everyday life*. NY: Basic Books.
- Kohn, A. (2000). Raising children who care. *NAMTA Journal*, 25(2), 185-206.
- Liotti, G. (1992). Disorganized/disoriented attachment in the etiology of the dissociative disorders. *Dissociation: Progress in the Dissociative Disorders*, 5(4), 196-204.
- Lorenz, K. (1957). *Instinctive behavior*. NY: International Universities Press.
- 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.

- Lyons-Ruth, K., & Jacobvitz, D. (1999). Attachment disorganization: Unresolved loss, relational violence, and lapses in behavioral and attentional strategies. In J. Cassidy & P. R. Shaver (Eds.), *Handbook of attachment* (pp. 520-554). NY: The Guilford Press.
- Main, M., & George, C. (1985). Response of abused and disadvantaged toddlers to distress in agemates: A study in the day care setting. *Developmental Psychology*, *21*, 407-412.
- Main, M., & Hesse, E. (1990). Parents' unresolved traumatic experiences are related to infant disorganized attachment status: Is frightened and/or frightening parental behavior the linking mechanism? In M. T. Greenberg, D. Cicchetti, & E. M. Cummings (Eds.), *Attachment in the preschool years: Theory, research, and intervention* (pp. 161-182). Chicago: University of Chicago Press.
- Main, M., Kaplan, N., & Cassidy, J. (1985). Security in infancy, childhood, and adulthood: A move to the level of representation. In I. Bretherton & E. Waters (Eds.), *Growing points of attachment theory and research. Monographs of the Society for Research in Child Development*, *50*(1-2, Serial No. 209), 66-104.
- Main, M., & Solomon, J. (1986). Discovery of a new, insecure-disorganized/disoriented attachment pattern. In T. B. Brazelton & M. W. Yogman (Eds.), *Affective development in infancy* (pp. 95-124). Norwood, NJ: Ablex.
- Main, M. & Solomon, J. (1990). Procedures for identifying infants as disorganized/disoriented during the Ainsworth strange situation. In M. T. Greenberg, D. Cicchetti, & E. M. Cummings (Eds.), *Attachment in the preschool*

- years: Theory, research, and intervention* (pp. 121-160). Chicago: University of Chicago Press.
- Margo, G. M., Dewan, M. J., Fisher, S., & Greenberg, R. P. (1992). Comparison of three depression rating scales. *Perceptual and Motor Skills*, 75(1), 144-146.
- Marvin, R. S., & Britner, P. A. (1999). Normative development: The ontogeny of attachment. In J. Cassidy & P. R. Shaver (Eds.), *Handbook of attachment* (pp. 44-67). NY: The Guilford Press.
- McGough, J., & Curry, J. F. (1992). Utility of the SCL-90-R with depressed and conduct-disordered adolescent inpatients. *Journal of Personality Assessment*, 59(3), 552-563.
- Mehrabian, A., & Epstein, N. (1972). A measure of emotional empathy. *Journal of Personality*, 40(4), 525-543.
- Mikulincer, M., Gillath, O., Halevy, V., Avihou, N., Avidan, S., & Eshkoli, N. (2001). Attachment theory and reactions to others' needs: Evidence that activation of the sense of attachment security promotes empathic responses. *Journal of Personality & Social Psychology*, 81(6), 1205-1225.
- Mikulincer, M., Gillath, O., Sapir-Lavid, Y., Yaakobi, E., Arias, K., Tal-Aloni, L., & Bor, G. (2003). Attachment theory and concern for others' welfare: Evidence that activation of the sense of secure base promotes endorsement of self-transcendence values. *Basic and Applied Social Psychology*, 25(4), 299-312.
- Mikulincer, M., & Shaver, P. R. (2001). Attachment theory and intergroup bias: Evidence that priming the secure base schema attenuates negative reactions to out-groups. *Journal of Personality & Social Psychology*, 81(1), 97-115.

- Mikulincer, M., & Shaver, P. R. (2003). The attachment behavioral system in adulthood: Activation, psychodynamics, and interpersonal processes. In M. P. Zanna (Ed.), *Advances in Experimental Social Psychology*, 35 (pp. 53-152). San Diego: Academic Press.
- Mikulincer, M., & Shaver, P. R. (2005a). Attachment security, compassion, and altruism. *Current Directions in Psychological Science*, 14(1), 34-38.
- Mikulincer, M., & Shaver, P. R. (2005b). Attachment theory and emotions in close relationships: Exploring the attachment-related dynamics of emotional reactions to relational events. *Personal Relationships*, 12(2), 149-168.
- Mikulincer, M., Shaver, P. R., Gillath, O., & Nitzberg, R. A. (2005). Attachment, caregiving, and altruism: Boosting attachment security increases compassion and helping. *Journal of Personality and Social Psychology*, 89(5), 817-839.
- Morgan, G. A., & Ricciuti, H. N. (1969). Infants' responses to strangers during the first year. In B. M. Foss (Ed.), *Determinants of infant behavior* (Vol. 4, pp. 253-272). London: Methuen.
- Ogawa, J. R., Sroufe, L. A., Weinfield, N. S., Carlson, E. A., & Egeland, B. (1997). Development and the fragmented self: Longitudinal study of dissociative symptomatology in a nonclinical sample. *Development & Psychopathology*, 9(4), 855-879.
- Putnam, F. (1996). Child development and dissociation. *Child & Adolescent Psychiatric Clinics of North America*, 5(2), 285-301.
- Robertson, J. (1962). *Hospitals and children: A parent's eye view*. NY: Gollancz.

- Roeser, R. W., Eccles, J. S., & Sameroff, A. J. (2000). School as a context of early adolescents' academic and social-emotional development: A summary of research findings. *The Elementary School Journal*, *100*(5), 443-471.
- Ryan, R. M., Stiller, J. D., & Lynch, J. H. (1994). Representations of relationships to teachers, parents, and friends as predictors of academic motivation and self-esteem. *Journal of Early Adolescence*, *14*(2), 226-249.
- Sarason, I. G., Levine, H. M., Basham, R. B., & Sarason, B. R. (1983). Assessing social support: The Social Support Questionnaire. *Journal of Personality and Social Psychology*, *44*(1), 127-139.
- Sarason, I. G., Sarason, B. R., Shearin, E. N., & Pierce, G. R. (1987). A brief measure of social support: Practical and theoretical implications. *Journal of Social and Personal Relationships*, *4*, 497-510.
- Schmitz, N., Hartkamp, N., Brinshwitz, C., Michalek, S., & Tress, W. (2000). Comparison of the standard and the computerized versions of the Symptom Check List (SCL-90-R): A randomized trial. *Acta Psychiatrica Scandinavica*, *102*(2), 147-152.
- Schmitz, N., Kruse, J., Heckrath, C., Alberti, L., & Tress, W. (1999). Diagnosing mental disorders in primary care: The General Health Questionnaire (GHQ) and the Symptom Check List (SCL-90-R) as screening instruments. *Social Psychiatry & Psychiatric Epidemiology*, *34*(7), 360-366.
- Smith, S. R., & Carlson, E. B. (1996). Reliability and validity of the Adolescent Dissociative Experiences Scale. *Dissociation: Progress in the Dissociative Disorders*, *9*(2), 125-129.

- Solomon, J., & George, C. (1999). *Attachment disorganization*. NY: Guilford Press.
- Stemmler, M., & Peterson, A. C. (2005). Gender differential influences of early adolescent risk factors for the development of depressive affect. *Journal of Youth & Adolescence, 34*(3), 175-183.
- Straker, G., & Jacobson, R. S., (1981). Aggression, emotional maladjustment, and empathy in the abused child. *Developmental Psychology, 17*(6), 762-765.
- Trinke, S. J., & Bartholomew, K. (1997). Hierarchies of attachment relationships in young adulthood. *Journal of Social and Personal Relationships, 14*(5), 603-625.
- van der Kolk, B. A. (1996). The complexity of adaptation to trauma: Self-regulation, stimulus discrimination, and characterological development. In B.A. van der Kolk, A. C. McFarlane, & Weisaeth, L.(Eds.), *Traumatic Stress: The effects of overwhelming experience on mind, body, and society* (pp. 182-213). NY: Guilford Press.
- Waters, E., Wippman, J., & Sroufe, L. A. (1979). Attachment, positive affect, and competence in the peer group: Two studies in construct validation. *Child Development, 50*, 821-829.
- Wentzel, K. R. (1998). Social relationships and motivation in middle school: The role of parents, teachers, and peers. *Journal of Educational Psychology, 90*(2), 202-209.
- West, M., Adam, K., Spreng, S., & Rose, S. (2001). Attachment disorganization and dissociative symptoms in clinically treated adolescents. *Canadian Journal of Psychiatry, 46*(7), 627-631.
- Westmaas, J. L., & Silver, R. C. (2001). The role of attachment in responses to victims of life crises. *Journal of Personality and Social Psychology, 80*(3), 425-438.

Yowell, C. M., & Smylie, M. A. (1999). Self-regulation in democratic communities.

Elementary School Journal, 99(5), 469-490.

APPENDIX A
INFORMED CONSENT STATEMENTS

Preamble Letters to the Adolescent Treatment Facility Group

Dear Legal Guardian,

My name is John Lamanna. I am a graduate student at Western Kentucky University. As part of my degree, I must complete a research project under the direction of Melissa Hakman, Ph.D., and I need your help. My study is examining social relationships and empathy, depersonalization, hostility, and depression. The adolescent in your custody has been chosen as a possible participant for this study. If you should decide to consent to their participation, it will entail their completion of six questionnaires. If you are interested in this study, please read and sign the attached consent statement and complete results form. Once these are completed, please return the forms to the researcher using the enclosed envelope or to the program director where the adolescent in your custody is currently residing at in the enclosed envelope. Once it is returned, the adolescent in your custody will be given the opportunity to complete some questionnaires at a designated date and time in the upcoming weeks under the direction of the researcher.

All information about the adolescent in your custody will be kept confidential and will not be released. Questionnaires will have participant numbers rather than names on them. It should be noted that these questionnaires have been used in numerous studies with no significant risk or discomfort. However, if at any point, the adolescent in your custody becomes uncomfortable and decides to discontinue participation, he or she can stop without penalty or prejudice. All completed questionnaires will be gathered by the researcher. Once the adolescent in your custody completes the questionnaires, he or she will be given a \$15 gift certificate to Wal-Mart, and your name will be entered into a lottery to receive a \$15 gift certificate to a local business. If you have any questions, please contact Melissa Hakman, Ph.D. at (270) 745-5435. Your participation and consent is greatly appreciated.

Dear prospective participant,

My name is John Lamanna. I am a graduate student at Western Kentucky University. As part of my degree, I must complete a research project under the direction of my advisor, Melissa Hakman, Ph.D., and I need your help. I am interested in looking at how your relationships influence how you think about things and what you believe in. If your legal guardian allows you to participate in this study, you will be asked to complete an assent form, which indicates that you are willing to participate in the study by completing six forms. All information about you, as well as your responses on the forms, will be kept confidential, meaning that no one else will see your answers except for myself or Dr. Hakman. Instead of putting your names on the forms, you will be given a number. If at any point you become uncomfortable and decide you do not want to fill out the forms, you can stop at any time. All completed questionnaires will be gathered by the researcher. Once you have completed the questionnaires, you will be given a \$15 gift certificate to Wal-Mart. If you have any questions, please contact your legal guardian. Your participation and consent is greatly appreciated.

Preamble Letter to Community Sample Control Group

Dear Parents,

My name is John Lamanna. I am a graduate student at Western Kentucky University. As part of my degree, I must complete a research project under the direction of Melissa Hakman, Ph.D., and I need your help. My study is examining social relationships and empathy, depersonalization, hostility, and depression. Your son or daughter has been chosen as a possible participant for this study. If you should decide to consent to their participation, it will entail their completion of six questionnaires. If you are interested in this study, please read and sign the attached consent statement and complete results form. Once these are completed, please return the forms to the researcher using the enclosed envelope. Once it is returned, the adolescent in your custody will be given the opportunity to complete some questionnaires at a designated date and time in the upcoming weeks under the direction of the researcher.

All information about your son or daughter will be kept confidential and will not be released. Questionnaires will have participant numbers rather than names on them. It should be noted that these questionnaires have been used in numerous studies with no significant risk or discomfort. However, if at any point, your son or daughter becomes uncomfortable and decides to discontinue participation, he or she can stop without penalty or prejudice. All completed questionnaires will be gathered by the researcher. Once your son or daughter completes the questionnaires, he or she will be given a \$15 gift certificate to Wal-Mart, and your name will be entered into a lottery to receive a \$15 gift certificate to a local business. If you have any questions, please contact Melissa Hakman, Ph.D. at (270) 745-5435. Your participation and consent is greatly appreciated.

WANTED

**Adolescents and Young Adults
between the ages of
13 and 20**



**To participate in a study being
conducted at the Child and Family
Research Lab at WKU. \$15.00 gift
card for participation.**

**To obtain more information, please
contact John Lamanna at (270) 745-
2026 or (270) 320-3041.**

Informed Consent Statement
Legal Guardian Form-Adolescent Treatment Facility Group

Project Title: The effects of attachment relationships on the development of empathy or depersonalization in adolescence.

Researchers: John Lamanna & Melissa Hakman, Ph.D.
Western Kentucky University
Department of Psychology
(270) 745-5435

You are being asked to allow the adolescent in your custody to participate in a project conducted through Western Kentucky University. The University requires that you give your signed agreement to allow him or her to participate in this project.

In the attached letter, you were provided with an explanation of the purpose of the project, what the adolescent in your custody will have to do, and the potential benefits/ risks of participation. During participation, if you or the adolescent in your custody should have any questions about the project, you may contact us using the contact information which you were provided. A basic explanation of the project is written below. Please read this explanation and contact the researcher with any questions you may have.

A. Purpose: This study will look at how the social relationships of adolescents affect their levels of empathy, depersonalization, hostility, and depression.

B. Procedures: This study will involve completion of forms. Specifically,

1. The adolescent in your custody will complete six forms. One will ask questions about biographical information. The second and third will ask questions about the type and quality of social relationships that he or she has. The fourth will ask questions pertaining to their thoughts and feelings in a variety of situations. The fifth will ask questions about different kinds of experiences that happen to people. The final form will assess psychological distress. These will be completed by the adolescent in your custody with the researcher at the facility they currently reside at within the next couple of weeks.

C. Duration of Participation: The adolescent's participation is completely voluntary and may be ended at any point with penalty or prejudice. This study is designed to last approximately 30-40 minutes.

D. Confidentiality: All information about you and the adolescent in your custody will be kept confidential and will not be released. Forms will have numbers, rather than names on them. All information will be kept in a secure place that is open only to the researchers and their assistants. This information will be saved as long as it is useful; typically such information is kept for five years after publication of the results. Results from this study may be presented at professional meetings or in publications. You or the adolescent in your custody will not be identified individually; we will be looking at the group as a whole.

E. Benefits: For participating in this study, the adolescent in your custody will be given a gift card from Wal-Mart after he or she completes the forms. In addition, your name will be entered into a

lottery for a \$15.00 gift certificate to a local business. If you are interested, we will send you a copy of the result of the study when it is finished.

F. Discomfort and Risks: The risks for the study are minimal. The forms have been used in previous studies with no harmful effects. If, in filling out the forms, the adolescent in your custody has concerns, psychological services at their place of residence will be provided. The adolescent in your custody may withdraw at any time without prejudice or consequence.

I have been fully informed about what is expected of me and the adolescent in my custody. I am aware of what the adolescent in my custody will be asked to do and the benefits of his or her participation. I also understand that it is not possible to know all potential risks in a study, and I believe that reasonable safeguards have been taken to reduce both the known and unknown risks to the adolescent in my custody. I also understand/agree with the following statements (Please check to note that you agree):

____ I affirm that I am 18 year of age or older.

____ I agree to allow the adolescent in my custody, _____, to complete the following questionnaires: a biographical data sheet, the Social Networks Questionnaire, the Social Support Questionnaire-Short Form, the Interpersonal Reactivity Index, the Adolescent Dissociative Experiences Scale, and the Symptom Checklist-90-Revised.

I understand that I may contact the researcher at the following address and phone number, should I desire to discuss my participation in the study. Melissa Hakman, Ph.D., Department of Psychology, Western Kentucky University, 1906 College Heights Blvd. #21030, Bowling Green, KY 42101, (270)745-5435. I may also contact Dr. Phillip E. Meyers, Human Protection Administrator at (270) 745-4652. I have read and fully understand this consent form. I sign it freely and voluntarily. A copy of this form will be given to me. I hereby give permission for the adolescent in my custody to participate in this study.

Signature of Legal Guardian

Date

Witness

Date

THE DATED APPROVAL ON THIS FORMS INDICATED THAT THIS PROJECT HAS BEEN REVIEWED AND APPROVED BY THE WESTERN KENTUCKY UNIVERSITY HUMAN SUBJECTS REVIEW BOARD.

Dr. Phillip E. Myers, Human Protection Administrator
TELEPHONE: (270) 745-4652

Informed Consent Statement
Legal Guardian Form-Community Sample Control Group

Project Title: The effects of attachment relationships on the development of empathy or depersonalization in adolescence.

Researchers: John Lamanna & Melissa Hakman, Ph.D.
Western Kentucky University
Department of Psychology
(270) 745-5435

You are being asked to allow the adolescent in your custody to participate in a project conducted through Western Kentucky University. The University requires that you give your signed agreement to allow him or her to participate in this project.

In the attached letter, you were provided with an explanation of the purpose of the project, what the adolescent in your custody will have to do, and the potential benefits/ risks of participation. During participation, if you or the adolescent in your custody should have any questions about the project, you may contact us using the contact information which you were provided. A basic explanation of the project is written below. Please read this explanation and contact the researcher with any questions you may have.

A. Purpose: This study will look at how the social relationships of adolescents affect their levels of empathy, depersonalization, hostility, and depression.

B. Procedures: This study will involve completion of forms. Specifically,

1. The adolescent in your custody will complete six forms. One will ask questions about biographical information. The second and third will ask questions about the type and quality of social relationships that he or she has. The fourth will ask questions pertaining to their thoughts and feelings in a variety of situations. The fifth will ask questions about different kinds of experiences that happen to people. The final form will assess psychological distress. These will be completed by the adolescent in your custody with the researcher at a specific site within the next couple of weeks.

C. Duration of Participation: The adolescent's participation is completely voluntary and may be ended at any point with penalty or prejudice. This study is designed to last approximately 30-40 minutes.

D. Confidentiality: All information about you and the adolescent in your custody will be kept confidential and will not be released. Forms will have numbers, rather than names on them. All information will be kept in a secure place that is open only to the researchers and their assistants. This information will be saved as long as it is useful; typically such information is kept for five years after publication of the results. Results from this study may be presented at professional meetings or in publications. You or the adolescent in your custody will not be identified individually; we will be looking at the group as a whole.

E. Benefits: For participating in this study, the adolescent in your custody will be given a gift card from Wal-Mart after he or she completes the forms. In addition, your name will be entered into a

lottery for a \$15.00 gift certificate to a local business. If you are interested, we will send you a copy of the result of the study when it is finished.

F. Discomfort and Risks: The risks for the study are minimal. The forms have been used in previous studies with no harmful effects. If, in filling out the forms, the adolescent in your custody has concerns, a list of several names and phone numbers of agencies that provide psychological services will be provided. The adolescent in your custody may withdraw at any time without prejudice or consequence.

I have been fully informed about what is expected of me and the adolescent in my custody. I am aware of what the adolescent in my custody will be asked to do and the benefits of his or her participation. I also understand that it is not possible to know all potential risks in a study, and I believe that reasonable safeguards have been taken to reduce both the known and unknown risks to the adolescent in my custody. I also understand/agree with the following statements (Please check to note that you agree):

____ I affirm that I am 18 year of age or older.

____ I agree to allow the adolescent in my custody, _____, to complete the following questionnaires: a biographical data sheet, the Social Networks Questionnaire, the Social Support Questionnaire-Short Form, the Interpersonal Reactivity Index, the Adolescent Dissociative Experiences Scale, and the Symptom Checklist-90-Revised.

I understand that I may contact the researcher at the following address and phone number, should I desire to discuss my participation in the study. Melissa Hakman, Ph.D., Department of Psychology, Western Kentucky University, 1906 College Heights Blvd. #21030, Bowling Green, KY 42101, (270)745-5435. I may also contact Dr. Phillip E. Meyers, Human Protection Administrator at (270) 745-4652. I have read and fully understand this consent form. I sign it freely and voluntarily. A copy of this form will be given to me. I hereby give permission for the adolescent in my custody to participate in this study.

Signature of Legal Guardian

Date

Witness

Date

THE DATED APPROVAL ON THIS FORMS INDICATED THAT THIS PROJECT HAS BEEN REVIEWED AND APPROVED BY THE WESTERN KENTUCKY UNIVERSITY HUMAN SUBJECTS REVIEW BOARD.

Dr. Phillip E. Myers, Human Protection Administrator
TELEPHONE: (270) 745-4652

Request for Results Form

_____ I am not interested in receiving a copy of the results for this study.

_____ I am interested in obtaining a copy of the results for this study.

Please provide the following information in order to obtain results and to be entered into the drawing for the gift certificate.

Name: _____

Address: _____

APPENDIX B
ASSENT FORM

Participant # _____

INFORMED CONSENT STATEMENT
(For minors only)

I, _____, understand that my legal guardian has given permission for me to participate in a project that looks at how social relationships in my life affect the thoughts and feelings that I have as well as the experiences that I have had. I will be required to fill out six forms with the researcher on a designated day at school. I understand that this project is under the direction of Dr. Melissa Hakman and John Lamanna at Western Kentucky University, and the forms will not be seen by anyone except for Dr. Hakman, Mr. Lamanna, and/or their research assistants. I also understand that I will be identified by a number, and my name will not be attached to any of the information I provide on the forms. Finally, I understand that I am allowed to stop participating in the project at anytime with out penalty.

Signature _____

Date _____

Witness _____

APPENDIX C
BIOGRAPHICAL DATA FORMS

Participant # _____

BIOGRAPHICAL DATA
ADOLESCENT TREATMENT FACILITY GROUP

Please answer the following questions as accurately as possible. Remember, all information you provide will be completely confidential. The information will not be able to be identified with you.

Age: _____

Gender: M F

Ethnicity: Caucasian African American Native American
 Hispanic Asian Other (Please specify): _____

Highest grade level completed: _____

Length of time at this facility: _____

Other placements prior to this facility (Please list name of facility and length of stay): _____

City and state that you were born in: _____

Number of biological siblings: _____

Age of biological sibling 1: _____ Gender of biological sibling 1: _____

Age of biological sibling 2: _____ Gender of biological sibling 2: _____

Age of biological sibling 3: _____ Gender of biological sibling 3: _____

Age of biological sibling 4: _____ Gender of biological sibling 4: _____

Age of biological sibling 5: _____ Gender of biological sibling 5: _____

How much contact (visit, phone, write, e-mail) do you have with the following people (please circle):

Your biological mother: A. None
 B. At least once a week
 C. At least once a month
 D. Three or four times a year
 E. Once a year
 F. Less than once a year

Your biological father: A. None
 B. At least once a week
 C. At least once a month
 D. Three or four times a year
 E. Once a year
 F. Less than once a year

Your biological siblings: A. None
 B. At least once a week
 C. At least once a month
 D. Three or four times a year
 E. Once a year
 F. Less than once a year

Your friends: A. None
 B. At least once a week
 C. At least once a month
 D. Three or four times a year
 E. Once a year
 F. Less than once a year

Have you ever lived apart from your parents? _____

If so, for how long? _____

How old were you? _____

Was it voluntary or involuntary? _____

Participant # _____

**BIOGRAPHICAL DATA
COMMUNITY SAMPLE CONTROL GROUP**

Please answer the following questions as accurately as possible. Remember, all information you provide will be completely confidential. The information will not be able to be identified with you.

Age: _____

Gender: M F

Ethnicity: Caucasian African American Native American
 Hispanic Asian Other (Please specify): _____

Highest grade level completed: _____

City and state that you were born in: _____

Number of biological siblings: _____

Age of biological sibling 1: _____ Gender of biological sibling 1: _____

Age of biological sibling 2: _____ Gender of biological sibling 2: _____

Age of biological sibling 3: _____ Gender of biological sibling 3: _____

Age of biological sibling 4: _____ Gender of biological sibling 4: _____

Age of biological sibling 5: _____ Gender of biological sibling 5: _____

How much contact (visit, phone, write, e-mail) do you have with the following people (please circle):

Your biological mother: A. None
 B. At least once a week
 C. At least once a month
 D. Three or four times a year
 E. Once a year
 F. Less than once a year

Your biological father: A. None
 B. At least once a week
 C. At least once a month
 D. Three or four times a year
 E. Once a year
 F. Less than once a year

Your biological siblings: A. None
 B. At least once a week
 C. At least once a month
 D. Three or four times a year
 E. Once a year
 F. Less than once a year

Your friends: A. None
 B. At least once a week
 C. At least once a month
 D. Three or four times a year
 E. Once a year
 F. Less than once a year

Have you ever lived apart from your parents? _____

If so, for how long? _____

How old were you? _____

Was it voluntary or involuntary? _____

APPENDIX D
DEBRIEFING STATEMENT

Participant # _____

DEBRIEFING STATEMENT

You participated in a study that examined how significant relationships influence levels of empathy, depersonalization, hostility, and depression. You completed a questionnaire which provided us with basic information about you and your family, as well as two additional questionnaires exploring relationships with which you have a strong emotional tie to and count on for support. You also completed questionnaires that measure your thoughts and feelings in certain situations, the experiences you may have had, and any psychological distress you may be currently experiencing. The results of this study will be useful in that they will increase understanding of the effects of strong, positive relationships outside of the caregiver relationship on the development of empathy or depersonalization. Understanding how relationships outside the caregiver relationship can help adolescents overcome negative early relationships and promote development is integral to realizing the importance of peers, teachers, and romantic partners in our lives. Your participation was greatly appreciated. If you have any additional questions, please contact Mr. John Lamanna or Melissa Hakman, Ph.D. at (270) 745-5435.

APPENDIX E

HUMAN SUBJECTS REVIEW BOARD LETTER OF PERMISSION