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**THE RELATIONSHIP BETWEEN ATTACHMENT, COPING, AND  
PSYCHOLOGICAL DISTRESS IN A SAMPLE OF ADOLESCENT FEMALES IN  
FOSTER CARE**

A Dissertation in

Counseling Psychology

by

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### **Abstract**

Given that youth in foster care are at-risk for a host of negative outcomes, it is imperative that research is conducted within this population in order to identify factors that contribute to these youths' distress. The present study examined the relationships between attachment (anxiety, avoidance, fearful-avoidant, and dismissing-avoidant), coping (active, avoidance, and distraction), and psychological distress in a sample of adolescent females in foster care. Additionally, a textual analysis was conducted on two open ended questions on coping and distress. Participants were 30 adolescent (ages 14-19) females in foster care who were wards of New York State. Four county Department of Social Services within Western New York participated in the study and allowed recruitment of their foster care youth. Results indicated that attachment avoidance was positively related to avoidance coping. Results were consistent with previous findings of a significant relationship between fearful-avoidant attachment and avoidance coping and a significant relationship between dismissing-avoidant attachment and distraction coping. Textual analyses of free-written responses to questions about distress and coping identified six subgroups of adolescent females in foster care. Results of the textual analyses showed that only the High Symptom Maximizer group (high levels of clinical symptoms, low reporting of distress) indicated having difficulty coping when compared to others. In contrast, the Low Symptom Maximizer group (low levels of clinical symptoms, high reporting of distress) did not report more difficulty coping when compared to others. Thus, despite use of maximizing strategy to report distress these

youth did not feel like they had problems coping when compared to others. Additionally, two contrasts emerged with regard to youth who said they had no more difficulty coping compared to others, yet also had high levels of clinical symptoms. Specifically, youth who used a minimizing strategy to report distress, regardless of level of clinical symptoms (high and low) said they did not believe they had problems coping when compared to others; and the same pattern emerged across both the high and low symptom groups with mixed reporting of distress style. This suggests that the focus should be on *clinical symptoms* as opposed to *distress reporting style* in efforts to reduce the distress of youth in foster care. Implications for counseling and study limitations are addressed.

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## **The Relationship between Attachment, Coping, and Psychological Distress in a Sample of Adolescent Females in Foster Care**

### **Chapter 1**

This study examined the relationship between attachment, coping, and psychological distress in a sample of adolescent females in foster care. Youth in foster care are at increased risk for chronic medical problems (Hochstadt, Jaudes, Zimo, & Schachter, 1987; Pinkney, 1994; Schor, 1982; Swire & Kavalier, 1977); emotional and psychological disorders (Frank, 1980; Halfon, Mendonca, & Berkowitz, 1995; Hochstadt, Jaudes, Zimo, & Schachter, 1987; Pinkney, 1994; Schor, 1982; Simms, 1989; Swire & Kavalier, 1977; Takayama, Wolfe, & Coulter, 1998); and diagnosed psychiatric problems (Stein, Rae-Grant, Ackland, & Avison, 1994), thus there is a need for research to better understand the experiences of these youth. The experiences of youth in foster care were explored in this study through the lens of attachment and coping. Specifically, this study examined differences among adolescent females in foster care with different attachment styles and coping reactions. Attachment has been posited to be associated with coping through the cognitive and affect regulation processes that make up coping (Cassidy, 1994; Kobak & Sceery, 1988; Ognibene & Collins, 1998; Mikulincer & Florian, 2004; Mikulincer & Shaver, 2007; Sieffge-Krenke & Beyers, 2005; Sroufe & Waters, 1977). In fact, associations have been found in empirical research between attachment and coping (Buelow, Lyddon, & Johnson, 2002; Harvey & Byrd, 2000). These links provided an empirical foundation for examining the relationship between attachment and coping. Moreover, investigation of these factors is important because little is known about the attachment styles and coping strategies of youth in foster care. The examination of the

links between attachment and coping has potential to inform future intervention and/or prevention work in adolescent females in foster care. In the present study, dimensions of attachment (both attachment anxiety and attachment avoidance) were hypothesized to be associated with dimensions of coping (active and avoidance). These links were assessed by multiple regression analyses.

As of September 30, 2005, there were 513,000 children in the United States foster care system (ChildTrends, 2007). In 2003, youth spent a medium length of 17.6 months in the foster care system (Administration for Children and Families, 2005). In 2005 nationally, 46% of foster children lived in foster family homes with non-relatives, 24% lived in family foster home with relatives, 18% lived in group homes or institutions, 4% lived in pre-adoptive families, and the rest lived in other types of facilities (ChildTrends, 2007). McIntyre and Keesler (1986) found that 50% of foster children exhibited behavioral problems on the Child Behavior Checklist (CBCL; Achenbach, 1991). Stein, Rae-Grant, Ackland, and Avison (1994) indicated that 40% to 60% of youth in foster care were diagnosed with at least 1 psychiatric disorder. In summary, youth in foster care are at risk for a number of negative outcomes (Frank, 1980; Halfon, Mendonca, & Berkowitz, 1995; Hochstadt, Jaudes, Zimo, & Schachter, 1987; Pinkney, 1994; Schor, 1982; Simms, 1989; Swire & Kavalier, 1977; Takayama, Wolfe, & Coulter, 1998), thus supporting the need for research within this population.

As suggested above, adolescent females in foster care are faced with stressors that extend past the problems typically faced during adolescence. Compas (1987) argued that it is important to examine stages of development when examining the construct of coping, thus it is important to describe the population examined in the present study,

along with the developmental tasks they are facing. It is crucial that we not assume that models that hold in young adults in college will also hold in adolescent females in foster care. The developmental tasks experienced in adolescence provide a baseline from which specific stressors faced by adolescent females can be gauged. In order to understand the developmental tasks faced by adolescents, it is necessary first to specify the age range of this population and the terms used to organize the two stages of life that uniquely emerge within adolescence.

Adolescence is comprised of the years between 10 and 19 years of age (Tanner, 1962). Early adolescence corresponds to the middle school years and includes puberty, ages 10-15 (Santrock, 1991). Late adolescence corresponds to ages 16-19 (Santrock, 1991). Normative developmental tasks faced by early and late adolescents in the United States provide a lens that aid in interpreting stressors faced by adolescent females.

An adolescent developmental task refers to a stage during adolescent development of which each adolescent must complete in order to progress to the next stage of development. Thus, future stages are dependent upon the successful completion of the prior stage (Klaczinski, 1990). Eight developmental tasks emerge from the research in the field of adolescent development. These tasks are derived from normative tasks faced by adolescents in the United States (Havighurst, 1972; Roscoe & Petterson, 1984; Klaczinski, 1990; Adams, 2000; Perkins, 2007).

Stages of adolescent development include: (a) development of mature relationships with peers, (b) acceptance of masculine/feminine sex role, (c) acceptance of one's physique or physical appearance, (d) achieving independence from adults, (e) preparing for marriage and family life, (f) preparing for economic career/independence

(g) acquiring an ideology and value/ethical system (h) and desiring and achieving socially responsible behavior. The above developmental tasks provide a generalization of normative adolescent development but lack cultural considerations.

Due to the wide diversity in the United States and within the foster care population, it is important to consider the influence of diverse cultural backgrounds. Benedict (1938) found themes that materialized when reviewing adolescent development across cultures. These themes consisting of cultural perspectives on training of adult roles and cultural expectations provide a cultural framework from which to interpret the eight normative developmental tasks found in the United States.

It is important to understand why adolescent females in foster care tend to be classified as high risk youth. At-risk youth are described as youth that have a particular blend of vulnerabilities and protective factors that result in a higher likelihood that they will experience problems. This likelihood or probability of experiencing difficulties is termed risk (Burt, Resnick, & Novick, 1998). Youth in foster care face stressors above and beyond the normative stressors that adolescents typically face throughout their development (Frank, 1980; Halfon, Mendonca, & Berkowitz, 1995; Hochstadt, Jaudes, Zimo, & Schachter, 1987; Pinkney, 1994; Schor, 1982; Simms, 1989; Stein, Rae-Grant, Ackland, & Avison, 1994; Swire & Kavalier, 1977; Takayama, Wolfe, & Coulter, 1998). The staggering number of stressors faced by adolescent females places them at-risk for a number of negative outcomes. For this reason, adolescent females in foster care are referred to as at-risk youth.

Adolescent females in foster care must deal with a variety of stressors including those related to adolescent development, as well as those associated with being in foster

care. Children in foster care are at risk for a variety of negative psychological outcomes such as: Post Traumatic Stress Disorder (PTSD), depression, fear of future separations, problems with self-worth, low self-esteem, sexual promiscuity, and suicide (Browne & Finkelhor, 1986; Egeland, Sroufe, & Erickson, 1983; Halfon, Mendonca, & Berkowitz, 1995; Klee & Halfon, 1987; Trickett & Putnam, 1993). In addition, Bruska (2008) found that children in foster care experience feelings of confusion, fear, apprehension about the unknown, loss, sadness, anxiety, and stress. The risk of severe psychopathology, abuse, economic, and psychosocial problems highlights the need for research within this population (Browne & Finkelhor, 1986; Egeland, Sroufe, & Erickson, 1983; Frick, 2007; Halfon, Mendonca, & Berkowitz, 1995; Klee & Halfon, 1987; Trickett & Putnam, 1993).

The present study focused on factors related to psychological distress in a sample of adolescent females in foster care. Previous research found psychological distress is prevalent in adolescent females (Browne & Finkelhor, 1986; Egeland, Sroufe, & Erickson, 1983; Frank, 1980; Halfon, Mendonca, & Berkowitz, 1995; Hochstadt, Jaudes, Zimo, & Schachter, 1987; Klee & Halfon, 1987; Pinkney, 1994; Schor, 1982; Simms, 1989; Stein, Rae-Grant, Ackland, & Avison, 1994; Swire & Kavalier, 1977; Takayama, Wolfe, & Coulter, 1998; Trickett & Putnam, 1993). Rates of depressive symptoms for adolescent females range anywhere from 28% to 67%, the prevalence of depression also places adolescent females at risk for future psychopathology (Leadbeater et al., 1996; Deal & Holt, 1998; Clemmens, 2002; Birkeland et al., 2005). Attachment may provide a lens for better understanding of factors affecting psychological stress in a sample of adolescent females in foster care because attachment has been found to be linked to psychological distress through the mediating role of coping in college student samples

(Wei et al., 2003; Mallinckrodt & Wei, 2005; Vogel & Wei, 2005). Attachment may be particularly important in examining distress in females in foster care because of the attachment disruptions that these young women have faced, placing them at greater risk for insecurity of attachment.

Adult attachment orientations can be conceptualized in terms of two dimensions: anxiety and avoidance (Brennan, Clark, & Shaver, 1998; Hazan & Shaver, 1987). *Attachment anxiety* refers to the fear of interpersonal rejection, an excessive need for approval from others, and stress when one's partner is unavailable and *attachment avoidance* refers to the fear of dependence and interpersonal intimacy, an excessive need for self-reliance, and reluctance to self-disclose (Brennan et al., 1998). When individuals high on attachment anxiety (one aspect of insecurity) are faced with a distressing event, they tend to engage in intense expressions of emotions in order to gain attention and security from attachment figures. As a result, these individuals perpetuate the distressing experience and become at-risk for prolonged distress and psychopathology. Alternatively, when individuals high on attachment avoidance (one aspect of insecurity) are faced with a distressing event, they tend to engage in emotionally distancing behaviors in order to suppress emotions. As a result, these individuals avoid solving problems and become at-risk for psychopathology (Mikulincer & Shaver, 2007). The association between attachment and psychological distress has been consistently supported by the empirical literature (Armsden & Greenberg, 1987; Kenny, 1987; Kenny & Donaldson, 1991; Hinderlie & Kenny, 2002; Holmbeck & Wandrei, 1993; Lopez & Brennan, 2000; Ryan et al., 1997; Torquati & Raffaelli, 2004; for a review, see Lopez & Brennan, 2000). Thus,

attachment anxiety and attachment avoidance was expected to be related to psychological distress in the current sample of adolescent females in foster care.

Coping can be conceptualized as an adaptation process that adolescents use in response to the constant changes in their surroundings (Compas, Connor-Smith, Saltzman, Thomsen, & Wadsworth, 2001). Thus, coping refers to “the cognitive and behavioral efforts used by individuals to manage the demands of a person-environment relationship” (Frydenberg, 2008, pg. 23). The coping dimensions examined in the current study include: active, distraction, and avoidance. Active coping refers to the use of cognitive and behavioral approaches to solve the problem. Distraction coping refers to the physical release or the use of stimuli in order to avoid thinking or acting on the problem. Avoidance refers to cognitive and behavioral attempts to avoid the problem (Ayers, Sandler, West, & Roosa, 1996). Coping has been posited to be associated with psychological distress through relationships between coping, reactivity, and attention. More specifically, adaptive and maladaptive coping strategies are chosen depending on the individual’s level of reactivity and ability to maintain and adjust attention. These individual differences can contribute to the use of maladaptive coping strategies and subsequently influence psychological distress (Compas et al., 2001). Empirical research has found support for the idea that an individual’s coping style may influence levels of psychological distress (Compas et al., 1988; Compas et al., 2006; Li, DiGiuseppe, & Froh, 2006; Panzarine, Slater, & Sharps, 1995).

The link between attachment and coping was theorized to occur through affect regulation, which is considered a coping process (Sroufe & Waters, 1977). More specifically, an individual’s attachment history has been theorized to be associated with



the way individuals cope with stressful situations (Mikulincer & Florian, 1998; Sroufe & Waters, 1977). Thus, individuals learn how to regulate distress as infants based on the availability of comfort and security provided by their caregivers. For example, individuals who have experienced comfort and security at times of distress as infants are theorized to seek support and comfort as a coping mechanism in adulthood. Moreover, Bowlby (1973, 1988) theorized that the attachment system is activated when children, adolescents, and adults are faced with distress. The response of attachment figures to distress from infancy onward is internalized by individuals as internal working models of self and other. Bowlby noted that these internal working models are present throughout the lifespan (1973, 1988), and provide a mechanism through which early experiences continue to have an effect as an individual matures and becomes an adult. Internal working models include expectations of self-worth, how attachment figures will behave, and how to interpret and respond to stimuli (i.e., templates for affect regulation). Thus, internal working models guide how an individual regulates emotions, or copes, and the strategies used in the process of coping. Kobak and Sceery (1988) theorized that these internal working models are present and active when individuals select coping mechanisms. Prior research supports the theoretical literature on the relations between attachment and coping. (Buelow, Lyddon, & Johnson, 2002; Folkman & Lazarus, 1985; Howard & Medway, 2004). Buelow et al. (2002) found low attachment anxiety and low attachment avoidance to be associated with higher cognitive and affective coping resources in adult samples. Howard and Medway (2004) found similar results in adolescent samples, such that adolescents low on both attachment avoidance and attachment anxiety used positive coping skills (e.g., communicating with family),

whereas adolescents high on both attachment avoidance and attachment anxiety used maladaptive coping skills (e.g., using drugs).

In summary, the theoretical literature on attachment and psychological distress (Mikulincer & Shaver, 2007); coping, reactivity, attention, and psychological distress (Compas et al., 2001); and attachment and affect regulation (Bowlby, 1973, 1988; Kobak & Sceery, 1988; Sroufe & Waters, 1977) provided a theoretical rationale for a mediational model. More specifically, in sum, through the attachment process individuals learn how to interpret and respond to distressing events based on their perceptions of security and comfort provided by attachment figures. Individuals develop internal working models based on the above process and these models guide how individuals interpret and react to distressing event. Internal working models influence people's reactions to distressing events by impacting their level of reactivity and ability to maintain and adjust attention level. People's level of reactivity and ability to maintain and adjust attention level then influences the type of coping strategy utilized, which subsequently impacts the individuals level of psychological distress. In short, it was expected that coping would mediate the link between attachment and psychological distress.

Various links in the mediational model have been supported by the empirical literature, including the associations between attachment and psychological distress (Armsden & Greenberg, 1987; Hinderlie & Kenny, 2002; Holmbeck & Wandrei, 1993; Kenny, 1987; Kenny & Donaldson, 1991; for a review, see Lopez & Brennan, 2000; Rice et al., 1997; Torquati & Raffaelli, 2004); coping and psychological distress (Compas et al., 2006; Compas et al., 1988; Li et al., 2006; Panzarine et al., 1995); and attachment and

coping (Buelow et al., 2002; Howard & Medway, 2004; Mikulincer & Shaver, 2007; William & Riskind, 2004). In fact, there has been some support for the mediational model as a whole (Lopez et al., 2001; Wei et al., 2003). Wei et al. (2003) investigated the potential mediating affects of coping (perceived problem-solving ability and progress in coping with problems) on the relations between attachment (attachment anxiety and attachment avoidance) and psychological distress (depression, hopelessness, anxiety, anger, and interpersonal problems) in a college student sample. The authors found that coping only partially mediated the relation between attachment avoidance and psychological distress, but coping fully mediated the relation between attachment anxiety and psychological distress in college students. Lopez et al. (2001) also examined the mediational role of coping in college students. Lopez et al. (2001) found that maladaptive coping mediated the relation between insecure attachment orientations (high attachment anxiety, high attachment avoidance) and high levels of psychological distress. Thus, the theoretical and empirical literature supported the notion of a mediational role of coping in the relation between attachment and psychological distress; nevertheless, to date studies of the mediational model have not been conducted in high risk samples.

### **The Current Study**

The current study examined the mediating role of coping on the relationship between attachment and psychological distress in a sample of adolescent females in foster care. Adolescent females are at risk for a host of negative outcomes (Browne & Finkelhor, 1986; Egeland, Sroufe, & Erickson, 1983; Frank, 1980; Halfon, Mendonca, & Berkowitz, 1995; Hochstadt, Jaudes, Zimo, & Schachter, 1987; Klee & Halfon, 1987; Pinkney, 1994; Schor, 1982; Simms, 1989; Stein, Rae-Grant, Ackland, & Avison, 1994;

Swire & Kavalier, 1977; Takayama, Wolfe, & Coulter, 1998; Trickett & Putnam, 1993). Thus, it was necessary for research to be done within this population that focused on constructs that could serve as possible targets for intervention and/or prevention. The present study examined one potential mediator: coping. Coping has been supported as a mediator for the relations between attachment and psychological distress in college student samples (Lopez et al., 2001; Wei et al., 2003); yet little is known about whether this mediation model would hold in a higher risk sample. If coping is a mediator of the link between attachment and distress in adolescent females in foster care, then it was possible that interventions focused either on the adolescent females' attachment orientations or on their coping strategies could ultimately decrease distress. In conclusion, the exploration of coping mechanisms (active, distraction, avoidance, and support seeking strategies) as mediators for the relations between attachment and psychological distress could provide a foundation for further research on necessary prevention and/or interventions within the population of adolescent females in foster care.

## Chapter 2

The present study investigated the mediating roles of coping dimensions (active, distraction, and avoidance) in the relations between attachment dimensions (attachment anxiety and avoidance) and psychological distress in a sample of adolescent females in foster care. In general, adolescents face a number of stressors that may result from completing normative developmental tasks (Adams, 2000; Havighurst, 1972; Klaczynski, 1990; Perkins, 2007; Roscoe & Petterson, 1984). Adolescents in foster care are also faced with multiple stressors and are at risk for a number of negative outcomes (Browne & Finkelhor, 1986; Egeland, Sroufe, & Erickson, 1983; Frank, 1980; Halfon, Mendonca, & Berkowitz, 1995; Hochstadt, Jaudes, Zimo, & Schachter, 1987; Klee & Halfon, 1987; Pinkney, 1994; Schor, 1982; Simms, 1989; Stein, Rae-Grant, Ackland, & Avison, 1994; Swire & Kavalier, 1977; Takayama, Wolfe, & Coulter, 1998; Trickett & Putnam, 1993) and placement outside of their home due to abuse and neglect (Budd, Holdsworth, & HoganBruen, 2006).

Youth in foster care at-risk for chronic medical problems (Hochstadt, Jaudes, Zimo, & Schachter, 1987; Pinkney, 1994; Schor, 1982; Swire & Kavalier, 1977); emotional and psychological disorders (Frank, 1980; Halfon, Mendonca, & Berkowitz, 1995; Hochstadt, Jaudes, Zimo, & Schachter, 1987; Pinkney, 1994; Schor, 1982; Simms, 1989; Swire & Kavalier, 1977; Takayama, Wolfe, & Coulter, 1998); and diagnosed psychiatric problems (Stein, Rae-Grant, Ackland, & Avison, 1994). Pinkney (1994) discussed how children in foster care are sicker than their peers and noted that the high frequency of mental health problems stem from abuse and neglect, the impact of separation and loss, poor health, and the lack of access to services. Halfon, Mendonca,

and Berkowitz (1995) conducted a study on youth in foster care and found that 80% of the youth in the sample had developmental and emotional problems. The researcher found that behavioral, interpersonal, emotional, and self-regulatory (i.e., coping) problems were mostly present in school-aged children in foster care. Takayama, Wolfe, and Coulter (1998) studied 749 children in foster care and found that the rate of mental health services was 8 times higher among youth in foster care when compared to youth with disabilities who are Medicaid recipients. Schmidt et al. (2006) found that in general more than 50% of adolescent females experience moderate to severe depressive symptoms. Thus, adolescent females in foster care are at-risk for a host of mental health problems. There is little empirical research that focuses on gender differences among youth in foster care, but due to the risk faced by both adolescents and adolescents in foster care, one can speculate that adolescent females in foster care would be at substantial risk for negative outcomes.

Adolescent females are at increased risk for attachment insecurity because, in general, high risk samples tend to show increased rates of insecure attachment (Armsden et al., 1990; Schmidt, et al., 2006; and Futh et al., 2008), and insecure attachment has been linked to higher rates of psychological distress (Armsden & Greenberg, 1987; Hinderlie & Kenny, 2002; Holmbeck & Wandrei, 1993; Kenny, 1987; Kenny & Donaldson, 1991; Rice, Cunningham, & Young, 1997; Torquati & Raffaelli, 2004). It is important for research to be done within this population that focuses on constructs that could serve as possible targets for intervention. Factors that contribute to psychological distress among females in foster care could be important targets for intervention. Attachment insecurity has been found to contribute to psychological distress in

adolescent and adult populations (Mallinckrodt & Wei, 2005; Torquati & Raffaelli, 2008; Vogel & Wei, 2005; Wei, Heppner, & Mallinckrodt, 2003). Prior research has also examined potential mechanisms through which attachment might be related to psychological distress such as: social self-efficacy (Mallinckrodt & Wei, 2005); emotional awareness (Mallinckrodt & Wei, 2005); psychological needs satisfaction (e.g., need for autonomy and relatedness; Wei, Shaffer, Young, & Zakalik, 2005); and coping (Lopez et al., 2001; Wei et al., 2003).

The present study examined one potential mediator of the link between attachment and psychological distress: coping. Coping has been found to explain the link between attachment and psychological distress (Lopez et al., 2001; Wei et al., 2003). An association has been found between attachment and coping in adolescents (Buelow, Lyddon, & Johnson, 2002; Harvey & Byrd, 2000). Coping has also been found to be associated with psychological distress in adolescents (Compas, Orosan, & Grant, 1993; Panzarine, Slater, & Sharps, 1995). The associations between attachment and coping and between coping and psychological distress support the notion of a mediational role of coping. There have been empirical tests of the mediating role of coping in the link between attachment and distress in college student samples (Lopez et al., 2001; Wei et al., 2003). The current study adds to the body of research regarding this mediational model by examining it in a sample of adolescent females in foster care. To date the mediational role of coping in the association between attachment and distress has not been examined in such a high-risk sample.

## **Attachment Theory**

Attachment theory provides a framework for understanding how individuals regulate emotion, including distressing emotions (Cassidy, 1994; Mikulincer & Shaver, 2007). Attachment has been found to be linked to psychological distress in adult samples (Mallinckrodt & Wei, 2005; Vogel & Wei, 2005; Wei et al., 2003). Thus, attachment theory provides a lens for better understanding of factors affecting psychological distress in a sample of adolescent females in foster care. The theoretical and empirical literature on attachment has examined how attachment is related to emotion regulation from infancy and into adulthood. A general overview of attachment, attachment in infancy/childhood, internal working models, and attachment in adulthood will be provided.

## **Overview of Attachment**

Bowlby (1973) theorized attachment as the primal need of infants to seek proximity to their caregivers, particularly at times of stress or distress. Proximity keeping at times of stress or distress is thought to enhance survival of the infant because the caregiver is then available to protect the infant from danger. The expression of the infant's desire for proximity to the caregiver relies on the infant's history of attachment to his or her caretaker. Bowlby posited that when an individual, based on experiences with caregivers, is confident that an attachment figure will be available when needed, that person will be much less prone to either intense or chronic fear than will an individual who has no such confidence. Bowlby speculated that confidence in the availability of attachment figures, or lack of it, begins during infancy and then remains stable through childhood and adolescence unless the caregiving provided to the child changes. He



postulated that whatever expectations are developed during those years tend to persist relatively unchanged throughout the rest of life unless conditions change (Bowlby, 1973).

### **Attachment in Childhood**

Empirical research has shown that infants require proximity to their caretakers and become more securely attached to their caregivers if the caregiver response to infant distress matches what is needed by the infant (Ainsworth, Blehar, Waters, & Wall, 1978). Attachment styles are derived from the interactional experiences of infants and their caregivers (Ainsworth, et al., 1978). Ainsworth's Strange Situation procedure is a laboratory procedure used to assess infant attachment style. This laboratory procedure consists of a series of episodes in which the infant is separated twice from his/her parent and then reunited after each separation. The infant's behavior once reunited with parent is the principal basis upon which the infant is classified into one of three attachment categories: insecure-avoidance, insecure-anxious, and secure attachment (Ainsworth et al., 1978). A fourth category, disorganized, was later added in order to account for unusual behavior not otherwise accounted for by the above three categories (Main & Solomon, 1990). Infants who are classified as insecure-avoidance may avert gaze from parent or turn away from parent upon reunion. Infants classified as insecure-anxious may appear highly distressed during separation yet seem not to be soothed by the parent during reunion. Infants who are classified as securely attached may explore freely and, if upset during separation, are easily soothed by parent during reunion. A fourth category of disorganized refers to the lack of organized behavioral strategy to deal with stresses. Infants who are classified as disorganized may experience the parent as frightening or

frightened. Bowlby (1973, 1981) theorized that attachment is bridged from infancy to adulthood through internal working models of attachment.

### **Internal Working Models**

Bowlby theorized that attachment was important throughout the lifespan. Although attachment tends to be stable throughout the lifespan, attachment orientations can change when relational circumstances change or through psychotherapy (Bowlby, 1969, 1988). Internal working models are postulated to bridge attachment between infancy and adulthood. Internal working models are mental representations of the self and others developed through the child-caregiver relationship.

The attachment system is activated when children, adolescents, and adults are faced with distress. The caregiver's response to the distress is internalized by the child as models of the self as worthy of care (or not) and others as trustworthy to provide needed care (or not). These representations are referred to as internal working models (Bowlby 1973, 1981). Internal working models, or schemas, are more adaptable during childhood but tend to solidify during adulthood. These working models become unconscious relational styles as adults (Bowlby, 1988). The internal working model helps individuals to predict and understand their environment (Bowlby 1973, 1981)

### **Attachment in Adulthood**

It is important to note that not all relationships are attachment relationships. Ainsworth (1989) suggested that attachment is more than just an affectional bond, and that the provision of security and comfort are aspects of attachment that may not be present in other affectional bonds. In adulthood, close relationships that are attachment relationships can be pair-bonds or close friendships (in addition to parents or other

important caregivers). There is a growing importance in the attachment field on romantic partners as attachment figures (Brennan, Clark, & Shaver, 1998). Hazan and Shaver (1987) theorized that the major attachment styles present in infancy (secure, avoidant, anxious/ambivalent) may translate into terms appropriate to adult romantic love. Hazan and Shaver (1987) developed a three-category model of attachment orientations in adults based on the attachment styles in childhood that were developed by Ainsworth. The three category model consists of secure, avoidant, and anxious-ambivalent attachment.

Individuals classified as secure typically do not have problems getting close to others and they are comfortable with people relying on them and comfortable relying on others.

Individuals classified as avoidant typically find it difficult to: get close to others, rely on people, and develop trust with others. People classified as avoidant feel uncomfortable when others get too close and others often want to be closer than avoidant individuals are comfortable with. Individuals classified as anxious/ambivalent are typically concerned about whether people really want to get close to them and believe that others may not want to be close to them. Those categorized as anxious/ambivalent may feel the need to be close to others, but this need may scare others away. The above three-category model developed by Hazan and Shaver was later modified by Bartholomew (Bartholomew, 1990).

Bartholomew (1990) developed a four-category model of attachment orientations in adults. The four-category model was derived from Hazan and Shaver's three-category model (1987), but the avoidant category was divided into two separate categories in the four-category model. Bartholomew's four-category model consists of: secure, preoccupied, dismissing-avoidant, and fearful-avoidant. Individuals classified as secure

are posited to have a sense of worthiness and an expectation that individuals are generally accepting and responsive. Individuals classified as preoccupied (analogous to anxiety/ambivalent group identified by Hazan and Shaver, 1987) were speculated to be overly dependent on others. Individuals classified as dismissing-avoidant were posited to avoid intimacy and rely on independence. Individuals classified as fearful-avoidant were hypothesized to avoid closeness in order to reduce disappointment based on expectations that others will reject them or be untrustworthy (Bartholomew, 1990; Bartholomew & Horowitz, 1991). Historically, attachment styles were placed, as shown above, in categories, whereas orientations of attachment have been most recently expressed in terms of dimensions.

Adult romantic attachment orientations can be conceptualized in terms of two dimensions: attachment anxiety and avoidance (Brennan et al., 1998). Although, Ainsworth initially identified the above two dimensions of attachment in her seminal work on infant attachment, Ainsworth's final decision was to use categorical models (Brennan et al., 1998). Attachment anxiety refers to the fear of interpersonal rejection, an excessive need for approval from others, and stress when one's partner is unavailable (Brennan et al., 1998). Attachment avoidance refers to the fear of dependence and interpersonal intimacy, an excessive need for self-reliance, and reluctance to self-disclose (Brennan et al., 1998). Attachment anxiety and attachment avoidance are dimensional scales identified as a result of a factor analytic study of all extant self-report measures. The factor analysis yielded two dimensions of attachment anxiety and attachment avoidance (Brennan et al., 1998).

Fraley and Waller (1998) found empirical support for the idea that adult attachment orientation should be conceptualized continuously rather than categorically. They found evidence that a categorical conceptualization of attachment does not capture the natural structure of attachment security. Continuous measures of attachment allow for more accurate assessment because individuals who fall on the borderlines of categorical styles can now be captured by the continuous dimensions of attachment without loss of information (Fraley & Waller, 1998). In addition, Fraley and Waller (1998) noted that the variables that may contribute to attachment, such as temperament, responsiveness of caregiver, trustworthiness of romantic partner, experiences of loss and rejection are conceptualized as continuous. For example, an individual with more experiences of rejection may be higher on attachment anxiety and lower on attachment avoidance.

Mikulincer, Shaver, and Pereg (2003) proposed a theory about the development of the two dimensions of attachment anxiety and attachment avoidance. Mikulincer et al. (2003) theorized attachment anxiety as being derived from trauma during separation from attachment figures, the individual not being encouraged to explore by overprotective attachment figures, and attachment figures being perceived as intrusive by the individual. The authors posited that these experiences may lead to hyper-activating strategies whereby individuals are constantly concerned about attachment and acting in ways to obtain a sense of security from attachment figures, thus creating an overdependence on attachment figures (Mikulincer et al., 2003).

Mikulincer et al. (2003) hypothesized that attachment avoidance begins when individuals are rejected by their attachment figure when they attempt to get close to them and that self-reliance is emphasized by their attachment figure. Individuals believe that

their attachment figure will not be available and that attempts at getting closer to their attachment figure will be punished and not rewarded. The authors theorized that this may lead to deactivating strategies, such that individuals will not seek out help from attachment figures, attempt to deactivate the attachment system, avoid stressful events and attempt to handle unavoidable stress on their own.

In order to summarize past and current research on attachment using a consistent terminology, it is necessary to translate categorical models into the most recently used dimensional models. Mikulincer et al. (2003) described a method of translating the earlier categorical models of attachment style into the more current dimensional model of attachment. According to their translational model: (a) the earlier categorical term secure style is translated in terms of low attachment anxiety and low attachment avoidance; (b) anxious or preoccupied style will be translated into high attachment anxiety and low attachment avoidance; (c) avoidant style will be translated into high attachment avoidance; (d) dismissing avoidance will be translated into low attachment anxiety and high attachment avoidance; and (e) fearful avoidance will be translated into high attachment anxiety and high attachment avoidance (Mikulincer et al., 2003). The use of the translational model will first be necessary in the review of past and current research on attachment and psychological distress.

### **Attachment and Psychological Distress**

According to the theoretical and empirical literature on attachment, individuals high on either attachment anxiety or avoidance or on both dimensions (insecure) experience feelings of low self-worth and low self-efficacy. Frequent interactions with unavailable or inconsistent attachment figures tend to result in higher scores on

attachment avoidance or anxiety (insecurity). Experiences of rejection, criticism, disapproval, and destructive perfectionism are likely to contribute to psychopathology (Mikulincer & Shaver, 2007). Thus, individuals high on either attachment anxiety or avoidance, or both, are at-risk for psychopathology and prolonged distress. More specifically, when faced with a problem, individuals high on attachment anxiety (one aspect of insecurity) express intense emotions in order to solicit attention and security from attachment figures. This hyper-activating process heightens the distressing experience and increases risk of psychopathology (Mikulincer & Shaver, 2007).

Alternatively, when faced with problems, individuals high on attachment avoidance (one aspect of insecurity) distance themselves from potential distress in order to suppress emotions. Thus, these individuals use deactivating strategies and fail to use problem-solving skills which subsequently place them at-risk for psychopathology (Mikulincer & Shaver, 2007).

Research provides support for this theory: attachment is linked empirically to psychological distress (Armsden & Greenberg, 1987; Hinderlie & Kenny, 2002; Holmbeck & Wandrei, 1993; Kenny, 1987; Kenny & Donaldson, 1991; for a review, see Lopez & Brennan, 2000; Rice et al., 1997; Torquati & Raffaelli, 2004). More specifically attachment anxiety and attachment avoidance have both been found to be positively related to psychological distress (Mallinckrodt & Wei, 2005; Vogel & Wei, 2005; Wei et al., 2003). Armsden et al. (1990) conducted on four groups of adolescents: clinically depressed, nondepressed psychiatric controls, nonpsychiatric controls, and adolescents with resolved depression. The researchers found that depressed adolescents had less parental attachment when compared to controls, and among all psychiatric patients

parental attachment was inversely correlated with severity of depression. One possible mechanism that may explain the link between attachment and psychological distress is coping.

Attachment has been linked to coping in the theoretical literature through theory on associations between attachment and affect regulation (Kobak & Sceery, 1988; Ognibene & Collins, 1998; Mikulincer & Florian, 2004; Mikulincer & Shaver, 2007; Sieffge-Krenke & Beyers, 2005; Sroufe & Waters, 1977). Through the attachment process individuals learn what to expect from attachment figures and how to interpret and respond to distressing events. This process contributes to the development of their internal working models of self and others that guide how people interact with their environment and the way they manage their emotions when faced with distress (Bowlby, 1973, 1988). Thus, internal models influence the techniques used by people to manage their emotions, or coping strategies (Kobak & Sceery, 1988).

Attachment has also been found in previous empirical literature to be related to coping in adolescents (Buelow et al., 2002; Harvey & Byrd, 2000). More specifically, both attachment anxiety and avoidance have been found to be associated with both (a) adaptive coping, or strategies associated with less psychopathology, and (b) maladaptive coping, or strategies associated with higher levels of psychopathology.

Adolescent coping is theorized to be associated with psychological distress based on a theory of coping, reactivity, attention, and psychological distress. Compas et al. (2001) suggested that individual differences exist within individuals' levels of reactivity and attention. These differences guide which coping strategies are used and subsequently influence levels of psychological distress. Coping has also been found in the empirical



literature to be related to psychological distress in adolescents (Compas et al., 2006; Compas, Malcarne, & Fondacaro, 1988; Li, DiGiuseppe, & Froh, 2006; Panzarine et al., 1995).

The theoretical and empirical literature described above provides a rationale for a mediational model. The theoretical literature on attachment and psychological distress (Mikulincer & Shaver, 2007); coping, reactivity, attention, and psychological distress (Compas et al., 2001); and attachment and affect regulation (Bowlby, 1973, 1988; Kobak & Sceery, 1988; Sroufe & Waters, 1977) provides support for theory underlying a mediational model. More specifically, the theory is that internal working models influence people's level of reactivity, ability to maintain and adjust attention level, and appraisal of the situation, which in turn influence the coping mechanism utilized by the individual, which subsequently impacts levels of psychological distress.

There is empirical support for the various links in the mediational model including research on attachment and psychological distress (Armsden & Greenberg, 1987; Hinderlie & Kenny, 2002; Holmbeck & Wandrei, 1993; Kenny, 1987; Kenny & Donaldson, 1991; Mikulincer & Shaver, 2007; Rice et al., 1997; Torquati & Raffaelli, 2004); coping and psychological distress (Compas et al., 1988; Compas et al., 2006; Cooper et al., 1998; Li et al., 2006; Panzarine et al., 1995; Radziwon, 2009; Rodrigues & Kitzmann, 2007); and attachment and coping (Buelow et al., 2002; Howard & Medway, 2004; Mikulincer & Shaver, 2007; William & Riskind, 2004). In addition to empirical support for components of the mediational model, there is also support for the whole model in college student samples (Lopez et al., 2001; Wei et al., 2003). These bodies of research will be reviewed below in more detail.

As will be shown below, research has contributed to an understanding of the indirect relationship of attachment and psychological distress through coping in college student samples, but these relations have yet to be examined in high-risk adolescent populations. The current study addresses the gap in the literature. The research on coping will be reviewed in greater detail below, as the present study investigated the possible mediational role of coping in the link between attachment and psychological distress within a sample of adolescent females in foster care.

### **Overview of Coping**

Coping has been defined in a number of ways in the literature. The most widely used definition for coping is “the response to the ongoing cognitive and behavioral demands that are taxing or exceeding the resources of the person” (Lazarus, 1993, as cited in Frydenberg, 2008 pg. 23). Coping can be conceptualized as an adaptation process that adolescents use in response to the constant changes in their surroundings (Compas, Connor-Smith, Saltzman, Thomsen, & Wadsworth, 2001). Thus coping refers to “the cognitive and behavioral efforts used by individuals to manage the demands of a person-environment relationship” (Frydenberg, 2008, pg. 23).

### **Theoretical Models of Coping**

Frydenberg (2008) proposed a model explaining the coping process in adolescents. The components of the model are as follows: situational determinants, primary appraisal, secondary appraisal, coping behavior, outcome, and tertiary appraisal. Situational determinants refer to the individual’s personality, insight into the stressor, and goals of coping. Frydenberg (2008) theorized that genetic and environmental differences influence an individual’s insight into the stressor. Genetic and environmental differences

were proposed to influence the individual's interpretations of the harm and threat of the stressor (primary appraisal) and the resources available to deal with the stressor (secondary appraisal). The information derived from primary and secondary appraisals is used in order to determine the response to the stressor (coping behavior), which influences the outcome. The individual then engages in tertiary appraisal, in which the coping strategy and its subsequent outcome is reviewed (Frydenberg, 2008).

### **Empirical literature on Coping**

There is a long history of empirical literature on coping. Compas et al. (2001) integrated a number of approaches to coping. Some of the earliest research on coping focused on two and three-factor models such as: problem and emotion focused coping; primary, secondary, and relinquished control coping; engagement and disengagement coping; reactive and suppressive style coping; and active and passive coping. These models and their associated terms will be further explained in the text below. Most recently, Ayers, Sandler, West, and Roosa (1996) provided a four-factor model of coping that was found to fit the data better than the two-factor models listed above. Compas et al. (2001) provides a comprehensive review of the literature of coping in adolescents and supports the most recent four-factor model developed by Ayers and colleagues.

Initially, Lazarus (1993) conceptualized coping as being split into two parts: problem focused coping, which refers to the adolescent's behavioral response to stress; and emotion-focused, which refers to the adolescent's response to the emotions resulting from the stress (Lazarus, 1993). Skinner and Welborn's model (1994) emerged from Lazarus' model of problem and emotion focused coping.

Lazarus' model of coping provided the conceptual framework for the Skinner and Welborn (1994) model, in which coping is a part of a motivational model for psychological control that focuses on basic human needs for competence, autonomy, and relatedness. The motivational model posits that humans either attempt to adjust their environment or seek to adjust their response to their environment in relation to the needs for competence, autonomy and relatedness (Skinner & Welborn, 1994).

Rothbaum, Weisz, and Snyder (1982) conceptualized coping as being divided into three subgroups: (a) primary control coping, which refers to the adolescent's attempts to change the conditions that are causing stress; (b) secondary control coping, refers to the adolescent's attempts to adapt to the stressful conditions in which they are in; and (c) relinquished control, refers to the lack of attempts made by adolescents to cope (Rothbaum et al., 1982).

Reynolds and Wigal (1989) conceptualized coping based on a two-factor model, engagement and disengagement coping, which was derived from Mullen and Suls' (1982) two-factor model of attention and rejection (or as later researchers termed them: approach and avoidance) (Roth & Cohen, 1986; Suls & Fletcher, 1985). Engagement coping refers to the adolescent coping by focusing on the stressful situation and the affiliated emotions (Tobin, Holroyd, Reynolds & Wigal, 1989; Ebata & Moos, 1991; Compas et al., 2001). Disengagement coping refers to the adolescent focusing on things other than the stressful situation and the affiliated emotions (Tobin et al., 1989; Ebata & Moos, 1991, Compas et al., 2001). Criticism of engagement vs. disengagement coping suggests that these dimensions are too broad and fail to differentiate more divergent subtypes of coping (Compas et al., 2001).

Heppner, Cook, Wright, and Johnson (1995) developed another two-factor model of coping that focused on whether one's problem-focused coping efforts were facilitating or inhibiting progress toward resolution of a problem. Reactive style coping refers to the use of emotions to react to stress. It is the tendency to have emotional and cognitive responses that deplete the individual or distort coping activities. For example, individuals may allow past feelings to affect how they currently respond to stress (Heppner et al., 1995). In contrast, suppressive style coping refers to a more avoidant style of coping such that individuals deny problems and avoid coping responses. (Heppner et al., 1995)

Walker, Smith, Garber, and Van Slyke (1997) developed a two-factor model of coping for children, active and passive, based on the existing pain and coping literature on adults. Active coping refers to four strategies: problem-solving, seeking emotional social support, seeking instrumental support, and using distraction (Walker et al., 1997). Whereas, passive coping refers to behavior disengagement, self-isolation, and catastrophizing (Walker et al., 1997).

Ayers et al. (1996) provided a four-factor model of coping that was found to fit the data better than the two- and three-factor models listed above. The researchers' tested conceptual models of the structure of coping in adolescence by confirmatory factor analysis. Compas et al. (2001) suggest confirmatory factor analytic methods provide a promising way to test theoretical-conceptual dimensions of coping. In addition, due to the complexity of coping and its associated processes, Carver, Scheier, and Weintraub (1989) noted that coping may involve more than simply two-factors.

Ayers and colleagues (1996) conducted a semi-structured interview with children's whose parents were recently divorced. A textual analysis was then performed

on the responses of the children, based on a categorization system that was derived from the existing coping literature. The categorization system was then revised in order to include responses from children that were not captured by the categories, which resulted in 11 categories. These 11 categories were grouped under five factors, which resulted in the proposed five-factor model examined in the study. A confirmatory factor analysis was then performed in order to test the five-factor structure in a racially diverse sample (43% Caucasian, 30% Latino/a, 20% African-American, and 7% Native American). As a result of the confirmatory factor analysis, Ayers et al. (1996) found that coping was divided into four-factors: active coping, social support, distraction, and avoidance. Across a variety of research studies that used the Children's Coping Strategies Checklist (CCSC), Ayers and colleagues found that there were no significant relationships between support seeking strategies coping and both depression and self-esteem (Ayers, 1991; Ayers et al., 1996; Program for Prevention Research, 1996). Due to the lack of expected relationships between support seeking strategies coping and child outcomes, Ayers and colleagues dropped support seeking strategies dimension from the four-factor model represented within the CCSC (Program for Prevention Research, 1996). This recent change was honored within the current study such that only dimensions of active, distraction, and avoidance coping were analyzed in a sample of adolescent females in foster care.

Active coping refers to active cognitive and behavioral responses to the problem through the use of problem solving activities (Ayers et al., 1996). More specifically, active coping consists of the following coping techniques: cognitive decision making (e.g.,, thinking about how to best handle the situation), direct problem solving (e.g.,, doing something to solve the problem), seeking understanding (e.g.,, thinking about what

could be learned from the problem), maintaining positivity (e.g., thinking about good things in life), and control (e.g., thinking things can be handled no matter what).

Distraction refers to physical release of emotion and distracting actions or the use of stimuli to avoid thinking and acting on problems (Ayers et al., 1996). More specifically, distraction coping consists of the use of distracting actions (e.g., read a book) and expressing emotions through physical activity (e.g., exercise). Avoidance refers to cognitive and behavioral attempts to avoid the problem (Ayers et al., 1996). More specifically, avoidance coping consists of engaging in actions to avoid problem (e.g., avoiding the people associated with the problem), repression (e.g., forgetting about problem), and wishful thinking (e.g., wishing situation was better).

Thus, the two-factor model proposed by Lazarus (1993) was not supported, whereas distraction loaded separately from avoidance coping suggesting that distraction is its own distinct coping strategy and not only used as mechanism to avoid (Compas et al., 2001; Frydenberg, 2008). In conclusion, coping has been conceptualized in the empirical literature as two-factor and three-factor models. After conducting a structured interview, textual analyses, and confirmatory factor analysis on the resulting four-factor model of coping, Ayers et al. (1996) examined two alternate two-factor models of coping (i.e., active and passive coping, as well as problem and emotion focused coping) using the data collected for their confirmatory factor analysis. The authors found that the two two-factor models failed to adequately represent coping within the sample. Thus, Ayers et al. (1996) determined that the four-factor model more adequately represented coping in the sample than did either of the two-factor models.

The research makes clear that active coping serves as an adaptive coping strategy. Active coping strategies are related to lower levels of depression, lower levels of conduct disorder, and higher levels self esteem (Ayers, 1991; Ayers et al., 1996). Sandler, West, and Tein (1994) conducted a longitudinal study on coping, stress, and psychological symptoms of children of divorce. Sandler and colleagues found that active coping moderated the relations between negative events and conduct problems. Sandler et al. (2003) investigated a group intervention, Family Bereavement Program (FBP), for parentally bereaved children and adolescents. The authors found that FBP led to higher levels of active coping and to less internalizing and externalizing problems. The authors only used the subscale of active coping because they reported that they wanted to only assess positive aspects of coping within the sample. Furthermore, Sandler, Tein, Mehta, Wolchik, and Ayers (2000) found coping efficacy to mediate the relations between active coping and psychological problems in sample of divorced children.

In contrast to active coping, avoidant coping is clearly a maladaptive coping strategy. Avoidant coping was found to be related to higher levels of depression and low self-esteem (Ayers, 1991) and higher levels of internalizing problems (Sandler et al., 2000). Sandler et al. (1994) conducted a longitudinal study on coping, stress, and psychological symptoms of children of divorce. Sandler et al. (1994) found that avoidance coping partially mediated the relations between negative events and symptoms but the authors failed to find a significant relationship between both distraction coping and support seeking strategies coping and both depression and self-esteem.

The research on distraction coping has been mixed. Ayers et al. (1996) found use of distraction coping to be related to high levels of depression and conduct disorder. In



contrast, Sandler et al. (1994) found that distraction coping was related to lower internalizing behaviors (e.g., anxiety and depression). Moreover, Ayers (1991) failed to find a significant relationship between distraction coping and either depression and self-esteem. Thus, it's difficult to ascertain whether distraction coping serves as an adaptive or maladaptive strategy.

As stated earlier, support seeking strategies coping was dropped by Ayers and colleagues due to non-significant relationships found between support seeking and psychological distress (Ayers, 1991; Ayers et al., 1996; Program for Prevention Research, 1996). For this reason, support seeking strategies was not explored in the present study.

### **Attachment and Coping**

As described earlier, the link between attachment and coping has been proposed based on the idea that attachment working models can affect the various cognitive and affect regulation processes that make up coping. Specifically, when an individual is faced with stressful life events, the individual's internal working model is expected to influence the type of coping strategy utilized by that individual. This link is highlighted within the theoretical and empirical literature on attachment and coping (Buelow et al., 2002; Howard & Medway, 2004; Kobak & Sceery, 1988; Mikulincer & Florian, 2004; Mikulincer & Shaver, 2007; Ognibene & Collins; Sieffge-Krenke & Beyers, 2005; Sroufe & Waters, 1977, 1998; William & Riskind, 2004).

### **Theoretical Literature on Attachment and Coping**

The link between attachment and coping can be conceptualized through the theoretical literature on attachment and affect regulation (Kobak & Sceery, 1988; Sroufe

& Waters, 1977; Ognibene & Collins, 1998; Mikulincer & Florian, 2004; Sieffge-Krenke & Beyers, 2005; Mikulincer & Shaver, 2007). For infants, attachment behavior serves as the tool to regulate proximity to caregivers based on the severity of the perceived environmental threat. When there is no perceived threat, the infant engages in exploration. If there is a perceived threat, the attachment system is activated and the infant uses the secure base, or caregiver, as a source of comfort and safety. (Ainsworth et al., 1978; Bowlby, 1969, 1973, 1980).

The level of sensitivity used by the caregiver once the attachment system is activated is the context in which the child is theorized to learn to regulate emotional experience and “felt security” (Sroufe & Waters, 1977). The adolescent’s history of regulating distress with attachment figures influence what strategies the adolescent uses to regulate emotions and “felt security” (Sroufe & Waters, 1977). If the adolescent’s history involves a consistent sensitive response from caregivers when in distress, then the adolescent will seek support/comfort from others as their coping strategy. Alternatively, if the adolescent’s history involves an inconsistent, insensitive response from caregivers, then the adolescent will seek out alternate coping strategies (Kobak & Sheeree, 1988). Support seeking as a coping strategy for individuals low on both attachment anxiety and low avoidance (secure) has been supported in the empirical literature (Ognibene & Collins, 1998).

Ognibene and Collins (1998) found that individuals who scored low on both attachment anxiety and low avoidance (secure) perceived more available support and thus used support as a coping strategy when faced with stressors such as: interpersonal and achievement-related stressors. These attachment working models are conceptualized by

Bowlby (1973, 1988) as internal working models. Individuals use internal working models to classify experiences and cope (Bowlby, 1980).

Mikulincer & Florian (1998) theorized that inner working models of individuals low on both attachment anxiety and low avoidance (secure) would help those individuals to assign a positive meaning to stressful situations, adaptively cope in stressful situations, and experience less distress. Alternatively, inner working models may influence those high on both attachment anxiety and attachment avoidance to assign a negative meaning to stressful situations, maladaptively cope in stressful situations, and experience more distress.

Seiffge-Krenke and Beyer (2005) provided additional theoretical support for the influence of attachment style on coping. The authors referred to Lazarus and Folkman's (1984) model of coping in order to explain the role of attachment. Lazarus and Folkman's (1984) model of coping suggests that individuals vary in the method adopted for coping based on their appraisals of their stressors. Lazarus and Folkman (1984) suggest that there are three appraisal processes in stressful situations: (a) primary appraisal- understanding and deciphering the problem, (b) secondary appraisals – identifying if resources are accessible to cope and (c) assessment of the consequence of response. According to the model, individual differences mediate the process of appraising stressors.

Seiffge-Krenke and Beyers (2005) noted that these individual differences include the different internal working models that individuals possess based on their experiences with caregivers in childhood. These internal working models are hypothesized to direct the appraisals of stress and the coping methods selected in response to the stressful

situation (Sieffge-Krenke & Beyers, 2005). In conclusion, the relation between attachment and coping is such that adolescents may use their attachment working models to determine which coping strategies to use when faced with distress.

In reference to dimensions of attachment anxiety and attachment avoidance, Mikulincer and Shaver (2007) posited that individuals who are low on both attachment anxiety and attachment avoidance (secure) and who are faced with an event that forces them to regulate their emotions will either focus their efforts on (a) changing the event that prompted the need to emotionally regulate or (b) reassessing the event that prompted the need to emotionally regulate or by (c) distracting themselves from the event if it can't be solved. The authors theorized that the above processes can reduce stress associated with the event. Adaptive coping strategies are then utilized by individuals low on both attachment anxiety and attachment avoidance (secure) due to their experiences with an attachment figure who is (or was) receptive to needs for security and support. The authors posited that these experiences aid in problem solving, more specifically the above provision of security and support from attachment figures enhance self-confidence and enables individuals to rationally re-evaluate problems and adjust plans based on logic and reason. Due to this, they are at less risk for irrational beliefs and lack of self-confidence negatively influencing problem solving processes.

Alternatively, Mikulincer and Shaver (2007) speculated that individuals high on both attachment anxiety and avoidance (insecure) differ in their attempts to emotionally regulate. Attachment anxiety is characterized by an excessive need for approval from others and fear of interpersonal rejection and attachment avoidance is characterized by emphasis on self-reliance and fear of interpersonal intimacy (Brennan et al., 1998).

Unlike individuals low on both attachment anxiety and avoidance (secure), individuals high on attachment anxiety (one aspect of insecurity) are driven by a need for attention and security from attachment figures. This drive then causes them to express intense emotions (e.g., anger, jealousy, sadness, anxiety, and fear). These individuals express intense emotions in order to solicit attention and security from attachment figures. Due to this, they are less likely engage in problem solving because using this skills may be opposite of their wish to perpetuate the problem situation, based on their desire for attention and comfort from others. Individuals high on attachment avoidance (one aspect of insecurity) are less likely to use coping techniques such as problem solving and re-assessing because this would require certain aspects of self awareness (e.g., recognizing errors, admitting distress) that people high on avoidance tend to deny. Instead, these individuals are unwilling or unable to deal with causes of painful emotions and opt to suppress emotions by (a) denial of emotion-related thoughts and memories, (b) by not focusing on emotion-related material, and (c) by hiding expressions of emotions (Mikulincer & Shaver, 2007). In summary, individuals high on both attachment anxiety and avoidance use maladaptive forms of coping: intensification and suppression, respectively. Nevertheless, the picture has been found to be more complex in adolescents based on empirical data on the relations between attachment anxiety and both involuntary disengaged coping and suppressive style coping. (Lopez, Mitchell, & Gormley, 2002; Radziwon, 2009; Wei et al., 2003). Although those high in attachment anxiety are hypothesized to engage in hyper-activating strategies, empirical evidence indicates that they also engage in some forms of de-activating strategies as well.

Lopez et al. (2002) found attachment anxiety to be related to suppressive style coping and Wei et al. (2003) found both attachment anxiety and attachment avoidance to be related to suppressive style coping. Suppressive style coping refers to a tendency to avoid dealing with problems. In addition, Radziwon (2009) found both attachment anxiety and avoidance to be related to involuntary disengaged coping. Involuntary disengaged coping refers to strategies such as emotional numbing and inaction. Thus, although the theoretical literature posited that high attachment anxiety would be more related to increased expression of emotion when faced with distress, empirical research has found that individuals tend to use more avoidance-related coping strategies, such as suppressive style and involuntary disengaged (Lopez, Mitchell, & Gormley, 2002; Radziwon, 2009; Wei et al., 2003)

### **Empirical Literature on Attachment and Coping**

Empirical research provides support for the theoretical literature on the relations between attachment and coping. However, it is important to note that much of the research on attachment and coping, as well as the research on coping and psychological distress, has been done using the older two- or three-factors of coping. No coping researcher has provided a method for translating the older models of coping into the most up-to-date four-factor model of coping. Although some terms can be easily translated, for example, active coping as conceptualized by Moos and colleagues (Billings & Moos, 1981; Ebata & Moos, 1991) refers to the individual's coping efforts being directed to the problem; likewise, active coping as conceptualized by Ayers and colleagues (Ayers et al., 1996), refers to active cognitive and behavioral responses to the problem through the use of problem solving activities; other terms (e.g., emotion-focused, ruminative coping) do

not have a clear factor into which they could be translated. For this reason, research presented on the association between attachment and coping and between coping and distress will simply be presented using the older terms without translation to the new four-factor model. The key point to notice is that lower levels of attachment anxiety and avoidance (attachment security) are associated with more adaptive coping styles, whereas, higher levels of attachment anxiety and avoidance (attachment insecurity) are linked to more maladaptive coping styles.

In a review of the empirical literature, Mikulincer and Shaver (2007) noted that attachment orientations are important in the process of appraising, coping, and reacting to emotionally stressful events. More specifically, attachment orientations are related to people's thoughts and expectations surrounding their ability to deal with stress. For example, both high attachment anxiety and avoidance (insecure) are related to more pessimistic and hopeless attitudes, and less ego-resiliency and hardiness (Mikulincer & Shaver, 2007). Also, both low attachment anxiety and avoidance (secure) are associated with appraising stressful events in less threatening ways, which leads to more adaptive coping strategies. Alternatively, both high attachment anxiety and avoidance are associated with appraising threats as extreme (or worsening), which leads to more maladaptive coping strategies. Prior research on attachment and coping has also found that low attachment anxiety and low attachment avoidance (secure) are linked to more adaptive coping resources such as cognitive and emotional resources (Buelow et al., 2002). Also, adolescents' low on both attachment anxiety and attachment avoidance (secure) tended to have higher levels of family communication and less negative avoidance and adolescents' high on both attachment anxiety and attachment avoidance

(insecure) tended to show higher levels of negative avoidance (Howard & Medway, 2004).

Furthermore, women low on both attachment anxiety and avoidance (secure) were found to use more problem-focused strategies (adolescents' behavioral response to a stress) when coping with tasks of being a parent (as assessed by Lazarus & Folkman's, 1994, appraisal scale and the ways of coping checklist (Folkman & Lazarus, 1985). Thus, adaptive and maladaptive coping strategies utilized by individuals and their association to attachment have been supported by research on attachment and coping. It is also necessary to examine the association between both adaptive and maladaptive coping and psychological distress, as factors contributing to adolescent distress were the focus of the present study.

### **Coping and Psychological Distress**

Compas et al. (2001) posited that individuals vary in their choices of coping strategies based on their level of reactivity (level in which they are emotionally or physically aroused by stressor). For example, when faced with problems, highly reactive individuals are slower to return to baseline stress and are more prone to being aroused by subsequent stressors. Highly reactive individuals have the potential to use avoidance coping strategies which leads to psychological distress. Moreover, individual differences in abilities associated with maintaining and adjusting attention levels are theorized to be related to more distraction coping strategies that also lead to psychological distress (Compas et al., 2001). Frydenberg (2008) posited that withdrawal factors associated with avoidant and distraction coping can be helpful in allowing adolescents to temporarily regulate but is less effective when these methods of coping are used long term.



Prior research has found that adolescents use adaptive and maladaptive ways to cope with stressors. The adaptive coping mechanisms tend to lead to decreased levels of psychological distress whereas maladaptive coping mechanisms tend to lead to increased levels of psychological distress (Compas et al., 1988; Compas et al., 2006; Cooper et al., 1998; Li et al., 2006; Panzarine et al., 1995; Radziwon, 2009; Rodrigues & Kitzmann, 2007). Adaptive and maladaptive coping techniques utilized by adolescents and the association with psychological distress will be discussed below.

Problem focused coping (adaptive coping strategy) was found to be negatively related to emotional/behavioral problems whereas emotion focused coping was found to be positively related to emotional/behavioral problems (Compas et al., 1988). In further support the association between coping and psychological distress, Compas et al. (2006) found that secondary control and engagement coping (adaptive forms of coping) predicted lower levels of anxiety/depression. Disengagement coping (a more maladaptive form of coping) predicted higher levels of anxiety/depression.

Li et al. (2006) found that adolescent girls used more emotion focused and ruminative coping, when compared to adolescent boys. Ruminative coping (maladaptive coping strategy), was related to high levels of depressive symptoms. Alternatively, Cooper, Shaver, and Collins (1998) found avoidance-related coping (maladaptive coping strategy) to be related to psychological distress. Moreover, Lopez et al. (2001) found suppressive style coping (maladaptive coping strategy) to be positively related to psychological distress. Suppressive style is referred to as a tendency to avoid dealing with problems (e.g., avoid thinking about problems). Radziwon (2009) and Rodrigues and Kitzmann (2007) found use of involuntary disengagement coping to be related to

increased levels of distress. Involuntary disengaged coping refers to strategies related to numbing out and cognitively withdrawing from problems (e.g., sleeping to avoid problems). In fact, Radziwon (2009) found that there was no significant relation between involuntary *engaged* coping and psychological distress (an involuntary, hyper-activating, ruminative style of coping), whereas there was a significant relation between involuntary *disengaged* coping and distress.

In summary, prior research found that various measures (though not all) of more maladaptive forms of coping, such as ruminative, emotion-focused, involuntary disengaged, suppressive style, and disengagement coping were associated with higher levels of psychological distress. Alternatively, the research found that adaptive, problem-focused, secondary control, and engagement coping are related to lower levels of psychological distress (Compas et al., 1988; Compas et al., 2006; Cooper et al., 1998; Li et al., 2006; Panzarine et al., 1995; Radziwon, 2009; Rodrigues & Kitzmann, 2007). The identification of adaptive and maladaptive coping skills and their relations to psychological distress is important in understanding the current study.

The dimensions of coping (active, distraction, and avoidant) used in this study were considered adaptive or maladaptive coping strategies based on prior research on their associations with depression, self-esteem, and conduct disorder, as described above.

The present study focused on potential factors that contributed to psychological distress in a high-risk sample of adolescent females in foster care. In order to further support the hypothesized factors that contribute to psychological distress within this study, a review of the literature on tests of mediational models that include attachment, coping, and psychological distress will be presented.

### **A Mediational Model Including Attachment, Coping, and Psychological Distress**

The theoretical and empirical literature review of the relations between attachment and psychological distress, coping and psychological distress, and attachment and coping provide support for a mediational model and in fact there is empirical support for a mediational role for coping in the links between attachment and psychological distress (Lopez et al., 2001; Wei et al., 2003).

Wei et al. (2003) examined the potential mediating affects of coping (perceived problem-solving ability, reactive coping, and suppressive style coping) on the relations between attachment (attachment anxiety and attachment avoidance) and psychological distress (depression, hopelessness, anxiety, anger, and interpersonal problems). Wei et al. (2003) hypothesized that: (a) coping would mediate the relation between attachment anxiety and psychological distress and (b) coping would mediate the relation between attachment avoidance and psychological distress in a sample of 515 undergraduate students who were primarily Caucasian women (68% women, 32% men; between ages of 18 and 41; 85% Caucasian; 8% African-American; 3% Asian-American; 1% Hispanic-American; 1% Native American; 1% multi-racial American; 1% Non-U.S. citizens; and 1% other).

The researchers used the Adult Attachment Scale (AAS; Collins & Read, 1990) in order to assess participants' attachment style. The Suppressive Style (tendency to deny problems and avoid dealing with problems) and Reactive Style (tendency to have strong emotional responses) subscales of the Problem-focused Style of Coping (PF-SOC; Heppner et al., 1995) and the Problem Solving Inventory (PSI; Heppner, 1988) were used to assess coping. Psychological distress was assessed by the Beck Depression Inventory

(Beck, Ward, Mendelson, Mock, & Erbaugh, 1961), the State-Trait Anxiety Inventory (STAI; Spielberger, 1983), the Trait Anger Scale (Spielberger, 1988), the Hopelessness Scale (Beck, Weissman, Lester, & Trexler, 1974), and the Inventory of Interpersonal Problems scale (Soldz, Budman, Demby, & Merry, 1995).

Initial tests of the mediational role of coping for both attachment anxiety and attachment avoidance and psychological distress yielded support for a partial mediational model, such that direct effects from attachment anxiety and attachment avoidance to psychological distress and additional pathways from attachment anxiety and attachment avoidance to various coping strategies, and from various coping strategies to psychological distress were supported. The authors then tested the full mediational potential of coping for each attachment dimension. The researchers found that the relation between attachment anxiety and psychological distress was fully mediated by coping (i.e., reactive and suppressive style coping). In contrast, the relation between attachment avoidance and psychological distress was partially mediated by coping (i.e., reactive and suppressive style coping). Thus, the relation between attachment anxiety and psychological distress was fully mediated by both emotion-focused type coping strategies and avoidance-related coping strategies and the relation between attachment avoidance and psychological distress was partially mediated by both emotion-focused type coping strategies and avoidance-related coping strategies. It is interesting to note that the theoretically expected distinction between attachment anxiety as linked to hyper-activating strategies and attachment avoidance as associated with de-activating strategies was not supported. Rather, both attachment anxiety and avoidance were linked with both

types of maladaptive coping strategies, and for both attachment anxiety and avoidance mediated the link between attachment and distress.

Wei et al.'s (2003) study provided an empirical foundation for the current research study but there were many limitations to this study. The researchers conducted the study among a college student sample that was predominately white, which limits the study's ability to generalize to clinically and culturally diverse samples. Thus, the authors noted that the study should be replicated in other populations, more specifically in populations where distress is expected to be high. The current examined a similar mediational model within a sample of adolescent females in foster care as distress is expected to be high in this group.

Moreover, Wei et al. (2003) used a measure of attachment, AAS, which was derived from Hazan and Shaver's (1987) three-category model of attachment. The researchers correlated the AAS's subscales of Close, Depend, and Anxiety with the two dimensions of attachment: attachment anxiety and attachment avoidance in order to determine which subscales were represented by the two dimensions. For example, the anxiety subscale of the AAS was used to represent the attachment anxiety dimension because the anxiety subscale of the AAS was found to be positively correlated with the anxiety dimension. Thus, Wei et al. (2003) did not use the most up to date measure of attachment in their study. This problem was resolved within the current study, which used the currently-recommended measure of attachment anxiety and attachment avoidance, the Experiences in Close Relationship Scale (ECR; Brennan et al., 1998), which was derived from a factor analysis of all extant attachment self-report scales.

Lopez et al. (2001) also conducted a study on the mediational role of coping. Similar to Wei et al. (2003), Lopez et al. (2001) used a sample of undergraduate students with similar demographics in order to test their hypothesis. The researchers proposed that: (a) attachment anxiety would be associated with a reactive style coping (b) attachment avoidance would be associated with a suppressive coping style (c) both attachment anxiety and attachment avoidance, as well as reactive and suppressive style coping would be related to psychological distress and (d) problem coping styles would mediate the relation between both attachment anxiety and attachment avoidance and psychological distress.

Similar to the study by Wei et al. (2003), Lopez et al. (2001) used the STAI (Spielberger, 1983) to assess anxiety and the PF-SOC (Heppner et al., 1995) to assess coping. Conversely, Lopez et al. (2001) chose to use DACL (Lubin, 1965) to measure depression and the ECR (Brennan et al., 1998). Lopez et al. (2001) found that problem coping styles mediated the relation between attachment and psychological distress. The authors analyzed the data by entering each construct in the regression analyses as blocks. Specifically, attachment anxiety and attachment avoidance were entered in the regression analysis as a block that represented attachment orientation. Also, reactive and suppressive style coping were entered in the regression analysis as a block that represented problem coping styles. Thus, statements can not be made regarding the specific mediating roles of reactive and suppressive style separately. The only statement that can be made based on the analyses used is that problem coping (reaction and suppressive style coping together) mediated the relation between attachment orientation (anxiety and avoidance together) and psychological distress. (Lopez et al., 2001).

Both Wei et al. (2003) and Lopez et al. (2001), explored coping as a mediator in college student samples that lacked clinical and cultural diversity which limited generalizability of research findings. Lopez et al. (2001) also encouraged the replication of a like study within a diverse sample. Thus the current study examined coping as a mediator in the relations between attachment and psychological distress within an at-risk, racially diverse sample in order to fill the gap in the literature. Adolescent females in foster care are deemed as high risk due to a number of factors such as: chronic medical problems (Hochstadt, Jaudes, Zimo, & Schachter, 1987; Pinkney, 1994; Schor, 1982; Swire & Kavalier, 1977); emotional and psychological disorders (Frank, 1980; Halfon, Mendonca, & Berkowitz, 1995; Hochstadt, Jaudes, Zimo, & Schachter, 1987; Pinkney, 1994; Schor, 1982; Simms, 1989; Swire & Kavalier, 1977; Takayama, Wolfe, & Coulter, 1998); and diagnosed psychiatric problems (Stein, Rae-Grant, Ackland, & Avison, 1994)

In addition to the research studies listed above that focused on college student samples, one study examined the mediating role of coping in sample of adolescents who were high school students. Radziwon (2009) explored coping and psychological distress as mediators for the relations between attachment (both anxiety and avoidance) and help seeking intentions. Although help-seeking intentions were included in the model for this study as an outcome variable, the results provided support for a mediational model of coping. Specifically, Radziwon (2009) found that attachment anxiety influenced avoidance-related coping strategies, or involuntary disengaged coping (e.g., emotional numbing and inaction). Avoidance-related coping strategies were then found to influence psychological distress which in turn influenced help-seeking behaviors in adolescents. Thus, this study suggested that avoidance-related coping strategies mediated the relation

between attachment anxiety and psychological distress in adolescence. Radziwon (2009) also found that emotion focused coping strategies (i.e., involuntary engaged coping) did not mediate the relation between attachment anxiety and psychological distress as hypothesized and supported by prior empirical studies (Compas et al., 1988; Li et al., 2006), although those attachment anxiety was linked to higher levels of emotion-focused coping. Emotion focused coping simply did not serve as a mediator of the link between attachment anxiety and distress.

### *The Current Study*

The current study investigated the mediating role of coping (active, distraction, and avoidance) in the relation between attachment (anxiety and avoidance) and psychological distress in a sample of adolescent females in foster care. Examination of potential coping mechanisms (active, distraction, and avoidance) as mediators for the relation between attachment and psychological distress could have potential implications for interventions for adolescent females in foster care.

### **Rationale for Hypotheses**

Prior research found (a) that maladaptive types of coping have been linked to higher levels of attachment anxiety and avoidance (insecure), and adaptive types of coping have been linked to lower levels of attachment anxiety and avoidance (secure); (b) that maladaptive forms of coping are linked to distress; and (c) that coping can serve as a mediator of the link between attachment and distress, the following hypotheses are proposed relative to the links between attachment, coping, and distress in adolescent females in foster care. Please note that although at times there was evidence that coping fully mediated the link between attachment and psychological distress in college student



samples (e.g., coping fully mediated the link between attachment anxiety and distress; Lopez et al., 2001; Wei et al., 2003), it was not expected that coping would fully mediate the attachment-distress link in this more high-risk sample of females in foster care. The reasoning for this expectation is that these females are facing a number of additional factors that may influence psychological distress in ways unrelated to their coping strategies (Armsden et al., 1990; Field et al., 2000; Birkeland et al., 2005; Schmidt et al., 2006; Barnett et al., 2008; Futh et al., 2008). For example, there may be biological factors related to psychological distress (e.g., in post-partum depression as some females in foster care are pregnant and/or parenting) that may not be connected to coping strategies. For this reason, in each case the hypothesis was that partial, not full, mediation would be found.

**Hypothesis for the mediating role of active coping on the relation between attachment anxiety and psychological distress.** Coping has been found to fully mediate the relation between attachment anxiety and psychological distress (Lopez et al., 2001; Wei et al., 2003). Low attachment anxiety (one aspect of security) has been found to be related to lower levels of psychological distress (Armsden & Greenberg, 1987; Hinderlie & Kenny, 2002; Holmbeck & Wandrei, 1993; Kenny, 1987; Kenny & Donaldson, 1991; for a review, see Lopez & Brennan, 2000; Mikulincer & Shaver, 2007; Rice et al., 1997; Torquati & Raffaelli, 2004) and low attachment anxiety (one aspect of security) has been found to be associated with increased use of adaptive coping strategies (Buelow et al., 2002). Moreover, use of active coping, an adaptive strategy, has been found to be related to lower levels of distress (Ayers, 1991; Ayers et al., 1996; Sandler et al., 1994; Sandler et al., 2000). Thus, it was hypothesized that active coping would partially mediate the

relations between attachment anxiety and psychological distress such that, higher levels of anxiety would be associated with lower levels of active coping, which in turn would be related to higher levels of psychological distress.

**Hypothesis for the mediating role of active coping on the relation between attachment avoidance and psychological distress.** Coping has been found to partially mediate the relation between attachment avoidance and psychological distress (Lopez et al., 2001; Wei et al., 2003). Low attachment avoidance (one aspect of security) has been found to be related to lower levels of psychological distress (Armsden & Greenberg, 1987; Hinderlie & Kenny, 2002; Holmbeck & Wandrei, 1993; Kenny, 1987; Kenny & Donaldson, 1991; for a review, see Lopez & Brennan, 2000; Mikulincer & Shaver, 2007; Rice et al., 1997; Torquati & Raffaelli, 2004) and low attachment avoidance (one aspect of security) has been found to be associated with increased use of adaptive coping strategies (Buelow et al., 2002). Moreover, use of active coping, adaptive strategy, has been found to be related to lower levels of distress (Ayers, 1991; Ayers et al., 1996; Sandler et al., 1994; Sandler et al., 2000). Thus it was hypothesized that active coping would partially mediate the relation between attachment avoidance and psychological distress, such that higher levels of attachment avoidance would be associated with lower levels of active coping, which in turn would be linked to higher levels of psychological distress.

**Hypothesis for the mediating role of avoidance coping on the relation between attachment anxiety and psychological distress.** Coping has been found to fully mediate the relation between attachment anxiety and psychological distress (Lopez et al., 2001; Wei et al., 2003). High attachment anxiety (one aspect of insecurity) has

been found to be related to higher levels of psychological distress (Armsden & Greenberg, 1987; Hinderlie & Kenny, 2002; Holmbeck & Wandrei, 1993; Kenny, 1987; Kenny & Donaldson, 1991; for a review, see Lopez & Brennan, 2000; Mikulincer & Shaver, 2007; Rice et al., 1997; Torquati & Raffaelli, 2004) and high attachment anxiety (one aspect of insecurity) has been found to be associated with increased use of avoidance coping strategies (Lopez et al., 2002; Radziwon, 2009; Wei et al., 2003). Moreover, use of avoidance, maladaptive strategy, has been found to be related to higher levels of distress (Ayers et al. 1996; Cooper et al., 1998; Lopez et al., 2002; Radziwon, 2009; Wei et al., 2003). Thus it was hypothesized that avoidance coping would mediate the relation between attachment anxiety and psychological distress, such that higher levels of attachment anxiety would be linked to higher levels of avoidance coping, which in turn would be associated with higher levels of psychological distress.

**Hypothesis for the mediating role of avoidance coping on the relation between attachment avoidance and psychological distress.** Coping has been found to partially mediate the relation between attachment avoidance and psychological distress (Lopez et al., 2001; Wei et al., 2003). High attachment avoidance (one aspect of insecurity) has been found to be related to higher levels of psychological distress (Armsden & Greenberg, 1987; Hinderlie & Kenny, 2002; Holmbeck & Wandrei, 1993; Kenny, 1987; Kenny & Donaldson, 1991; for a review, see Lopez & Brennan, 2000; Mikulincer & Shaver, 2007; Rice et al., 1997; Torquati & Raffaelli, 2004) and high attachment avoidance (one aspect of insecurity) has been found to be associated with increased use of avoidance coping strategies (Radziwon, 2009; Wei et al., 2003). Moreover, use of avoidance, maladaptive strategy, has been found to be related to higher

levels of distress (Ayers et al. 1996; Cooper et al., 1998; Lopez et al., 2002; Radziwon, 2009; Wei et al., 2003). Thus, it was hypothesized that avoidance coping would mediate the relation between attachment avoidance and psychological distress, such that higher levels of attachment avoidance would be linked to higher levels of avoidance coping, which in turn would be associated with higher levels of psychological distress.

**Research question concerning the relations between attachment (anxiety and avoidance), distraction coping, and psychological distress.** Prior research on attachment and coping has found that high attachment (anxiety and avoidance) were related to maladaptive coping strategies and low attachment (anxiety and avoidance) were related to adaptive coping strategies (Buelow et al., 2002; Howard & Medway, 2004). Moreover, high distraction coping has been found to be related to both low internalizing symptoms (anxiety and depression) and higher levels of depression and conduct disorder (Ayers et al., 1996; Sandler et al., 1994). Due to the inconsistency in the empirical literature, no statements could be made regarding the adaptive or maladaptive nature of distraction coping. As a result, the current study examined the following research question: What are the relations between attachment, distraction coping, and psychological distress? If the links necessary for a mediational model were found, then additional questions would examine whether distraction coping served as a mediator of the expected link between attachment and psychological distress.

## Chapter 3

### Method

#### Participants

Participants in this study were 30 adolescent females, ranging in age from 14-19 years ( $M_{age} = 16.93$ ,  $SD = 1.49$ ), who were wards of New York State. There were 18 (60%) African-American, 5 (16.7%) Biracial/Multiracial, 3 (10%) Caucasian/White/European American/European, and 3 (10%) Latino(a)/Hispanic participants. The sample did not reflect the race and ethnicity of the current foster care population which consists of 41% White-Non Hispanic, 32% Black-Non Hispanic, 18% Hispanic, and 1% Asian-Non Hispanic. Participants were recruited through the New York State Office of Children and Family Services (NYS-OCFS). NYS-OCFS required the submission of a research application prior to conducting research in New York State. The application consisted of (a) contact information for principal investigator and advisor, Dr. Susan Woodhouse; (b) curriculum Vitae; (c) explanation of funding; (d) statement of purpose; (e) explanation of the relevance of research to the NYS-OCFS mission and expected contribution to the field of study; (f) a literature review; (g) detailed research questions; (h) research design; (i) explanation of data collection instruments; (j) detailed analytic approach; (k) detailed procedures to protect confidentiality; (l) procedure for obtaining informed consent and assent; (m) potential risks and benefits; (n) data security plan; (o) plans for reporting results; (p) potential impacts to NYS-OCFS and local agency operations; (q) expected timeline for completion of project; (r) abstract (s) academic institution institutional review board (IRB) approval; and (t) County Department of Social Services (DSS) approval.

To obtain DSS approval, the principal investigator contacted eight counties in western New York State to request approval to conduct research within their counties. Approval was received from four separate DSS.

Prior to submitting application to NYS-OCFS to conduct research, a full review application was submitted to The Pennsylvania State University's (PSU) IRB. A full review application was deemed necessary due to youth in foster care being considered a "special population." PSU IRB application materials were submitted, a full review meeting was held, and the project was approved after the IRB-suggested changes were made. Suggested changes included changing the age range of participants from 14-21 to 14-19 and changing the targeted population from adolescent mothers in foster care to adolescent females in foster care. Additionally, the IRB stipulated that principal investigator was not to contact youth in foster care directly. Thus, principal investigator recruited staff members at local foster care agencies to explain the study to the youth and provide youth with the principal investigator's contact information. After these changes were made, approval was obtained from the PSU IRB and a completed application was submitted to NYS OCFS and subsequently approved. Upon NYS OCFS approval, local foster care agencies within the approved DSS were contacted in order to obtain approval to conduct research with the foster care youth served by the respective agencies. The counties provided contact information for twenty local foster care agencies. County administrators requested that the agencies not be contacted more than three times during efforts to seek approval in order to prevent agencies feeling a sense of harassment. A total of five sites (25%) gave approval for recruitment of youth within their agencies. Some sites declined to allow recruitment with their agencies because of the requirement

that agency staff assist in recruitment. Thus, this barrier contributed to problems with reaching the initially proposed sample size of 88 participants. The initial proposed sample size of 88 was based on  $\alpha = 0.05$ , Power = 0.8, expected Cohen's f-square effect size = 0.15.

**Changes in the data analyses due to difficulties in recruitment and data collection.**

Due to problems with recruitment and the unanticipated length of time necessary to obtain approvals, recruit, and collect data (i.e., the IRB application submitted in October 2009 and data collection ended in January 2012), the initially proposed sample size was not acquired. Therefore, there were not enough participants in the study to continue with the initial proposal of testing the proposed mediational models using hierarchical regression, following the Baron and Kenny (1986) method for examining mediation. An alternate plan for analyses was created and the power analysis was revised. The revised analytic plan relied on examination of bivariate correlations in order to do a preliminary examination of the theory outlined in Chapter 2. Specific changes to the initial proposal are detailed below:

- The first mediational model initially proposed was that active coping, an adaptive strategy, would partially mediate the relations between attachment anxiety and psychological distress. Specifically, the original plan had been to examine the following links as a part of testing the larger mediational model, following the Baron and Kenny (1986) procedures:
  - Attachment anxiety would be positively related to psychological distress.  
This hypothesis was not tested with the smaller sample because there is

- already research showing that there is a link between attachment anxiety and psychological distress (Armsden & Greenberg, 1987; Kenny, 1987; Kenny & Donaldson, 1991; Hinderlie & Kenny, 2002; Holmbeck & Wandrei, 1993; Lopez & Brennan, 2000; Ryan et al., 1997; Torquati & Raffaelli, 2004; for a review, see Lopez & Brennan, 2000).
- Attachment anxiety would be inversely related to active coping. This hypothesis was tested with the smaller sample size in the current study.
  - Controlling for attachment anxiety, active coping would be inversely related to psychological distress. This hypothesis was not tested with the smaller sample size in order to focus on only a select number of bivariate correlations due to lack of power.
  - When controlling for active coping, the link between attachment anxiety and psychological distress would be significantly reduced. This hypothesis was not tested with the smaller sample size in order to focus on only a select number of bivariate correlations due to lack of power.
- The second mediational model initially proposed was that active coping, an adaptive strategy, would partially mediate the relation between attachment avoidance and psychological distress. Specifically, the original plan had been to examine the following links as a part of testing the larger mediational model, following the Baron and Kenny (1986) procedures:
    - Attachment avoidance would be positively related to psychological distress. This hypothesis was not tested with the smaller sample because there is already research showing that there is a link between attachment



- avoidance and psychological distress (Armsden & Greenberg, 1987; Kenny, 1987; Kenny & Donaldson, 1991; Hinderlie & Kenny, 2002; Holmbeck & Wandrei, 1993; Lopez & Brennan, 2000; Ryan et al., 1997; Torquati & Raffaelli, 2004; for a review, see Lopez & Brennan, 2000).
- Attachment avoidance would be inversely related to active coping. This hypothesis was tested with the smaller sample size in the current study.
  - Controlling for attachment avoidance, active coping would be inversely related to psychological distress. This hypothesis was not tested with the smaller sample size in order to focus on only a select number of bivariate correlations due to lack of power.
  - When controlling for active coping, the link between attachment avoidance and psychological distress would be significantly reduced. This hypothesis was not tested with the smaller sample size in order to focus on only a select number of bivariate correlations due to lack of power.
- The third mediational model initially proposed was that avoidance coping, a maladaptive strategy, would mediate the relation between attachment anxiety and psychological distress. Specifically, the original plan had been to examine the following links as a part of testing the larger mediational model, following the Baron and Kenny (1986) procedures:
    - Attachment anxiety would be positively related to psychological distress. This hypothesis was not tested with the smaller sample because there is already research showing that there is a link between attachment anxiety and psychological distress (Armsden & Greenberg, 1987; Kenny, 1987;

Kenny & Donaldson, 1991; Hinderlie & Kenny, 2002; Holmbeck & Wandrei, 1993; Lopez & Brennan, 2000; Ryan et al., 1997; Torquati & Raffaelli, 2004; for a review, see Lopez & Brennan, 2000).

- Attachment anxiety would be positively related to avoidance coping. This hypothesis was tested with the smaller sample size in the current study.
- Controlling for attachment anxiety, avoidance coping would be positively related to psychological distress. This hypothesis was not tested with the smaller sample size in order to focus on only a select number of bivariate correlations due to lack of power.
- When controlling for avoidance coping, the link between attachment anxiety and psychological distress would be significantly reduced. This hypothesis was not tested with the smaller sample size in order to focus on only a select number of bivariate correlations due to lack of power.
- The fourth mediational model initially proposed was that avoidance coping, a maladaptive strategy, would partially mediate the relation between attachment avoidance and psychological distress. Specifically, the original plan had been to examine the following links as a part of testing the larger mediational model, following the Baron and Kenny (1986) procedures:
  - Attachment avoidance would be positively related to psychological distress. This hypothesis was not tested with the smaller sample because there is already research showing that there is a link between attachment avoidance and psychological distress (Armsden & Greenberg, 1987; Kenny, 1987; Kenny & Donaldson, 1991; Hinderlie & Kenny, 2002;

Holmbeck & Wandrei, 1993; Lopez & Brennan, 2000; Ryan et al., 1997; Torquati & Raffaelli, 2004; for a review, see Lopez & Brennan, 2000).

- Attachment avoidance would be positively related to avoidance coping. This hypothesis was tested with the smaller sample size in the current study.
- Controlling for attachment avoidance, avoidance coping would be positively related to psychological distress. This hypothesis was not tested with the smaller sample size in order to focus on only a select number of bivariate correlations due to lack of power.
- When controlling for avoidance coping, the link between attachment avoidance and psychological distress would be significantly reduced. This hypothesis was not tested with the smaller sample size in order to focus on only a select number of bivariate correlations due to lack of power.

In summary, the current study explored the following hypotheses given the smaller sample size:

Attachment anxiety:

- Attachment anxiety would be inversely related to active coping
- Attachment anxiety would be positively related to avoidance coping

Attachment avoidance:

- Attachment avoidance would be inversely related to active coping
- Attachment avoidance would be positively related to avoidance coping

The current sample size did not allow for the initially proposed analyses as there was not significant power to analyze all of the initially proposed analyses. There was not

significant power to examine mediation. The analyses that have been removed focus on establishing the link between attachment and psychological distress. The association between attachment anxiety and psychological distress as well as the association between attachment avoidance and psychological distress has been consistently supported by the empirical literature, thus was not analyzed in the current sample (Armsden & Greenberg, 1987; Kenny, 1987; Kenny & Donaldson, 1991; Hinderlie & Kenny, 2002; Holmbeck & Wandrei, 1993; Lopez & Brennan, 2000; Ryan et al., 1997; Torquati & Raffaelli, 2004; for a review, see Lopez & Brennan, 2000).

To analyze the above 4 final hypotheses involving examination of bivariate correlations, a sample size of 30 was acquired (power = 0.75, alpha = 0.025 for each analysis;  $r^2 = .2$ ). By using the Bonferroni Correction method, there was a studywise Type I error rate of 0.05 with an alpha at 0.025 for each of the four analyses.

In addition to examining bivariate correlations, open-ended questions on the demographic questionnaire were analyzed using an abbreviated version of grounded theory (Charmaz, 1995; Charmaz, 2006). The following two questions: (a) “How do you think you handle stress in comparison to other people?” and (b) “How would you describe your feelings within the past month?” were textually analyzed. Data were analyzed by line by line coding (Willig, 2008): 1) identifying anchors that allow the key points of the data to be gathered (codes) 2) identifying concepts by collecting codes of similar content that allow the data to be grouped 3) identifying categories by developing broad groups of similar concepts that can be used to generate a theory 4) identifying a collection of explanations that help to explain these youth’s experiences (theory).

Principal investigator (Coder # 1) coded the data and identified codes (key points of data). Data were then audited by another coder (Coder # 2). Differences were resolved at this level through consensus. Coder # 1 then found similarities in the codes and further divided these codes into separate groups. Lower level groups were found within the groups that were formed. Coder # 2 audited the data and differences were resolved through consensus. Categories were developed and theories explaining adolescent female in foster care's experiences were generated.

### **Procedure**

Five participating local foster care agencies were sent via postal mail a) letters explaining the study, b) brochures describing the study, c) the local department of social services approval letter, and d) the NYS OCFS approval letter. Agencies were called after the mailing in order to answer questions and further explain the agency's role in the study. Agencies were asked to distribute brochures to the female youth in foster care between the ages of 14 and 19 who received services through their agency. Youth were asked by agency representatives to contact the principal investigator should they be interested in participating in the study.

Brochures were also posted in local community centers and health care centers within participating counties. Youth who contacted the principal investigator to express interest in the study were given an explanation of the consenting procedure and questions regarding the study were answered. For interested youth recruited through local foster care agencies, agency representatives were contacted to assist with obtaining consents.

If youth were under 18 years of age, all of the following consent forms were required: a) a parent/guardian consent form, b) the local department of social service

commissioner consent form, and c) the youth assent form. If youth were 18 and 19 years of age, a signed informed consent form from the youth was required. All individuals who signed informed consent forms and assent forms to participate were given the following explanation: “All information will be kept confidential, except for circumstances where disclosure is mandated by law such as suicide threat, threat of harm to others, and child abuse (any other disclosure circumstances need to be clearly specified on the consent form). Should the researcher have reasonable cause to suspect that a child is being abused or neglected, this information will be reported to the Statewide Central Register of Child Abuse and Maltreatment.”

After receiving assents/consents for participation, youth and agency representatives were contacted in order to schedule a day and time to complete survey packet. The completed a survey packet, included the Experiences in Close Relationships Scale (Brennan, Clark, & Shaver, 1998; see Appendix A), the Brief Symptom Inventory (Derogatis-Leonard, 1975; see Appendix B), the Children’s Coping Strategies Checklist (Ayers, Sandler, West, & Roosa, 1996; Program for Prevention Research, 1996; see Appendix C), and a brief questionnaire (see Appendix D). The completion of the survey packet took approximately 20 minutes. Each participant was be given \$10 cash for her participation in the study. Details regarding the measures are provided below.

## **Measures**

**Experiences in Close Relationships Scale (ECR; Brennan, Clark, & Shaver, 1998).** Attachment orientation was measured with the Experiences in Close Relationships Scale (ECR; Brennan, Clark, & Shaver, 1998). The ECR was a 36-item self-report instrument used to measure two dimensions of attachment: anxiety and avoidance.

Attachment anxiety refers to the fear of interpersonal rejection, an excessive need for approval from others, and stress when one's partner is unavailable (Brennan, Clark, & Shaver, 1998). Attachment avoidance refers to the fear of dependence and interpersonal intimacy, an excessive need for self-reliance, and reluctance to self-disclose (Brennan, Clark, Shaver, 1998). Eighteen items examined attachment anxiety (e.g., "I worry about being abandoned"), and 18 items examined attachment avoidance (e.g., "I get comfortable when a romantic partner wants to be very close"). Participants were asked about the extent to which each item was descriptive of their feelings in close relationships on a 7-point, partly anchored, Likert-type scale ranging from 1 (*disagree strongly*) to 7 (*agree strongly*). Higher scores on the anxiety and avoidant subscales indicated higher levels of attachment anxiety and attachment avoidance, respectively. Adequate internal consistency was shown for both subscales of attachment anxiety and attachment avoidance: Cronbach's alpha coefficients were .91 and .94 for the Anxiety and Avoidance subscales, respectively (Brennan, Clark, & Shaver, 1998). For the present sample, internal consistency reliability coefficients were .83 for the avoidance subscale and .85 for the anxiety subscale. Evidence for construct validity was provided by theoretically expected relations with measures of touch, emotions, and sexual practices (Brennan, Clark, & Shaver, 1998); by significant relationships in the hypothesized directions of attachment with coping and distress (Lopez & Gormley, 2002); and by theoretically expected relations with social self-efficacy and emotional awareness (Mallinckrodt & Wei, 2005). Test-retest reliability for both scales was .70 (Brennan, Shaver, & Clark, 2000).

**The Brief Symptom Inventory (BSI; Derogatis-Leonard, 1975).** This measure was a self-report measure used to assess psychological symptoms. The BSI is derived from the Symptom Checklist-90 (SCL-90; Derogatis, Rickels, and Rock, 1976), which originally evolved from the Hopkins Symptoms Checklist (HSCL; Derogatis, Lipman, Rickels, Uhlenhuth, and Covi, 1974). The BSI is composed of nine symptom dimensions (somatization, obsessive-compulsive, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideation, and psychoticism) and three global indices (global severity index, positive symptom distress index, and positive symptom total). Participants were asked to consider the past week and provide the degree to which various symptoms were experienced on a 5-point scale of distress (0-4), ranging from *not at all* (0) to *extremely* (4). Previous studies reported internal consistency reliabilities that range from a low of .71 on Psychoticism to a high of .85 on Depression. Test-retest reliability over a 2-week period ranged from a low of .68 on Somatization to a high of .91 on Phobic Anxiety. The global severity index (GSI) has been found to have a test-retest reliability of .90 and Cronbach's alpha of .95 (Derogatis, 1975; Endermann, 2005). Concurrent validity was provided through the correlations on the symptom dimensions of the BSI with the Wiggins content scales and the Tryon cluster scores obtained on the MMPI, with correlations ranging between .30 to .72 (Derogatis, 1983, 1993). Concurrent validity for the GSI was provided through a comparison of adjustment of patients on chemotherapy with those who were not. The chemotherapy group revealed significantly higher elevations on the GSI when compared to non-chemotherapy group (Schain, Wellisch, Pasnau, & Landsverk, 1983). The present study used the GSI to measure global symptoms as an indicator of psychological distress. Items related to harm to self and



harm to others were removed from survey packet due to concerns expressed by IRB and NYS OCFS. Higher scores on the GSI indicated higher levels of psychological distress. During textual analyses, youth's BSI scores were divided into two categories: high symptoms and low symptoms. These groups were determined by the youth's score on the GSI in relation to the clinical cutoff scores. Youth whose GSI scores were above clinical cutoff of .57 (Schauenberg & Strack, 1999) were classified as having "high symptoms". Youth whose GSI scores were below clinical cutoff were classified as having "low symptoms." Validity of the cutoff scores have been shown through studies involving (a) normal population and (b) inpatient and outpatient populations (Schauenberg & Stack, 1999; Muller, Postert, Beyer, Furniss, & Achtergarde, 2010). Cronbach's alpha for the current sample was .90.

**The Children's Coping Strategies Checklist (CCSC; Ayers, Sandler, West, & Roosa, 1996; Program for Prevention Research, 1996).** This was a self-report measure used to assess general coping styles. The CCSC is a 45-item measure examining active coping strategies (cognitive decision making, direct problem solving, seeking understanding, positive cognitive restructuring), avoidance strategies (cognitive avoidance and avoidant action), distraction strategies (distracting actions and physical release of emotions), and support seeking strategies (emotion-focused support and problem-focused support). In a follow up studies on the CCSC, the authors reported that the support seeking strategies dimension was not significantly related to independent measures of depression, self-esteem, and conduct disorder. As a result, the support seeking dimension was dropped by Ayers and colleagues due to the lack of evidence of associations between the dimension and child outcomes (Program for Prevention

Research, 1996). Internal consistency estimates for each of the three remaining coping strategies were .89, .73, and .80, respectively. Evidence for construct validity was provided by theoretically expected relations of active, avoidance, and distraction coping strategies with measures of self-esteem, depression, anxiety and conduct problems (Ayers, 1991; Sandler, Tein, & West, 1994; Program for Prevention Research, 1996); and by theoretically expected relations with other known measures of coping (Ayers et al., 1996). These factors are stable in relation to general stress (i.e., the degree of stress a child is experiencing as a result of various stressors) and specific stressors (i.e., identified stressors) in both samples of children in general and children of divorce (Ayers, 1991; Sandler et al., 1994; Ayers et al., 1996). In addition, these factors are invariant with respect to age (11-19) and gender (Ayers et al., 1996). The CCSC has been validated in at-risk and racially diverse samples (Caucasian [43%], Hispanic [30%], African-American [20%], and Native American [7%]), which made this measure appropriate for the sample of adolescent females in foster care used in the current study (Ayers, 1991; Sandler et al., 1994; Ayers et al., 1996). Cronbach's alpha for the current sample were .85, .72, and .81 for the active, avoidance, and distraction subscales, respectively.

**Brief Questionnaire.** This demographic form included the following questions (a) number of Children, (b) What is your race/ethnicity? (c) Are you involved in romantic relationship? (d) How long have you been in this relationship? (e) Do you live in an independent living facility? (f) How do you think you handle stress in comparison to other people? (g) How would you describe your feelings, in your own words, within the past month? (h) How would you rate the level of your parent/guardian/caregiver support that you receive?

## Chapter 4

### Results

#### Primary Analyses

##### Quantitative analyses.

**Hypothesis 1.** The first hypothesis was that attachment anxiety would be inversely related to active coping. A bivariate correlation indicated that attachment anxiety was not significantly correlated with active coping ( $r = -.07, p_{(\text{two-tailed})} > .01$ ). Results for tests of all four hypotheses were interpreted using the Bonferroni correction method. The four hypotheses were analyzed with a sample of  $n = 30$  with power = 0.75 and alpha = 0.025 for each analysis. Alpha was set at .025 to minimize the studywise Type I error. Note that correlations ranging between .10 and .29 are considered small effects, .30 and .49 are considered medium effects, and .49 and higher are considered large effects (Cohen & Cohen, 1983). Only medium and large effect sizes will be interpreted in the current study. The result for Hypothesis 1 showed a non-significant, trivial effect size.

**Hypothesis 2.** The second hypothesis was that attachment anxiety would be positively correlated with avoidance coping. A bivariate correction indicated that attachment anxiety was not significantly correlated with avoidance coping ( $r = .35, p_{(\text{two-tailed})} > .01$ ). Despite the fact that this effect was non-significant, it was noteworthy that the size of this non-significant effect was medium in size. Given the medium effect size, the planned nature of the analyses, the limitations of power due to the small sample size, as well as the fact that there is little research on coping in the context of foster care, there may be good reason to interpret this non-significant finding. In fact, Rozeboom (1997)

and Schmidt and Hunter (1997) argue that statistical significance testing is unnecessary in modern research. Thompson (1998) provided a balanced argument to the controversy over significance testing versus examination of effect sizes by stating that significance testing becomes important “*if* the sample represents the population”. Thompson further stated that it is not accepted that achieving statistical significance testing means that the null hypothesis is true in the population. Thompson (1998) and Wilkinson and the Task Force on Statistical Inference (1999) emphasize the importance of reporting effect sizes and interpreting results, regardless of significance, in the context of previously supported effects.

**Hypothesis 3.** The third hypothesis was that attachment avoidance would be inversely correlated with active coping. Results indicated that attachment avoidance was not significantly correlated with active coping ( $r = .21, p_{(\text{two-tailed})} > .01$ ).

**Hypothesis 4.** The fourth hypothesis was that attachment avoidance would be positively related to avoidance coping. It was found that attachment avoidance was significantly correlated with avoidance coping ( $r = .60, p_{(\text{two-tailed})} < .01$ ). This significant effect demonstrated a large effect size.

**Table 1****Subscale Correlations between ECR and CCSC.**

	Attachment Anxiety	Attachment Avoidance	Active Coping	Avoidance Coping
Attachment Anxiety				
Attachment Avoidance	.74** <i>p</i> = .00			
Active Coping	-.07 <i>p</i> = .71	.21 <i>p</i> = .28		
Avoidance Coping	.35 <i>p</i> = .06	.60** <i>p</i> = .00	.68** <i>p</i> = .00	1

Note: \*\* $p_{(two-tailed)} < .01$

**Textual analyses**

Participants provided written responses to the following questions within the survey packet: (a) “How would you describe your feelings, in your own words, in the past month?” (b) “How well do you think you handle stress in comparison to other people?” Data from two free-written responses to these questions were analyzed using line-by-line coding (Willig, 2008).

First, responses to the first open-ended question “How would you describe your feelings in the past month?” were examined. Responses to “How do you think you handle stress in comparison to other people?” were examined after the previous responses were coded. Three largely descriptive labels emerged from coding responses to “How would you describe your feelings in the past month”:

- (a) Low reports of distress: Youth whose responses reflected minimal expressions of distress. These youth focused less on distress and indicated more positive responses to questions regarding their distress. For example, one youth indicated feeling “Wise, stronger, open-minded, out-going” over the past month.
- (b) Focus on distress: Youth whose responses focused on distress. These youth focused on their distress and thus their expressions of distress were less positive. For example, one youth indicated that “sometimes I get stressed or angry, people can get me mad!”.
- (c) Mixed reports of distress: Youth who indicated both feeling good and not feeling so good in their responses. For example, one youth indicated feeling “up and down (good on some days, bad on others)”.

After responses were separated into labels, youth whose BSI distress scores were above clinical cut-off of .57 (Schauenberg & Stack, 1999; Muller, Postert, Beyer, Furniss, and Achtergarde, 2009) were classified as having “high symptoms”. Youth whose distress scores were below clinical cut-off on the BSI were classified as having “low symptoms.” It was notable that the level of symptoms: high symptoms (i.e., above the clinical cutoff score) vs. low symptoms (i.e., below the clinical cutoff score), as reported on the BSI did not appear to be linked to the youth distress reporting style (i.e., low reports of distress, focus on distress, or mixed reports of distress).

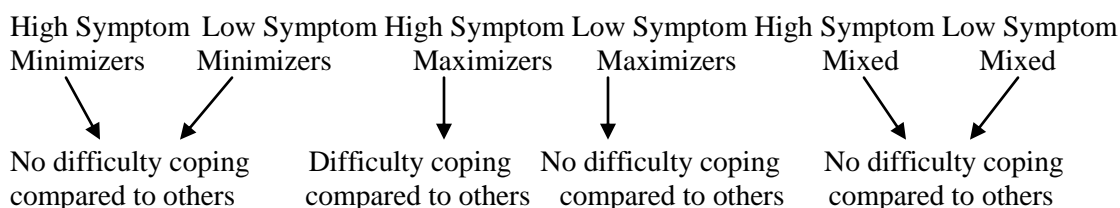
Next youth were categorized according to BOTH distress reporting style (based on responses to the question “How would you describe your feelings in the past month?”) and symptom level (above and below the clinical cut-off on the BSI). Specifically, 6 categories emerged: (a) High symptom minimizers = low reporters/high symptoms; (b)

Low symptom minimizers = low reporters/low symptoms; (c) High symptom maximizers = focused on distress/high symptoms; (d) Low symptom maximizers = focused on distress/low symptoms; (e) High symptom mixed = mixed/high symptoms; and (f) Low symptom mixed = mixed/low symptoms.

Second, responses to the second open-ended question, “How do you think you handle stress in comparison to other people?” were examined. Two broad categories emerged: (a) No difficulty coping when compared to others; and (b) Difficulty coping when compared to others. These two broad coping style categories were then examined in terms of how each of the two coping categories were associated with the six distress reporting style X symptom level categories described above. See Figure 1 for a visual representation of the descriptions provided below.

**Figure 1**

Model illustrates results of coding



- a. **High Symptom Minimizers:** (Youth with high symptoms, but low reporting of distress): Based on youth’s open ended responses to question: “How would you describe your feelings in the past month?” (as described above), these youth focused less on distress and indicated more positive responses to questions regarding their distress. Those low reporters who had high symptoms (i.e., youth whose BSI distress scores were above clinical cut-off) reported no

difficulty coping when compared to others. For example, one youth noted, “I think I handle stress very well, because I can ignore the negative better than some people”.

- a. Example of youth who is categorized as a (a) low reporter with (b) high symptoms and (c) who has no difficulty dealing with stress in comparison to others:
  - i. This youth indicated feeling “wise, stronger, open minded, out-going” over the past month. This youth’s distress score was above clinical cutoff indicating high symptoms. This youth noted handling stress in comparison to other people by responding “I think I handle stress very well, because I can ignore the negative better than some people”.
  - ii. In summary, although this youth seemed to report lower symptoms, the youth’s BSI score indicated that she experiences high symptoms of distress. She indicated handling her stress better than some people because she has the ability to



“ignore the negative better than some people”.

b. **Low Symptom Minimizers** (Youth with low symptoms, and low reporting of distress): Based on youth’s open ended responses to question: “How would you describe your feelings in the past month?” (as described above), these youth focused less on distress and indicated less positive responses to questions regarding their distress. Those low reporters who had low symptoms (i.e., youth whose BSI distress scores were below clinical cut-off) reported no difficulty coping when compared to others. For example, one youth noted, “I barely have any stress and when I do, I listen to music, sing, dance, and draw”.

a. Example of youth who is categorized as a (a) low reporter with (b) low symptoms and (c) who has no difficulty dealing with stress in comparison to others:

i. This youth indicated feeling “pretty upbeat and outgoing” over the past month. This youth’s distress score was below clinical cutoff indicating low symptoms. This youth noted handling stress in comparison to other people by

responding “I barely have any stress and when I do, I listen to music, sing, dance, & draw”.

- ii. In summary, this youth reported low symptoms, which was aligned with youth’s BSI score. She indicated handling her stress by listening to music, singing, dancing, and drawing.

b. **High Symptom Maximizers** (Youth with high symptoms, and high reporting of distress)): Based on youth’s open-ended responses to question: “How would you describe your feelings in the past month?” (as described above), these youth focused on their distress and their expressions of distress were less positive. Those focused on distress youth who had high symptoms (i.e., youth whose BSI distress scores were above clinical cut-off) reported difficulty coping in comparison to others. For example, one youth noted “not very well” in response to question regarding how stress is handled in comparison to others.

- a. Example of youth who is categorized as (a) focused on distress with (b) high symptoms and (c) who has difficulty dealing with stress in comparison to others:

- i. This youth indicated feeling “depressed, stressed out, and angry” over the past month. This youth’s distress score was above clinical cutoff indicating high symptoms. This youth noted handling stress in comparison to other people by responding “not very well”.
- ii. In summary, this youth’s reports of distress were consistent with high symptoms indicated by BSI score being above clinical cutoff. She reported difficulty dealing with high symptoms by noting that she does not handle stress “very well”.

b. **Low Symptom Maximizers** (Youth with low symptoms, but high reporting of distress)): Based on youth’s open-ended responses to question: “How would you describe your feelings in the past month?” (as described above), these youth focused on their distress and their expressions of distress were less positive. Those focused on distress youth who had low symptoms (i.e., youth whose BSI distress scores were below clinical cut-off) reported no difficulty coping when compared

to others. For example, one youth noted, “I do a lot better than most cause these girls don’t know what to do”.

a. Example of youth who is categorized as (a) focused on distress with (b) low symptoms and (c) who have no difficulty dealing with stress in comparison to others:

i. This youth indicated a response of “could be better than this” in response to the question ““How would you describe your feelings in the past month?” This youth’s distress score was below clinical cutoff indicating low symptoms. This youth noted handling stress in comparison to other people by responding “I do a lot better than most cause these girls don’t know what to do”.

ii. In summary, this youth’s reports of distress were inconsistent with the low symptoms indicated by BSI score being below clinical cutoff. She reported no difficulty handling stress by noting that she does “better than most”.

- c. **High Symptom Mixed** (Youth with high symptoms, but mixed reporting of distress): Based on youth's open-ended responses to question: "How would you describe your feelings in the past month?" (as described above), these youth indicated both feeling good and not feeling so good in their responses. Those mixed youth who had high symptoms (i.e., youth whose BSI distress scores were above clinical cut-off) reported no difficulty coping when compared to others. For example, one youth noted "very well. I usually take a deep breath or walk away".
- a. Example of youth who is categorized as (a) mixed with (b) high symptoms and (c) who have no difficulty dealing with stress in comparison to others:
- i. This youth indicated a response of "mixed, very happy but irritated or stress" in response to the question "How would you describe your feelings in the past month?" This youth's distress score was above clinical cutoff indicating high symptoms. This youth noted handling stress in comparison to other people by responding "Very well. I usually take a deep breath or walk away".

ii. In summary, this youth's reports of distress were mixed but her distress score indicated that she experienced high symptoms (BSI score above clinical cutoff). She reported no difficulty handling stress by noting that she handles stress "very well".

d. **Low Symptom Mixed** (Youth with low symptoms, but mixed reporting of distress)): Based on youth's open-ended responses to question: "How would you describe your feelings in the past month?" (as described above), these youth indicated both feeling good and not feeling so good in their responses. Those mixed youth who had low symptoms (i.e., youth whose BSI distress scores were above clinical cut-off) reported no difficulty coping when compared to others. For example, one youth noted "I handle myself pretty good."

a. Example of youth who is categorized as (a) mixed with (b) low symptoms and (c) who have no difficulty dealing with stress in comparison to others:

i. This youth indicated a response of "I've been up and down with my emotions" in response to the question "How would you describe your feelings in the past

month?” This youth’s distress score was below clinical cutoff indicating low symptoms. This youth noted handling stress in comparison to other people by responding “I handle myself pretty good”.

- ii. In summary, this youth’s reports of distress were mixed and her distress score indicated that she experienced low symptoms (BSI score below clinical cutoff). She reported no difficulty handling stress by noting that she handles stress “I handle myself pretty good”.

***Exploratory quantitative approach to the textual analysis.***

(a) Are there any differences between youth with high symptoms vs. low symptoms in attachment? (b) Are there any differences between youth with high symptoms vs. low symptoms in coping? (c) Are there any differences between those classified as minimizers/maximizers/mixed in attachment? (d) Are there any differences between those classified as minimizers/maximizers/mixed in coping? (e) Are there any differences between those in the two coping groups (difficulty coping vs. no difficulty coping) in attachment? (f) Are there any differences between those in the two coping groups (difficulty coping vs. no difficulty coping) in coping? (g) Are there any

differences between those in the two coping groups (difficulty coping vs. no difficulty coping) in psychological distress? (h) Are there any differences based on any of the demographic variables (age, number of children, race/ethnicity, length of relationship, independent living facility, rating of support) in attachment, coping, and/or psychological distress?

All of the above questions were explored. Based on the post hoc analyses there were patterns that emerged and patterns that were not discernible. (a) No discernible pattern emerged in terms of differences between those with high vs. low symptoms in attachment (b) No discernible pattern emerged in terms of differences between those with high vs. low symptoms in coping (c) No discernible pattern emerged in terms of differences between those classified as minimizers/maximizers/mixed in attachment (d) No discernible pattern emerged in terms of differences between those classified as minimizers/maximizers/mixed in coping (e) No discernible pattern emerged in terms of differences between those in the two coping groups (difficulty coping vs. no difficulty coping) in attachment (f) No discernible pattern emerged in terms of differences between those in the two coping groups (difficulty coping vs. no difficulty coping) in coping (g) No discernible pattern emerged in terms of differences between those in the two coping groups (difficulty coping vs. no difficulty coping) in psychological distress (h) A pattern emerged in terms of differences based on the demographic variables of relationship status and ratings of support, but not based on age, number of children, race/ethnicity, or independent living facility). See table below.



**Table 2****Post Hoc Textual Analyses**

	If in a Steady Dating Relationship	Single Status	If Rated support as “Not at all supportive”
High Symptom Minimizers	Low attachment avoidance and attachment anxiety if in steading dating relationship	High attachment avoidance and attachment anxiety if single	
High Symptom Maximizers		Tendency to be single if maximizing style	Scored one <i>SD</i> above mean on attachment anxiety
Low Symptoms Maximizers		Tendency to be single if maximizing style	Scored one <i>SD</i> above mean on attachment anxiety

Specifically, youth in the high symptom minimizer category who noted being in a steady dating relationship had lower scores on attachment avoidance and attachment anxiety when compared with high symptom minimizers who were not in a steady dating relationship. Youth categorized as either high or low symptom maximizers tended to be single; that is to say that regardless of symptom level, youth who tended to maximize reports of distress also tended to be single. Youth categorized as maximizers who indicated “Not at all supportive” in response to the question “How would you rate the level of your parent/guardian/caregiver support that you receive?” most of these youth scored at least one standard deviation above the mean on attachment anxiety. Thus, it

appeared that most youth who experienced their parents/guardians/caregivers as not at all supportive tended to also be high on attachment anxiety.

### **Exploratory quantitative analyses.**

Attachment and psychological distress.

The links between attachment and psychological distress were explored.

Specifically, the following questions were explored in the post hoc analyses: (a) Is there a link between attachment anxiety and psychological distress? (b) Is there a link between attachment avoidance and psychological distress? Results indicated that there was no significant correlation between attachment anxiety and psychological distress ( $r = .30$ ,  $p_{(two-tailed)} > .01$ ). Despite the fact that this effect was non-significant, it was noteworthy that the size of this non-significant effect was medium in size. Given the medium effect size, the planned nature of the analyses, the limitations of power due to the small sample size, as well as the fact that there is little research on coping in the context of foster care, there may be good reason to interpret this non-significant finding. Results indicated that there was no significant correlation between attachment avoidance and psychological distress ( $r = .13$ ,  $p_{(two-tailed)} > .01$ ). It should be noted that there was a large correlation found between attachment anxiety and attachment avoidance ( $r = .74$ ,  $p_{(two-tailed)} > .01$ ). In summary, there were no significant correlations found between both attachment anxiety and attachment avoidance, and psychological distress. It should be noted that the size of the non-significant effect between attachment anxiety and psychological distress was medium in size. Thus, its implications will be further explored in Chapter 5.

### Attachment and coping.

The links between attachment and coping were explored. Specifically, the following questions were explored in the post hoc analyses: (a) Is there a link between attachment anxiety and distraction coping? (b) Is there a link between attachment avoidance and distraction coping? Results indicated that there was no significant correlation between attachment anxiety and distraction coping ( $r = -.07, p_{(two-tailed)} > .01$ ). Results indicated that there was no significant correlation between attachment avoidance and distraction coping ( $r = .28, p_{(two-tailed)} > .01$ ). In summary, there were no significant correlations between both attachment anxiety and attachment avoidance, and distraction coping.

### Coping and psychological distress.

The links between coping and psychological distress were explored. Specifically, the following questions were explored in the post hoc analyses: (a) Is there a link between distraction coping and psychological distress? (b) Is there a link between active coping and psychological distress? (c) Is there a link between avoidance coping and psychological distress? Results indicated that there was no significant correlation between distraction coping and psychological distress ( $r = .05, p_{(two-tailed)} > .01$ ). Results indicated that there was no significant correlation between active coping and psychological distress ( $r = -.03, p_{(two-tailed)} > .01$ ). Results indicated that there was no significant correlation between avoidance coping and psychological distress ( $r = .37, p_{(two-tailed)} > .01$ ), it should be noted, however, that this medium size effect was significant at the .05 level. In summary, there were no significant correlations between distraction, active, and avoidance coping, and psychological distress. It should be noted that the non-

significant effect between avoidance coping and psychological distress was medium in size.

In summary, despite the fact that the links between (a) attachment anxiety and psychological distress and (b) avoidance coping and psychological distress were non-significant, it was noteworthy that the size of this non-significant effect was medium in size. Given the medium effect size, the planned nature of the analyses, the limitations of power due to the small sample size, as well as the fact that there is little research on coping in the context of foster care, there may be good reason to interpret this non-significant finding. These interpretations will be discussed in Chapter 5. Results of the post hoc textual analyses are shown in Table 2 below.

**Table 3****Results from post-hoc quantitative analyses**

	Attachment anxiety	Attachment Avoidance	Active coping	Distraction coping	Psychological distress
Attachment anxiety					
Attachment avoidance	.74** $p = .00$				
Active coping	-.07 $p = .71$	.21 $p = .28$			
Avoidance coping	.35 $p = .06$	.60** $p = .00$	.68** $p = .00$		
Distraction coping	-.07 $p = .71$	.28 $p = .14$	.45** $p = .01$	.43 $p = .02$	1
Psychological distress	.30 $p = .11$	.13 $p = .49$	-.03 $p = .87$	.37 $p = .04$	.05 $p = .78$

Note: \*\* $p_{(two-tailed)} < .01$

***Additional analyses examining two types of avoidance.***

As discussed in Chapter 2, Bartholomew (1990) developed a four-category model of attachment orientations in adults that consisted of: (a) secure (b) preoccupied (c) dismissing avoidant (d) fearful-avoidant attachment groups. The two dimensions of attachment, attachment anxiety and attachment avoidance, can be used to describe the above categories such that the four categories of attachment can be translated into dimensional language. Specifically, individuals who are securely attached score low on both attachment anxiety and attachment avoidance. Individuals who score high on

attachment anxiety and low on attachment avoidance are characterized as having a preoccupied attachment style, a form of insecure attachment. Individuals who score low on attachment anxiety and high on attachment avoidance are characterized as having a dismissing-avoidant attachment style, a form of insecure attachment characterized by a tendency to dismiss the importance of close relationships, avoid intimacy, and an rely on independence (Bartholomew, 1990; Bartholomew & Horowitz, 1991; Fraley & Shaver, 1997). Individuals who score high on both attachment anxiety and attachment avoidance are characterized as having a fearful-avoidant attachment style, a form of insecure attachment characterized by both a desire for closeness and avoidance of closeness in order to reduce disappointment, based on expectations that others will reject them or be untrustworthy (Bartholomew, 1990; Bartholomew & Horowitz, 1991).Mohr, Gelso, and Hill (2005), following Bartholomew (1990; Bartholomew & Horowitz, 1991) argued that it could be very useful to use arithmetic combinations of scores on the two dimensions of attachment, attachment anxiety and attachment avoidance, in order to be able to examine the two types of avoidance separately because the two types of avoidance seem to employ differing interpersonal and coping strategies. As described by Mohr et al. (2005), these arithmetic combinations of attachment anxiety and attachment avoidance resulted in the rotation of these two dimensions to create two new attachment dimensions that allow a particular focus on dismissing-avoidance and fearful-avoidance. This is an important idea because if the two dimensions of avoidance function differently, then examining only the unrelated avoidance dimension would obscure potential differences.

Thus, in the current study, as in the study by Mohr et al. (2005), a fearful-avoidance attachment dimension score was created by adding standardized scores of

attachment anxiety and attachment avoidance. A dismissing attachment dimension score was created by subtracting a standardized score of attachment avoidance from a standardized score of attachment anxiety. Bivariate correlations were conducted to examine the relationships between these attachment dimensions, coping, and psychological distress.

#### Fearful-avoidant attachment and coping.

The links between fearful-avoidant attachment and coping were explored. Specifically, the following questions were explored in the post hoc analyses: (a) fearful-avoidant attachment and active coping (b) fearful-avoidant attachment and avoidance coping (c) fearful-avoidant attachment and distraction coping. No significant correlations were found between (a) fearful-avoidant attachment and active coping ( $r = .07, p_{(two-tailed)} > .01$ ) and (c) fearful-avoidant attachment and distraction coping ( $r = .11, p_{(two-tailed)} > .01$ ). Significant correlations, however, were found between (b) fearful-avoidant attachment and avoidance coping ( $r = .51, p_{(two-tailed)} < .01$ ). In summary, there were no significant correlations found between the fearful-avoidant attachment and, both active and distraction coping. However, there was a significant correlation found between fearful-avoidant attachment and avoidance coping.

#### Fearful-avoidant attachment and psychological distress.

The link between fearful-avoidant attachment and psychological distress was explored. Results indicated no significant correlation between fearful-avoidant attachment and psychological distress ( $r = .23, p_{(two-tailed)} > .01$ ).

### Dismissing-avoidant attachment and coping.

The links between dismissing-avoidant attachment and coping were explored. Specifically, the following questions were explored in the post hoc analyses: (a) dismissing-avoidant attachment and active coping (b) dismissing-avoidant attachment and avoidance coping (c) dismissing-avoidant attachment and distraction coping. Results indicated no significant correlations between (a) dismissing-avoidant attachment and active coping ( $r = .38, p_{(two-tailed)} > .01$ ) and (b) dismissing-avoidant attachment and avoidance coping ( $r = .35, p_{(two-tailed)} > .01$ ). Significant correlations, however, were found between dismissing-avoidant attachment and distraction coping ( $r = .48, p_{(two-tailed)} < .01$ ). In summary, there were no significant correlations found between dismissing-avoidant attachment and, both active and avoidance coping. However, a significant correlation was found between dismissing-avoidant attachment and distraction coping.

### Dismissing-avoidant attachment and psychological distress.

The link between dismissing-avoidant attachment and psychological distress was explored. Results indicated no significant correlation between dismissing-avoidant attachment and psychological distress ( $r = .23, p_{(two-tailed)} > .01$ ).

It should be noted that alpha was set to 0.025. The significant correlation between dismissing-avoidant attachment and distraction coping was medium in size, and the correlation between fearful-avoidant attachment and avoidance coping was large in size, according to Cohen and Cohen (1983). Results can be found in table 4 below.



**Table 4**

**Correlations between fearful-avoidant attachment, dismissing-avoidant attachment, active coping, avoidance coping, distraction coping, and psychological distress.**

	Fearful-avoidant	Dismissing-avoidant	Active coping	Avoidance coping	Distraction coping	Psychological distress
Fearful-avoidant						
Dismissing-avoidant	.00 <i>p</i> = 1.00					
Active coping	.07 <i>p</i> = .70	.38 <i>p</i> = .04				
Avoidance Coping	.51** <i>p</i> = .00	.35 <i>p</i> = .06	.68** <i>p</i> = .00			
Distraction Coping	.11 <i>p</i> = .57	.48** <i>p</i> = .01	.45** <i>p</i> = .01	.43 <i>p</i> = .02		
Psychological Distress	.23 <i>p</i> = .22	-.23 <i>p</i> = .22	-.03 <i>p</i> = .87	.37 <i>p</i> = .04	.05 <i>p</i> = .78	1

Note: \*\* $p_{(two-tailed)} < .01$



## **Chapter 5**

### **Discussion**

This chapter discusses the interpretation of the results that have been presented, including both quantitative and textual findings. Limitations of the present study along with suggestions for future research are discussed. Finally, implications of the findings are presented.

#### **Primary Analyses**

##### **Quantitative analyses.**

Contrary to expectation, the hypothesis that attachment anxiety would be inversely related to active coping, a positive coping skill, was not supported. In fact, results showed there was no relation between attachment anxiety and active coping. This finding stands in contrast to those of previous research on adolescents who were not in foster care, indicating that adolescents not in foster care who were low on both attachment avoidance and attachment anxiety (i.e., secure) used positive coping skills (e.g., communicating with family), whereas adolescents high on either attachment avoidance and attachment anxiety (or both) used maladaptive coping skills (e.g., using drugs; Howard and Medway, 2004). In sum, the inverse relationship between attachment anxiety and active coping expected on the basis of previous research with youth not in foster care was not supported within the current sample of adolescent females in foster care. Bowlby (1973, 1988) theorized that individuals respond to distress by using the internal working models developed during childhood. These internal working models are thought to guide how an individual regulates emotions, including the selection of coping mechanisms (Kobak & Sceery, 1988). It is possible that some adolescents in foster care

have faced such extreme stressors (Schor, 1982; Simms, 1989; Takayama, Wolfe, & Coulter, 1998), that even some with low attachment anxiety are not feeling they can actively cope well. Alternatively, it could be that some adolescents in foster care have had to develop strong coping skills in order to adapt to their life circumstances, such that regardless of attachment, they have managed to find ways to actively cope. It could be that supports offered to adolescents in foster care (e.g., counseling) allow some adolescents who are insecurely attached to nevertheless engage in active coping.

Results will need to be replicated in order to determine whether the lack of a significant relation between attachment anxiety and active coping in the current study is a reliable finding. Nevertheless, post-hoc exploratory analyses were conducted to examine potential explanations for the inconsistency between prior research and the current study. Because previous researchers (Bartholomew & Horowitz, 1991) have drawn attention to a distinction between those who may be low on attachment anxiety but high in avoidance (dismissing-avoidant) as opposed to those who score high on both attachment anxiety and attachment avoidance (fearful-avoidant), following Mohr et al. (2005), scores on attachment anxiety and avoidance were mathematically rotated to create two new dimensions of attachment: fearful-avoidance and dismissing-avoidance. The links between the fearful-avoidance attachment dimension (i.e., high on both attachment anxiety and attachment avoidance) and active coping, as well as the dismissing-avoidance dimension (i.e., low on attachment anxiety and high on attachment avoidance) and active coping were examined. It was possible that those high in a dismissing-avoidant attachment style may cope differently from those high on fearful-avoidance (Bartholomew, 1990; Bartholomew & Horowitz, 1991). Results showed no significant

correlations between either fearful-avoidance or dismissing-avoidance and active coping. Thus, there was no indication that links between attachment anxiety and active coping might be different depending on the level of attachment avoidance. In sum, there was no link between attachment anxiety and active coping.

The second hypothesis was that attachment anxiety would be positively correlated with avoidance coping. The result for this hypothesis showed a non-significant but medium effect size. Thus, although results were non-significant with a  $n = 30$ , results of the present study were consistent with those of Howard and Medway (2004), who found that adolescents low on both attachment anxiety and attachment avoidance (i.e., secure) tended to have higher levels of family communication, less negative avoidance and more positive avoidance coping. Whereas adolescents' high on both attachment anxiety and attachment avoidance (insecure) tended to show higher levels of negative avoidance coping. Although, this relationship was non-significant in the present study, it was noteworthy that the size of this non-significant effect was medium in size. This effect was thus interpreted in the current study based on previous research that supports this link. Thompson (1998) and Wilkinson and the Task Force on Statistical Inference (1999) emphasize the importance of reporting effect sizes and interpreting results, regardless of significance, in the context of previously supported effects.

In fact, other studies in addition to the one by Howard and Medway (2004), have found a positive relationship between attachment anxiety and avoidance coping (Lopez, Mitchell, & Gormley, 2002; Radziwon, 2009; Wei et al., 2003). Lopez, Mitchell, and Gormley (2002) and Wei et al. (2003) found that in college student samples attachment anxiety was positively related to suppressive style coping (e.g., denial, escapism,

tendency to suppress awareness of problems; Heppner, Cook, Wright, & Johnson, 1995). Radziwon (2009) also supported this link within a sample of adolescents, such that attachment anxiety was found to be positively correlated with voluntary disengaged coping (e.g., denial and avoidance; Connor-Smith, Compas, Wasworth, Thomsen, & Saltzman). Thus, these studies support the relationship found in the current sample, and support the notion that interpretation of the non-significant, but medium-sized effect, could be meaningful.

In sum, although attachment theory proposes that individuals high in attachment anxiety engage in hyperactivating strategies (increased expression of emotion to cope with distress; Mikulincer et al., 2003); the current study parallels previous research findings (Lopez, Mitchell, & Gormley, 2002; Radziwon, 2009; Wei et al., 2003), suggesting that individuals high in attachment anxiety tend, instead, to engage in deactivating strategies (e.g. avoiding proximity to others and attempting to cope with stress alone; Mikulincer et al., 2003). Radziwon (2009) suggested that those high in attachment anxiety may become so engaged by interpersonal stressors that they will try almost anything to relieve the fears associated with closeness. Such an explanation could address the gap between the theory and research on attachment anxiety and coping strategies, but more research will be needed to understand why adolescents high in attachment anxiety appear to engage in deactivation strategies across studies despite the fact that theory would predict that adolescents high in attachment anxiety should tend to engage in hyperactivating, rather than deactivating, strategies.

When data were re-analyzed in terms of fearful-avoidance and dismissing-avoidance (i.e., mathematical rotations of attachment anxiety and avoidance, as described

above; Mohr et al., 2005), results showed there was a significant correlation between fearful-avoidance (i.e., high scores on both attachment anxiety and attachment avoidance) and avoidance coping, but no significant relation between dismissing-avoidance and avoidance coping. As mentioned earlier, avoidance coping had been conceptualized as a deactivating strategy, yet both previous research and the present study have consistently found that attachment anxiety is linked to avoidance coping. In fact, the present study found that dismissing-avoidance (i.e., low on attachment anxiety, high on attachment avoidance) was not linked to avoidance coping. Rather, it was fearful-avoidance (i.e., high on both attachment anxiety and avoidance) that was associated with avoidance coping, highlighted the role of attachment anxiety, as opposed to attachment avoidance, in predicting avoidance coping.

Contrary to expectation, the hypothesis that attachment avoidance would be inversely correlated with active coping was not supported. This result of the present study was not consistent with prior research supporting the inverse relationship between attachment avoidance and active coping (Buelow et al., 2002; Radziwon, 2009). Nor is the present result consistent with attachment theory, which postulates that individuals who would use deactivating strategies, such as those high in attachment avoidance, are more likely to engage in avoidance coping (e.g., avoiding people, forgetting about problems; Ayers et al., 1996) rather than active coping (e.g., problem solving, maintaining positivity; Ayers et al., 1996) strategies (Mikulincer et al., 2003). This gap between the hypothesis and the results may be due to the fact that active coping also consists of coping strategies such as control (i.e., thinking that you can handle whatever happens) and minimization (i.e., minimizing the problem or consequence). Those high in

attachment avoidance may be unlikely to engage in other active coping strategies, such as, cognitive decision making (i.e., planning or thinking about ways to solve the problem) and positive thinking (i.e., thinking about the good things that happened); but likely to engage in control and minimization. Alternatively, it may be that youth in foster care develop active coping skills, even when insecurely attached. It is notable that neither of the hypotheses about active coping being inversely linked with level insecurity of attachment (i.e., attachment anxiety or avoidance) was supported. Finally, it may be that youth have a difficult time accurately self-reporting about the degree to which they engage in active coping. Clearly, more research will be needed to better understand predictors of active coping in youth in foster care.

As hypothesized, attachment avoidance was significantly and positively related to avoidance coping, and the effect size was large. This finding was consistent with the theoretical literature that posits that individuals high on attachment avoidance are less likely to use coping techniques such as problem solving and re-assessing because this would require certain aspects of self-awareness (e.g., recognizing errors, admitting distress) that people high on avoidance tend to deny (Cassidy, 1994; Mikulincer & Shaver, 2007). Similarly, the present study found that adolescent females in foster care who were high in avoidance tended to suppress emotions by making efforts to avoid problems, repressing thinking of problems, and imagining that problems were better. Furthermore, when data were re-analyzed in terms of fearful-avoidance and dismissing-avoidance (i.e., mathematical rotations of attachment anxiety and avoidance, as described above; Mohr et al., 2005), those high in both attachment anxiety and attachment avoidance (fearful avoidance) tended to be higher than others on avoidance coping.



It should be noted that attachment anxiety was found to be positively related to attachment avoidance, with a large effect size. This was unexpected because the two dimensions were designed to be orthogonal (Brennan, Clark, & Shaver, 1998). Although previous studies have sometimes found a significant correlation between attachment anxiety and avoidance (e.g., Woodhouse & Gelso, 2008), the large correlation found in the present study is quite unusual. It may be that the high correlation found in the present study is indicative of participants who tended to score high on both attachment anxiety and avoidance. Bartholomew and Horowitz (1991) theorized that high scores on both dimensions of attachment anxiety and attachment avoidance indicated fearful avoidance attachment. Individuals high on fearful avoidant tend to avoid closeness in order to reduce disappointment based on expectations that others will reject them or be untrustworthy, yet at the same time long for connection with others (Bartholomew, 1990; Bartholomew & Horowitz, 1991). These individuals lack experiences of a secure base which aligns with the experience of adolescent females in foster care with highly inconsistent caregivers and disruptions in relationships with important caregivers.

### **Textual analyses.**

The current study found both high and low symptom groups across three classifications of adolescent girls based on how they reported distress (i.e., those who reported low levels of distress, those who focused on distress, and those who had mixed reports of distress). Six subgroups were then created based on a combination of the classification of reporting style of distress and the level of distress (i.e., those showing clinical levels of distress vs. those showing low levels/subclinical levels of distress symptoms). These six subgroups (distress reporting style x symptom level) did not seem

to differ from each other in terms of self-reported ability to cope as compared to others, with the notable exception of High symptom maximizers (those who focused on distress and *also* had high symptoms). Specifically, youth who focused on distress and had high symptoms were the only group that expressed difficulty coping when compared to others. Youth who were considered (a) Low symptom maximizers: focused on distress and had low symptoms (b) High symptom minimizers: reported less distress and had high symptoms (c) Low symptom minimizers: reported less distress and had low symptoms (d) High symptom mixed: reported mixed distress and had high symptoms (e) Low symptom mixed: reported mixed distress and had low symptoms, indicated no difficulty coping as compared to others. Interestingly, the single difference found among the six subgroups in terms of reported difficulty coping as compared to others did not appear to be related to differences in attachment between the six subgroups. Likewise, no differences were found between the six subgroups on reports of active, distraction, and avoidance coping. The relatively small number of participants within each subgroup precluded the use of formal statistical tests of subgroup differences on quantitative scales; thus, textual analyses included inspection of scale scores as a part of examination of differences between the subgroups.

It is not surprising that adolescent females in foster care who were considered high symptom maximizers would express difficulty coping when compared to others. It is interesting, however, that youth who reported low or no distress, yet had high psychological symptoms based on standard measures of symptoms, expressed no difficulty coping when compared to others. It may be that these subgroups of adolescent females in foster care who report relatively low levels of distress yet exhibit high levels

of psychological symptoms tend to underreport their experience of distress and over-report their ability to cope. Alternatively, It may be that these youth are faced with extreme stressors, are attempting to use adaptive coping strategies, but are unsuccessful in their attempts—resulting in higher levels of symptoms. Future research that measures stressors and relies on observations of coping behavior, rather than simply self-reported coping, may be able to tease apart whether the effect noted is based in biased self-reporting or whether reports are accurate, but coping strategies are unsuccessful.

The six subgroups of adolescent females in foster care were examined in terms of patterns of attachment that could potentially distinguish the groups. One subgroup was different from the other subgroups in terms of patterns of attachment: those who were low reporters of distress, yet had high symptoms, and who said they had no difficulty coping when compared to others differed from the other groups on attachment. Specifically, this group received lower scores on both attachment dimensions (attachment anxiety and avoidance) when compared to other youth, implying that these young women tended to be more secure than others.

This subgroup of adolescent females in foster care who were categorized as low reporters of distress, yet who exhibited high levels of symptoms, and reported no difficulty coping as compared to others differed in demographics from the other subgroups with regard to an important demographic variable. Specifically, this subgroup tended to be in steady dating relationships. Such a pattern of tending to be in steady dating relationships was not observed in the other five subgroups. It may be that youth who are low reporters of distress, with high symptoms, and no reported difficulty coping as compared to others tend to be more secure than the other groups because their dating

partners provide a measure of security for them. Alternatively, it may be that they have had earlier experiences with positive caregivers that allowed them to develop secure attachments, which then help them value attachment relationships and be ready to engage in committed relationships with romantic partners. It is impossible to ascertain from the present study the direction of effects: Is it that security leads to tending to be in a romantic relationship or is it that being in a romantic relationship tends to increase security (or both).

It is interesting that this subgroup does exhibit a high level of psychological symptoms, despite their security of attachment, low focus on distress, and reported ease in coping compared to other people. It could be that the youth in this subgroup experience some of the extreme stressors (i.e., financial hardship, abuse, neglect, poverty, family death, illness; Schor, 1982; Simms, 1989; Takayama, Wolfe, & Coulter, 1998), mentioned above, perhaps even within their steady dating relationships. It is possible that these young women may attempt to cope with these stressors but are unsuccessful with their attempts by virtue of the volume and/or severity of the stressors they are exposed. Additional research will be needed to better understand the experiences of these youth.

It is important to note that despite the fact that the subgroup described tended to not focus much on reporting distress and reported no difficulty coping as compared to others, that this subgroup exhibited clinically significant levels of psychological distress. Given that previous research has shown that security of attachment is associated with a higher likelihood of seeking psychological treatment (Dozier, 1990; Korfmacher, Adam, Ogawa, & Egeland, 1997; Reis & Grenyer, 2004) and psychotherapy working alliance

(Eames & Roth, 2000), it may be that young women in this group would particularly benefit from psychological treatment if they are not already in treatment.

Additionally it was found that youth who focused on distress, with either high or low symptoms, tended to be single. Thus, these adolescent females in foster care who were not involved in romantic relationships tended to focus on distress whether they had high or low symptoms. It may be that youth who are single have fewer distractions from their distress and thus focus on their distress more than those in relationships. It could also be that these youths' focus on distress makes them less likely to be involved in relationships for some reason. It was also found that many of the youth categorized as focused on distress scored at least one deviation above the mean on attachment anxiety (i.e., more insecure).; youth in this group also indicated not feeling supported. Thus the youth who were high attachment anxiety and focused on distress indicated not feeling supported. This finding is consistent with the theoretical literature on attachment anxiety, such that youth high in attachment anxiety would engage in hyperactivating strategies (i.e. individuals are constantly concerned about attachment and about not getting enough from others Mikulincer et al., 2003).

### **Post Hoc Analyses**

#### **Quantitative analyses.**

##### ***Attachment and psychological distress.***

A positive relationship between attachment anxiety and psychological distress was non-significant, but showed a medium effect size. Based on recommendations from Thompson (1998) and Wilkinson and the Task Force on Statistical Inference (1999) that effect sizes should be reported and results should be interpreted, regardless of

significance, in the context of previously supported effects, this effect was interpreted. In fact, both the theoretical and empirical literature supports this finding (Mallinckrodt & Wei, 2005; Mikulincer & Shaver, 2007; Radziwon, 2009; Vogel & Wei, 2005; Wei et al., 2003). Mikulincer and Shaver (2007) hypothesized that individuals high on attachment anxiety express intense emotions in order to solicit attention and security from attachment figures. This hyperactivating process heightens the distressing experience and increases the risk of psychopathology. Given that children in foster care are at risk for a variety of negative psychological outcomes due to the circumstances they face (Browne & Finkelhor, 1986; Egeland, Sroufe, & Erickson, 1983; Halfon, Mendonca, & Berkowitz, 1995; Klee & Halfon, 1987; Trickett & Putnam, 1993), it is important to understand factors that may contribute to their distress. If the relationship between attachment anxiety and psychological distress is replicated in future research, it may be important to consider research on interventions to reduce attachment anxiety in youth as a way to reduce the risk of psychological distress.

No significant correlations were found between attachment avoidance and psychological distress. Previous research has been mixed regarding potential links between attachment avoidance and distress. Some studies have found no relation between attachment avoidance and distress (Lopez et al., 2001; Vogel & Wei, 2005), whereas other studies have found a positive relationship between the two variables (Mallinckrodt & Wei, 2005; Wei et al., 2003). Additionally, Radziwon (2009) found a small, significant positive relationship between attachment avoidance and psychological distress in a sample of adolescents who were not in foster care. The theoretical literature suggests that individuals high on attachment avoidance distance themselves from potential distress in

order to suppress emotions. These individuals tend to use deactivating strategies and tend to fail to use problem solving skills, which subsequently place them at-risk for distress (Mikulincer & Shaver, 2007). Yet, findings for the present study found no evidence of these tendencies in the current sample. Further research will be needed.

Contrary to the theoretical literature which suggests that fearful-avoidant attachment would be more strongly associated with psychological distress than dismissing-avoidant attachment (Bartholomew, 1990; Bartholomew & Horowitz, 1991), no significant correlations were found between fearful-avoidant attachment (high attachment anxiety and high attachment avoidance) and psychological distress; and dismissing-avoidant attachment (low attachment anxiety and high attachment avoidance) and psychological distress.

#### ***Attachment and distraction coping.***

No prior studies have examined the relationship between attachment and distraction coping, as measured by *The Children's Coping Strategies Checklist (CCSC; Ayers, Sandler, West, & Roosa, 1996; Program for Prevention Research, 1996)*. However, the theoretical literature suggests that those high in attachment avoidance engage in deactivating strategies and those high in attachment anxiety would engage in hyperactivating strategies (Mikulincer & Shaver, 2007). Contrary to the theoretical literature no significant correlation was found between attachment avoidance and distraction coping. Consistent with the theoretical literature, no significant correlation was found between attachment anxiety and distraction coping.

***Distraction coping and psychological distress.***

The research on distraction coping and psychological distress is mixed, such that it is whether distraction coping is a maladaptive or adaptive coping strategy (Ayers et al., 1996; Sandler et al., 1994). In the present study, there was no significant link between distraction coping and distress. Similarly, Ayers (1991) failed to find a significant relationship between distraction coping and either depression and self-esteem. In contrast, Sandler et al. (1994) found that distraction coping was related to lower internalizing behavior (e.g. anxiety and depression). Further research will be needed to understand the role of distraction coping.

***Active coping and psychological distress.***

No significant correlation was found between active coping and psychological distress in the present study. Although empirical research supports a negative relationship between active coping and depression (Ayers, 1991; Ayers et al., 1996), there are no studies that have examined the link between active coping, as measured by *The Children's Coping Strategies Checklist (CCSC; Ayers, Sandler, West, & Roosa, 1996; Program for Prevention Research, 1996)*, and an overall distress score, like the global severity index in *The Brief Symptom Inventory (BSI; Derogatis-Leonard, 1975)*. This may explain the discrepancy between the results in the current study and previous research. Alternatively, it may be that the stressors faced by some youth in foster care are so severe as to overwhelm even active coping strategies, such that some who use active coping nevertheless experience psychological distress.



***Avoidance coping and psychological distress.***

As hypothesized, a medium size effect (significant at the  $p = .05$  level, but not at the more stringent alpha cutoff level of .025 established for the post-hoc tests) was found for the link between avoidance coping and psychological distress. Compas et al. (2001) suggested that individuals vary in their choices of coping strategies based on their level of reactivity (level in which they are emotionally or physically aroused by stressor). It was posited that highly reactive individuals may use avoidance coping strategies, which could lead to psychological distress despite the avoidance. The positive association between avoidance coping and psychological distress was also found in previous research. Specifically, high levels of avoidance coping have been linked to higher distress (Radziwon, 2009); lower self-esteem (Ayers et al., 1990); and an increase in depression and conduct disorder (Ayers, 1991). Thus, both the theoretical and empirical literature support the interpretation of this non-significant finding in the current study based on Thompson (1998) and Wilkinson and the Task Force on Statistical Inference's (1999) suggestion.

***Active coping and Avoidance coping.***

The non-significant effect for the association between avoidance coping and psychological distress was medium in size, yet no significant link between active coping and psychological distress was found. This pattern of correlations was unexpected given the high correlation between active coping and avoidance coping. It may be that these youth are utilizing avoidance coping strategies (i.e., engaging in actions to avoid problems) because these strategies help decrease distress in the moment, whereas active coping (i.e., engaging in use of problem solving activities) may not immediately reduce

distress. This may explain why there is a high correlation between active coping and avoidance coping, yet avoidance coping is related to psychological distress but active coping is not related to psychological distress.

## **Limitations and Future Research**

### **Statistical Limitations**

Due to problems with recruitment, the initially proposed sample size was not acquired. Therefore, there was not enough power in the present study to test the initially-proposed mediational models using hierarchical regression. An alternate plan for analyses was created as a result. The revised plan examining bivariate correlations included the use of the Bonferroni correction method, such that alpha was set at .025 to minimize the studywise Type I error. Limitations of power based on the small sample size should be noted. Replication of this study in a larger sample of adolescent females in foster care would benefit the field.

### **Sampling limitations**

The current study was limited in generalizability due to the small sample size and small number of participating counties within New York State, although low participation levels seem to be a common problem with research involving vulnerable populations such as adolescent females in foster care. The barriers that are necessarily in place to protect these youth from potential harm tend to constrain research that seeks to help and lessen the distress these youth experience. While generalizability is a limitation it should be noted that the sample was not limited in terms of racial/ethnic diversity given that the sample was composed of 60% African American, 16.7% Biracial/Multiracial, and 10% Caucasian/White/European American/European, and 10% Latino(a)/Hispanic.

The second limitation is that foster care placement history could not be obtained. Specifically, youth in the current study could vary widely in the number of foster care placements which may have a direct effect on their attachment history, coping style, and overall distress. For example, some of the youth may have recently been removed from their biological parent's home and placed in a group home whereas others may have been removed as infants or small children and may have experienced a number of foster placements prior to their current placement.

#### **Limitations of self-report**

The current study was limited by the sole use of self-report measures to examine the links between attachment, coping, and psychological distress. Future studies should also use behavioral observations in order to obtain additional perspectives on the youths' coping style and distress. These behavioral observations could be made by group home staff members, social workers, school officials, or other supportive individuals who are involved with adolescent females in foster care. Youth in the current study reported using avoidance coping strategies, but it would be helpful if the use of specific coping strategies were confirmed by other sources of data.

#### **Limitations of cross-sectional designs**

Cross sectional data were used for this study. Given the varying number of foster care placements for youth in foster care, future research in this area should focus on using longitudinal data. Due to the changing conditions and exposure to different attachment figures, youth in foster care may be more likely to experience changes in attachment style over time. Thus, it would be important to examine how attachment changes over time and

how such changes might impact youths' coping strategies and subsequent distress. Longitudinal data would assist in examining these phenomena over time.

### **Limitations in the nature of the textual data collected**

The current study attempted to place the quantitative data obtained in context by way of the textual analyses of brief free-written responses to questions. Future research would benefit from interviewing youth in foster care in order to increase the opportunity to better understand factors contributing to their distress. Interview data would allow for greater richness in the data related to the experiences of adolescents in foster care.

### **Future research**

The data from the present study suggested that avoidance coping could be a key maladaptive coping strategy linked both to insecurity of attachment and adverse mental health outcomes for adolescent females in foster care. Thus, it is proposed that future research test two mediational models:

- Mediation Model # 1. Avoidance coping, a maladaptive strategy, will partially mediate the relation between attachment anxiety and psychological distress. Evidence from the present study supporting the idea that such a mediational model be explored included non-significant but moderate effects associated with the links between attachment anxiety and psychological distress, as well as between attachment anxiety and avoidance coping.
- Mediation Model # 2. Avoidance coping, a maladaptive strategy, will partially mediate the relation between attachment avoidance and psychological distress. The present study did not find a link between attachment avoidance and psychological distress, but this association has been consistently supported in

previous research (Armsden & Greenberg, 1987; Kenny, 1987; Kenny & Donaldson, 1991; Hinderlie & Kenny, 2002; Holmbeck & Wandrei, 1993; Lopez & Brennan, 2000; Ryan et al., 1997; Torquati & Raffaelli, 2004; for a review, see Lopez & Brennan, 2000). In addition, the present study found a significant relation between attachment avoidance and avoidance coping. Thus, it may be fruitful for future research to examine the potential mediating role of avoidance coping in the link between attachment avoidance and psychological distress.

### **Implications for counseling**

Bowlby (1973) speculated that confidence in the availability of attachment figures, or lack of it, begins during infancy and then remains stable through childhood and adolescence unless the caregiving provided to the child changes. He postulated that whatever expectations are developed during those years tend to persist relatively unchanged throughout the rest of life unless conditions change. Research on empirically based attachment interventions for children foster care in has grown over the past 10 years (Dozier et al., 2006; Zeanah, Smyke, Koga, & Carlson, 2005). The goal of these interventions was to lessen the distress that these children in foster care are experiencing by helping parents/caregivers to understand their children's signals of distress, as well as the ways in which children in adverse caregiving situations sometimes learn to not signal distress even when they are distressed. In addition, these interventions support caregivers in responding more effectively to children's distress (whether or not child signals of distress are present), thus increasing the likelihood of the child's secure attachment. Little research has been conducted on attachment based interventions for adolescents in foster care, yet based on the findings in the current study highlighting the role of insecurity of

attachment, attachment based interventions may help in reducing the amount of distress these at-risk youth experience.

In addition to attachment-based interventions, youth in foster care may benefit from counseling that focuses on self-awareness and coping. Based on the current findings, some youth in foster care may be experiencing distress but are not self reporting this distress and indicating that they have no difficulty coping but may be struggling to cope based on their distress scores. Youth in this study have also been found to be experiencing distress, focusing on distress, and indicating that they are having difficulty coping. These groups of adolescent females in foster care would benefit from individual counseling that focuses on awareness of stressors and learning techniques to cope. Group therapy with other youth in foster care may also be helpful to these youth as it would provide a venue to learn skills from peers and to have their experiences validated. In particular, given the links between avoidance coping and psychological distress, it may be important to support adolescents engaging in avoidance coping to learn and practice alternative coping strategies. Previous research has shown that active coping strategies are related to lower levels of depression, lower levels of conduct disorder, and higher levels self-esteem (Ayers, 1991; Ayers et al., 1996), yet in the present study active coping was not linked to lower symptoms. As discussed earlier, avoidance coping may be a short term coping strategy that provides instant relief from distress whereas active coping may relieve distress over time as the individual focuses on solving problems, and over time problems begin to resolve, yet not provide instant relief. Thus, it may not be enough to simply support youth in engaging in more active coping—these youth may be experiencing distress that is not alleviated by active coping in the short term because the

problems they are facing may tend to persist for a time even when youth are actively coping. It may be important to simply acknowledge the distress youth are experiencing and understand why they are distressed. Also, it may be useful to pair techniques that can help to provide immediate relief in the short term (e.g., social support, practical assistance, positive activities that are enjoyable, physical exercise) with support for active coping strategies. Such a pairing may allow youth to experience instant relief in addition to relief over time as problems begin to be resolved through active coping. More research on coping and its complexity would help determine ways to help these youth experience less distress.

### **Recommendations for researchers in the field of foster care**

There are a number of potential challenges faced by researchers in the field of foster care. Youth in foster care are considered a “special” or “vulnerable” population and due to this status, there are many levels of protection against potential harm to these youth. The layers of protection are very necessary in order to ensure these youth are provided the right information to make an informed decision, free of coercion, given the opportunity to withdraw at any time, and not exploited or victimized. Although these layers of protection are very necessary, they also can present time-consuming barriers to research that aims to better understand youth in foster care. For example, the current study was successfully reviewed by three institutional review boards (IRB; of which one of the three was considered a full review); two major changes in methodology by IRBs; and lack of participation from government and non-government agencies. One major hurdle faced was a misconception by one IRB that youth in foster care were “prisoners.” This misconception was corrected by the principal investigator, but nevertheless resulted

in the IRB requiring agency staff members to recruit adolescent females in foster care instead of researcher. This change limited the degree to which the researcher was able to present herself as a trustworthy person to potential participants, explain the study to those who might be interested, and directly answer any questions that young women may have about participation. Another major barrier to recruitment was the by New York State Office of Children and Family Services requirement that parents of youth in foster care (regardless of parental involvement) **and** the county commissioner to sign informed consent forms for the youths' participation when parental rights have not been terminated. As a result of these major changes, recruitment was very difficult. There was no incentive for agency staff to assist with research, and in fact agency staff may have felt burdened by the request for assistance with recruitment. Also, some parents who were inconsistent in their level of involvement with youth were difficult to locate and obtain consent.

Future researchers in the area of foster care should consider the potential time commitment prior to start of research and plan accordingly. It may be important to educate university IRBs about what the foster care system is in order to counter any potential misconceptions. When recruiting within residential placement sites (i.e., group homes), it may be helpful to propose a presentation of research to an audience of youth in foster care that is supervised by agency staff members. This presentation would ensure that youth are being appropriately informed about the research study and offer the opportunity to ask questions directly to the researcher, while at the same time ensure that youth are properly protected from any undue pressure to participate in the research. Additionally, proposing that informed consents only be signed by county commissioner



should youth indicate that they are not in custody of biological parents, would be helpful and reduce the amount of time to get research approved and begin the study. It may be helpful for investigators who are interested in research with foster children to develop ongoing relationships with agencies who may be involved in research over time. Part of building a positive relationship may include giving back to the agency staff and youth in meaningful ways. For example, researchers may have expertise that can be useful for staff training or staff support. It may also be helpful to include agency staff in designing research that helps to answer questions most relevant to their concerns in working with youth. Ideally, in the future, it may be very positive to develop researcher-service provider partnerships that collaborate to best serve youth in the foster care system.

Youth in foster care are at risk for a host of negative outcomes. The current study confirms that adolescent females in foster care are using maladaptive coping strategies (i.e., avoidance coping) that is leading to a considerable amount of distress. In order to reduce the amount of distress these vulnerable youth experience, it is necessary to conduct research within this population to identify potential contributors to distress. The guidelines above may help reduce the amount of time necessary to get research approved which may increase the number of research studies within this population.

### **Summary**

Because of difficulties in recruiting adolescent females in foster care, planned tests of mediational models proved impossible. Instead a limited set of bivariate correlations were examined in the present study. As expected, the primary quantitative analyses suggested that attachment avoidance is linked to avoidance coping, fearful-avoidance attachment is linked to avoidance coping, and dismissing-avoidant attachment

is linked to distraction coping. Contrary to expectation there was no link between either attachment anxiety or attachment avoidance with psychological distress and active coping. Thus, future research should replicate the present study in order to confirm factors related to the distress these adolescent females in foster care are experiencing.

However, results highlighted the potential key importance of avoidance coping as a potential mediator of the link between attachment insecurity (i.e., attachment anxiety and attachment avoidance) and mental health outcomes among adolescent females in foster care. Thus, results suggested that future research would benefit from examination of whether avoidance coping mediates the relationships between both attachment anxiety and attachment avoidance and psychological distress. Based on the textual analyses, results indicated that among adolescent females in foster care only those young women who focused on distress and had high levels of psychological symptoms expressed difficulty coping compared to others. Nevertheless, results indicated that there are young women in foster care who feel they are coping as well as others do, who nevertheless do show clinically significant levels of psychological distress. Likewise, there are young women in foster care, who are not particularly focused on distress but instead either report low levels of distress or are able to report both good and bad experiences, who nevertheless also show clinically significant psychological symptoms. Much more work will need to be done to understand the development of psychological symptoms in adolescent females in foster care. Nevertheless, it is important to note that there was a sizable minority of young women in foster care who exhibited positive mental health (i.e., did not report clinically significant psychological symptoms). Even among young women who tended to focus on distress, there was a subgroup of adolescents who

reported they felt they were able to cope as well as others. This subgroup, in fact, showed low levels of psychological distress. Thus, it is important to note potential resilience within young women in foster care even as we continue to explore factors related to coping and mental health outcomes for this important group.

Due to the small sample size, the current findings have limited generalizability but provide foundational data for future research within this at-risk population. Given the number of stressors, both normative and situational, and high distress scores found in this study, it is vital that more research be conducted in this population to identify potential factors that contribute to these youth's distress. Once factors that contribute to distress are identified, it is even more important for research to be conducted that focuses on clinical interventions that can potentially help these youth to experience less distress.

## Appendix A.

**YOUR GENERAL THOUGHTS AND FEELINGS**

(ECR)

Please take a moment to think about how you *generally* feel in *important relationships in your life*. Think about your past and present relationships with people who have been especially important to you, such as romantic partners and close friends. Respond to each statement in terms of how you *generally* feel in these relationships. Please circle **ONE** number.

**Disagree    Neutral/    Agree**  
**Strongly    Mixed    Strongly**

1.	I prefer not to show people how I feel deep down.	1	2	3	4	5	6	7
2.	I worry about being abandoned.	1	2	3	4	5	6	7
3.	I am very uncomfortable being close to people.	1	2	3	4	5	6	7
4.	I worry a lot about my relationships.	1	2	3	4	5	6	7
5.	Just when people start to get close to me, I find myself pulling away.	1	2	3	4	5	6	7
6.	I worry that people won't care about me as much as I care about them.	1	2	3	4	5	6	7
7.	I get uncomfortable when people want to be very close to me.	1	2	3	4	5	6	7
8.	I worry a fair amount about losing close relationships.	1	2	3	4	5	6	7
9.	I don't feel comfortable opening up to others.	1	2	3	4	5	6	7
10.	I often wish that other people's feelings for me were as strong as my feelings for them.	1	2	3	4	5	6	7
11.	I want to get close to people, but I keep pulling back.	1	2	3	4	5	6	7
12.	I often want to merge completely with people, and this sometimes scares them away.	1	2	3	4	5	6	7
13.	I am nervous when people get too close to me.	1	2	3	4	5	6	7
14.	I worry about being alone.	1	2	3	4	5	6	7
15.	I feel comfortable sharing my private thoughts and feelings with others.	1	2	3	4	5	6	7
16.	My desire to be very close sometimes scares people away.	1	2	3	4	5	6	7
17.	I try to avoid getting too close to people.	1	2	3	4	5	6	7

18.	I need a lot of reassurance that I am loved by others.	1	2	3	4	5	6	7
		<b>Disagree Strongly</b>		<b>Neutral/ Mixed</b>		<b>Agree Strongly</b>		
19.	I find it relatively easy to get close to others.	1	2	3	4	5	6	7
20.	Sometimes I feel that I force people to show more feeling and more commitment.	1	2	3	4	5	6	7
21.	I find it difficult to allow myself to depend on others.	1	2	3	4	5	6	7
22.	I do not often worry about being abandoned.	1	2	3	4	5	6	7
23.	I prefer not to be too close to others.	1	2	3	4	5	6	7
24.	If I can't get other people to show interest in me, I get upset or angry.	1	2	3	4	5	6	7
25.	I tell close others just about everything.	1	2	3	4	5	6	7
26.	I find that people don't want to get as close as I would like.	1	2	3	4	5	6	7
27.	I usually discuss my problems and concerns with others.	1	2	3	4	5	6	7
28.	When I'm not involved in a relationship, I feel somewhat anxious and insecure.	1	2	3	4	5	6	7
29.	I feel comfortable depending on others.	1	2	3	4	5	6	7
30.	I get frustrated when people are not around as much as I would like.	1	2	3	4	5	6	7
31.	I don't mind asking others for comfort, advice, or help.	1	2	3	4	5	6	7
32.	I get frustrated if people are not available when I need them.	1	2	3	4	5	6	7
33.	It helps to turn to close others in times of need.	1	2	3	4	5	6	7
34.	When others disapprove of me, I feel really bad about myself.	1	2	3	4	5	6	7
35.	I turn to others for many things, including comfort and reassurance.	1	2	3	4	5	6	7
36.	I resent it when close others spend time away from me.	1	2	3	4	5	6	7

## Appendix B.

**YOUR THOUGHTS AND FEELINGS IN THE PAST MONTH**  
(CCSC)

	<b>When you had problems in the past month:</b>	<i>Never</i>	<i>Sometimes</i>	<i>Often</i>	<i>Most of the Time</i>
1.	You thought about what you could do before you did something.	1	2	3	4
2.	You tried to notice or think about only the good things in your life.	1	2	3	4
3.	You tried to ignore it.	1	2	3	4
4.	You tried to stay away from the problem.	1	2	3	4
5.	You did something to make things better.	1	2	3	4
6.	You told yourself that things would get better.	1	2	3	4
7.	You listened to music.	1	2	3	4
8.	You reminded yourself that you are better off than a lot of other kids.	1	2	3	4
	<b>When you had problems in the past month . . .</b>	<i>Never</i>	<i>Sometimes</i>	<i>Often</i>	<i>Most of the Time</i>
9.	You daydreamed that everything was okay.	1	2	3	4
10.	You went bicycle riding.	1	2	3	4
11.	You tried to put it out of your mind.	1	2	3	4
12.	You thought about what would happen before you decided what to do.	1	2	3	4
13.	You told yourself that it would be OK.	1	2	3	4
14.	You told yourself that you could handle this problem.	1	2	3	4
15.	You went for a walk.	1	2	3	4
16.	You tried to stay away from things that made you feel upset.	1	2	3	4

17.	You tried to make things better by changing what you did.	1	2	3	4
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	<b>When you had problems in the past month . . .</b>	<i>Never</i>	<i>Sometimes</i>	<i>Often</i>	<i>Most of the Time</i>
18.	You told yourself you have taken care of things like this before.	1	2	3	4
19.	You played sports.	1	2	3	4
20.	You thought about why it happened.	1	2	3	4
21.	You didn't think about it.	1	2	3	4
22.	You told yourself you could handle what ever happens.	1	2	3	4
23.	You told yourself that in the long run, things would work out for the best.	1	2	3	4
24.	You read a book or magazine.	1	2	3	4
25.	You imagined how you'd like things to be.	1	2	3	4
26.	You reminded yourself that you knew what to do.	1	2	3	4
27.	You thought about which things are best to do to handle the problem.	1	2	3	4
	<b>When you had problems in the past month . . .</b>	<i>Never</i>	<i>Sometimes</i>	<i>Often</i>	<i>Most of the Time</i>
28.	You just forgot about it.	1	2	3	4
29.	You told yourself that it would work itself out.	1	2	3	4
30.	You went skateboard riding or roller skating.	1	2	3	4
31.	You avoided the people who made you feel bad.	1	2	3	4
32.	You reminded yourself that overall things are pretty good for you.	1	2	3	4
33.	You did something like video games or a hobby.	1	2	3	4
34.	You did something to solve the problem.	1	2	3	4
35.	You tried to understand it better by	1	2	3	4

	thinking more about it.				
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	<b>When you had problems in the past month . . .</b>	<i>Never</i>	<i>Sometimes</i>	<i>Often</i>	<i>Most of the Time</i>
36.	You reminded yourself about all the things you have going for you.	1	2	3	4
37.	You wished that bad things wouldn't happen.	1	2	3	4
38.	You thought about what you needed to know so you could solve the problem.	1	2	3	4
39.	You avoided it by going to your room.	1	2	3	4
40.	You did something in order to get the most you could out of the situation.	1	2	3	4
41.	You thought about what you could learn from the problem.	1	2	3	4
42.	You wished that things were better.	1	2	3	4
43.	You watched TV.	1	2	3	4
44.	You did some exercise.	1	2	3	4
45.	You tried to figure out why things like this happen.	1	2	3	4



## Appendix C.

**YOUR THOUGHTS AND FEELINGS IN THE PAST 7 DAYS**

(BSI)

Below is a list of problems people sometimes have. Please read each one carefully, and circle the number that best describes HOW MUCH THAT PROBLEM HAS DISTRESSED OR BOTHERED YOU DURING THE PAST 7 DAYS, INCLUDING TODAY. Circle only one number for each problem.

	<b>How Much Were You Distressed By:</b>	<i>Not At All</i>	<i>A Little Bit</i>	<i>Moderately</i>	<i>Quite a Bit</i>	<i>Extremely</i>
1.	Nervousness or shakiness inside	0	1	2	3	4
2.	Faintness or dizziness	0	1	2	3	4
3.	The idea that someone else can control your thoughts	0	1	2	3	4
4.	Feeling others are to blame for most of your troubles	0	1	2	3	4
5.	Trouble remembering things	0	1	2	3	4
6.	Feeling easily annoyed or irritated	0	1	2	3	4
7.	Pains in heart or chest	0	1	2	3	4
8.	Feeling afraid in open spaces or on the streets	0	1	2	3	4
9.	Feeling that most people cannot be trusted	0	1	2	3	4
10.	Poor appetite	0	1	2	3	4
11.	Suddenly scared for no reason	0	1	2	3	4
12.	Temper outbursts that you could not control	0	1	2	3	4
13.	Feeling lonely even when you are with people	0	1	2	3	4
14.	Feeling blocked in getting things done	0	1	2	3	4

15.	Feeling lonely	0	1	2	3	4
16.	Feeling blue	0	1	2	3	4
17.	Feeling no interest in things	0	1	2	3	4

	<b>How Much Were You Distressed By:</b>	<i>Not At All</i>	<i>A Little Bit</i>	<i>Moderately</i>	<i>Quite a Bit</i>	<i>Extremely</i>
18.	Feeling fearful	0	1	2	3	4
19.	Your feelings being easily hurt	0	1	2	3	4
20.	Feeling that people are unfriendly or dislike you	0	1	2	3	4
21.	Feeling inferior to others	0	1	2	3	4
22.	Nausea or upset stomach	0	1	2	3	4
23.	Feeling that you are watched or talked about by others	0	1	2	3	4
24.	Trouble falling asleep	0	1	2	3	4
25.	Having to check and double check what you do	0	1	2	3	4
26.	Difficulty making decisions	0	1	2	3	4
27.	Feeling afraid to travel on buses, subways, or trains	0	1	2	3	4
28.	Trouble getting your breath	0	1	2	3	4
29.	Hot or cold spells	0	1	2	3	4
30.	Having to avoid certain things, places, or activities because they frighten you	0	1	2	3	4
31.	Your mind going blank	0	1	2	3	4
32.	Numbness or tingling in parts of your body	0	1	2	3	4
33.	The idea that you should be punished for your sins	0	1	2	3	4

34.	Feeling hopeless about the future	0	1	2	3	4
35.	Trouble concentrating	0	1	2	3	4
36.	Feeling weak in parts of your body	0	1	2	3	4
37.	Feeling tense or keyed up	0	1	2	3	4

	<b>How Much Were You Distressed By:</b>	<i>Not At All</i>	<i>A Little Bit</i>	<i>Moderately</i>	<i>Quite a Bit</i>	<i>Extremely</i>
38.	Having urges to beat, injure or harm someone	0	1	2	3	4
39.	Having urges to break or smash things	0	1	2	3	4
40.	Feeling very self-conscious with others	0	1	2	3	4
41.	Feeling uneasy in crowds, such as shopping or at a movie	0	1	2	3	4
42.	Never feeling close to another person	0	1	2	3	4
43.	Spells of terror or panic	0	1	2	3	4
44.	Getting into frequent arguments	0	1	2	3	4
45.	Feeling nervous when you are left alone	0	1	2	3	4
46.	Others not giving you proper credit for your achievements	0	1	2	3	4
47.	Feeling so restless you couldn't sit still	0	1	2	3	4
48.	Feelings of worthlessness	0	1	2	3	4
49.	Feeling that people will take advantage of you if you let them	0	1	2	3	4
50.	Feelings of guilt	0	1	2	3	4

51.	The idea that something is wrong with your mind	0	1	2	3	4
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