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Transgenerational Attachment, Life Stress, and the Development of Disruptive Behavior in Preschool Children

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**TRANSGENERATIONAL ATTACHMENT, LIFE STRESS, AND
THE DEVELOPMENT OF DISRUPTIVE BEHAVIOR IN
PRESCHOOL CHILDREN**

by

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B.A. May 1993, Bates College

A Dissertation Submitted to the Faculty of
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ABSTRACT

TRANSGENERATIONAL ATTACHMENT, LIFE STRESS, AND THE DEVELOPMENT OF DISRUPTIVE BEHAVIOR IN PRESCHOOL CHILDREN.

Mary Jane Call
Virginia Consortium Program in Clinical Psychology, 1999
Director: Dr. Suzanne Getz Gregg

While a great deal of research focuses on representations of attachment, behavioral disorders, and life stress separately, research integrating these concepts has just recently begun (DeKlyen, 1996). The current study focuses on the links between transgenerational attachment, life stress, maternal psychopathology, and the development of behavior problems in preschool boys. Participants included 52 mothers of preschool boys (Mean Age = 56 months) who attended private preschool (N = 23) or a Head Start Program (N = 29). Participants completed a battery of assessment instruments including the Attachment Style Inventory (ASI) (Sperling & Berman, 1991), the Q-Set (Waters & Deane, 1985), the Parenting Stress Index (PSI) (Abidin, 1983), the Brief Symptom Inventory (BSI) (Derogatis, 1982), and the Child Behavior Checklist (CBCL) (Achenbach & Edelbrock, 1983). As predicted, child attachment security was found to be significantly correlated with child behavior problems ($p < .01$). Chi-square analyses indicated that children with internalizing and externalizing behavior problems are more likely to have mothers with psychopathology ($p < .05$ and $p < .01$, respectively). Though there was a significant correlation between total dyadic stress and child attachment security ($p < .01$), there was not a significant relationship between life stress and child attachment security. A Pearson r indicated that higher levels of total dyadic stress were significantly correlated with behavior problems ($p < .01$), while level of life stress was not. Regression analyses indicated that total dyadic stress was the only singular variable significantly related to the development of externalizing ($p < .0001$) and internalizing ($p < .01$) behavior problems, and child attachment security ($p < .001$), while maternal psychopathology and attachment security were not. The current study did not exhibit a significant relationship between maternal attachment classification and child behavioral difficulties or child attachment security. No significant relationship between maternal psychopathology and child attachment security was revealed. No significant differences

between the Head Start and Private Day Care populations were found in relation to behavior problems and child attachment security. Results indicate that in order to assess child attachment and child behavioral problems, the level of stress impacting the family must be considered. Alleviating the degree of stress impacting at-risk families through psychoeducational programs, parent counseling, and the enhancement of support networks could help alleviate later behavior problems and assist in the development of secure attachment relationships. To better understand the relationship between transgenerational attachment, life stress, and the development of childhood behavior problems, a larger investigation utilizing a high risk population is needed.

This dissertation is dedicated to my parents, James and Molly Call,
for their undying love and support.

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CHAPTER I

INTRODUCTION

The parent-child relationship has been studied extensively by attachment theorists, as well as by theorists from social learning, psychodynamic, and family system perspectives. There is widespread agreement that the attachment bond is central to the development of a person's relationships throughout the life span. This affective bond between the infant and caregiver provides a sense of security for the infant, and assists the infant in the development of later relationships (Goldsmith & Harman, 1994). Furthermore, there is a movement away from the narrow focus of infant-parent attachment toward a broader life-span perspective on attachment which ranges from early parent-infant attachment to parent-grandparent attachment on the other end of the life-span continuum (Cassidy, 1988; Main, Kaplan, & Cassidy, 1985). Special attention is now being devoted to the relationship between a parent's childhood experiences, their own parenting style, and the attachment style that their children develop in relation to them (Main, Kaplan, & Cassidy, 1985).

These perspectives all support the belief that the quality of child-parent attachment has enormous impact on the later development and/or the expression or maintenance of childhood behavior problems (DeKlyen, 1996). While there is a wealth of research on attachment and on behavioral disorders separately, research integrating the two has just recently become a topic of great interest. The attachment relationship between parent and preschooler is of special interest since it is often during the preschool years that patterns of disruptive behavior surface. Therefore, an ideal time period to study the complex relationship between attachment style and child behavior problems is during the preschool years.

THEORETICAL FORMULATIONS

Attachment Theory

Attachment serves as a foundation from which later representational models of both self and others are constructed (Bowlby, 1980). These models arise from early interactive experiences which provide infants with environmental expectations regarding the responsiveness of others. This in turn contributes to the infant's beliefs of self-worth

Publication manual of the American Psychological Association, 4th edition was utilized as a model for this dissertation.

(Bowlby, 1973). Therefore, a mother who is responsive to her infant's needs, who approaches caretaking in a straight-forward and non-intrusive manner, will positively influence her child's degree of self worth, and will help create for the child a non-threatening view of the world and others. By contrast, an unresponsive or overly intrusive mother may be detrimental to the infant's development of self worth and world view.

Ordinary variations in early care contribute to important differences in later observed attachment behavior, ranging from dependent behavior to avoidant behavior. The infant need not have been exposed to traumatic happenings to develop an insecure attachment style (Waters, Posada, Crowell, Lay, 1993). While events such as the death of the primary caretaker or physical abuse of the infant may considerably increase the likelihood that a particular infant will develop an insecure attachment, there are still some infants in such circumstances who do develop secure attachments. On the other hand, infants whose parents differ only slightly in their degree of intrusiveness or attentiveness, within the realm of ordinary variations in early care can develop significantly different attachment styles. Thus it seems that observation of early caregiving alone is not sufficient in predicting attachment styles. Instead, all of the complexities of the parent-infant interaction, the infant-environment interaction, and child temperament must be studied.

Overall, attachment is characterized by three main properties: There is comfort when the attachment figure is present, there is an effort to stay close to the attachment figure, and there is often distress when the attachment figure is not accessible (Fishler, Sperling, & Carr, 1990). One frequently used method of defining the attachment relationship is the "secure base metaphor." Originating with Bowlby (1958), and re-emphasized by Sroufe (1983) and Waters et al. (1993), the concept of the attachment figure as a secure base has been used to describe both parent-child relationships and adult love relationships. The parent as a secure base allows the child to freely explore his or her environment, and to feel confident that his or her parent will still be available and responsive, if needed. This opportunity for new experience enhances the child's cognitive development, cooperation, and problem-solving abilities (Sroufe, 1983). As Ainsworth, Blehar, Waters, and Wall (1978) reported, infants need a caregiver who is both physically and emotionally available, enhances exploration of the environment, and comforts and reassures the infant when there is alarm. Some researchers have reported that the secure attachment relationship, as characterized by these attributes, has been found to be a type of protective factor against the development of later behavior problems (Sroufe, 1983; Rubin, Hymel, Mills, & Rose-Krasnor, 1991). However, others have found no such relationship between attachment style and behavior problems (Bates, & Bayles, 1988;

Radke-Yarrow, McCann, DeMulder, & Belmont, 1995).

There is a reasonably predictable course of the development of attachment to the primary caretaker. In the first three months of life the infant begins interacting with the caretaker and the environment, and this experience serves as a basis for building future relationships (Wenar, 1994). During the fourth and fifth months of life, the infants' development allows for greater cognitive and emotional understanding of interactions, as seen by the appearance of "social smiles". The 6- to 9-month-old infant demonstrates a preference for his/her caretaker, thus exhibiting the formation of a true relationship and attachment. Lastly, with continued development, the 12 to 18-month-old child successfully solidifies these relationships, and this serves as a guide for the formation of later relationships.

Security versus insecurity in the attachment relationship contributes to the determination of feelings of either support or abandonment, whether the child develops an organized or disorganized representational system, and whether the child sees the world as a trustworthy or dangerous place (Bretherton, 1995). Securely attached children will feel supported even when their attachment figure is not nearby; they will have an organized, consistent view of themselves, and their caregiver, and they will view the world as a trustworthy, safe place. In contrast, insecurely attached children may fear abandonment even when their attachment figure is close by; they will likely have a disorganized, inconsistent view of themselves and their caregiver, and they will view the world as a dangerous, unpredictable place. It follows that security in the attachment relationship is of significant importance in numerous realms of a child's life.

Bretherton and Waters (1985) summarized Bowlby's major contributions as: a) The understanding that the attachment system is a behavioral control system characterized by its own motivational forces, and b) the belief that an individual's representational model of self, others, and world are closely tied to the uniqueness of each individual. In addition to these effects of early experience with attachment figures, age, sex, and circumstances of a person all contribute to particular patterns of attachment behavior shown by individuals (Bowlby, 1977). In fact, disturbances in attachment relationships may result in psychopathology that is characterized by anxiety or distrust, which in turn may reduce a child's ability to cope with later adversity (Bowlby, 1982).

Internal Working Models of Attachment

Bowlby's theoretical formulations provide a foundation from which to build an enhanced understanding of the parent-child relationship. This understanding stems from the internal working models of attachment, which have been defined as "a set of

conscious and/or unconscious rules for organizing of information relevant to attachment and for obtaining or limiting access to that information, that is, to information regarding the attachment relationship experience, feelings, and ideations" (Main, Kaplan, Cassidy, 1985, p66). These working models guide behavior in relationships by mediating behavior in certain situations, by determining which information is attended to, by assigning meaning and affective responses to that information, and by determining which information will be encoded into memory (Zeanah, & Barton, 1989). At birth infants promote proximity of their caregivers by crying, yet it is not until the middle of their first year that an infant forms the first internal representation of the caregiver and has some sense of others' existence when not present (Ainsworth, 1989).

Research suggests that children whose parents are available and able to meet their needs will develop a representational model of self that permits the child to cope capably and see him or herself as worthy of help from others, often characterizing a secure attachment. In contrast, parents who are not responsive, or who have threatened or actually abandoned the child, will contribute to the child's development of an unworthy and unlovable representational model of self, often characteristic of insecurely attached children (Bowlby, 1979). Overall, insecurely attached individuals are "believed to have complementary models of the self as unlovable and incompetent in the context of the caregiving relationship" (Greenberg, Speltz, & DeKlyen, 1993, p202) These models may in turn reduce self-esteem and result in feelings of inadequacy (Greenberg et al., 1993). Sroufe (1983) elaborates further on the caregiving relationship between mother and child. He suggests that this interaction is actually transformational in that the infant develops a relationship model through his/her interaction with the caregiver, and "the effects of the parental behavior are seen in the emergence of new behaviors (p504)." Thus, the mother-child interaction consists of influences from both members of the dyad, and each member's behavior significantly influences the other's behavior. In other words, the parent's behavior contributes to the infant's development of a representational model, which in turn "transforms" the child's subsequent behavior. The mother-child interaction and each members behavior is also guided significantly by the temperament of both the mother and the child. Thus, a dyad is influenced by each members' temperament as well as the obvious behaviors, that in combination, contribute to the development of a child's internal representation.

Furthermore, insecurely attached individuals are thought to have disorganized working models of self and attachment figures. This disorganization may result in miscommunication with others that characterizes most of a person's significant relationships (Bretherton, 1992). These working models will be activated most frequently

in situations where the maintenance of an attachment relationship is an important issue. For example, in situations when a child is fearful or facing danger, and truly needs his or her parent for security or protection. It is in these situations that securely attached children will differ most significantly from insecurely attached children, especially in their positive expectations and adaptive behavior (Rothbaum, Rosen, Pott, & Beatty, 1995). For example, in situations that involve interactions with parents or peers, securely attached children will more often demonstrate positive expectations and appropriate behavior than will their insecurely attached counterparts.

REVIEW OF RESEARCH

Attachment Styles

While researchers have provided differing labels for the various attachment patterns, there are three main patterns of insecure attachment and one pattern of secure attachment, as most frequently determined by Ainsworth's Strange Situation in infancy. The separation-reunion paradigm of the Strange Situation will be discussed in detail shortly. Securely attached infants seek interaction upon reunion and are readily soothed by their responsive and available parent. The three insecure attachment styles are differentiated by the child's pattern of response to separation and reunion with the parent. In contrast to the securely attached, the insecure-avoidant infants typically ignores the parent upon reunion, and tends to have a distant and unresponsive mother. Insecure-ambivalent infants display distress at separation, yet are not effectively soothed upon reunion, even though they seem to want proximity. These infants are often observed with overly intrusive mothers. Insecure-disorganized/ disoriented infants show a combination of avoidant and ambivalent behavior upon reunion and evidence other contradictory responses (dazed expression, looking away when held, fleeting fear response, affectless, sudden stillness). Mothers of these infants are often characterized as inconsistent, marked by both neglect and rejection (Main & Cassidy, 1988; Bretherton, 1992; Radke-Yarrow, Cummings, Kuczynski, & Chapman, 1985; and Wenar, 1994). Theoretically some have proposed that secure mothers will raise secure children; detached mothers will raise avoidant children; and preoccupied mothers will raise ambivalent children (Crowell and Feldman, 1989). In summarizing the prevalence of these attachment patterns, Bretherton and Waters (1985) reported that nearly 65% of mother-infant attachment relationships can be categorized as secure, while 35% are apt to be categorized as insecure with 20% as avoidant, 10% as resistant./ambivalent, and 5% as disorganized.

As previously mentioned, there is a movement toward the evaluation of parent-child relationships beyond infancy. Main and Cassidy (1988), Goldberg (1991), and

Main, Kaplan, and Cassidy (1985) have extended their attachment research to six and seven year-old children. Main and Cassidy found that children determined to be securely attached at six or seven years old treat parents in a friendly way, interact freely, and enter into intimacies upon reunion. Those children characterized as avoidant appeared to minimize interaction upon reunion and tended to avoid parental initiatives. The ambivalent or resistant children, however, showed a mixture of sadness, intimacy and hostility, and seemed to be exaggerating both dependency and intimacy. Lastly, the disorganized group, who are often referred to as controlling, dominated the parent upon reunion and tried to direct the parent's behavior through both punitive as well as caregiving acts (Main & Cassidy, 1988).

Main et al. (1985) reported similar results when utilizing a family photograph as the reunion stimulus. In this study, six-year-old children who were classified as securely attached, were pleased yet casual when shown their family photograph; avoidantly attached children actively refused to view the photo or turned away from it; and children classified as disorganized showed signs of depression and disorganization when presented with their family photograph. Goldberg (1991) reported similar results with seven-year-olds. Secure children greeted parents happily but casually, coordinated interactions with parents, and continued exploration. The children who were classified as avoidant appeared more interested in activities, and made no social initiatives with their mothers. Goldberg labeled the ambivalent infants as "dependent children" and reported their distress at separation and their preoccupation with the relationship at the expense of exploration (Goldberg, 1991). Lastly, the disorganized children behaved similarly to their counterparts in Main and Cassidy's study, with either overly enthusiastic reunions to please the parent, or highly controlling behavior during reunion.

Significant differences in attachment styles raise the question of the role of caregiver responsiveness in determining later child behavior. While it is clear that mothers of securely attached infants are typically responsive to their infants' needs and are available for support, there are very different caregiving histories that characterize the other patterns of attachment. Cassidy and Kobak (1990) classified these caregiving histories in relation to each attachment style. Theoretically they proposed that an avoidant attachment style may reflect early caregiver unresponsiveness. This unresponsiveness could contribute to an internal representation of the belief that others are consistently uncaring. This type of internal representation could then lead to hostile and dismissing interactions with others that are frequently associated with externalizing behavior problems. Cassidy and Kobak (1990) proposed a very different history preceding the development of an ambivalent or resistant attachment pattern. They felt

that these children were exposed to inconsistent responsiveness when they were distressed. This inconsistency, in turn contributed to the infant's preoccupation with gaining attention from the caregiver and led to social withdrawal and a reduction in exploration. Lastly, the authors felt that children demonstrating disorganized attachment may very well have been maltreated in their past.

It should be noted that there is not unanimous agreement regarding the presence of these four varying attachment styles. Main and Solomon (1990) do not believe that the disorganized attachment style should be viewed as an "organized pattern of attachment." Instead they propose that such a behavioral presentation is actually a display of combinations of behavior drawn from two or more of the organized attachment patterns. In certain infants there are conflicting behavioral tendencies that compete, and this results in an expression of a combination of behaviors, each more typical of secure, ambivalent, and avoidant attachment patterns. Explanation for this disorganized attachment strategy may stem partly from its significant positive correlation with severity of social risk factors (Main & Solomon, 1990). As the severity of social risk factors increases, conflicting behavioral tendencies may compete, which results in such a disorganized presentation. Even though there is some disagreement surrounding the fourth style of disorganized attachment, there is a significant amount of empirical support suggesting its validity, and it will therefore be treated as an organized pattern of attachment in the current study.

The Relationship Between Life Stressors and Attachment Style

The formation of a child's attachment style does not occur in isolation from the outside environment, encapsulated entirely within the parent-child relationship. Consideration of daily stressors and risk factors is crucial to an understanding of attachment. For example, Radke-Yarrow et al. (1995) reported that children growing up in high risk environments seem to have a higher incidence of the type of behavior disturbances that are consistent with the disorganized classification of attachment. Stressful life events occurring within the child's family were also found to be associated with changes in attachment toward a nonoptimal attachment pattern during the 12 to 18 month period, as assessed in the Strange Situation (Vaughn, Egeland, Sroufe, & Waters, 1979). Marital discord is one variable that has received significant attention in regards to its effect on the attachment relationship. Davies and Cummings (1994) found that secure attachment may serve as a buffer against the adverse impact on a child of marital conflict, yet exposure to such conflict is typically detrimental. Eiden, Teti, and Corns (1995) found that insecurely attached mothers (as determined by the Adult Attachment Interview) who reported high marital adjustment had children (mean age of 33 months)

who were significantly more secure than insecure mothers who reported poor marital adjustment. This finding suggests that mothers' internal working models and marital adjustment can act as protective factors which lessen the negative effects of insecure attachment or poor marital adjustment on their children's adjustment. There is not complete support for such a view, however, as Radke-Yarrow et al. (1995) reported that a child's attachment style did not differ significantly based on the presence or absence of marital discord, or losses. Thus, further research is required to establish the level of impact that marital discord has on the attachment relationship between parent and child and, more globally, how life stressors impact the attachment relationship.

Stability of Attachment

There is evidence suggesting that attachment patterns, once established in infancy, are fairly stable throughout childhood, and even into adulthood. Main and Cassidy (1988) reported that classifications of security in mother-infant relationships were highly predictive of attachment security in six-year-olds. More specifically, accurate prediction of security of attachment at six-years-old, from attachment security at 12-months, was possible in 84% of their sample. Significant situational changes such as long separations between parent and child or large reductions in the severity of life stressors may partially account for the 16% of the sample who did not demonstrate stability of attachment from 12-months to 6-years. Even though attachment patterns are most likely to persist over time, change is possible. Bowlby (1988) proposed that, during the first three years of life, the attachment pattern is more likely to change than it is in later years since it is a property of the early relationship. In other words, the pattern may change if the parent treats the child differently than before. However, as the child ages the attachment pattern becomes more internalized, in that he/she imposes it upon new situations. Thus, older children will be less likely to demonstrate changes in attachment. Extensive reconstruction of internal working models tends to be difficult since, once established, these models tend to work outside of a person's conscious awareness (Bowlby, 1980).

Evidence for change in attachment style in the early years is provided by Lieberman, Weston, and Pawl's (1991) study of the effect that infant-parent psychotherapy can have on quality of attachment. Lieberman followed anxiously attached infants who received conjoint psychotherapy with their caregiver for 12-months, anxiously attached infants who did not receive the intervention, and securely attached infants who did not receive the intervention. She found that the intervention group demonstrated significantly less avoidance, resistance, and anger than the anxious controls. Furthermore, there were no differences between the intervention and secure control

groups at the end of the study, suggesting that infant-parent psychotherapy is one avenue available for use in moving at least insecure-anxious infants toward a more secure attachment style. However, the adverse effects of earlier experiences are not erased, and children with early maladaptation whose lives have greatly improved may continue to show differential vulnerability for some time (Erickson, Sroufe, and Egeland, 1985).

It should be noted that the goal of changing insecure attachment to secure attachment is not always ideal. In some unusual family circumstances, insecure attachment may actually be a positive adaptation (Greenberg, et al., 1993). Similarly, Radke-Yarrow et al. (1995) reported that insecure attachment may have benefits for some children, just as secure attachment may not be a protective factor for other children in critical circumstances. For instance, an insecure-avoidant child may have fewer difficulties than a securely attached child in a home situation where the caregiver was not typically available or where the home environment was very disorganized. In this instance, the avoidant child may not seek as great a degree of support from the caregiver, and, therefore, may not be as adversely affected as the securely attached child by the caregiver's absence or the disorganization of the environment. Furthermore, Sroufe (1983) reported that anxious attachment may be either adaptive or maladaptive in regards to current relationships. However, this attachment style may either serve the child well in later relationships or be a hindrance to the development of these relationships. These findings suggest that general statements about the advantages and disadvantages of different types of attachment patterns must be made cautiously. Furthermore, these results emphasize the crucial role that attachment figures play in situations in which change of a child's attachment style is desired. In order for such change to occur with the child, the attachment figure must also demonstrate changes in the relationship.

It does not seem to be the case that infant attachment completely determines later social relationships, but Bowlby (1980) offers explanations for the significant carryover that is observed. First, he noted that the stability of the family environment contributes to the endurance of the particular pathway to which the child adheres. Secondly, he believed that internal working models had a stabilizing influence in and of themselves. Lastly, the environment should be considered as partly created by the individual, and, therefore, this interaction is another stabilizing influence. Consideration of these stabilizing factors facilitates an understanding of the stability of attachment patterns across the life span.

Attachment Patterns and Emotional Regulation

Though there is some disparity regarding evidence of the stability of attachment,

there is widespread agreement that the parent-child relationship is a definitive, if not exclusive, determinant in the establishment of skills of emotional regulation. For example, Bretherton (1990) and Cassidy (1994) view this relationship as the "cornerstone" in the development of emotional regulation. Such affective regulation stems from the empathic responsiveness of the caregiver and is an important facet of general adaptation for the infant (Sameroff & Emde, 1989). Furthermore, the caregiver guides the infant in the avoidance of extreme emotions and facilitates the infant's affective sharing and reciprocal behavior, which is a crucial factor in social development. Thompson, Flood, and Linnquist (1995) summarized the relationship between emotional regulation and the attachment relationship as follows: Attachment figures serve as an important resource for coping with both emotions and expectations surrounding their availability and their helpfulness and can either enhance or inhibit the child's ability to manage emotional arousal. Hence, the attachment relationship is highly relevant when speaking of emotional regulation, and should not be overlooked.

It should be noted that both parent and infant are individuals who demonstrate their own temperament and attitudes and, therefore, conflicts may arise in one parent-child relationship that do not develop in another parent-child relationship. Hence, the "goodness of fit" between parent and child plays an important role in the relationship between attachment patterns and emotional regulation. If a parent's and infant's temperament tend to compliment each other and adaptation is easily achieved, the development of emotional regulation in the infant will be more successful than it would be in a conflicted relationship. Therefore, the "goodness of fit" between a parent and infant ought to be considered when assessing the relationship between attachment patterns and emotional regulation.

Measures of Attachment

The complexities of the attachment relationship are currently assessed with a variety of different methodologies. These methodologies all focus on security of attachment or, more specifically, an individual's ability to gain security in the infant-parent relationship, and ability to utilize this relationship as a secure base from which to explore. The most utilized method for attachment research is the Strange Situation as developed by Mary Ainsworth in 1964. This separation-reunion paradigm serves as the foundation for a wealth of clinical research and continues to stimulate advancement in the attachment field. This paradigm was originally devised to assess the development of infant-mother attachment during the first year of life in familiar, home environments.

The Strange Situation is comprised of several stages in which the infant, the

mother, and a stranger interact in various scenarios at three-minute intervals. Initially, the mother and infant are left alone in a room filled with toys; the stranger then enters and talks with the mother and attempts to engage the infant; after some time; the mother then leaves the room while the stranger remains with the baby; upon the mother's return the stranger leaves; then mother leaves the room, and the baby is alone; the stranger returns to comfort the baby; and, finally, mother reenters the room and greets the baby to conclude the assessment. Observation of both the separation and reunion behaviors of the infant is crucial in determining attachment classification (Ainsworth, 1989; Main, 1995). This paradigm allows for a standardized observation of the infant's exploration and attachment behavior throughout an increasingly stressful progression of events. As previously mentioned, infants with secure, avoidant, ambivalent, and disorganized attachment styles will differ significantly in their response to separation and reunion with their caregivers.

During the Strange Situation, securely attached infants are active and explore freely, while utilizing the attachment figure as a secure base. Upon separation, these infants may demonstrate distress; yet upon reunion they actively approach the attachment figure and are easily soothed, subsequently returning to play. Infants classified as insecure-avoidant tend not to seek proximity to the attachment figure when present, and show little reaction during separation. Furthermore, these infants typically show avoidant behavior during reunion episodes. Infants classified as insecure-ambivalent present as anxious during the Strange Situation, and seem to inhibit subsequent exploration. These infants demonstrate preoccupation with the attachment figure, and may demonstrate significant distress upon separation; yet, they are unable to be soothed upon reunion (Ainsworth, 1978). Though only these three attachment styles were originally defined by Ainsworth, there is more recent agreement about the existence of a fourth pattern of attachment, insecure-disorganized (Main et al. 1985; Main & Cassidy, 1988; Bartholomew & Horowitz, 1991; Goldberg, 1991). These infants demonstrate a combination of behaviors characteristic of both the ambivalent and the avoidant attachment style, often demonstrating more hostile behavior than the other insecure groups and sometimes showing depressed affect and fearfulness upon reunion with the attachment figure.

Several other attachment measures have been devised that continue to draw upon the wealth of empirically-based information regarding the Strange Situation. The Attachment Q-sort devised by Waters and Deane (1985) is one such measure. This methodology is available for assessing attachment security in young children and is based on Bowlby's control system model of attachment that was previously discussed (1982).

The Q-sort is typically completed several times by the attachment figure. Both the parental and observers' versions contain 90 cards that must be sorted into nine piles that range from most characteristic to least characteristic of a child. Three steps are employed in the production of a final sort, including the initial division into nine piles, and two additional sorts, resulting in a final attachment classification as compared to an "ideally" attached child. Waters and Deane (1985) proposed that this measure is advantageous in assessing relationships among affect, cognition, and behavior in the attachment relationship, and in examining both qualitative and quantitative developmental change. Though, results of the Attachment Q-sort and the Strange Situation do not converge significantly, differences in measured attachment security are significantly related to the nature of care given by a particular caregiver, as measured by both the Strange Situation and the Q-sort (Belsky, Rosenberger, & Crnic, 1988). Thus both measures emphasize an assessment of the caregiver role in relation to the development of attachment.

Recently, Cassidy (1988), Bretherton, Ridgeway, and Cassidy (1990), and Buchsbaum and Emde (1990) have proposed that the use of play narratives and story completion tasks are an accurate and important tool in assessing children's attachment styles. These story completion tasks are an attempt to access the internal working models of attachment in young children. Cassidy (1988) found the following: Secure children presented a positive picture of self and were able to acknowledge imperfections of self; avoidant children presented the self as perfect without mention of interpersonal relationships; ambivalent children demonstrated no clear pattern; and controlling/disorganized children depicted an excessively negative picture of self. Different attachment styles also correlated with various responses during the story completion task involving a child doll. Those children classified as secure during the separation-reunion task presented the child doll as worthy of care, and involved in a supportive relationship with the mother. The avoidant children depicted the child doll as isolated or rejected. The ambivalent children showed a variety of responses that did not form a cohesive pattern. Lastly, the controlling/disorganized children often portrayed the protagonist child in hostile or bizarre behavior amidst a disorganized relationship with the mother. Though the validity and reliability of this story completion task are not solidly established, the measure continues to be researched.

Similarly, Bretherton, Prentiss, and Ridgeway (1990) and Bretherton, Ridgeway, and Cassidy (1990) introduced three-year-olds to five attachment story stems involving a doll family that was placed in several different situations. These situations tend to elicit resolutions to attachment concerns, including "caregiving, discipline, empathetic concern, reassurance from parents and care seeking, fear of discipline, and separation

anxiety from children" (Bretherton, Prentis, & Ridgeway, 1990, p92). The children were classified as secure if they addressed the issues without hesitation and created adequate positive resolutions. An insecure-avoidant classification was assigned to those children who required many prompts to reach a resolution, continuously responded with "I don't know, " or offered irrelevant completions. Lastly, children were classified as disorganized if they enacted bizarre story completions. The utility of the story completion task was further defined by Oppenheim (1989), Slough and Greenberg (1990), and Bretherton, Ridgeway, and Cassidy (1990), who reported significant correlations between these attachment story ratings and the following attachment measures: Strange Situation at 18-months, security scores from Attachment Q-sorts at 25-months, the sensitivity/insight ratings of the Parent Attachment Interview at 25-months, and an actual separation-reunion procedure at 37-months. These findings confirm the accuracy and utility of the attachment story completion task. This methodology is judged to be one pathway that will lead to a greater understanding of children's inner worlds (Buchsbaum & Emde, 1990).

The Adult Attachment Interview (AAI) devised by George, Kaplan, and Main (1984) is a significantly different type of attachment measure that has received a great deal of attention recently. The AAI is a structured interview focusing upon early attachment experiences and their later effects. Main and Goldwyn (1985) have devised a system of interview analysis which involves three stages. In stages one and two, scorers utilize a 9-point rating scale to document the speaker's childhood experience with each parent and his/her current state of mind in regards to these experiences, respectively. In the third stage, the text is further considered for application to a classification system which attempts to represent the speaker's state of mind in reference to his or her attachment.

Four adult attachment classifications result from this analysis. First, "autonomous" (secure) individuals present coherent, consistent and collaborative discourse during the AAI. They value attachment and bring objectivity to the evaluation of specific events. Second, adults classified as "dismissing" (avoidant) present non-coherent, brief transcripts which are characterized by a dismissing attitude regarding attachment-related experiences and a contradictory autobiographical history. Third, adults classified as "preoccupied" (ambivalent) demonstrate non-coherent, excessively lengthy transcripts which are characterized by a preoccupation with past attachment relationships that are often described in an angry and fearful manner. Lastly, the "unresolved/disorganized" group present with striking lapses of the capacity to monitor reasoning when discussing themes of loss and abuse. For instance, they may state that a

person was killed by a childhood thought. Otherwise, these individuals may demonstrate characteristics of the aforementioned attachment classifications (George et al., 1984).

AAI classifications are believed to be strongly associated with attachment classifications as determined by the Strange Situation. Main et al. (1985) reported that the dismissing classification from the AAI is related to the corresponding avoidant attachment style as determined by the Strange Situation, while the preoccupied classification is related to the ambivalent attachment style. The disorganized classification is related to the disorganized attachment style in infancy, and the autonomous classification determined by the AAI is related to the secure attachment style as determined by the Strange Situation. Fonagy, Steele, and Steele (1991) have extended this link further to the relationship between a parent's attachment style as determined by the AAI and their child's resultant attachment style as determined by the Strange Situation. It appears that autonomous mothers are no longer burdened by unresolved childhood concerns and are therefore sensitive to their infant's cues, which in turn contributes to their child's development of a secure attachment style. Dismissing mothers may be reluctant to acknowledge their child's needs, often behaving insensitively and unresponsively, which contributes to the development of an avoidant attachment style in their infant. A parent classified as preoccupied may provide an inconsistent and confused picture to the child, contributing to the development of an ambivalent attachment style. Though Fonagy et al. (1991) failed to elaborate on the relationship between the disorganized attachment style as determined by both the AAI and the Strange Situation, it may be that disorganized parents are significantly burdened by their own childhood issues, and are therefore unaware of their child's needs, which may in turn result in the neglect and abuse that is common in disorganized-disorganized parent-child attachment relationships.

Interestingly, the behaviors of mothers in interactions with their children were associated with the parents' attachment classifications as determined by the AAI (Crowell, O'Connor, Wallmers, Sprakin, & Uma-Rao, 1995). The secure parents tended to be warm and supportive of their children, presenting organized assistance, whereas insecure mothers were less supportive and helpful. More specifically, dismissing mothers appeared to contribute to the most severe behavioral problems in their children, often characterized by aggressive and oppositional behavior, whereas preoccupied mothers appeared to contribute to anxious children who demonstrated fewer externalizing behavior problems than the children of dismissing mothers.

Similar results were found by Motti (1986) who assessed preschool child-teacher relationships. Motti found that children classified into different attachment styles

received different treatment by teachers. Secure children were treated in a warm manner, and teachers expected compliance from them. Disorganized children were often highly controlled by teachers who had low expectations of compliance from these children. Avoidant children seemed to draw out reactions of anger from teachers. Lastly, resistant/ambivalent children received a great deal of nurturance and were viewed as not yet able to comply with rules. These findings further elaborate the interactive exchange between the children and other attachment figures, whether they be parents or teachers.

The Attachment Style Inventory developed by Sperling (1988) extends the realm of attachment further by assessing adults' attachment styles to friends, intimate partners, mother, and father. This measure consists of four paragraphs, each describing one of the four defined attachment styles. Participants rate their conformance to each attachment style on a 9-point Likert scale and indicate the particular attachment style that best characterizes that relationship. Furthermore, this measure assesses the level of security-insecurity of the relationship in question. After completing the inventory four times (in reference to friends, sexual partners, mother, and father), a master score on each attachment style across the different relationships, individual attachment style scores for the different relationships, and a self-classification of the most characteristic attachment style are computed. Fagen and Sperling (1989) reported that the attachment styles of dependent, avoidant, and ambivalent, as derived from the Attachment Style Inventory, are similar to the Ainsworth secure, avoidant, and ambivalent styles, respectively. Furthermore, these authors posited that the hostile/disorganized style may be roughly analogous to the disorganized attachment style in children. Utilization of this adult attachment measure in conjunction with related childhood attachment measures is one avenue for assessing attachment transgenerationally.

Sperling, Foelsch, and Grace (1996) conducted one of the few studies assessing the relationship between various measures of adult attachment. In comparing the Adult Attachment Scale (Collins & Read, 1990), the Attachment Style Measure (Simpson, 1990), and the Attachment Style Inventory (Sperling & Berman, 1991) these authors found a moderate degree of positive association between the subscales of these measures. It was also found that subscales of these different measures with the same labels were associated, suggesting they are measuring similar entities. Furthermore, the ASI demonstrated sufficient predicted association and convergent validity with Hazen and Shaver's (1987) Attachment Self Report Measure.

Differential Attachment to Mother and Father

Though the bulk of attachment research has been conducted with infants and their

mothers, fathers may also serve as a significant attachment figure. Studies have demonstrated that there is contradictory evidence regarding the correlation between infant-mother and infant-father attachment relationships. Some research has demonstrated that attachment style classification between the infant and both parents as determined by the Strange Situation at 12- and 18-months were independent of each other, yet were both stable over a six-month period (Main & Weston, 1981). Consequently, the effects of an insecure attachment relationship to one parent can be mitigated by a secure relationship to the other parent. This raises a suggestion of the protective value of at least one secure attachment relationship throughout a child's life. The independence of the infant-mother and infant-father attachment relationships is further elaborated by the meta-analysis conducted by Rothbaum and Weisz (1994) which found that early mother-child relationships were predictive of later behavior problems, while father-child relationships were not. This particular finding may seem contradictory to some of the literature suggesting the link between antisocial fathers and behavioral problems in their children, yet the literature on antisocial fathers does not assess the father-child attachment relationship which was crucial to the study by Rothbaum and Weisz (1994). This finding suggests that the mother-infant and father-infant relationships both play important, yet very different roles in their children's lives and should be assessed separately when focusing on the relationship and its effect on later behavior. However, other studies have demonstrated that attachment relationships with mother and father were highly correlated, with the type of insecurity observed likely to be similar in the relationships to both parents (Fox, Kimmerly, Schafer, 1991). These contradictory findings are suggestive of the need for further research assessing the dependence or independence of a child's attachment to father as well as mother.

Mother-Child Attachment Relationship and Disruptive Behavior

Though there has been a wealth of research done on the attachment relationship and later development, there has been little focus on the relationship between attachment style and the development of disruptive behavior. There are several lines of thought provided by researchers in regard to this link. Sroufe (1979) reported that with each developmental period, beginning with the attachment relationship in infancy, the stage is set for the child's degree of adaptation to developmental tasks of each progressive developmental phase. Furthermore, he suggests that aggressive behavior and other forms of antisocial behavior may be linked to failures in adaptation that occurred in earlier periods, specifically when attachment and autonomy issues were addressed. If this is the case, further elaboration on this area is necessary, along with a need for direct assessment

of the attachment relationship, developmental adaptation, and the development of disruptive behavior.

Greenberg and Speltz (1988) propose a multipathway model that outlines the relationship between attachment and behavior problems and have expanded on Sroufe's (1979) proposal. These authors delineate four important facets comprising this developmental model. First, the developmental process is transactional in that there is continuous negotiation occurring between the child and his/her parent. Second, as the child matures, his/her internal working model plays a greater role in directing both behavior and thought. Third, the parent-child relationship from infancy to preschool undergoes drastic developmental changes in both structure and process. Lastly, the authors noted that the child's working model is greatly influenced by developmental changes in the parent-child relationship.

This developmental model suggests that it is not only the attachment relationship as a unit that contributes to the development of later behaviors, but that the development and experience of the parent and child individually also contribute greatly. Thus, when assessing the attachment relationship, all three aspects must be considered fully or a great deal of valuable information may be overlooked. Evidence for this transactional, multipathway model was offered by Erickson et al. (1985) who found that attachment in the early years of development was related to preschool behavior difficulties in the predictable direction. This relationship, however, was sometimes mediated by concurrent variations in the parent-child relationship and family circumstances. In effect, information about attachment style as well as later parent-child and familial relationships are all necessary to accurately predict the development of behavior problems.

Across studies, there is a great deal of variation in the strength of research findings linking early attachment with the development of later behavior problems. The causal direction between attachment style and external behavioral problems in the preschool years is unclear. Greenberg, Speltz, DeKlyen, and Endriga (1991) reported that, in some cases, insecure attachment serves as a risk factor that is part of a multicausal pathway that contributes to the development of behavior problems, whereas in other cases insecure attachment may be secondary or even unrelated to the problem behavior. In the latter instance, insecure attachment may actually serve as a protective factor by preventing the development of more severe problems, instead of as a risk factor. Lastly, for some children who are referred to clinics with behavioral problems, the quality of attachment may be less important than some difficulty in transitioning from early proximal attachment to the later symbolic formats of attachment.

The causal direction in the relationship between attachment style and behavior

problems becomes more complex when consideration of mother-child interactions is included. It appears that children without behavior problems have mothers who respect their autonomy, are supportive, help with structuring tasks, and set consistent limits (Erickson et al., 1985). It remains to be seen whether the child's attachment style causes these behaviors in the mother, the mother's parenting behavior causes the child's behavior, or if it is a combination of the two. There is no question, however, that attachment is related to behavior. For example, attachment quality (based on separation-reunion observations) is as important in the assessment of behavioral problems as are measurements of specific child behaviors during play and compliance tasks (Speltz, DeKlyen, Greenberg, & Dryden, 1995).

In general, early secure attachment may assist a child in coping more effectively with later life stress. Though insecure attachment alone is an insufficient predictor of the presence of later psychopathology, there is evidence that secure attachment for males is a sufficient predictor of psychological health (Lewis, Feiring, McGuffog, & Jaskir, 1984). Securely attached males tended to exhibit fewer behavioral problems at age six. These secure children were reported to be more psychologically healthy than avoidant children, who were more psychologically healthy than the ambivalent children, who were found to be most susceptible to later psychopathology. However, the prediction of behavioral problems at age six (as assessed by the Child Behavior Profile), from the classification of attachment at age one (as determined by the Strange Situation) was more complex. For boys, those with ambivalent attachment styles exhibited the most behavior problems, whereas for girls, secure attachment related most highly to externalizing behavior problems. Furthermore, ambivalent boys were rated as highest on internalizing behavior problems, whereas for girls, a secure attachment classification was related to the highest level of externalizing behavior problems. The authors propose that while securely attached girls scored higher than insecurely attached girls on the externalizing scale, it may be that the secure girls exhibited the optimal level of externalizing behavior, while their insecure counterparts displayed less than optimal levels. Therefore, it may be that secure children demonstrate the appropriate amount of externalizing behavior, whereas insecure boys exhibit higher than optimal levels and insecure girls exhibit lower than optimal levels of externalizing behavior (Lewis, Feiring, McGuffog, & Jaskir, 1984).

Even though there appears to be a strong relationship between attachment style and the development of later behavioral problems, there are some exceptions. For instance, in the Erickson et al. (1985) study, of 96 children, there were six anxiously attached children, males and females (as determined by the Strange Situation at 18-months) who were well adjusted and competent in preschool, and there were eight

securely attached children who were demonstrating significant behavior problems at preschool. Though these exceptions make up only a small proportion of the sample, to overlook these would be detrimental to research focusing on attachment and behavior problems. Bates, Maslin, and Frankel (1985) found that infant-mother attachment relationships were not related to maternal reports of behavior problems for their three-year-olds. Similarly, Goldberg, Corter, Lojkasek, and Minde (1990) found no relationship between attachment style and mother and teacher ratings of behavioral problems in four-year-olds. Furthermore, Bates and Bayles (1988) reported that quality of attachment allowed no direct prediction of later behavior problems in either boys or girls. Lastly, Radke-Yarrow et al. (1995) extended these findings to six- and nine-year-olds.

It appears that in some cases behavior problems have little association with the attachment relationship of mother and infant, while in other cases behavior problems may actually cause or be a response to problems in the attachment relationship (Waters et al., 1993). The equivocal findings regarding attachment predicting to later outcome may reflect different populations assessed, different prevalence rates of behavior problems, different outcome assessments, instability of attachment patterns or the failure to differentiate among subtypes of insecure attachment (Goldberg, Golowiec, & Simmons, 1991). Furthermore, Lewis et al. (1984) suggest that insecure attachment may only be associated with later behavior problems when it occurs in conjunction with other stresses.

Specific Attachment Styles and Behavioral Problems

There is much conflicting evidence surrounding the relationship between attachment style and later behavioral problems. Theoretically, children who are insecurely attached "have less to lose by disobeying parental requests and would have a less trusting view of adults' behavior, given previous lack of contingent parental responsiveness," (Greenberg & Speltz, 1988, p356). Thus, it is likely that these insecurely attached children are more prone to disruptive and aggressive behavior, as they have not internalized parental directives and prohibitions. Similarly, Sroufe (1983) showed that infants rated as insecurely attached showed social problems, which included aggressive and inattentive behaviors, in both preschool and kindergarten. This evidence provides a further link between insecure attachment and later behavior problems.

Many researchers have further elaborated upon this link by differentiating the types of insecure attachment and then comparing the groups on measures of later behavior problems. For instance, Fagot and Kavanagh (1990) found that among high risk samples (low social economic status, single parent home, etc.) avoidant attachment classification

was predictive of later behavior problems. However, this was not the case for lower risk samples. Thus, varying levels of risk may contribute to different effects in the relationship between attachment quality and behavior problems. Similarly, Shaw, Keenan, and Vondra (1994) found that avoidant attachment at 18-months (as determined by the Strange Situation) was associated with significantly higher rates of behavior problems at five-, seven-, and eight-years of age (as determined by mother's completion of the Child Behavior Checklist). Similarly, Renken et al. (1989) reported that avoidant attachment in infancy coupled with negativistic behavior in the preschool period is correlated with both later aggressive and antisocial behavior. A further differentiation of the avoidant attachment subgroup was offered by Fagot and Pears (1996) who found that at 30 months of age some of the avoidant children had become more defended with their caregivers while others became more coercive. It was the latter group of children who were rated by their teachers (on the Child Behavior Checklist) as having both more internalizing and more externalizing behavior problems. It appears that these coercive children discovered that displays of emotion often attract parental attention, and therefore they utilize emotional displays frequently.

Though it is believed that avoidant children are more likely than ambivalent children to display disruptive preschool behavior (Rubin, Hymel, Mills, & Rose-Krasnor, 1991), there is evidence of behavioral problems in the latter group. In fact, Sroufe (1983) reported that both groups of infants may develop externalizing behavior problems. He felt, however, that the meaning of the behavior differed for each group. The avoidant children may demonstrate a hostile behavior pattern because of the rejecting care they have received. This may include external displays of anger resulting in bullying and lying. By contrast, the ambivalent children may demonstrate reduced frustration tolerance and attentional skills as well as increased impulsivity as a result of overstimulation. Though the behavior patterns displayed may be similar in these two groups of children, the differing meanings ought to be considered. Perhaps infants classified as ambivalent are prone to show aggression in preschool because their internal working model of the attachment relationship which they apply to other relationships is a highly rejecting one. Unfortunately, the infant becomes even more vulnerable because they alienate the caregiver further when they utilize avoidance instead of expressing their anger about the caregiver's unavailability (Renken, Egeland, Marvinney, & Mangelsdorf, 1989). Lastly, ambivalent children were rated by their teachers as hostile, withdrawn and impulsive as well as having poor social skills and demonstrating noncompliance (Erickson et al., 1985).

To complete the subtypes, children with disorganized attachment styles have also

been shown to develop later behavior problems. Lyons-Ruth, Alpern, and Repacholi (1993) assessed 18-month-old infants in the Strange Situation and reassessed these children at five years of age utilizing behavioral ratings from teachers. They found that of their sample of 62 preschoolers, those children classified as disorganized in infancy accounted for 71% of the children demonstrating serious hostile behavior in the classroom at the age of five. Furthermore, they found that the combination of disorganized infant attachment and maternal psychosocial difficulties was highly predictive of later displays of hostile behavior. Though there is less research on this newest subtype of insecure attachment, evidence from this study in combination with the studies focusing on the other attachment classifications suggests that later behavioral problems can be found in children with each type of insecure attachment. Greenberg and Speltz (1995) suggest that these behaviors, which are frequently labeled as conduct problems, may be strategies used by the children to gain attention and proximity from an unresponsive caregiver. Children may initially utilize conflict with their parents as a method of caretaking regulation. Thus, their negative behaviors may be implemented to gain a positive outcome.

Intergenerational Attachment and Behavioral Problems

It is obvious that the parent-child attachment relation is very influential throughout the life span, however, the influence of the mother's attachment to her own parents can not be dismissed. The fact that maternal representations of attachment was predictive of later infant-mother attachment patterns, in 75% of dyads assessed, reiterates the importance of intergenerational attachment and its effects (Fonagy et al., 1991). Bretherton and Waters (1985) reported that a parent's internal working model of their own childhood attachment tends to govern how that parent behaves as their own child's attachment figure. There are two explanations for this finding; individuals may draw on their internalized model of their parent, which in turn guides their own parenting behavior or their parenting behavior may be guided by a current model of self, which stems from their earlier relationships with their parents. Bretherton and Waters (1985) concluded that transmission of intergenerational attachment is guided by how a person construes their internal working model as an adult, not by their internal working models of attachment figures, per say.

Assessment of intergenerational attachment has recently become a focus of attachment research with George, Main, and Kaplan's (1984) advent of the Adult Attachment Interview. It appears that the predictive power of the AAI lies in the mother's organization of internal relationship representations, rather than in the actual quality of their childhood experience (Fonagy et al., 1991). The mother's qualitative accounts of these childhood experiences have significant power in predicting their own

children's attachment style. For example, Fonagy et al. (1992) found that 78% of securely attached mothers as determined by the AAI before their child's birth had securely attached children at 12-months-old, as assessed by the Strange Situation. Similarly, 72% of the insecurely attached mothers had insecurely attached children, suggesting strong evidence for the transmission of attachment across generations for perhaps three quarters of adults. There could be several reasons why one quarter of the children of insecure mothers did not demonstrate insecure attachment: Perhaps the remaining quarter of children had another significant attachment figure in their life whom they securely attached to, or perhaps their mothers had successfully worked through their own childhood issues which contributed to their insecure attachment style. Overall, this finding supports the widely held belief that one's own childhood conflicts tend to reemerge during the parenting of one's own children (Fraiberg, Adelson, & Shapiro, 1975). Similarly, a mother's insecure attachment may go hand in hand with negative or unrealistic expectations of others in relationships, which may contribute to her belief that her relationship with her child is either less important or overly important to her own well-being (Greenberg, et al., 1993).

More specific findings stemming from AAI research suggests the presence of various types of working models results in different parental behavior, which results in differing infant behavior. Bretherton (1990) reported that poorly organized working models of attachment typically characterize insecure parents, which in turn results in the parent's misinterpretation of their infant's signals. This misinterpretation may contribute to inconsistent feedback which results in confusion for the infant. Therefore, the mother's poorly organized model interferes with the infant's construction of a well organized internal working model. This contributes to a maladaptive intergenerational attachment pattern. In assessment of secure parents, Bretherton (1990) found that informative, consistent feedback is presented to the infant, who in turn begins forming an adaptive and organized internal working model that can guide them in learning about other relationships.

In addition to the transmission of intergenerational attachment there is also an association between the parent's representation of attachment and the development of later behavior problems in their children. Pasternack-Chinitz (1995) reported that a parent's poorly organized internal attachment representation contributes to the development of disruptive behavior problems in young children. For parents who have experienced significant adversity, such as abandonment by their own parents, or abuse, they develop an unlovable and incompetent model of self in the context of relationships and therefore expect their child to be antagonistic as others have been in the past, thus creating and maintaining an adverse cycle. Interestingly, different disruptive behaviors have been

found to be associated with different parental attachment styles. Crowell et al. (1995) found that 5- to 11-year-old children of secure mothers (as determined by the AAI) were found to be most competent in all tasks presented, and tended to demonstrate symptoms of Attention Deficit Hyperactivity Disorder if any behavioral problems were shown at all. The children of the 19 dismissing mothers were found to have the most severe behavior problems, with 84% of them receiving diagnoses of Oppositional Defiant Disorder or Conduct Disorder. These findings suggest that a dismissing attachment classification of a mother is a significant risk factor for the development of disruptive behavior in their children.

DeKlyen (1996) elaborates further on the links between preschool behavior problems, mother-child relationships, and mothers' attachment to her own parents. She reported that "maternal attachment may influence the development of behavior problems by shaping mother-child interactions; the history of these interactions may then be represented in the child's attachment behavior." (p. 363) Unfortunately this study was conducted with a sample which included few participants from low income or minority groups. Thus not allowing for valuable comparisons across ethnic and economic variables. Overall, DeKlyen (1996) focused on families who were not experiencing severe psychosocial stress, which has been found to be related to the development of behavior problems (Webster-Stratton, 1985). Therefore, further research comparing and contrasting a more multiproblem population with those experiencing less severe psychosocial stressors is needed to truly understand the links between pre-school behavior problems, mother-child attachment, and mothers' attachment to her own parents.

Attachment Style and Scores on the Child Behavior Checklist

The Child Behavior Checklist (CBCL) developed by Achenbach (1979) has been extensively used as a questionnaire measure of child behavior problems. The subscales comprise two global dimensions; externalizing (aggressive, destructive, etc.) and internalizing (anxious, withdrawn, etc.) behavior problems. Researchers have further compared children's attachment style classifications to the problem behavior scores obtained on the CBCL. Bates and Bayles (1988) assessed 168 middle to upper class children over the first three years of their lives, and then again at the ages of five and six. Attachment classification was determined at 13 months of age (as assessed by the Strange Situation), and CBCL scores were elicited from the mothers when their children were five- and six-years-old. These authors predicted that "anxiously attached, avoidant children would show problems concerning anger, coerciveness, and interpersonal aloofness; that the anxiously attached, resistant children would show anger, low

frustration tolerance, immature dependency, and specific anxieties; and that the securely attached children would show lower behavior problem scores than the insecurely attached children" (p. 280). Their data analyses, however, revealed no significant differences between the attachment groups when comparing their CBCL scores. These authors propose two reasons why attachment security was not predictive of behavioral problems in their study. First, they believed that attachment security may depend on correlated third variables such as general family stress and positive family functioning. High levels of family stress and reduced coping levels may play an important role in the production of behavior problems versus adjustment. Since Bates and Bayles' (1988) study assessed a population with lower life stress than previous studies, it is possible that this third variable plays a defining role in the relationship between attachment style and behavior problems. Furthermore, these authors believed that positive family functioning may mitigate the expected effects of insecure attachment. Thus, their sample of "well functioning" families may differ greatly from other studies which utilized higher risk samples.

For example, Sroufe (1983) found that in a sample of families with lower socioeconomic status and higher risk, specific types of attachment predicted specific types of behavioral patterns. More specifically, children classified as ambivalent appeared more disorganized, while avoidant children appeared more devious. Similarly, Erickson et al. (1985) found that anxiously attached high risk children (as determined by the Strange Situation at 12 and 18 months) were more likely to have behavioral problems in preschool (as measured by the Behavioral Problem Scale devised by the authors). These findings suggest that experiences with the attachment figure lead to expectations that in turn influence how the child organizes his/her behavior at least throughout the first five years of their life. Golberg, Gotowiec, and Simmons (1995) conducted a study of attachment (as measured by the Strange Situation at 12 months of age) and behavior problems (as measured by the CBCL at three years of age) comparing chronically ill and healthy preschoolers. Though no significant effect of attachment on Total CBCL scores was found, it was reported that avoidantly attached children consistently scored higher on the Externalizing scale when compared to ambivalently and securely attached children. Avoidant children also received (insignificantly) higher scores on the Internalizing scale. The authors suggest that these findings in conjunction with findings from Erickson et al. (1985) and Lewis et al. (1984) "suggest that the etiological significance of avoidant attachment for externalizing disorders is consistently supported by empirical evidence, but connections between resistant (ambivalent) attachment and internalizing disorders are tenuous" (p.279). Lastly, Goldberg et al. (1995) reported that children with a disorganized attachment classification did not receive higher CBCL scores than the

avoidant or ambivalent children, whereas Lyons-Ruth, Alpern, and Repacholi (1993) found that disorganized attachment in high risk children was a strong predictor of later hostile behavior. The evidence surrounding the relationship between attachment style and later behavior problems is equivocal with mixed findings that warrant further study.

Diagnosis of Disruptive Behavior Disorders

Conduct Disorder (CD), Oppositional Defiant Disorder (ODD), and Attention Deficit Hyperactivity Disorder (ADHD) are typically referred to as the disruptive behavior disorders, which are all characterized by demonstrations of externalizing behavior. These externalizing behaviors are a class of "inattentive, impulsive, overactive, hostile, aggressive, and delinquent actions" (Hinshaw & Lahey, 1993, p. 32). These childhood psychiatric disorders are prevalent and often disruptive to home life, and school situations. Children who display aggressive and noncompliant behavioral patterns, such as those children diagnosed with CD and ODD, are at significant risk for the development of psychiatric, academic and social impairment (Robins, 1973). Children diagnosed with ODD, typically evident before the age of eight, are characterized by negativistic, hostile, and defiant behavioral patterns, yet there typically is not serious violation of basic human rights. These children are viewed as argumentative with short tempers, angry, easily annoyed, rule defying, and blaming of others. These children also demonstrate low self-esteem and low frustration tolerance (American Psychological Association, 1994). Furthermore, this disorder can be viewed as persistent displays of irritability, opposition, and defiance, which are not developmentally appropriate (Hinshaw & Lahey, 1993).

Frequently there is a progression from ODD to CD, with the average age of onset for ODD being six and one half-years -old, while nine years of age is reported by parents for the onset of CD (Hinshaw & Lahey, 1993). Researchers have found that symptoms of ODD are frequently retained even after the emergence of CD, suggesting that these two disorders are developmentally intertwined, with ODD serving as a precursor to CD (Loeber, Keenan, Lahey, Green, & Thomas, 1993). A history of parental antisocial behavior, conflict, peer difficulties, and low socioeconomic status are correlated with both disorders, though to a lesser degree with ODD. ODD may actually represent a less severe form of CD (Hinshaw & Lahey, 1993).

CD is characterized by a pattern of rule violations and the violation of basic human rights, which is demonstrated through threatening, aggressive, and confrontational behavior. The destruction of property, aggression towards people and animals, and theft are also common characteristics noted in CD children (American Psychological

Association, 1994). The onset of this disorder is typically in late childhood or early adolescence, and often persists into the development of antisocial behavior in adulthood (American Psychological Association, 1994). This disorder greatly resembles its possible precursor, ODD, on a higher level of behavioral severity. During development the oppositional and antisocial behavior of children with childhood onset of symptoms changes significantly. Initially, a preschooler with behavioral problems may display temper tantrums and refuse to respond to instructions. These children may then begin lying and initiating fights as they develop. In later childhood these children may vandalize, steal, and torture animals. By young adulthood they may demonstrate a chaotic employment and relationship history, and may be abusive (Hinshaw & Lahey, 1993). It should be noted that children with childhood onset CD frequently have a history of ADHD (Hinshaw & Lahey, 1993), which may suggest a relationship between these two disorders that in some ways resembles the relationship between ODD and CD.

ADHD is another disruptive behavior disorder which is characterized by externalizing behaviors that are problematic. This disorder is characterized by significant difficulties with inattention and/or significant hyperactivity and impulsivity that is problematic before the age of seven. Children with ADHD often demonstrate behavioral impairment in two or more settings (i.e. school, home) causing significant academic as well as social difficulties (American Psychological Association, 1994). These three disorders comprising the categorization of disruptive behavior disorders create a highly prevalent problem in our society, and require continued research in the assessment of pathways leading to their development.

Lastly, Campbell and Ewing (1990) reported that the predicted persistence of these externalizing behaviors in children who were nine-years-old was determined by a combination of variables. In regards to the child's behavior, a reported difficult infancy and high levels of behavioral difficulties in preschool, including overactivity, impulsivity, noncompliance, and aggression, were contributing factors. Significant maternal control and high family stress also helped predict the presence of externalizing symptoms in their children. It should be noted that the heritability factor, especially for ADHD, offers convincing evidence for the importance of the internal variables in the development of behavior problems. Researchers have reported that from 20% to 32% of parents and siblings of ADHD children also have the disorder (Biederman, Munir, Knee, Armentano, Autor, Waternaux, & Tsuang, 1987; Deutsch, Swanson, & Bruell, 1982), suggesting that internal variables may help explain the inconsistency of attachment research in regards to the relationship between attachment typology and behavior disorders. These findings suggest that there is in fact an interaction between internal variables within the child,

maternal variables, and external situational variables that in combination contribute to the development or absence of disruptive behavior.

Developmental Pathways Leading to Disruptive Behavior Disorders

Disruptive behavior disorders are a serious social problem affecting significant numbers of preschool aged children. This disruptive behavior may initially be utilized to engage parents who have not responded to other strategies. This type of behavior is initially an adaptive response, however, such behavior often results in coercive interactive patterns between parent and child (Pasternack-Chinitz, 1995). Furthermore, the noncompliance and attention seeking that contributes to the coercive interactions have been found to be associated with externalizing behavior problems in school age children (Patterson, Reid, & Dishion, 1989). This finding suggests that the quality of the parent-child relationship is an important determinant of later behavior. Furthermore, Sroufe and Waters (1977) suggest that later effective behavior is supported by the development of appropriate adaptation in earlier developmental phases. This suggests that children who adapt well socially and emotionally at one age will tend to adapt well at a later age. This finding also supports the premise that the early parent-child relationship serves as a foundation for the development of later relationships and behaviors.

It appears that serious behavioral problems in the preschool period fall into three general categories of antecedents. First, the behavioral characteristics of the child must be considered. The presence of oppositional behavior, attention problems, or a difficult temperament may be an antecedent to serious behavior problems. Second, ineffective parenting can play a significant role. For example, a parent who displays little involvement, who is harsh, or who is an ineffective disciplinarian with their child may contribute to the later behavioral problems. Last, the presence of distal variables including parental psychopathology, low socioeconomic status, and divorce which appear to disrupt the parent's discipline can serve as an antecedent to the development of disruptive behavior during the preschool years (Reid, 1993). Furthermore, there seem to be two general pathways that lead to disruptive behavior. First, is an aggressive-versatile pathway which is often linked to hyperactivity and frequently characterized by conduct problems that are either aggressive or covert. This pathway could be characterized by a child who aggressively attacks people or one who is involved with theft. Second, is a nonaggressive antisocial pathway which is typically characterized by nonaggressive and covert acts, including stealing and fire setting (Loeber, Wung, Keenan, Giroux, Stouthamer-Loeber, Van Kammen, & Maughan, 1993)

Renken et al. (1989) further elaborated on the link between antecedents and later

behavior problems by referring to the internal working model concept. Take for example, the case of aggression. The world may be seen as threatening while people are seen as unavailable. In such a scenario, a child may learn that he will be exploited in relationships if he is vulnerable, thus the child presents a hostile front from which he is then rejected by peers. From this standpoint, it appears that the child's internal working model can result in adverse cyclical episodes in which the child ultimately suffers. In other words, while the child is trying to protect himself from "exploitation,," in actuality he is harming himself and reducing his opportunities to be part of a meaningful, supportive relationship.

Models of the Development of Child Psychopathology

The development of disruptive behavior is complex, thus resulting in the development of several explanatory models. Greenberg and Speltz (1988) view the development of disruptive and antisocial behavior from a cognitive/affective perspective. They suggest that preschoolers who display disruptive behavior are attempting to receive attention from an unresponsive caregiver who has not established strong communication surrounding goals and plans. If a "goal corrected partnership" is not developed in the preschool years, and negotiation around rules is not mastered, the child may also fail to share emotions with others. As the child has not learned to share emotions and does not know how to request assistance from others, there is confusion surrounding his/her mixed feelings toward the caregiver. Anger may result from this emotional confusion and may then contribute to the development of coercive interactive patterns. From this perspective, it is the combination of cognitive and affective variables that contribute to the development of disruptive behavior.

Greenberg, Speltz, and Deklyen (1993) offer a more recent process model which addresses three complementary processes that may lead to the development of disruptive behavior. First, and similar to the above model, is the development of a cognitive-affective working model of self and others. This working model is solidified and relationships become viewed as representing feelings of anger, mistrust, and chaos etc. Second, disruptive behavior displayed by young children can actually be an attachment strategy with the goal of regulating caregiving patterns (Greenberg & Speltz, 1988). Third, the motivational properties of attachment may contribute to the development of disruptive behavior. For example, a child may be motivated to be close to their parent, thus they may cause a scene which in turn brings the parent closer in proximity. The motivation to be close to the parent, therefore, may actually contribute to the display of disruptive behavior. Waters et al (1990) stated that attachment may serve as motivation

to explain prosocial development. The authors suggest that attachment promotes either a global positive or resistant social orientation in the child which helps determine their readiness for socialization. These models and the emphasis on both cognitive and affective variables in the development of disruptive behavior run the risk of overlooking environmental factors that may also play a defining role in the development of such behavior. Therefore, a discussion of the development of disruptive behavior would not be complete without reference to other variables and risk factors that may play an important role.

The Role of Risk Factors in the Development of Disruptive Behavior

Risk factors are factors that if present will increase the likelihood that a child will develop an emotional or behavioral disorder later in their development (Rae-Grant, Thoma, Offord, & Boyle, 1989). It appears to be an aggregate of these risk factors that impairs a child's development, rather than a single factor. More specifically, Rutter and Quinton (1977) reported that even though the presence of one risk factor did not lead to a significant increase in the development of "mental disorders" in children, the presence of two factors lead to a fourfold increase, and the presence of four risk factors led to a ten fold increase in the risk of developing a "mental disorder." Risk factors in the family environment that are significantly correlated with childhood mental disturbances include: Severe marital discord, low socioeconomic status, large family size, paternal criminality, maternal psychiatric disorder, foster care placement (Biederman & Meberger, 1993), not living with natural mother or father, low parent education, parental drug abuse (Mooney, Thompson, Nelson, 1987), young parents, lack of support, chaotic living conditions, and high degree of life stress (Erickson et al., 1985).

These risk factors and their relationship to the development of disruptive behavior have been assessed in a number of studies which have produced some interesting findings. For example, Campbell, Breaux, Ewing, and Szumowski (1986) found that externalizing behaviors at three-, four-, and six-years-old were associated with low socioeconomic status, continuing family stress, and a poor mother-child relationship in toddlerhood. In another study, marital aggression was shown to contribute unique variance to the prediction of Conduct Disorder, personality disorders, immaturity, and significant levels of disruptive child behavior (Jouriles, Murphy, & O'Leary, 1989). Similarly, Richman, Stevenson, and Graham (1982) reported that the continuance of childhood behavior problems was predicted by ongoing familial stress including relationship difficulties, maternal depression, and other external stresses. Results of a study by Campbell and Ewing (1990) are somewhat contradictory to the previous

findings. These authors found that Oppositional Defiant Disorder and Conduct Disorder symptoms were not predicted accurately by familial stress levels. Their sample, however, was a more intact, middle class sample than the above-mentioned studies suggesting that lower levels of family stress may have been present in their study. Similarly, Mooney et al. (1987) reported that their analysis of CBCL scores of children aged 4 to 16 did not reveal a significant relationship between "any combination of risk factors and total number of behavior problems, internalizing or externalizing scores for the entire group, males and females separately, or for the age and sex groupings of 6- to 11- and 12- to 16-year-olds." (p.67) These results may suggest that risk factors that have been helpful in differentiating between clinical and nonclinical populations may not be helpful in further differentiating within a clinical sample after the threshold of seeking clinical help is surpassed (Mooney, et al., 1987).

Risk factors and the relationship between attachment classification and the development of disruptive behavior have also been assessed. Renken et al. (1989) found that both attachment history and early social adaptation were related to the development of aggressive behavior in boys, whereas harsh parental treatment and stressful life events were related to the development of aggression in both girls and boys. In another study children were assessed from birth to three-and-one-half-years-old. Carlson, Jacobvitz, and Sroufe (1995) found that for this sample, maternal caregiving style was the most important predictor of later ADHD-like behavior. Relationship status at birth, the parent's social support, and measures of parental overstimulation also contributed to the development of ADHD-like behaviors in three-and-one-half-year-olds. Lastly, Shaw et al. (1994) reported that insecure attachment may be prevented from becoming dysfunctional if the child is from a middle class family since this type of ecosystem may serve as a buffer. Low socioeconomic status boys are more prone to show later externalizing behavior problems. In combination these findings suggest that there is in fact a measurable interaction between risk factors, attachment classification, and disruptive behavior .

There appears to be four general domains of risk factors which contribute to the development of disruptive behavior (Greenberg et al., 1993). First, there are biological factors of the child including: Physiological and neurological factors, prenatal or perinatal trauma, or exposure to neurotoxins which place the child at increased risk. Second, family ecological variables including: Degree of parent education, parent psychiatric illness, and criminality must be considered. The third domain consists of parental management techniques and socialization. Lastly, the authors suggest that early parent-child attachment plays an important role in the development of behavior problems.

Support arises from Bretherton (1985) and Ainsworth et al. (1978) who reported that secure attachment in the first two years of life is related to degree of sociability, compliance, and more effective affect regulation.

Theoretically, there are two basic pathways of how a family's ecology affects child behavior. First, Patterson and Dishion (1988) believe that a family's distress and adversity may be transmitted through their negative influence on parenting which could then promote disruptive behavior in the children. Second, Greenberg et al. (1993) believe that family adversity can contribute directly to the development of disruptive behavior as well as indirectly. Therefore, family adversity and levels of stress ought to be considered when assessing the development of disruptive behavior in children.

Protective Factors and Their Role in the Development of Disruptive Behavior

Though there are numerous studies assessing the impact of risk factors on the development of behavior problems, there are few assessing the impact of protective factors on the development of disruptive behavior. Protective factors actually alter people's responses to a particular environmental stressor, (i.e. parental psychopathology, low socioeconomic status, or life stress) that predisposes them to maladaptive outcomes (Rae-Grant et al., 1989). Factors that protect against the development of disruptive behavior include supportive family environment and external support (Garmezy (1983); positive temperament, social competence, and above average intelligence (Rutter, 1979). In a sample of children with Attention Deficit Hyperactivity Disorder, researchers found that higher maternal education level, family stability, good physical health, and higher cognitive functioning all served as protective factors (Palfrey, Levine, Walker, & Sullivan, 1985). A study by Rae-Grant et al. (1989) concluded that of the protective factors that they assessed (including getting along with others, good academic performance, the presence of good friendships, levels of competence, and good participation levels) it was only getting along with others and demonstrating good academic performance that had a significant impact. These two protective factors were significantly related to a reduction in behavioral disorders in children aged four to sixteen years of age.

Protective factors also play a role in the development of particular attachment styles. Crockenberg (1981) reported that the strength of a social support network serves as a buffer against the effect of other life stress and is predictive of the type of attachment relationship between mother and infant. Those mothers with strong support systems may feel less life stress than those mothers with nonexistent support systems, and in turn may be more available to their child, thus fostering the development of secure attachment.

Lastly, Bates, Maslin, and Frankel (1985) suggested that in middle class homes there are a greater number of protective factors present and these may inhibit the emergence or minimize the severity of problems arising from insecure attachment. Assessment of these and other protective factors is a dimension that deserves inclusion in studies assessing the relationship between risk factors and behavioral problems.

Parental Psychopathology and its Relationship to the Development of Disruptive Behavior

The literature generally suggests that extreme levels of maternal distress are associated with increased levels of child behavioral maladjustment (Dumas, Gibson, & Albin, 1989). The study of the relationship between parental psychopathology and a child's behavioral adjustment has been quite extensive, resulting in some contradictory findings. For example, Radke-Yarrow, Cummings, Kuczynski, and Chapman (1985) found significantly higher levels of disruptive behavior problems in children (here) whose mothers presented with unipolar and bipolar disorders than in children of "healthy" control mothers (in both middle and late childhood). Similarly, Radke-Yarrow et al. (1995) reported that maternal depression was related to maladaptive functioning in their children at both six- and nine-years-old. Researchers who administered the Minnesota Multiphasic Personality Inventory-2 (MMPI-2) to mothers of 6- to 13-year-old children who were diagnosed with Conduct Disorder reported that these mothers scored significantly higher on MMPI-2 scales assessing antisocial behavior, histrionic behavior, and disturbed adjustment (Lahey, Frances-Russo, Walker, & Piacentine, 1989). These findings suggest that maternal psychopathology does play a contributing role in the development of disruptive behavior.

Hops, Biglan, Sherman, Friedman, and Osteen (1987) further elaborated on the relationship between maternal depression and the behavior of children diagnosed with conduct disorder. These authors, as well as Dumas et al. (1989), concluded that, after observing familial interactions, maternal depression may actually function as an inhibitor of the display of aversive behavior by family members, and may increase compliance of the conduct disordered children. This finding stands in conjunction with the finding that Conduct Disordered children whose mothers are depressed are more behaviorally maladjusted than Conduct Disordered children whose mothers are not depressed (Dumas et al., 1989). In effect, the added stress of parental psychopathology may either further confuse the child and cause increased behavioral difficulties in these children or inhibit their display of disruptive behavior.

The relationship between parental psychopathology, children's behavioral

problems, and children's attachment styles has attracted researchers. It is evident that maternal psychopathology can interfere with the development of a secure attachment relationship, and therefore this interaction may contribute to the development of disruptive behavior. For example, Radke-Yarrow (1995) reported that maternal depression serves as a risk factor since it contributes to "feelings of unworthiness, difficulty engaging with the environment, impairment in handling stress and regulating affect, and difficulty in developing positive relationships." (p.249) These effects could all disrupt the development of a secure attachment relationship. Furthermore, these researchers reported that the severity of the mother's affective illness was strongly associated with children's behavioral functioning. The finding that children of depressed mothers can develop secure or insecure attachment relationships (Radke-Yarrow et al., 1995) is partially explained by this "degree of severity" factor. Evidence supporting this belief comes from research done by Radke-Yarrow et al. (1985) who concluded that insecure attachment was more common in children whose mothers had major depression than among children of mothers with low level depression or among children with normal mothers. These researchers also reported that insecure attachment was seen more frequently in children whose mothers had bipolar rather than unipolar depression. Lastly, these authors elaborated further by suggesting that avoidant and disorganized attachment in particular are related to maternal psychopathology. These results suggests that understanding the interaction between maternal psychopathology, attachment style, and the development of disruptive behavior is important in the search for a comprehensive understanding of the phenomenon of disruptive behavior.

Parenting Style and Disruptive Childhood Behavior

The exact relationship between parenting style and disruptive behavior is not clearly understood, however the existence of an interaction between the two factors is accepted. It is not clearly understood if parental behaviors, such as ineffective and punitive parenting techniques, are cause or effect in the course of difficult child behavior (Anderson, Lytton, & Ronney, 1986). It is difficult to determine if a child's disruptive behavior causes a parent to respond punitively, or if the parent's punitive behavior contributes to the child's display of disruptive behavior. Olson, Bates, and Bayles (1990) found evidence supporting the latter possibility. These researchers reported that utilizing praise to reward children, consistent enforcement of rules, and encouragement of mature behavior were consistent predictors of compliance in children, whereas the frequency of physical punishment was an important predictor of noncompliance in children. Thus, the style of one's parenting practices can have a direct impact on the development of

disruptive behavior. This is further supported by Dielman and Cattell's (1972) finding that in families where the mother expects immediate compliance and rewards this behavior, and displays strict discipline, children age six- to eight-years-old tend to earn higher scores on an "acting out" factor (destructiveness, overaggressiveness, and temper tantrums) of the Behavior Problem Checklist.

Lastly, it seems that the presence of a "good enough" parent serves as a protective factor against the development of disruptive behavior problems. This type of parent does not react with agitation or disorganization when their child demonstrates a strong display of affect, accepts this display, and models other ways of expressing emotions for the child (Greenberg, et al., 1991). Therefore, a "perfect" parent is not a prerequisite for the successful development of children without disruptive behavior problems.

PURPOSE

Summary

Now that researchers are devoting attention to the relationship between a parent's childhood experiences, their own parenting style, and the attachment style that their children develop in relation to them (Main, Kaplan, & Cassidy, 1985), an extension of this research focusing on the link between transgenerational attachment and the development of behavior problems in children becomes crucial to our understanding of such developmental pathways. Since the formation of a child's attachment style does not occur in isolation from the outside environment, life stressors and risk factors must be considered when assessing this relationship. The complexity of this relationship requires further in-depth analysis which addresses each of the following facets: child and parent attachment style, life stressors, parental psychopathology, and child behavior problems. Thus, the current study comparing "well adjusted" and "high risk" preschoolers will provide information crucial to our understanding of the relationship between transgenerational attachment, life stressors, and the development of disruptive behavior during the preschool years.

CHAPTER II

METHOD

SUBJECTS

Fifty-two participants were involved in the study: 29 biological mothers of preschool boys attending a Head Start Program; and 23 biological mothers of preschool boys attending a university preschool center. Only mothers of boys were included, since boys constitute the majority of children with identified behavioral problems and because the development of behavioral problems may be different for boys and girls (Speltz, 1990). All participants were mothers of male children between 36 and 71 months of age at the time of assessment. The mean age of the boys was 56 months of age. In this sample, 27 mothers (52%) were Caucasian, 21 mothers (40%) were African American, 1 mother (2%) was Hispanic, and 3 mothers, (6%) were biracial. The majority of this sample, (56%) were married with a mean education level of at least some completed college. The majority of this sample, (56%) resided in homes with combined total income above \$25,000 per year.

The 52 families were recruited through letters distributed to the preschool program directors who dispersed the information to the appropriate children and mothers. Follow-up telephone contacts were conducted and memos were distributed as deemed necessary to schedule meeting times with the mothers.

MATERIALS AND PROCEDURES

Participating families received a cover letter for the study prepared by the researcher and distributed by their preschool program's director. An explanation of the purpose and design of the study along with a solicitation of participation was included (See Appendix A). The cover letter also explained the terms of confidentiality, including a statement clarifying that results would be coded by number and detached prior to data analysis from any materials that may contain names. Those families who expressed interest in the study were contacted by phone or memo to set up an appointment for the assessment.

Eligible participants for the study were seen separately for forty-five minute assessment appointments and then completed approximately forty-five minutes of questionnaire material. Participant parents were asked to give written consent for their family to participate in the study upon arrival for the assessment. The examiner thoroughly reviewed the informed consent form (See Appendix B) with participants before it was signed and assured participants that their data would be collected and coded

confidentially and that their anonymity would be respected.

During the assessment the participants completed a brief background questionnaire that addressed relevant demographic information (See Appendix C) and a child history questionnaire (See Appendix D). The various dependent measures were administered and collected in the same standardized order by the researcher. The assessment measures were scored by the researcher utilizing standardized scoring criteria outlined in the test manuals. Lastly, the scores were transferred to a data summary sheet with names being replaced by numerical codes. After completion of the assessment instruments and the required questionnaires, participants were provided with a form to indicate whether or not they wished to receive feedback about the results (See Appendix E). As a token of the researcher's appreciation for participant's time and effort, each participant received a ten dollar gift certificate to a local toy store at the conclusion of the assessment session.

For the present study, a battery of questionnaires and assessment instruments was compiled to assess parental attachment style, child attachment style, parental psychopathology, family stress and stressors, and child behavior problems. A brief synopsis of each of the assessment tools utilized follows.

The Attachment Style Inventory

The Attachment Style Inventory (ASI) devised by Sperling and Berman (1991) is an adult attachment measure that is based upon both psychoanalytic and attachment theories. The measure expands the classification system devised by Ainsworth (1978) into four distinct attachment classifications instead of the original three described by Ainsworth. The ASI consists of the following four attachment classifications: resistant-ambivalent, hostile, avoidant, and dependent (secure). Each is rated on a 9-point Likert scale. Participants are asked to select which of the four styles best describes his/her attachments. An assessment of security/insecurity on a 9-point continuum is also included (Sack, Sperling, Fagen, & Foelsch, 1996). The measure is typically completed by subjects four times, once each in relation to their mother, father, friends, and partners. These ratings are summed across the four relationship categories to yield four global attachment scores for each style, which is an approximation of the person's representation of attachment associated with that attachment style (Sperling, Foelsch, & Grace, 1996).

Q-Set

The Attachment Q-Set devised by Waters and Deane (1985) is an alternative to the Strange Situation, one that is being used more and more frequently by researchers. There

is both a parental and an observer's version of this measure which have been found to have an average correlation of .80 when completed for the same child. The current study, however, utilized only the parental measure. The parent is asked to judge how "like" or "unlike" each of the 90 behavioral descriptors was of their child's behavior. These items are sorted into nine piles of ten cards each that range from most characteristic (pile 1) to least characteristic (pile 9) of a particular child. Items receive a score of one to nine, depending on which pile they were placed in. This is accomplished in three steps that result in a final sort (van Dam and van Ijzendoorn, 1988). At that time the parent's ratings of her child were then correlated with a "criterion" sort obtained from numerous well-respected attachment experts who completed the Q-Set regarding their beliefs about the "most secure child" of preschool age (van Dam and van Ijzendoorn, 1988). Security scores are assigned by correlating the 90-item description of a particular child and the 90-item description of the "most secure child" for each child as rated by each parent. The higher the correlation between the criterion sort and the mother's sort, the more apt the child is to use the parent as a secure base.

Parenting Stress Index (PSI)

The Parenting Stress Index (Abidin, 1983) is a 101-item self-report inventory designed to assess the degree of stress in the parent-child system. The measure also consists of 19 optional questions designed to assess recent (past 12 months) life stressors. It contains three major domains of stressors: 1) Child Characteristics Domain, 2) Parent Characteristics Domain and 3) Life Stress. The Child Domain consists of six dimensions of adaptability, acceptability, demandingness, mood, distractibility/ hyperactivity, and reinforces parent. The Parent Domain consists of seven dimensions of depression, attachment, restriction of role, sense of competence, social isolation, relationship with spouse, and parent health. Lastly, the Life Stress Domain measures the amount of stress which the parent is experiencing outside the parent-child relationship.

After completion of the PSI, the subscale, domain, and total scores were readily computed by hand. Subscales were scored by adding the weights of the numbers above the answer selected, whereas domain scores are obtained by adding all the subscale scores for the given domain. The raw scores for subscales, domain scales, and total stress score were then converted to percentile ranks, allowing for individual comparison to the normative group. The "normal" range is designated as percentile ranks within the 15 to 75 range. Hence, subscale scores, domain scores, and total score above the 75th percentile and below the 15th percentile are meaningful for clinical use. Furthermore, cut-off scores are examined as indicators for specific actions or interpretations, such as a

high total stress score suggesting excessive stressors and stress in the parent-child system (Abidin, 1985).

Correlations for test-retest reliability of the PSI suggest that the measure provides a stable estimate of stress/stressors and can be utilized to assess change. Data presented in the manual indicated correlations ranging from .55 to .82 for the Child Domain, .69 to .91 for the Parent Domain, and .65 to .96 for the total stress score (Abidin, 1983). Further studies found that the PSI is a valid measure assessing parental perceptions that are related to child characteristics, parental stress, and problems in child rearing (Abidin, 1983).

Brief Symptom Inventory (BSI)

The BSI (Derogatis, 1982) is a self-report questionnaire consisting of 53 items which assess psychological symptoms of both psychiatric and medical patients as well as non-patients. Each item is rated on a 5-point Likert scale of distress ranging from "not at all" (0) to "extremely" (4). The BSI consists of nine primary symptom dimensions and three global indices of distress. The Primary Symptom Dimensions are as follows: somatization, obsessive-compulsive, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideation, and psychoticism. The Global Indices are referred to as the Global Severity Index (GSI), the Positive Symptom Distress Index (PSDI), and the Positive Symptom Total (PST). Instructions for the measure are provided by the examiner, and the standard time reference utilized is the past seven days (Derogatis, 1982). Scoring of the BSI involves transferal of the 53-item scores to the Score/Profile form. Second, the items comprising the symptom dimensions are summed and the nine totals are divided by the respective number of items making up that dimension. After these calculations, the three global indices are calculated and all raw scores are converted to standardized T-scores (Derogatis, 1982).

The reliability of the BSI has been established in terms of both internal consistency and test-retest. The internal consistency coefficients of all nine dimensions were found to be very good, ranging from .71 on the Psychoticism dimension to .85 on the Depression dimension. Test-retest reliability studies of the BSI tend to reveal very good stability across time, ranging from a coefficient of .68 for Somatization to .91 for Phobic Anxiety (Derogatis, 1982). Sufficient convergent and discriminant validity of the BSI was demonstrated with the comparison of the BSI to the Minnesota Multiphasic Personality Inventory (MMPI), with correlations ranging from .32 to .55.

Child Behavior Checklist (CBCL)

The Child Behavior Checklist (Achenbach & Edelbrock, 1983) is a 118 item questionnaire consisting of problem behavior descriptors. These problem behavior descriptors are rated by parents on a 3-point Likert scale ranging from "not at all" to "very often." It provides standard T-scores for internalizing and externalizing problems, for total problems, and for several subtests. The subtests include social withdrawal, aggression, and immaturity. The CBCL is a well standardized measure with extensive validity and reliability data (Achenbach & Edelbrock, 1983). Intraclass correlations have been reported in the .90s for interparent agreement and test-retest reliability. In this study internalizing and externalizing behavior domains will be analyzed separately rather than as one factor. It is expected that limited variability between these factors will be indicated when analyses between other variables are completed, given the significant correlation between the internalizing and externalizing factors as reported by previous researchers.

CHAPTER III

RESULTS

In this sample, 41 mothers (79% of the total sample) were classified as dependent (secure), 8 mothers (15%) were classified as avoidant, 2 mothers (4%) were classified as resistant-ambivalent, and 1 mother (2%) was classified as hostile, as determined by the Attachment Style Inventory (ASI). The distribution of mothers' attachment classification is consistent with previous population estimates (Bretherton & Waters, 1985) in that secure attachment classification is most prevalent. Table 1 displays the percentages related to child and maternal variables analyzed in this study. Across variables, this study captured a sub-clinical population.

Table 1

Summary of Percentile Comparisons Related to Maternal and Child Variables.

Variable	Percentile
Maternal Psychopathology (BSI)	
Below Clinical Cutoff	92%
Above Clinical Cutoff	8%
Maternal Attachment Security (ASI)	
Secure Attachment	79%
Insecure Attachment	21%
Total Stress (PSI)	
Below Clinical Cutoff	81%
Above Clinical Cutoff	19%
Child Behavior Problems (CBCL)	
Below Clinical Cutoff	83%
Above Clinical Cutoff	17%
Child Attachment Security (Q-sort)	
Secure Attachment	77%
Insecure Attachment	23%

Maternal Attachment Classification and Child Behavioral Difficulties

It was predicted that preschool children with significant behavioral difficulties would be more likely to have mothers with insecure attachment than children without behavior problems. Two separate 2 X 4 chi-square analyses were completed, assessing the relationship between both internalizing and externalizing behavior problems in preschool boys and maternal attachment style. These analyses revealed that mothers' attachment styles to their own parents were not significantly related to internalizing or externalizing behavioral difficulties in their children, $X^2(3, N = 52) = 2.71, p > .05$, $X^2(3, N = 52) = 3.29, p > .05$, respectively. Given the small cell sizes for the resistant-ambivalent and hostile attachment classifications, results of maternal attachment classification were divided into secure versus insecure attachment for further analysis. This 2 X 2 chi-square analysis also revealed that maternal attachment security (secure or insecure) was not significantly related to internalizing or externalizing behavior problems, $X^2(1, N = 52) = .425, p > .05$, and $X^2(1, N = 52) = .603, p > .05$, respectively. In this sample, therefore, there is not a significant relationship between mothers' representation of attachment and children's significant behavioral difficulties. It should also be noted that a Pearson product-moment correlation was employed to assess the relationship between internalizing and externalizing behavior problems. This analysis revealed a significant correlation, $r = .68, p < .01$, suggesting that both types of behaviors as assessed by the CBCL are highly correlated.

The current study revealed that the majority of the dyads were composed of securely attached mothers and children without behavior problems ($N = 35$). Table 2 summarizes the relationship between maternal attachment and childhood behavior problems.

When the Attachment Style Inventory, which was the measure of maternal attachment utilized in this study, was divided into two separate attachment domains consisting of an attachment style to mother and father and another attachment style to friends and lover, no significant correlation was found, $r = .26, p > .05$. In this study, therefore, mother's attachment to her parents was not significantly correlated with her attachment to her friends and lover.

Child Attachment Security and Significant Child Behavior Problems

Pearson product-moment correlations were employed to assess the relationship between the continuous child security measure and the continuous measure of internalizing and externalizing behavior problems. These analyses revealed significant relationships between child attachment security and both internalizing and externalizing

behavior problems, $r = -.48$, $p < .01$ and $r = -.44$, $p < .01$, respectively. The more secure the child, the less likely they were to exhibit significant behavioral problems.

Table 2

Descriptive Comparison of Maternal Attachment Security and Child Behavior Problems.

Child Behavior	Maternal Attachment	
	Secure	Insecure
Below Cutoff	35	9
Above Cutoff	6	2

N = 52

Maternal Attachment Classification and Child Attachment Security

A t -test was utilized to assess the concordance rate of the continuous preschool attachment style measured by the Q-set and the dichotomous maternal attachment classification, secure versus insecure, as assessed by the ASI. It was found that maternal attachment security was not significantly related to child's attachment security, $t(50) = -.262$, $p > .05$.

In this study, the majority of the dyads were composed of two securely attached members ($N = 32$), with only three dyads composed of two insecurely attached people. Table 3 summarizes the relationship between maternal and child attachment.

Level of Stress Within the Parent-Child Relationship and Child Attachment Security

A Pearson product-moment correlation assessed the relationship between level of stress within the dyadic relationship and child attachment security. A significant correlation between the two factors was revealed, $r = -.48$, $p < .01$. Thus, as the level of stress increases so does the likelihood that a child will demonstrate less attachment security.

Results indicated that the majority of this sample was composed of dyads with low total stress levels and children with secure representations of attachment ($N = 35$). Table 4

Table 3

Descriptive Comparison of Maternal and Child Attachment Security.

Child Attachment	<u>Maternal Attachment</u>	
	Secure	Insecure
Secure	32	8
Insecure	9	3

N = 52

Table 4

Descriptive Comparison of Child Attachment Security and Level of Total Dyadic Stress.

Child Attachment	<u>Level of Total Stress</u>	
	Below Cutoff	Above Cutoff
Secure	35	4
Insecure	6	7

N = 52

When the scores of the optional life stress scale of the Parenting Stress Index (PSI) were utilized instead of the total stress score, no significant correlation between life stress and child attachment security was found, $r = -.20$, $p > .05$. In combination, these findings suggest that stress within the parent-child relationship is more predictive of child attachment security than is circumstantial life stress impacting the dyad.

Maternal Psychopathology and Child Attachment Security

A Pearson product-moment correlation was employed to assess the relationship between the overall Brief Symptom Inventory (BSI) score and the attachment

classification of children as determined by the Q-set. Analysis revealed that this continuous measure of maternal psychopathology was not significantly correlated with child attachment security, $r = -.11$, $p > .05$. Though not significant, this result did suggest the additional cases might confirm the presence of an inverse relationship in that as maternal psychopathology increased, it was likely that child attachment security would decrease.

Maternal Psychopathology and Child Behavior Problems

Two 2 X 2 chi-square analyses were completed to assess the relationship between maternal psychopathology as measured by the BSI (clinical cutoff = 70) and both internalizing and externalizing behavior problems as determined by the Child Behavior Checklist (CBCL with clinical cutoff = 70). These analyses revealed that children with internalizing and externalizing behavior problems are more likely to have mothers with psychopathology, $\chi^2 (1, N = 52) = 3.99$, $p < .05$ and $\chi^2 (1, N = 52) = 17.1$, $p < .01$, respectively. Cramers Coefficient (V), which indicates the magnitude of association between two categorical variables, confirmed the significance of these relationships, $V = .277$, $p < .05$ for internalizing behavior problems and $V = .573$, $p < .01$ for externalizing behavior problems.

Pearson product-moment correlations indicated significant correlations between maternal psychopathology and child behavior problems, as Table 5 demonstrates.

Level of Stress Impacting the Parent-Child Relationship and the Development of Childhood Behavior Problems

Pearson product-moment correlations with both "Life Stress" (circumstantial stress) and "Dyadic Stress" (total stress within the dyad) in relation to internalizing and externalizing behavior problems were computed. As indicated in Table 6, these analyses revealed significant correlations between both internalizing and externalizing behavior problems and dyadic stress, with a higher level of dyadic stress being correlated with a greater degree of behavioral difficulties. The analyses focusing on life stress, however, did not reveal significant correlations.

Further analyses indicated that there was significant overlap between the CBCL measure of behavior problems and the Child Domain of the Parenting Stress Index. Pearson product-moment correlation indicated that internalizing and externalizing behavior problems as assessed by the CBCL were significantly correlated with the Child Domain, $r = .31$, $p < .05$ and $r = .40$, $p < .01$, respectively. Thus, the aforementioned relationship between dyadic stress and child behavior problems may be partially

accounted for by the confounding relationship between the Child Domain and the CBCL.

As expected, the majority of dyads in this sample experienced limited levels of stress and had children without significant behavioral difficulties (N = 37). Table 7 summarizes the comparison between total stress and child behavior problems.

Table 5
Correlations Between Maternal Psychopathology and Child Behavior Problems.

Variable	Behavior		BSI Score
	Internalizing	Externalizing	
Internalizing			
Pearson r	1.00		
Externalizing			
Pearson r	.847**	1.00	
BSI Score			
Pearson r	.304*	.376**	1.00

* Correlation is significant at the .05 level

** Correlation is significant at the .01 level

Comparisons of Those Attending Private Day Care and Those Attending a Head Start Program

A chi-square analysis conducted to assess the relationship between type of day care and the development of behavioral problems did not reveal significant relationship, $\chi^2 (1, N = 52) = .524, p > .05$. A chi-square analysis conducted to assess the relationship between type of day care and child attachment security did not reveal a significant relationship, $\chi^2 (1, N = 52) = .234, p > .05$. Lastly, t- tests revealed that in this sample, the children in Head Start spent significantly more time in day care, $t (50) = -6.36, p < .001$, and the mothers of children in Head Start had significantly more children than the mothers of children in private day care, $t (50) = -2.02, p < .05$. Further statistical comparisons between the Head Start and private day care participants were not completed given the limited cell sizes, but percentages were computed, as listed in Table 8.

Table 6
Correlations Between Level of Stress and Childhood Behavior Problems.

Variable	Life Stress	Dyadic Stress	Behavior	
			Internalizing	Externalizing
Life Stress				
Pearson r	1.00			
Dyadic Stress				
Pearson r	-.054	1.00		
Internalizing				
Pearson r	.087	.543**	1.00	
Externalizing				
Pearson r	.200	.653**	.847**	1.00

** Correlation is significant at the .01 level; $N = 52$

Table 7
Descriptive Comparison of Childhood Behavior Problems and Level of Dyadic Stress.

Behavioral Problems	Level of Dyadic Stress	
	Below Cutoff	Above Cutoff
Above Cutoff	4	5
Below Cutoff	37	6

Table 8
Percentile Comparisons Between Private Day Care and Head Start Participants.

Variable	Private	Head Start
Maternal Marital Status		
Married	91%	28%
Single		41%
Separated		17%
Divorced	9%	14%
Ethnicity		
Caucasian	96%	17%
African American	4%	69%
Hispanic		3%
Other		10%
Maternal Education		
Some High School		21%
High School Diploma		38%
Some College	9%	31%
2 Years College		3%
4 Years College	39%	7%
Advanced Degree	52%	
Income		
Below \$25,000	4%	76%
Above \$25,000	96%	24%
Child Educational Needs		
Yes	26%	31%
No	74%	69%
Educational Services		
Yes	17%	28%
No	83%	72%
Type of Services		
None	83%	72%
Speech Therapy	9%	24%
Speech/Occupational	8%	3%

The Relationship Between Maternal Psychopathology, Maternal Attachment, and Dyadic Stress to Child Behavior Problems and Child Attachment Security

It was predicted that dyadic stress, maternal psychopathology, and maternal attachment security were related to the development of childhood behavior problems and child attachment security. Given the limited sample size, the following regression analyses were conducted to investigate possible relationships and will be interpreted cautiously. Prior to completing two sequential multiple regression analyses, the demographic variables (mother's age, marital status, race, education level, income, child age, type of day care, age began day care, hours at day care, special education services, and type of special education interventions) were entered to assess any significant relationship with child attachment security and child behavior problems. It was found that special education needs and type of special education intervention were the only two demographic variables with significant predictive power, both yielding $R^2 = .156$. Type of special education intervention, specifically speech therapy was predictive of internalizing behavior problems, $F(2,49) = 4.54$, $p < .05$, $B = .362$, as was special education needs, $F(1,50) = 9.256$, $p < .01$, $B = .395$. By implication, language difficulties contribute to the display of internalizing behavioral difficulties in preschool boys.

After controlling for demographic variables it was found that, in combination, maternal attachment security, dyadic stress, and maternal psychopathology were significantly predictive of internalizing and externalizing behavior problems as well as child attachment security. Table 9 summarizes the results of the regression analyses for variables predicting externalizing behavior problems. In relation to externalizing behavior problems, it was found that the combined maternal attachment security, maternal psychopathology, and dyadic stress was significantly predictive, $F(3,48) = 13.24$, $p < .001$, $R^2 = .45$. Further analyses indicated that dyadic stress was the only single factor which was significantly related to externalizing behavior problems, $t(51) = 5.12$, $p < .0001$. In relation to internalizing behavior problems, it was found that the combined variables had significant predictive power, $F(3,46) = 9.23$, $p < .0001$, $R^2 = .317$. Table 10 summarizes the results of the regression analyses for variables predicting internalizing behavior problems.

In summary, total stress was the only single factor that was significantly related to these behavior difficulties, $t(51) = 4.09$, $p < .01$. Lastly, in relation to child attachment security, it was found that, in combination, the variables were significantly predictive, $F(3,48) = 4.72$, $p < .01$, $R^2 = .228$. Again, dyadic stress was the only single factor that

Table 9
Summary of Sequential Regression Analysis for Variables Predicting Childrens' Externalizing Behavior Problems.

Variable	<u>B</u>	<u>SE B</u>	Beta
Maternal Psychopathology	.125	.101	.143
Dyadic Stress	.281	.055	.590**
Maternal Attachment	-1.49	1.91	-.084

Note. $R^2 = .45$; R^2 Change = .45 ($p < .001$)

**Correlation is significant at the .001 level

Table 10
Summary of Sequential Regression Analysis for Variables Predicting Childrens' Internalizing Behavior Problems.

Variable	<u>B</u>	<u>SE B</u>	Beta
Maternal Psychopathology	8.03	.102	.092
Dyadic Stress	.227	.055	.480**
Maternal Attachment	-2.94	1.94	-.167

Note. $R^2 = .473$; R^2 Change = .317 ($p < .001$)

**Correlation is significant at the .001 level

was significantly related to the dependent variable, child attachment security, $t(51) = -3.59$, $p < .001$. This cautious examination of the relationship between maternal psychopathology, maternal attachment, and dyadic stress to child behavior problems and

child attachment security indicates that, of the considered independent variables, dyadic stress appears to be the only factor with significant predictive power within this limited sample. Table 11 summarizes the results of the regression analyses for variables predicting child attachment security.

Table 11

Summary of Sequential Regression Analysis for Variables Predicting Childrens' Attachment Security.

Variable	<u>B</u>	<u>SE B</u>	Beta
Maternal Psychopathology	4.30	.001	.040
Dyadic Stress	-2.85	.001	-.491**
Maternal Attachment	-1.98	.028	-.009

Note. $R^2 = .228$; R^2 Change = .228 ($p < .001$)

**Correlation is significant at the .01 level

CHAPTER IV

SUMMARY AND INTERPRETATION

The present study extended the research focus on the relationship between a parent's childhood experiences, their own parenting style, and the attachment style that their children develop in relation to them, by assessing the link between transgenerational attachment and the development of behavior problems in children. Since the formation of a child's attachment style does not occur in isolation from the outside environment, life stressors were also considered when assessing this relationship. The following facets were addressed: child and parent attachment style, life stressors, parental psychopathology, and childhood behavior problems.

Maternal Attachment Classification and Child Behavioral Difficulties

The initial hypothesis predicted that preschool children with significant behavioral difficulties would be more likely than children without behavior problems to have mothers with insecure attachment styles. Results of this study indicate that, within this sample, maternal attachment style and maternal attachment security are not significantly predictive of children's behavioral problems. Furthermore, types of behavioral problems are not associated with different maternal attachment classifications. This contradicts the results of a study conducted by Crowell et al. (1995) who reported a significant relationship between different maternal attachment classifications and varying types of disruptive behavior disorders. It should be noted that maternal attachment style is rarely perfectly assessed and this is complicated further when studies utilizing different measures of attachment are compared.

A model of the development of disruptive behavior presented by Greenberg and Speltz (1988) provides further clarification of this finding. These authors reported that disruptive behavior exhibited by young children may actually be an attachment strategy with the goal of regulating caregiving patterns and that the motivational properties of attachment may contribute to the development of behavior problems. One possible explanation for the finding that maternal attachment is not related to the development of behavior problems is that, although the maternal attachment classification is insecure, a child may have a positive relationship to another securely attached adult. This other relationship may serve as a buffer against the development of behavior problems.

This result also suggests that maternal attachment style is not, in and of itself, a significant predictor of childhood behavioral problems. Though a securely attached

mother may be better able to foster a positive relationship with her child who, in turn incorporates a positive internal representation of his/her mother, the security of the relationship does not appear to be a complete protective buffer against the development of behavior problems. On the other hand, maternal insecurity does not necessarily lead to the development of behavior problems. In this study, the majority of participants were mothers with secure attachment security who had children without significant behavioral problems. Thus, to better understand this relationship, a study enlisting a large number of participants must be conducted. The limited sample of insecure mothers reduced the possibility of further conclusions. In future studies, analyses also need to focus on the relationship between different types of maternal attachment classifications and the development of different types of behavior problems.

Child Attachment Security and the Development of Behavioral Difficulties

Although there is no reported relationship between maternal representation of attachment and children's behavioral difficulties in this study, a significant correlation between child attachment security and the development of behavior problems was found. Both internalizing and externalizing behavior problems were negatively correlated with child attachment security, thus suggesting that more securely attached children are less likely to exhibit behavioral problems than their insecurely attached counterparts. This finding compliments the results of previous studies which documented similar results.

Goldberg and Gotowiec (1995) indicated that the majority of the relationship between behavior problems and attachment style is accounted for by avoidant attachment specifically, rather than general insecurity. Even with the limited sample in this study, the relationship between child attachment security and the behavioral difficulties was evident. In this case, the general level of attachment security as assessed by the q-sort is significantly predictive of behavior problems. These contradictory results are explained by Bates and Bayles (1988) who believe that attachment security may depend on correlated third variables such as general family stress. These authors also believe that positive family functioning may mitigate the expected effects of insecure attachment. Therefore, it should be expected that studies assessing high risk populations may have differing results than "well functioning" samples. It is again noted that the current sample is composed of non-clinical participants who were not seeking psychological treatment. The findings of this study further emphasize the role of third variables in impacting the relationship between maternal attachment security and childhood behavioral problems.

Pertinent information regarding this relationship would be gained if a study assessed child attachment as both a categorical and a continuous variable. This type of

study would allow for further consideration of which knowledge is more important in attempting to prevent the development of behavior problems, level of attachment security or a specific attachment classification.

Relationship Between Maternal Attachment Classification and Child Attachment Classification

It was also predicted that there would be a significant concordance rate between maternal attachment security and child attachment security. The current study did not reveal a significant relationship. This finding is supported by Waters, Posada, Crowell, and Lay's (1993) result that observation of early caregiving alone is not sufficient in predicting child attachment style. Other important factors may affect the strength of intergenerational attachment. For instance, the effects of insecure attachment can be mitigated by a secure attachment relationship to the other parent, or perhaps their mother had successfully worked through her own childhood issues which contributed to her insecure attachment style (Fonagy et al., 1991).

In this study, only 11 of the 52 mothers assessed were insecurely attached and only 12 of the children were insecurely attached. Upon review of the current data, it appears that, in some cases, mothers who have developed secure attachment representations of their own parents are unable to foster the development of a secure attachment relationship in their own children. On the other hand, there are some mothers who formed insecure attachment representations of their own parents yet are able to foster the development of secure attachment representations in their own children. This latter group of dyads further supports newer attachment studies that emphasize the concept of recovery across the life-span. Similar to Wenar's (1994) finding that all depressed mothers do not then raise depressed children, insecurely attached mothers in this study who raise securely attached children appear to marshal their depleted resources on behalf of normalizing their children's lives. There is a small percentage of mothers who are able to assist their children in the development of a secure attachment relationship even though they themselves are insecurely attached. It is this portion of the population which most reflects the ability to change and to recover across the life-span. The question then becomes how can clinicians assist caregivers in finding adequate resources and implementing positive intentions which will result in the best outcome for their children?

This finding implies that intervention aimed at altering attachment relationships may not prevent the child from maintaining an insecure representation of attachment. Given that there is not a significant relationship between maternal and child attachment style, it appears that a child's development of an insecure attachment style is not

dependent solely on his/her mother's attachment style. Again, it appears that a combination of factors is impacting the mother-child attachment relationship.

Level of Stress Within the Parent-Child Relationship and Child Attachment Security

One such factor affecting child attachment security may be the level of stress within the dyad (total dyadic stress) or the level of circumstantial stress impacting the dyad (life stress). Current results indicate that there is a significant correlation between level of total dyadic stress and child attachment security, suggesting that as the level of total dyadic stress increases, so does the likelihood that a child will demonstrate less attachment security. Results indicate that the majority of this sample was composed of dyads with low total stress levels and children with secure representations of attachment. These results suggest that, in some cases, children who experience significant levels of stress are able to develop a secure representation of attachment, while in other cases, children develop insecure representations of attachment even when they experience limited levels of stress. Life stress however, was not found to be significantly correlated with child attachment security. In combination, these results suggest that total dyadic stress which encompasses stress within the parent, child, and parent-child domains is predictive of child attachment security while the life stress measure which encompasses external stress impacting the dyad is not. It should be noted that perceived parenting stress is a more specific variable than life stress which may account for the difference in level of significance. However, the level of life stress may intensify the total dyadic stress that the parent is experiencing. This result is supportive of the Vaughn et al. (1979) finding that stressful life events are associated with changes in attachment toward non-optimal attachment patterns. Similarly, Hadadian and Mebler (1996) found that reducing maternal stress contributed to a more positive parent-child attachment relationship which further emphasizes the need for early intervention. The current finding is also supported by the Radke-Yarrow et al. (1995) finding that children's attachment style did not differ based on the presence or absence of marital discord or loss (life stress).

Further investigation is needed to assess the differences and similarities between life stress and total dyadic stress and the impact on child attachment security. Utilizing a total dyadic stress measure may assist professionals in identifying parent-child systems which may be under a significant degree of stress and therefore at risk for the existence of behavior problems in the children or dysfunctional parenting. One possible avenue for intervening with populations who are not seeking treatment may be psychoeducational programs provided through the school systems.

Level of Stress Within the Parent-Child Relationship and the Development of Child Behavioral Problems

It was further hypothesized that life stress and total level of stress would be significantly correlated with the development of internalizing and externalizing behavior problems. The current study revealed that while total dyadic stress was significantly correlated to both internalizing and externalizing behavior problems, the measure of life stress was not. As expected, the majority of dyads in this sample experienced limited levels of stress and had children without significant behavioral difficulties. It appears that total stress is a prominent factor which needs to be considered when assessing both child attachment security and behavior problems.

There are supportive and contradictory findings provided by other studies. Goldberg, Junus, Washington, Simmons, MacLusky, and Fowler (1997) found that higher levels of parenting stress were associated with higher CBCL scores in 4-year-olds. Similarly, Richman et al. (1982) reported that the continuance of childhood behavior problems was predicted by ongoing family stress. Results by Campbell and Ewing (1990) were somewhat contradictory in that they found Oppositional Defiant Disorder and Conduct Disorder symptoms were not predicted accurately by level of familial stress. There are several ways in which stress tends to impact behavioral problems. Patterson and Dishion (1988) believe that a family's distress and adversity may be transmitted through their negative influence on parenting which could then promote disruptive behavior in the children. In contrast, Greenberg et al. (1993) believe that family adversity can contribute directly to the development of disruptive behavior. The current study has further emphasized the predictive nature of dyadic total stress in relation to both child behavior problems and child attachment security. The strength of the factor reiterates the need for early intervention strategies directed at alleviating stress within the dyad, whether that be focused on the child, the parent, or the dyad. As Goldberg et al. (1997) reported, the Parenting Stress Index appears to be an easily utilized screening tool to assess children at risk for the development of behavior problems. The current study furthered this finding by assessing children through the age of five. The current study also extended the relationship between stress and behavior problems to both internalizing and externalizing behavior problems. In this study, the correlation between total dyadic stress and significant behavior problems could not be explained as a statistical artifact, because there were several cases in which mothers of children with significant behavior problems did not report significant total dyadic stress. Establishing a support network for at-risk family systems may significantly reduce the amount of total stress and, in turn, positively impact children's behavior and enhance their level of attachment security.

Maternal Psychopathology, Child Attachment Security, and the Development of Behavioral Problems

Maternal psychopathology is another risk factor hypothesized to impact child attachment security and the development of childhood behavioral problems. It was hypothesized that children with insecure representations of attachment in comparison to children with secure representations of attachment would be more likely to have mothers with psychopathology. It was also hypothesized that children with significant behavioral difficulties would be more likely than children without behavior problems to have mothers with psychopathology.

When the relationship between a continuous measure of maternal psychopathology and child attachment security was assessed, no significant correlation was found. This is in contrast with the Radke-Yarrow et al. (1995) finding that there was a significant relationship between maternal psychopathology and child attachment security. One viable reason why the analysis assessing the relationship between the continuous measure of maternal psychopathology and child attachment security did not indicate a significant correlation is the minimal number of mothers earning scores above the clinical cutoff. Thus, a significant relationship may have been masked. Another factor was that degree of severity of psychopathology was not considered in this study. Consideration of severity may have contributed to different findings.

The relationship between maternal psychopathology and the development of significant behavioral problems was also assessed. It was found that children with significant behavioral problems are more likely to have mothers with psychopathology. The Radke-Yarrow et al. (1995) findings support this result. This finding indicates that specific types of behavioral difficulties need to be examined when assessing this relationship.

The relationship between maternal attachment security and maternal psychopathology was then assessed to further the understanding between these third variables which may impact the development of behavior problems in children. No significant relationship between maternal psychopathology and maternal attachment security was found within this sample. This conclusion is made cautiously given that only four participants were found to have a significant degree of maternal psychopathology. A study utilizing a larger sample may be able to better delineate this relationship.

Comparisons Between the Head Start Program Participants and Private Day Care Participants

Given that two populations were assessed in this study, comparisons were conducted. These analyses revealed that there was not a significant difference between children attending private day care and those attending a Head Start program in relation to child attachment security or the development of childhood behavior problems. It should be noted that despite poverty and other factors that leave these children eligible for Head Start, there is a proportion of the mothers of Head Start children who are doing well by their children even in the face of adversity. For example, of the 29 participants who attend Head Start, 21 of them are securely attached, and three of these children experience significant levels of stress in their lives. Furthermore, of the 29 Head Start participants, 24 of them exhibit positive behavior, and four of these children experience significant stress in their lives. These findings provide further evidence surrounding the transmission of attachment in sub-clinical populations. Further statistical comparisons between these two populations were not completed given the limited cell sizes. Though percentiles of demographic variables differed across the two populations, few were significantly predictive of any of the dependent variables.

Maternal Psychopathology, Life Stress, and Maternal Attachment in Relation to Child Behavior and Child Attachment Style

Prior to completing the regression analysis to assess the relationship between total stress, maternal psychopathology, and maternal attachment security to the development of childhood behavior problems and child attachment security, all demographic variables were entered. The only significantly predictive variables were the receipt of speech therapy and special education needs (speech therapy) which were both predictive of internalizing behavior problems.

This finding is supported by evidence that 8-year-olds with significant language impairments who were originally assessed at the age of 4 were found to have more significant behavior problems at the age of eight (as assessed by the CBCL) than those children without language problems (Benasich, Curtiss, & Tallal, 1993). It is also suggested that a child's inability to verbally express his needs at 24 to 32 months old may contribute to poor behavior as an alternative (Caulfield, Fischel, DeBaryshe, & Whitehurst, 1989). Furthermore, the development of language skills typically coincides with improvement in self-control. Therefore, if development of language skills falters, behavioral control may also lag behind (Funk & Ruppert, 1984). The fact that utilization of speech therapy is predictive of internalizing behavior problems suggests that this

population is at significant risk and requires early intervention.

After controlling for demographic variables, this investigation indicated that neither maternal attachment security nor maternal psychopathology were predictive of child attachment security or behavior problems. Unlike in the analysis assessing the correlation between maternal psychopathology and the development of behavior problems, which indicated a significant relationship, this regression removed third variables that may have impacted these results. The regression analysis did indicate that total dyadic stress, however, was significantly predictive of child attachment security and the development of behavior problems. In the current study, total stress within the parent-child dyad was the most highly predictive variable assessed. In a larger sample, composed of a greater number of participants with psychopathology, insecure representations of attachment, and higher degrees of life stress, significant findings may develop from these apparent trends. Given the limited sample size, conclusions stemming from these regression analyses are to be interpreted cautiously.

CHAPTER V

CONCLUSIONS

This study revealed that the relationship between transgenerational attachment, maternal psychopathology, total dyadic stress, and the development of childhood behavior problems is more complicated than previously expected. Though numerous demographic variables were controlled for in this study, the presence of other variables impacting this complex relationship is likely. For instance, it is possible that numerous children in this sample have established a secure attachment relationship with another adult in their life. This relationship could in turn mitigate the child's development of insecure attachment to their mother. Furthermore, some insecurely attached mothers in this sample could have worked through their own childhood issues and therefore the probable link of transgenerational attachment could be broken. These are just two examples of possible third variables impacting the results of the current study. Further research must assess these third variables and others, and control for them adequately.

These results indicate that, in order to adequately assess child attachment or childhood behavioral problems, the level of stress impacting the family must be considered. Given the strength of this predictive variable, level of dyadic stress may be one of the most important factors which needs to be evaluated, especially in determining the at-risk level of families. Early intervention programs targeting stress reduction are a necessity and overall could be highly successful. Alleviating the degree of stress impacting families through psychoeducational programs, parent counseling, and the enhancement of support networks appears to be a realistic goal.

The link between child attachment security and behavior problems was further confirmed by this study. This also suggests that early intervention with at-risk families could help alleviate later behavior problems and assist in the development of secure attachment relationships. Though this study does not suggest a causal link between child attachment security and behavior problems, it certainly suggests the need for research clarifying the nature of this relationship. Is it that early temperamental difficulties contribute to the development of insecure attachment or is it that insecure attachment contributes to the development of behavior problems, or a combination of the two? Future studies would most likely benefit from including the Teacher's Version of the CBCL to gain a broader perspective on children's behavioral difficulties. This addition would be most helpful in parent-child dyads with a disordered parent who may have difficulty accurately rating her child's attachment style and behavior.

Though maternal psychopathology as assessed by the Brief Symptom Inventory in the current study is not significantly correlated with child attachment security, there is a significant correlation between maternal psychopathology and childhood behavior problems. This relationship requires further assessment in order for researchers to truly understand this link. For instance, the relationship between different types of maternal psychopathology and types of associated behavior problems needs to be researched. Though it is helpful for clinicians to understand the overall relationship between general maternal psychopathology and significant behavioral problems, knowledge of specific links would prove invaluable. In retrospect, relying solely on maternal reports of their own attachment style, total stress, and pathology, as well as their children's attachment style and behavior problems could be a confounding variable in and of itself. Inclusion of teacher's reports, father's reports, and clinical observations would greatly enhance the results of future studies.

The foundation of knowledge that the current study provides can be greatly expanded if a similar research design is utilized with a much larger, high risk population. The current sample proved to have few participants with insecure attachment styles, child behavior problems, maternal psychopathology, or significant levels of total dyadic stress. As previously mentioned, studies focusing on high risk samples may reveal more significant findings than the current results. Thus, further investigation is needed to better assess the relationship between transgenerational attachment, life stress, maternal psychopathology, and childhood behavior problems.

Though there are evident limitations of the current study, these results will serve as a foundation for extended research in this area. The most prominent findings surround the presence and impact of total dyadic stress. Though previous researchers have indicated the adverse impact that level of stress has on general functioning, the relationship between total dyadic stress, behavioral problems, and attachment security has not been fully explored. The current findings indicate that total dyadic stress is a prominent factor which is significantly correlated with both child attachment security and behavior problems. This is one factor that if alleviated would significantly enhance children's adaptive behavior and their ability to establish secure interpersonal relationships.

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APPENDIX A

PARTICIPATION LETTER

Dear Participant,

We are asking for your help in a research project to help better understand the link between the biological mother-child relationship, and life stress. This will help us understand how these factors influence the behavior of preschool children. This research is being conducted by members of the Eastern Virginia Medical School and the Virginia Consortium for Professional Psychology. An increased understanding of this link can lead to a greater understanding of the steps useful in the treatment and intervention of behavioral problems.

We would like to ask you to assist with this research by contributing 90 minutes of your time. The session will begin with a brief questionnaire about background information such as age, and level of education. Four questionnaires follow that focus on your contacts with your friends, parents, and partners, the degree of life stress you encounter, your emotional well-being, and your preschool child's behavior. You will end with a card sorting task that examines your relationship with your preschool child.

Approximately 50 people will be taking part in this research, and no names will be used in the final analysis of the results. All data will be coded with numbers instead of names to maintain strict confidentiality. If you would like a summary of the results of this study, please inform the researcher at the conclusion of the session.

Your cooperation and willingness to assist us in this research is greatly appreciated and as a token of our appreciation for your time and effort we will provide you with a ten dollar gift certificate to a local toy store. A better understanding of the relationship between parent-child relations, life stress, and child behavior will lead to better treatment of families who are faced with behavioral difficulties. Thank you very much.

Sincerely,

Mary Jane Call
 Doctoral Candidate/Researcher
 Virginia Consortium for Professional
 Psychology

Suzanne Getz, Ph.D, LPC
 Associate Professor
 Eastern Virginia Medical
 School

APPENDIX B

SUBJECT CONSENT FORM

Transgenerational Attachment, Life Stressors, and the Development of Disruptive Behavior in Preschool Children

INVESTIGATORS: Suzanne Getz Gregg, Ph.D., LPC, Mary Jane Call, Doctoral Candidate, & Gretchen LeFever, Ph.D.

DESCRIPTION:

If you are willing to participate in this research study please sign and return this form. Your signature at the end of this consent form confirms that you have read and understood the details of the present study as follows:

The purpose of this study is to assess the relationship between parent and child relationships, stressful life events, and the development of disruptive behavior in preschool children. I understand that I am being given four questionnaires that relate to my relationships with my parents, friends, and partners, the stressful events in my life, my emotional well-being, and my child's behavior. In addition, I will be asked to separate statements into piles that help describe my relationship with my preschool child. Lastly, I will be asked to complete a brief background questionnaire. Completion of these questionnaires will take me approximately 90 minutes. The results will be coded, using numbers rather than names, and will be kept strictly confidential.

EXCLUSIONARY CRITERIA:

If my preschool child is not my biological child I understand that I am unable to participate in this research study.

RISKS:

Known risks associated with participation in this study include the inconvenience of spending up to 90 minutes of my time completing the questionnaires, card sort, and background questionnaire, and that confidentiality will be broken if danger to myself or others is communicated during the study.

I understand that there may be other risks not yet identified. I will be informed of any significant risks that are discovered during the course of the research which may affect my decision to continue participating.

BENEFITS:

I understand that my participation in this study may contribute to a better understanding of the relationship between parent-child relationships, life stressors, and behavior in preschool children. I also understand that at the end of the study I will be able to receive a summary of the overall results, including how parent-child relationships and stressful life events are related to the behavior of preschool children.

COSTS AND PAYMENTS:

There is no known cost associated with participation in this study other than the inconvenience of spending up to 90 minutes of my time completing the questionnaires, card sort, and background questionnaire. I understand that I will be compensated for my time and effort with a ten dollar gift certificate to a local toy store at the end of the session.

CONFIDENTIALITY:

I understand that all personal information learned about me and my family during this research will be kept strictly confidential and that my records will be protected within the limits of the law. I also understand that confidentiality will be broken in the event that information provided during the study indicates any danger to myself or others, and a referral will be made to the Norfolk Community Service Board or an other appropriate agency.

I also understand that non-personal information learned from this study could be used in reports, presentations, or publications but I will not be personally identified. It may be necessary for my records to be inspected by federal regulatory authorities.

NEW INFORMATION:

Any new information obtained during the course of this research that may affect my willingness to continue participation in the study will be provided to me.

WITHDRAWAL PRIVILEGE:

I understand I may refuse to participate in or withdraw from this study at any time. If I do I will receive exactly the same treatment at this institution as I normally would receive. I also understand it may be necessary for Dr. Suzanne Getz Gregg, to withdraw me from the study. If I do withdraw, or am withdrawn, I agree to undergo all evaluations necessary for my safety and well-being as determined by Dr. Getz Gregg.

COMPENSATION FOR ILLNESS OR INJURY:

I understand that if I suffer a physical injury or illness as a direct result of my participation in this research study, immediate medical treatment will be made available to me at no charge. Financial compensation for a research related injury or illness, lost wages, disability, or discomfort is not available. However, I understand I do not waive any of my legal rights by signing this consent form.

The Medical College of Hampton Roads (MCHR) provides no compensation plan or free medical care plan to compensate me for such injuries. If I believe I have suffered an injury as a result of my participation in any research program I may contact Dr. Gerald J. Pepe, (757) 446-8423, an employee of MCHR, who will review the matter with me.

FEEDBACK:

In addition, I have the right to receive feedback about the overall results of the study for which my participation contributed. At the end of the session, I will be asked to complete a form stating whether I wish to receive feedback about the results.

VOLUNTARY CONSENT:

I certify that I have read all of this consent form or it has been read to me and that I understand it. If I have any questions pertaining to the research or my rights as a research subject, I may contact Dr Suzanne Getz Gregg whose phone number is (757) 446-5888. A copy of this consent form will be given to me. My signature below means I freely agree to participate in this study.

DATE

SIGNATURE OF PARTICIPANT

DATE

SIGNATURE OF WITNESS

INVESTIGATOR'S STATEMENT:

I certify that I have explained to the above individual the nature and purpose of the study, potential benefits, and possible risks associated with participation in this study. I have answered any questions that have been raised.

DATE

SIGNATURE OF INVESTIGATOR

APPENDIX C

BACKGROUND INFORMATION SHEET

Please complete the following questions to the best of your knowledge.

Demographic Information:

Subject Identification Number: _____

1. Your Present Age _____
2. Marital Status: _____ Single _____ Married _____ Separated _____ Divorced
3. Please circle one: White African American Hispanic Asian other
4. Number of children: _____ Number living in the home: _____
5. Highest level of education achieved: Please check one
 _____ 5th Grade or Below _____ 6th, 7th or 8th Grade _____ Some High School
 _____ Completed High School _____ Some College _____ 2 Year College Degree
 _____ 4 Year College Degree _____ Advanced degree
6. Please list your current occupation: _____
7. Please indicate your household's approximate yearly income:
 _____ \$0-\$15,000 _____ \$15,001-\$25,000 _____ \$25,001-\$45,000 _____ \$45,000- & above
8. Your preschool child's birth date: _____
9. Your preschool child's current age: _____
10. Name of the Daycare/Preschool Program which your child attends currently:

APPENDIX D**CHILD HISTORY QUESTIONNAIRE**

Please complete the following questions to the best of your knowledge.

Subject Identification Number: _____

1. Has your child ever had an evaluation for specialty services? ____ Yes ____ No

2. Has your child ever received early intervention services? ____ Yes ____ No

Please specify: (infant stimulation, occupational therapy, speech therapy, etc.)

3. Has your child ever received a diagnosis following an assessment? ____ Yes ____ No

Please specify: (mental retardation, seizure disorder, global developmental delay)

4. Please describe your child's favorite interests and current strengths: _____

APPENDIX E**FEEDBACK FORM**

I, _____, am requesting feedback of the general results obtained from this study. I understand that written feedback will be provided by Mary Jane Call, under the supervision of Suzanne Getz, Ph.D. In addition, I understand that this feedback information will not be provided until the conclusion of this study.

Date

Signature

I, _____, am declining feedback of the results obtained from this study.

Date

Signature

VITA

Mary Jane Call
 School Address:
 VCPCP
 ODU/NSU Graduate Office
 3300 South Bldg., Suite 201
 397 Little Neck Road
 Virginia Beach, VA 23452

EDUCATIONAL HISTORY

- | | |
|-----------|---|
| 1994-1998 | Virginia Consortium Program in Clinical Psychology
Norfolk, Virginia
Psy.D., expected May, 1999 |
| 1989-1993 | Bates College
Lewiston, Maine
B.A., Psychology: May 1993 |

CLINICAL EXPERIENCE

- | | |
|------------------------|---|
| October 1998 - present | Assistant Psychologist
The Genesee Hospital Child and Youth Services
Rochester, New York |
|------------------------|---|

Provide individual and group psychotherapy, conduct diagnostic evaluations, offer diagnostic feedback and treatment recommendations with outpatient clients ages 3 to 18. Conduct psychological assessments through an affiliated developmental unit with clients ages 4 to 18. Offer parent counseling sessions to parents of clients treated at the clinic.

- | | |
|------------------------------------|---|
| September 1997 -
September 1998 | Pre-Doctoral Internship
University of Rochester Medical School- Rochester, New York |
|------------------------------------|---|

Outpatient Psychiatry: Provide individual and group psychotherapy, conduct diagnostic evaluations, offer diagnostic feedback and treatment recommendations, and serve as a liaison between families and schools with clients ages 4 to 18. Offer parent counseling sessions to parents of clients treated at the clinic. Conduct and interpret psychological evaluations.

Inpatient Psychiatry: Provide short-term, crisis-oriented interventions to children ages 6 to 17 and their families. Provide individual and family therapy, diagnostic evaluation, after-care planning, and case management to clients during their hospitalization. Develop and implement problem-focused treatment plans and conduct psychological assessments.

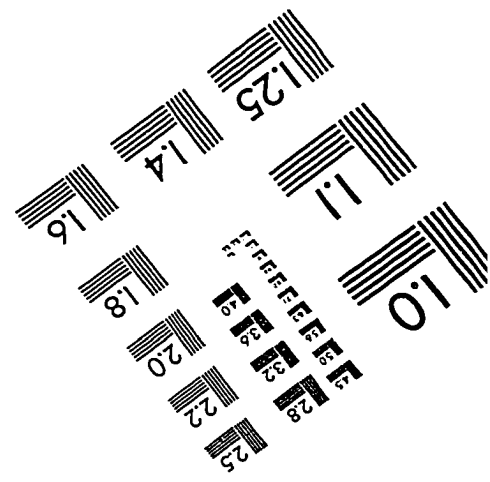
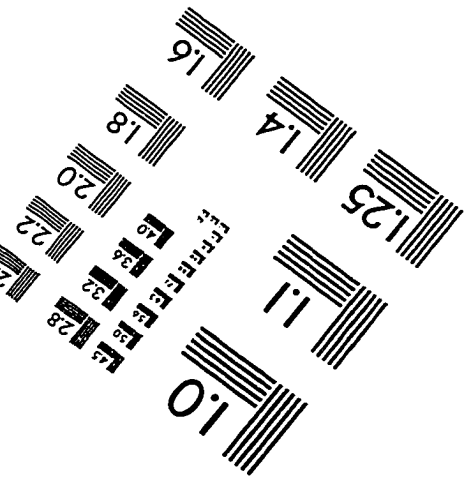
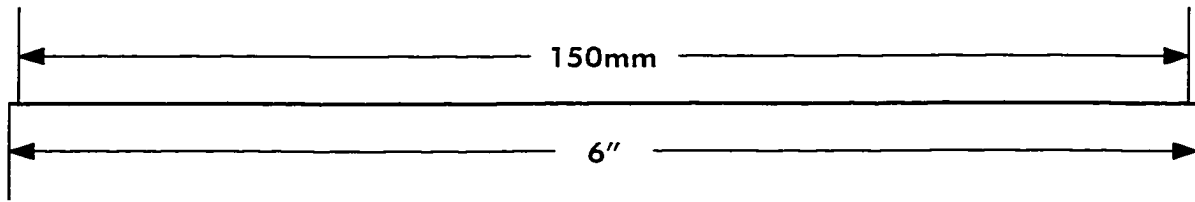
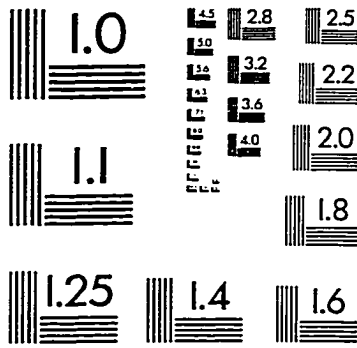
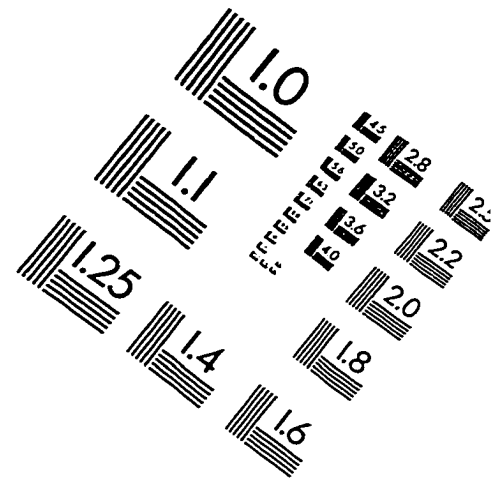
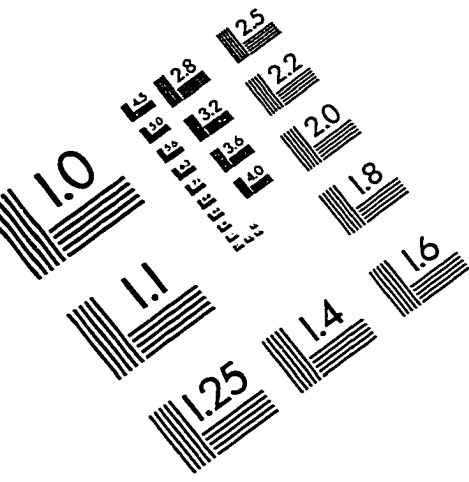
Neuropsychological Assessment: Administer and interpret full neuropsychological test batteries with outpatient clients. Provide interpretive feedback to parents and offer treatment recommendations.

PRESENTATIONS

Getz, S. & Call, M.J. (1998). Attachment-Based Issues in the Play of Children from Intact, "Broken," Adoptive, and Foster Families in Hawaii, the U.S. Mainland, and England. Workshop presented at the International Play Therapy Conference, Honolulu, Hawaii.

Call, M.J. (1993). Attachment Style and Personal Account of Loss. Poster presented at Maine Psychological Association Meeting, Augusta, Maine.

IMAGE EVALUATION TEST TARGET (QA-3)



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