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Attachment: A working-model approach to problem behaviors in middle school children

Nicole Pray

The University of Montana

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Attachment: A Working-Model Approach

To Problem Behaviors in Middle School Children

by

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B.A. California State University, Chico, 1993

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Recent advances in the study of attachment propose a strong link between a developmental history of avoidant attachment in infancy and subsequent development of negativistic and disruptive behavior in childhood (Fagot & Kavanagh, 1990; Renken et al., 1989; Sroufe et al., 1993; Greenberg et al., 1993) and conduct disorder in adolescents (Allen et al., 1996; Rosenstein & Horowitz, 1996; Pianta et al., 1996; Main, 1996). The author attempts to delineate that link in four stages. The first is an exploration of the background and basic tenets of attachment theory to demonstrate its merit and strength as a developmental framework. Second, empirical support and evidence for the stability and predictive value of attachment theory in understanding child and adolescent development is provided. This involves further delineation between individual differences in attachment and the working models that support them. Recent developments in the study of adolescent problem behaviors illustrate how an individual's working models of attachment influence subsequent development of problem behaviors in adolescents. Regression analyses provide confirmatory evidence for hypotheses that attachment, along with related family environment and social support variables, predict problem behaviors in middle school students. Results further demonstrate important relationships between attachment and family environment, social support, and internalized problems. Findings suggest the need for gender-specific approaches to research and prevention programming.
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Chapter 1: Introduction

The increasing numbers of juvenile crimes, along with associated increases in the type and severity of antisocial and aggressive behaviors (Robins, 1991) have signaled the need for a more complex, interdisciplinary approach to understanding adolescent problem behaviors. By itself, adolescence is viewed as a time of increased pressure for problem-solving and personal decision, a period of increased expectations from self and others, of "transformation from childhood compliance to mature autonomy" (Worell & Danner, 1989, p.3). In addition to the existing developmental tasks which adolescents must achieve, today's adolescents are faced with extensive activities (alcohol and drug use, unprotected sex, abuse, and violence), that place them at heightened risk for serious dysfunction and psychological impairment (Kazdin, 1993). Thus, it should not come as a surprise that between 30% and 50% of mental health referrals for children and adolescents are the result of antisocial and aggressive behavior (Robins, 1991). A review of the literature suggests that, not only is conduct disorder a fairly common disorder of adolescence, but also that it is a highly stable and debilitating condition (Holland, Moretti, Verlaan, & Peterson, 1993; Rutter & Garmezy, 1983). Outcome
studies (Fergusson, 1996) have demonstrated strong behavioral continuity. Children who showed early disruptive behaviors showed a likelihood of developing adolescent conduct disorder over 16 times higher than children who displayed no early disruptive behavior.

In examining the origin and dynamics of adolescent problem-behaviors, researchers have pointed to critical developmental tasks of adolescence that require learning of psychosocial and contextual competencies (de Armas & Kelly, 1989), as well as to cognitive strategies (Markstrom-Adams, 1989) that are necessary for healthy navigation of the adolescent period. While it is clear that great discrepancies exist among individuals in their capacity and motivation to successfully adapt to the challenge, it is less clear how or whether these differences are all related to successful adaptation in adolescence.

A Theory of Attachment

Bowlby's (1969; 1973; 1981) theory of attachment proposes an integrative approach to understanding the developmental process and how disruptive behavior patterns develop. At the core of attachment theory is a strong causal relationship between an individual's life experiences with parents and later capacity to make an affectional bond.
Included is the belief that certain variations in that capacity will be manifest in a variety of ways, including trouble among children (Bowlby, 1976). Lending support to Bowlby's theory are numerous studies that have acknowledged a developmental pattern associated with maternal rejection/hostility and unavailability in early childhood that has been significantly related to later aggression in the preschool years (Egeland & Sroufe, 1981), early elementary school (Renken, Egeland, Marvinney, Mangelsdorf, & Sroufe, 1989), and into late childhood (Sroufe, Carlson, & Shulman, 1993).

Bowlby's (1969; 1973; 1981) attachment theory has been employed as a developmental model to explain a vast array of adaptive changes that humans face, from infancy through adulthood. Drawing largely on psychoanalytic traditions, Bowlby's theory includes material from cognitive psychology and control systems theory in order to explain the complex organization of feelings and behaviors that surround a child's efforts to get caregiving needs met by attachment figures (1969). Briefly put, attachment behavior is behavior that results in a person "attaining or retaining proximity to some other differentiated and preferred individual, who is usually perceived as stronger and/or wiser" (1976, pp.203). In early infancy, such behaviors as crying, calling, following and clinging are employed to
elicit the attention and maintain proximity to a primary caregiver. According to Bowlby (1976), the maintenance of such proximity and the subsequent bond that develops both play important evolutionary roles. As observed in other primates, these behaviors have demonstrated survival value as a source of protection from predators. Furthermore, the bond that develops between infant and caregiver tends to endure, usually for most of the life cycle. Learning to distinguish the familiar from the strange, the infant regards the mother as providing a secure base from which to explore and to which he or she can return, particularly in response to fear. Throughout infancy, the individual attempts to maintain a balance between exploratory behavior and proximity-seeking behavior, taking into account the availability of the caregiver. If the infant is assured of a "felt security," then exploratory behaviors are likely to ensue. Whenever a threat or question about safety is present, the infant is likely to engage in proximity-seeking behaviors. When the infant is confident that an attachment figure is accessible, he or she is much less prone to fear than an individual who is not confident in the accessibility of an attachment figure. Furthermore, expectations that an individual develops regarding the availability and responsiveness of attachment figures become incorporated into inner working models of attachment.
On the basis of the affective experiences involved in seeking and receiving caregiving from a primary attachment figure (Bowlby, 1976), the infant learns to devise "working models" of the attachment figure and of him- or herself that serve to guide later experience. Working models are heuristic in that they provide the individual with "rules and rule systems for the direction of behavior and the felt appraisal of experience" (Main & Goldwyn, 1985, p77, cited in Kobak & Sceery, 1988). These models are carried forward into new relationships, where they play an active role in guiding perceptions and behavior. The particular importance of these working models with respect to the development of conduct problems will be discussed later. First, it will be important to provide the basis for a distinction between different patterns of attachment and to explain how these patterns provide a framework to guide their emotional and behavioral transactions with the environment.

**Empirical Support**

Ainsworth (1979, 1991) lent empirical support to Bowlby's theory of attachment by investigating mother-infant dyads in a laboratory setting and in their homes. Ainsworth identified three distinct patterns of response among 12-month-old infants to brief experimental separations and
subsequent reunions with the parent. The *Strange Situation* procedure is carried out with infants between 11 and 18 months of age. It occurs in a place that is unfamiliar to the infant (usually a laboratory room) and involves brief trials that allow for observation and coding of the infant’s behavioral response to both the absence and return of the infant’s primary caregiver and to the presence of a female stranger. Ainsworth, Blehar, Waters, and Wall (1978) describe the procedure and instructions for coding the infant’s behavior according to three general patterns of observed behavior. This Strange Situation procedure (Ainsworth et al., 1978) provided convincing new evidence for the importance of attachment bonds and has been replicated in several other controlled settings.

In the first pattern, the infants showed signs of “missing” the mother during her absence, greeting her actively and then returning to play. These secure infants had caregivers who were available, warm, and responsive to their needs. Later replications of the strange situation procedure confirmed this pattern and implied that infants judged as having secure relationships were confident of the accessibility and responsiveness of the caregiver, and that secure patterns were characterized by sensitive responsiveness in interactions during the first year (Sroufe
et al., 1993). Secure babies show strong initiative in interaction with their mother, actively seeking proximity to and maintaining contact with her (Colin, p. 44, 1996). Secure infants used their mother as a secure base from which to explore new and unfamiliar toys and interactions, returning to her for comfort and reassurance as necessary.

By contrast, an anxious-resistant pattern of attachment was identified (Ainsworth, 1978). Infants with this attachment pattern had difficulty exploring and were often wary of the presence of the stranger, becoming upset in both experimental separations. Their pattern of response was distinguished by a preoccupation with the parent, showing continued distress upon reunion. This anxious-resistant (also referred to as preoccupied) pattern was associated with alternately seeking and resisting the parent, often exhibiting signs of anger or passivity. These babies show a marked distress in response to their mother’s absence, often crying and protesting dramatically. Anxious-resistant infants are especially wary of the presence of the stranger.

Mothers of anxious-resistant infants demonstrated caregiving characterized as insensitive, intrusive, and inconsistent. Often, these infants mixed contact-seeking with contact resistance, pushing away and squirming to be
put down (only before signaling to be picked back up again). They demonstrated marked distress in response to both separations from their mothers and, unlike other infants, did not return to active play and exploration following her return (Sroufe et al., 1993).

A second insecure pattern was recognized as anxious/avoidant. Avoidant babies show conspicuous avoidance of proximity or interaction with the mother upon her return (Ainsworth et al., 1978; Ainsworth, 1979; Colin, p. 37). These infants responded less positively to being held (Ainsworth, 1979) and reacted more negatively to being put down. Moreover, avoidant infants tended not to cry on separation and actively ignored or avoided the parent on reunion. Caregivers of avoidant infants tended to be rejecting at home, especially when their babies sought contact, and were "generally insensitive" to their infants' signals for attention. Avoidant infants were accepting of the stranger and showed little distress during separations, especially when left with the stranger. Upon the second reunion with caregivers, these infants were especially avoidant of them, demonstrating aborted approaches to her. Instead, they keep their attention directed toward toys or other objects, apparently to shift attention away from the wish to establish contact with their attachment figures. In
contrast to these outward attempts to present a lack of interest or concern, laboratory measures of cardiac arousal suggest a hidden distress (Ainsworth et al., 1978). Mothers of avoidant infants were much less sensitive and less responsive to their infants in earlier home interactions, failing to pick up the baby when he or she sought contact or reassurance. Ainsworth (1979) posits that babies whose mothers have disregarded their signals for attention, or who have responded to them inappropriately, develop no expectation that the mother will be accessible and responsive. Furthermore, mothers of avoidant infants were found to be averse to close, bodily contact and were more rejecting, more often angry, and yet more restricted in the expression of their affect than were mothers of anxious or secure infants. Subsequently, avoidant infants' behavior (also referred to as "dismissing type" in later studies) is viewed as a defensive strategy for lessening the anxiety and anger experienced in reaction to their thwarted attempts at seeking close bodily contact with the mother.

More recent advances in attachment research have resulted in the identification of a fourth attachment style, labeled disorganized-disoriented by Main and her colleagues (Main & Weston, 1981; Main & Solomon, 1990). Unable to be consistently classified under previously recognized
categories of attachment, these infants showed signs of disorganized and contradictory behaviors during reunion episodes of the Strange Situation procedure. Behaviors such as crying for the caregiver during separation and then moving away from him or her during reunion, approaching the caregiver with head averted, approaching the caregiver and then falling to the floor or suddenly freezing in midapproach were observed among these infants. Main and Weston (1981) reported that 14 percent of their Strange Situation videotapes were "unclassifiable" using criteria for the original three attachment types. Behavior was considered unclassifiable when a baby demonstrated both extreme avoidance and extreme distress throughout the Strange Situation. Infants demonstrating such conflicting and inconsistent strategies were subsequently classified as disorganized. Subsequent studies have labeled infants as disorganized if they exhibited such behaviors as first approaching the caregiver and then showing dazed avoidance or suddenly crying out after having appeared to settle down (Sperling & Berman, p. 47). A repeated examination of 200 unclassifiable Strange Situation videotapes conducted by Main and Solomon (1990) showed that these infants exhibit an array of conflicted behaviors in the parent's presence - rocking on hands and knees with face averted after an abortive approach; freezing all movement, arms in air, with
a trancelike expression. Main and colleagues have found an association between an infant's disorganized classification and a caregiver's unresolved feelings and incoherent thinking about attachment-related traumas and losses. About 15% to 25% of infants in low risk samples (including many infants previously assigned to the secure group) are now considered disorganized.

Many successful replications of the Ainsworth Strange Situation procedure have provided further evidence for the presence of these distinct attachment patterns (Fagot & Kavanagh, 1990; Sroufe et al., 1993). More importantly, subsequent studies (Sroufe, 1983, cited in Bowlby, 1988) have demonstrated that the pattern of attachment exhibited by the infant at 12 months was highly predictive of behavior outside the home in a nursery group 3 1/2 years later. Children who had demonstrated a secure pattern of attachment at 12 months were rated by their teachers as "cheerful and cooperative, popular with other children, resilient, and resourceful." In contrast, avoidant children (20 percent of all cases) were likely to be rated as emotionally insulated, hostile, or antisocial. Interestingly, both the avoidant children and the resistant children (roughly 10 percent of all cases) were rated by teachers as being highly dependent. This prediction of very different behaviors from early attachment patterns has signaled the need for further
investigation.

Stability

The stability of these behavioral patterns derived convincing support from a series of well-designed longitudinal studies designed to draw connections between infant-caregiver attachment patterns and subsequent behavioral patterns (Renken, Egeland, Marvinney, Mangelsdorf, & Sroufe, 1989; Sroufe, 1979; 1988; Sroufe, Carlson, & Shulman, 1993).

In the first investigation, Renken and colleagues utilized Bowlby’s concept of “internal working models” to guide their hypotheses that attachment patterns and related factors could predict aggressive behavior and passive withdrawal in elementary school years. According to Bowlby (1969), this internal working model provides a framework for understanding and further pursuing transactions with the environment. A child who expects to be rebuffed or rejected may opt not to seek out others when needy, may misinterpret others’ actions as hostile, and may even strike out aggressively (Renken et al., 1989). The avoidant child experiences a conflict stemming from his or her inability to seek out a caregiver who is believed to be unavailable. Anger is expressed in response to this conflict and may
serve to further alienate the avoidant infant from a rejecting caregiver. Findings in a study of elementary school children who were previously classified as either secure, avoidant, or resistant, according to a Strange Situation procedure at 18 months, demonstrated strong support for the role of avoidant attachment history in predicting later aggression among these children. Derived from Bowlby's concept of "internal working models" (to be discussed later), this study used teacher ratings, home environment observations, and Q-sort measures of aggression and passive-withdrawal to examine the behavioral outcomes of the various attachment types. Renken and his colleagues found avoidantly attached boys to be overrepresented in the aggressive group (demonstrating behaviors such as defiance, disobedience, disturbing others, lying, and fighting), while resistantly attached boys were highly overrepresented in the passive group (exhibiting behaviors such as apathy, lack of initiative, shyness, and avoidance of social activity). Inconsistent parenting and disorganized, unstable living conditions found to characterize homes of resistantly attached infants [Ainsworth et al., 1987] were expected to predict passive withdrawal as well. Perhaps most importantly, the early attachment relationship was found to predict aggression at the elementary school level. These findings are consistent with earlier evidence suggesting
that caregiver emotional unavailability is highly predictive of childhood aggression (Egeland & Sroufe, 1981). Childhood aggression can be predicted both by early attachment history and by behaviors related to the emotional and cognitive framework associated with a particular history. Such findings provide strong evidence for Bowlby's concept of the internal working model. "In contrast to the usual expectation that relationships are sources of mutual support and enhancement, such a child has learned that in relationships, the vulnerable are exploited and pushed aside" (Renken et al., 1989,p. 227).

Sroufe et al. (1993) provided further evidence and clarity to this understanding of the working model of avoidant attachments. As part of the ongoing Minnesota Parent-Child Project, Sroufe and colleagues provided a comprehensive assessment of the relationship between attachment patterns and individual development, from infancy though the childhood years. Combined efforts allowed researchers to closely observe the links between early care and later social functioning. Observations occurred across a range of environments throughout childhood, including the home, laboratory, schools, the playground, and summer camp. Results provided a compelling argument for the coherence in individual development, lending further support to Bowlby's proposal of internal working models.
During the preschool years, naturalistic observations and teacher ratings allowed Sroufe and colleagues to clearly identify avoidant children as being highly dependent (consistent with Bowlby's theory and with the concept of coherence). Furthermore, researchers found that relationships with peers in the preschool setting were significantly related to attachment history. Avoidant children formed relationships that were less deep (characterized by less mutuality, less responsiveness and affective involvement) and more hostility than their peers' relationships. Sroufe et al., (1993) also found that avoidant children were more aggressive in the classroom, tending to have teacher relationships characterized as controlling and even angry. "With these children, they (teachers) had low expectations for compliance and little tolerance for violations. To some extent, the rejecting relationships of the avoidant child's early years were recapitulated in the school classroom" (Sroufe et al., 1993, p. 325). Often engaging in hostile or defiant behavior, avoidant children already demonstrated compelling evidence for distinct, coherent patterns of behavioral development in relation to attachment patterns.
Unique Behavioral Outcomes

It is important to note that avoidant children formed behavior patterns quite distinct from securely attached children. Securely attached children demonstrated self-direction and compliance with classroom rules. Secure children were judged more competent by their preschool peers and teachers who interacted with them were judged to be warm and straightforward in approaching them (Sroufe et al., 1993). Secure children were also rated high on a measure of ego-resiliency, demonstrating flexible management of impulses, desires, and behaviors.

Adaptation of children in the middle childhood years and in early adolescence provided a similar picture. Camp counselor ratings distinguished the avoidant children as more dependent. Behavioral observations confirmed these differences for both the avoidant children and for the resistant children. Children in both groups spent significantly more time interacting with counselors than did children with secure attachment histories. By contrast, secure children demonstrated more comfort in free play activities, successfully negotiating issues of status and role-taking. Therefore, these children participated in more complex activities (involving a greater degree of coordination, conflict resolution, and negotiation) and
later showed increasing complexity of adolescent and peer group functioning through coordination and maintenance of lasting friendships. Securely attached children showed higher ratings of emotional health, self-esteem, ego-resiliency, and peer competence than was demonstrated by their avoidant classmates. The markedly different behavioral patterns suggest strong differences exist between the three attachment types.

More recent developments in attachment research have recognized similarly negative behavioral outcomes for the disorganized, or fourth style of attachment. Current examination of the newly identified disorganized style of attachment suggests that these infants are likely to suffer the most pronounced risk for mental disorder (Main, 1996). According to Main, it is the lack of an organized behavioral strategy for dealing with stressful situations that puts these infants in a behavioral paradox. "By activating simultaneous impulses to approach the parent as a haven of safety and to flee from the parent as a source of alarm,"
(p. 239) these infants are unable to master a consistent strategy for dealing with stress. While the recent discovery of this fourth attachment group has provided limited opportunity for extensive investigation, disruptive-aggressive school behavior has been found associated with infant disorganized attachment status in a
poverty sample (Lyons-Ruth, 1996). The development of problem behaviors among this disorganized group requires further investigation. However, current research recognizes that important distinctions exist between the unique developmental paths of the four attachment groups.

Support for a Working-Model Approach

Findings from the investigations reported above provide compelling support for a transactional model or process where early expectations about oneself and subsequent experiences in relationships, along with patterns of emotional arousal and cognitive interpretation lead to particular forms of social (or asocial) engagement. The result is a self-perpetuating pattern of adaptation, where internal working models are further consolidated by confirmatory experiences. In other words, the transactional process illustrates how a child's early expectations and self-representations resulting from his or her experiences lead to styles of engagement and social behavior that perpetuate feedback from the environment.

One way in which these attachment styles provide direct feedback from the environment is suggested by Feeny and Noller (1996) to come in the form of attachment-related beliefs and attitudes. The beliefs and attitudes of the
Avoidant individuals are characterized by a lack of confidence in social contexts. Avoidants tend to be suspicious of human motives, to doubt the honesty and integrity of their parents and others. Based on memories of their mothers as cold and rejecting, avoidant individuals believe, for the most part, that others are neither trustworthy nor dependable. As a result, avoidant individuals are defined by a need to maintain interpersonal distance and to limit intimacy, perhaps in an effort to avoid an anticipated rejection, and in an attempt to assert themselves as autonomous and independent. Avoidant individuals have working models that isolate them from others. According to Renken and his colleagues, this is because the avoidant's social encounters will be guided by the expectations that others are not available, that social encounters are not rewarding, and that the self is unworthy of care (1989). As described by Colin (1996, p.138), avoidant children develop a defensive process as an adaptation to the insensitive, rejecting care they received in infancy, and this defense system becomes increasingly maladaptive as it gets carried into other situations and interactions. Avoidant infants guard against letting themselves or others become aware of their fear, anger, hostility, and need for comfort. These efforts aimed at giving off the false idea that they are "OK" are often made
at the expense of reality. This leads to emotional insulation, lack of empathy, and hostile or antisocial behaviors during preschool years (Sroufe et al., 1993; Renken et al., 1989).

Feeny and Noller (1996) assert that these working models tend to be stable because they develop and operate in the context of a fairly stable family setting. In addition, as the ways of thinking that are already incorporated into the models become habitual, the models begin to operate outside of conscious awareness, rendering them more resistant to change. It should also be noted that working models of attachment are likely to be self-fulfilling because actions that are based on one’s model tend to produce consequences that reinforce them. For example, the avoidant child learns early in his/her life that he will be rejected by others. By approaching social situations with the defensive stance of someone who is likely to be rejected, the avoidant may be quick to judge the actions of others as automatically rejecting or hostile. By reacting quickly and defensively in social situations, this individual is likely to be viewed as threatening and hostile and will therefore be rejected. This is the process underlying the principle of coherence in Bowlby’s working-models approach to adaptation. The fact that social competence in middle childhood could be predicted from
attachment styles in infancy provided clearcut evidence for the applicability of the working models of attachment theory to behavioral and social development in later years.

Across the Lifespan

The stability of the working model of attachment is suggested by several studies of adult relationships. Hazan and Shaver (1987; 1990) provided convincing evidence that infant-caregiver attachment styles may represent key components of adult love relationships, remembered relationships with parents, and current vulnerability to loneliness. In fact, their findings suggest that adult relationships are organized according to the same patterns of attachment learned in early infant-caregiver roles. In response to a publicized questionnaire, 620 subjects classified themselves according to a brief description as either secure, avoidant, or anxious-ambivalent. Just over half (56%) classified themselves as secure, whereas the other half were split between the avoidant and anxious-ambivalent categories (25% and 19% respectively). According to Hazan and Shaver, these figures are similar to proportions reported in American studies of infant-mother attachment (Campos, Barrett, Lamb, Goldsmith, & Stenberg, 1983, cited in Hazan & Shaver, 1987, summarized the
proportions obtained in these studies as 62% secure, 23% avoidant, and 15% anxious-ambivalent). While these findings do not provide direct proof, they present evidence suggesting that attachment styles persist well into adult love relationships.

Following this discovery of the likely persistence of childhood attachment patterns into the organization and maintenance of adult relationships, several groups of researchers have devised a variety of measures that classify adult attachments according to childhood patterns. Further support for the pervasive effects of childhood attachment on adult relationships and functioning is provided by research stemming from the development of The Adult Attachment Interview (AAI). Interviewers ask participants for descriptions and evaluations of their childhood attachment relationships and the effects of these experiences on their development (cited in Main, 1996). Coders are instructed to classify subjects into one of four categories corresponding to the four attachment styles identified in Ainsworth et al.’s (1978) Strange Situation - a) insecure - avoidant, b) secure, c) insecure - preoccupied and d) insecure - unresolved with respect to past loss or trauma (paralleling the infant strange situation insecure-disorganized type). Because of its predictive validity (its ability to correctly
identify adult attachment styles that match or agree with infant styles of attachment, derived from the Strange Situation) the AAI has provided the focus for considerable research on adult attachment (Steele & Steele, 1994). Recent findings with the AAI have demonstrated intergenerational patterns of attachment that are transferred between parents and their children. A number of studies have established that the ways in which caregivers organize their linguistic behavior in the context of the Adult Attachment Interview are strongly associated with their children's behavior in the Strange Situation (see Steele & Steele, 1994 for a review of the literature on intergenerational transmission of attachment behaviors).

Partly due to the extensive training required and limited access associated with the AAI, researchers have increasingly focused on the development of self-report measures of attachment in adults. Hazan and Shaver's work (1987; 1990) spawned considerable interest in the classification of attachment related beliefs and styles of attachment between adult romantic partners. Feeney, Noller, and Hanrahan (1994) provide a detailed review of current measures of adult attachment. The persisting influence of early attachment patterns in these adult relationships, coupled with evidence for their childhood presence, suggests that their continuity may be felt during the adolescent
years as well. Again, support for the working-models process approach to attachment is provided by findings that attachment styles learned in infancy may carry similar patterns across the lifespan.

**Summary of Attachment**

Thus far, the author has proposed the usefulness of Bowlby’s attachment theory in explaining childhood behavioral, social, and cognitive-emotional processes that characterize an individual’s developmental adaptation to the environment. Bowlby’s theoretical construct and Ainsworth’s empirical support were examined for their practical and well-substantiated delineation among three distinct attachment styles: secure, anxious/resistant (paralleling the descriptions of the preoccupied attachment in other studies), and anxious/avoidant. More recent research has identified the presence of a disorganized, or fourth attachment style. In particular, Bowlby’s working-model approach has been proposed to explain how the avoidant attachment may differ from the secure attachment history and how it may translate into aggressive and antisocial behavior. Compelling evidence for this connection has been provided by a series of well-designed longitudinal approaches. Each of these has documented critical
differences in psychosocial development in each of the attachment histories. A noteworthy pattern of development which has been related to the avoidant attachment history has characterized these children as being more angry, outwardly hostile, defiant, avoidant, and generally alienated from peers and adults. Preliminary evidence has demonstrated similarly negative behavioral outcomes for the disorganized attachment style. Longterm stability of these attachment styles is evidenced by their apparent relation to patterns of adult relationships and relationship components. Further investigation is warranted to discover the impact of such an enduring, influential model and its relation to behavioral problems in adolescence. The coherence of the model suggests that the hostility and aggressive externalizing behaviors displayed by the individual with an avoidant attachment style must play a crucial role in the avoidant's development. These behaviors deserve closer attention.

Attachment Theory in Adolescence: A Working-Model Approach to Problem Behaviors

The coherence of attachment, while mostly studied in infants and young children, has just begun to be examined with respect to the adolescent period. It is surprising
that this developmental period has been overlooked as often as it has by attachment researchers. In a time period marked by the individuation-separation from parental attachments and subsequent internalization of self-regulatory processes, it seems fitting, if not obvious, that the complexities of attachment would come into play. Especially in light of the tremendous physical and emotional change that intensifies and acts as a catalyst for psychosocial development, it would be naive to forgo an examination of the role of early attachment patterns in adolescent development.

Kobak and Sceery's (1988) use of the Adult Attachment Interview to examine the coherence of the three working models of attachment—Secure, Preoccupied, and Dismissing (Avoidant) with adolescent psychosocial functioning represents one of only a few such comprehensive efforts made with adolescents. Fifty-three first-year college students were classified by the AAI into three distinct parent-attachment patterns. Using peer Q-sort ratings and self-report measures, strong support was found for the working models approach, as attachment styles demonstrated significant relation to predicted areas of adolescent functioning. The Dismissing (Avoidant) group was rated low on ego-resilience and higher on hostility by peers. These individuals were also rated by peers as being unable to
delay gratification. Furthermore, the dismissing adolescents reported more distant relationships in terms of more loneliness and low levels of support from their families. Results supported the notion that adolescents with dismissing styles of attachment would minimize acknowledgment of distress in self-representations while seeing others as not being supportive (a model of relationships based on "compulsive self-reliance"; see Bowlby, 1973). Furthermore, the dismissing group was rated by peers as more hostile than either the Secure or the Preoccupied group, a suggestion that the avoidants' strategies for restricted expression of affect are not only ineffective (others perceived them as more hostile), but also that they are related to further alienation from peers and family. This perceived lack of support from family and peers deserves further attention for its role in the isolation of Dismissing individuals from peers and family.

Papini and Roggman (1992) argue that attachment relations with parents carry particular salience for early adolescents. Their longitudinal survey of early adolescents revealed that attachment to parents was related to higher self-perceived competence and less depression and anxiety, particularly during the transition to junior high school. Results from their study provide support for the hypothesis that quality of attachment to parents may buffer the child
from the anxiety and potential feelings of depression or emotional stress associated with the transitions that characterize early adolescence. It is important to recognize that these findings measure the importance of adolescents' current attachment to parents, rather than early attachments with primary caregivers. Bowlby's (1976) "working models" of attachment, as they have been studied with respect to individual development, are congruent with this latter emphasis on the adolescent's application of a previously learned "internal working model" of attachment which influences relationships within and outside of the family. Bowlby's concept of attachment emphasizes the more global impact of an individual's internal representation of self and others. This representation apparently carries particular salience during the period of social transition that characterizes early adolescence. Guided by expectations stemming from these internal models, adolescents may or may not derive the necessary support from family or peer relationships in order to successfully negotiate the challenging transitions of this period.

With respect to the etiology of problem behaviors, conduct disorder and antisocial behaviors represent some of the most characteristic forms of outward aggression and externalizing behaviors for which adolescents who exhibit problem behaviors are identified. Of the few studies that
have focused on adolescent problem behaviors in relation to attachment theory, the majority (Rosenstein & Horowitz, 1996; Pianta, Egland, & Adam, 1996; Allen, Hauser, & Borman-Spurrell, 1996) have found decisive evidence for a relationship linking conduct disorder and other forms of psychopathology (including narcissistic, antisocial, and paranoid personality traits) to attachment history. Rosenstein and Horowitz (1996), for example, found overwhelming support for the relationship between attachment styles, personality, and psychopathology. Drawing on the developmental pathways perspective suggested by Bowlby (1988), their findings provide clear evidence that quality of attachment plays a large part in determining an individual's degree of vulnerability to developmental deviance. In their examination of sixty psychiatrically hospitalized adolescents, the authors found that adolescents classified by the Adult Attachment Interview - AAI (Main & Goldwyn, 1985-1994, cited in Rosenstein and Horowitz, 1996) as having a dismissing (avoidant) attachment history were more likely to have a conduct or substance abuse disorder, narcissistic or antisocial personality disorder, and matching personality traits. Furthermore, the majority of male adolescents (roughly two-thirds) were found to have a dismissing attachment organization, while only 25% of females had a dismissing attachment organization. This
disproportionately higher number of males classified as dismissing warrants further attention.

Rosenstein and Horowitz's results are also consistent with a developmental pathways perspective in which "internal working models of attachment, guiding patterns of behavior, and affect regulation" (pp.250) give rise to attachment strategies. Adolescents using a "dismissing" (avoidant) attachment strategy, for example, direct their efforts at the avoidance of distressing thoughts and affects associated with rejection by the attachment figure. Results support the connection between attachment pattern and conduct disorder. The identification of conduct problems among adolescents classified as having an avoidant attachment organization provides substantial direction and illustrates the need for further investigation of the link between attachment and conduct problems. The overlap between attachment theory and adolescent problem behaviors suggests that more than chance is at work. The process by which an individual's internal working model of attachment translates into external behavior is less understood.

However, findings from one other study argue against the role of attachment in the etiology of problem behaviors. Fagot and Kavanagh's (1990) carefully designed study of the prediction of antisocial behavior from avoidant attachment classifications demonstrates the need to use caution with
regard to the interpretation of attachment histories as predictors of behavioral outcomes. Children classified as insecure-avoidant or securely attached at 18 months were rated by teacher and parents as having similar behavioral outcomes at four years, regardless of attachment history. The only significant effect for attachment classification was that teachers and observers of play groups rated girls classified as insecure-avoidant as more difficult to deal with and as having more difficulty with peers than girls rated as more securely attached. With the exception of this finding, Fagot and Kavanagh's results suggest that attachment history may be less related to behavioral outcomes than previous research suggests. Perhaps other variables deserve examination for their potential impact on behavioral outcomes. These findings demonstrate the need for further examination of the usefulness of attachment classification as a predictor of problem behaviors. In doing so, it will be important to recognize that attachment is not the only factor which may predict behavior problems. Rather, it is necessary to consider the importance of a range of variables that may be related to the development of problem behaviors.

A Multidimensional Approach To Problem Behaviors:
Recent examination of the role of attachment in the etiology of problem behaviors has emphasized the importance of an integrative approach to understanding how problem behaviors develop. Greenberg, Speltz, and DeKlyen (1993) underline the relative influence of various family environment and parent-child interaction variables on the development and maintenance of problem behaviors. The authors assert that attachment should be considered as only one, and not necessarily the most important, risk factor interacting with other variables in the development of problem behaviors. Waters, Posada, Crowell, and Lay (1993) further emphasize that many of the same family variables associated with the development of problem behaviors have demonstrated influence on the development of attachment. In a comprehensive screening for factors related to the presence of conduct disorder among elementary school children, the most powerful predictors of conduct disorder were variables related to family process, including poor family communication and involvement. A comprehensive examination of problem behaviors must therefore incorporate a concurrent investigation of both family ecology and attachment related variables. Only in this way can the impact of the working models of attachment be distinguished from other concurrent influences on the development of problem behaviors.
In an investigation of attachment style and family functioning among 137 eighth grade students, Feeney, Noller, and Hanrahan (1994, p. 128-152) found an inverse relationship between high levels of family conflict and low scores on all scales measuring aspects of insecure attachment. Kobak and Sceery's (1988) pioneering work with adolescent attachment (discussed earlier) cited convincing evidence for the connection between dismissing attachment and more distant relationships in terms of more loneliness and low levels of support from the family. These findings suggest the need to examine how working models of attachment influence and are influenced by communication in current parent-child interactions.

The interaction between early attachment classifications and later family cohesion and conflict as determinants of behavior and psychopathology at age 6 was studied by Lewis, Feiring, McGuttog, and Jaskir (1984). Mothers of infants previously classified by a modified version of the Strange Situation procedure at 12 months were asked to complete the Family Environment Scale (FES) and the Child Behavior Profile when the children reached 6 years of age. For males, 50 percent of the conflicted families (those scoring in the top 25 percent on the combined Cohesion and Conflict subscales of the FES) had children with signs of psychopathology, compared to 0 percent for
nonconflictual families (those scoring in the bottom 25 percent on the combined subscales). Perhaps most important was the finding that later environmental stress had little effect on the development of psychopathology for secure males. For insecure males, however, psychopathology was dependent on exposure to poor family environmental conditions. These findings suggest that secure attachment may serve a protective role, by buffering the effects of stress. Further investigation is needed to determine how attachment is related to family environment variables in the development of problem behavior.

In addition, a variety of biologic factors have been associated with the etiology of problem behaviors. Decreased sympathetic response (as measured by Skin Conductance Rate and resting heart rate) has been associated with Conduct Disorder in children and adolescents (Rogeness, 1994). Other variables, such as lower verbal IQ and biochemical differences in neurotransmitter metabolic rates have also demonstrated a strong relationship to the development of CD. Researchers have also explored the potential role of temperament and other genetically influenced factors while yielding little direct evidence for the presence of an isolated genetic or biological explanation for the development of problem behaviors (Lewis, 1994). Other studies support the influence of gender on the
development of problem behaviors. In accordance with earlier findings of gender differences with respect to the incidence of problem behaviors, Forehand, Neighbors, and Wierson (1991) found that, relative to girls, boys had more internalizing and externalizing behavior problems in early adolescence. These findings are consistent with Rosenstein and Horowitz’s (1996) evidence of gender differences, as reported earlier.

A parallel field of research has focused on the possible role of peer relationships in the development of problem behaviors. Findings have suggested a relationship between membership in a deviant peer group and higher rates of problem behaviors. In one examination of the role of assortive pairing (partner choices) in the continuity of conduct problems, Quinton, Pickles, Maughan, and Rutter (1993) found that conduct disordered adolescents were much less likely to attain supportive relationships. This perceived lack of support among one’s peers has been linked to both the avoidant attachment’s construct (others as unavailable, unsupportive) and to higher incidence of problem behaviors (Quinton et al., 1993). These findings demonstrate the coherence of internal working models of attachment during adolescence and their relationship to social relationships and functioning. Adolescents with working models of avoidant attachment seek friendships and
relationships which provide little social support. Further evidence for this relationship is provided by Koback and Sceery’s (1988) (discussed earlier) findings that adolescents with avoidant working models of attachment tend to report more loneliness and lower levels of familial support. Apparently, the avoidant attachment’s working model serves to isolate him or her from supportive family and peer relationships, thus increasing the likelihood of problem behaviors.

These findings illustrate a process by which an individual’s early attachment experiences help mold their internal working model of themselves in relation to others, which in turn guides the development of new relationships. The perceived lack of support that an individual derives from these relationships further isolates him or her and continues to reinforce the perception that others are unavailable. Thus, the individual’s working model further contributes to the development of problem behaviors. Once again, support for Bowlby’s working model approach is provided by findings suggesting that perceived lack of support in relationships is related to the development of problem behaviors. Clearly, it will be important to consider the role of social support provided by peer and family relationships in relation to individual working models and the development of problem behaviors.
Specifically, it will be worthwhile to examine how the avoidantly attached adolescent's working model relates to lower levels of perceived support from relationships in the development of problem behaviors.

Hypotheses

The nature of the relationship between avoidant attachment patterns and the expression of antisocial behavior in adolescents warrants further attention. Due to the paucity of research currently available, it was necessary to formulate some general hypotheses regarding the link between adolescent problem behaviors and attachment theory.

1) First, it was hypothesized that individuals with higher scores on scales measuring avoidant attachment would have higher levels of problem behaviors.

2) Lower levels of problem behaviors were predicted for individuals with higher scores on scales measuring secure attachment.

3) In keeping with findings of Lewis et al. (1984) and Kobak and Sceery (1988), it was expected that an exploratory analysis of family environment variables would reveal significant relationships with regard to attachment and the presence of problem behaviors. Specifically, it was
expected that higher levels of conflict would be predictive of higher levels of problem behaviors. Environmental stressors were also expected to contribute to the prediction of problem behaviors, with higher levels of stress predicting higher levels of problem behaviors. Alternately, lower expressiveness and cohesiveness were expected to be predictive of higher problem behavior scores.

4) Finally, the role of an individual's perceived social support was expected to help explain some of the differences in problem behaviors. Lower levels of perceived support from peers, teachers, and parents was expected to predict higher levels of problem behaviors.

5) Gender was also expected to explain some of the variance in problem behaviors, with males receiving higher problem behavior scores.

6) Collectively, the variance in problem behavior would be predicted by higher scores on measures of avoidant attachment, family conflict and environmental stress, lower levels of perceived support, and lower scores on measures of family cohesiveness and expressiveness.
Chapter 2: Methods

Subjects

One-hundred-ninety 11- and 12-year-olds were recruited from a larger pool of sixth grade students attending one of two middle schools. About half (95) of the children were already participating in a larger, more extensive study of a school-based intervention targeting the psychosocial development of middle school children and their families. However, testing took place prior to implementation of these activities and thus children from both schools were not expected to differ substantially with regard to effects of prevention programs.

For the first middle school, a letter asking for their child's participation in the study was distributed to parents and students during the sixth-grade registration assembly prior to the first day of school. Approximately 80 percent of parents were present at the assembly. Due to timing constraints, there were no letters distributed at the second middle school's assembly. However, permission slips were sent home with students of both schools after the study was introduced in homeroom classes during the first month of school. Students were told that homerooms that returned the most permission slips, regardless of parental consent, would
receive an “ice cream party.” Homerooms that returned all of their permission slips all received ice cream cones. Students with obtained parental consent were contacted during the third month of school, during their homeroom class, to participate in the study. Teacher participation was solicited via a brief informational meeting during the first two weeks of school. Teachers were asked to complete a brief checklist on each student’s behavior. The measures were administered, along with several other measures, as part of the larger longitudinal study. Parents (mother or father) were asked in the permission slip for their willingness to complete measures during the following month. Parents who agreed to participate were sent the measures by mail, along with a return envelope provided.

The neighborhood surrounding one of the middle schools targeted for this study represented the most ethnically diverse neighborhood in the community (Seele, 1997). Of the residents, 37 were black, 261 were Native American, 204 were Asian, and 137 were Hispanic. Twenty-four percent of all children in the neighborhood who were between the ages of 6-17 years of age were living with a family whose income was below the poverty level. Additionally, students at the middle school witnessed a 65% turnover rate for the 1995-1996 school year. The demographics surrounding the second middle school provided the basis for its selection as
a characteristically similar population.

Procedure

Prior to the collection of data, a comprehensive written proposal for research was submitted to the University of Montana Institutional Review Board for final approval to conduct research. Data was collected during the third month of the school year. Self-report measures of attachment style were administered in the students' homeroom class during the third month of school. Completion of the two measures occurred at the same time that several other measures were completed by students as part of the larger study. Questionnaires were administered by the author, with the help of undergraduate research assistants. The attachment measures, by themselves, took about 15 minutes to complete, with another five minutes for instructions. Teacher ratings of student behaviors took place while the students were filling out their measures separately. Additional time was given to teachers during the next three weeks to complete student rating forms. Completion of each checklist took between five and ten minutes per student. Parents were sent a Child Behavior Checklist along with other measures related to the larger longitudinal study. Instructions asked parents to return the completed measures in the envelope provided. Three weeks later, a follow-up
A phone call was made to parents who had not returned their measures.

Measures

The Attachment Style Questionnaire. — (revised version) Developed by Feeney, Noller, and Hanrahan (1994), the Attachment Style Questionnaire (ASQ) is a broad-based measure of five dimensions central to adolescent and adult attachment. The measure assesses individual attachment characteristics, as they apply to parent, peers, or others. Sixty-five original items were developed, based on the constructs posited in Table 1, on the following page. These constructs represent the major features of current three- and four-group models of adult attachment.
Table 1.
Constructs Used in the Development of the Attachment Style Questionnaire

<table>
<thead>
<tr>
<th>Positive view of self</th>
<th>Negative view of self</th>
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</thead>
<tbody>
<tr>
<td><strong>Positive view of other</strong></td>
<td><strong>Negative view of other</strong></td>
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<tr>
<td>Self-esteem</td>
<td>Overdependence</td>
</tr>
<tr>
<td>Comfort with closeness</td>
<td>Interpersonal anxiety</td>
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<tr>
<td>Trust</td>
<td>Aloneness</td>
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<tr>
<td>Healthy dependence</td>
<td>Desire for approval</td>
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<tr>
<td></td>
<td>Lack of confidence</td>
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<td></td>
<td>Preoccupation with relationships</td>
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<tr>
<td>Avoidance of intimacy</td>
<td>Low self-esteem</td>
</tr>
<tr>
<td>Lack of trust</td>
<td>Lack of trust</td>
</tr>
<tr>
<td>Value on independence</td>
<td>Interpersonal anxiety</td>
</tr>
<tr>
<td>Compulsive self-reliance</td>
<td>Desire for contact and intimacy</td>
</tr>
<tr>
<td>Emphasis on achievement</td>
<td>Need for approval</td>
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<tr>
<td></td>
<td>Aloneness</td>
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<td></td>
<td>Anger / Hostility</td>
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After being administered to 470 young adult university students, Feeney et. al’s (1994) analysis revealed five dominant factors which accounted for 43.3% of the total variance: Confidence (in self and others), Discomfort with Closeness, Need for Approval, Preoccupation with Relationships, and Relationships as Secondary (to achievement). The 40 items remaining after the analysis comprise the total scale and include 8 items on the Confidence scale, 10 items on the Discomfort with Closeness
scale, 7 items on the Need for Approval scale, 8 items on the Preoccupation with Relationships scale, and 7 on the Relationships as Secondary scale.

These findings provide empirical support for the effectiveness of one dimension, Discomfort With Closeness, in distinguishing between individuals classified as Avoidant and individuals classified as either Secure or Preoccupied. Feeney et. al's (1994) results suggest that comfort with closeness is linked with mental models of others, and therefore with the extent of social avoidance. A second dimension, Relationships as Secondary, was found to successfully distinguish between the two types of Avoidants consistent with previous research - Fearful (Disorganized) and Dismissing Avoidants. While the focus of this investigation involved primarily the avoidant (dismissing) attachment style, it was expected that it would be useful to further distinguish between the two types of avoidants, just as earlier research (mentioned above) has demonstrated. Feeney and Noller (1996) found strong support for the dismissing attachment as one that places a much greater emphasis on the importance of achievement and self-reliance. The ASQ was found to distinguish the dismissing avoidant from the other attachment styles by using the Relationships as Secondary scale.

Internal consistency was calculated and yielded alphas
of .83, .83, and .85 for the three factors (Security, Avoidance, and Anxiety), respectively. For the scales of Confidence (in self and others), Discomfort with Closeness, Need for Approval, Preoccupation with Relationships, and Relationships as Secondary (to achievement), coefficient alphas were .80, .84, .79, .76, and .76, respectively. These coefficient alphas represent moderate levels of internal consistency.

In order to check the internal consistency of the five attachment scales with a younger sample, the Attachment Style Questionnaire was administered to 248 eighth-grade students (equal males and females) and yielded alpha coefficients of .73 (Confidence), .73 (Discomfort with Closeness), .67 (Need for Approval), .73 (Preoccupation with Relationships), and .70 (Relationships as Secondary). The lower reliability estimates, while acceptable, suggest the need for caution with regard to the applicability and interpretation of findings with a younger sample. An assessment of the validity of the Attachment Style Questionnaire was performed to assess its usefulness with a sample of high school students. Analyses showed that a linear combination of all of the attachment scales was related to a combination of all of the family functioning scales. High family intimacy, democratic parenting, and low levels of family conflict (.89, -.86, and .76) were
associated with high scores on Confidence (.88) and with low scores on all scales measuring aspects of insecure attachment (Preoccupation with Relationships = -.67, Discomfort with Closeness = -.64, Need for Approval = -.60, Relationships as Secondary = -.54).

For the purposes of this study, the author used a slightly modified version of the ASQ. In order to ensure the readability of the measure by a younger population, the author simplified the wording of a few statements. This modified version and the original version of the ASQ can be found in Appendices 1 and 2.

Relationship Questionnaire (RQ) Items —(revised version) The shortage of well-validated and empirically tested measures of attachment with this younger age group prompted the use of a second measure of attachment. In order to provide initial reliability and validity data, the author used this additional measure of attachment with this study.

Bartholomew and Horowitz (1991) developed prototypical descriptions of the four attachment styles, similar in form to the three attachment descriptions originally used by Hazan and Shaver (1987). As with the original measure, these descriptions can be offered in a forced-choice format,
Bartholomew and Horowitz (1991) assessed each subject's response through a semi-structured interview concerning the person's current relationships with peers and early relationships within the family. The hypothesized underlying structure was confirmed by family and peer ratings, and friend-reports as well. While Bartholomew and Horowitz's (1991) data showed a convergence between family and peer ratings and between ratings from the interview, self-reports, and friend's reports, it would be insufficient to suggest practical support for their use in the current study based on such estimates. Again, because these descriptions have not been tested with this age range before, the use of the RQ with this younger population was intended for the purpose of providing initial validity data for a slightly revised RQ when compared to the estimates obtained with the Attachment Style Questionnaire, which has been normed with this population. A revised version and the original RQ can be viewed in Appendices 3 and 4. For the purposes of this study, the author slightly revised the original RQ (Appendix 4), and the revised version is provided in Appendix 3 (The Friendship Questionnaire). In accordance with Bartholomew and Horowitz's instructions for allowable modifications (1991), revisions include replacement of the word "relationship(s)" with the word "friendship(s)".
**Family Environment Scale (FES)**

Developed by Moos and Moos (1986), the FES is a 90-item questionnaire that assesses three dimensions: Relationship, Personal Growth and System Maintenance (see Appendix 3). The scale that is most valuable to this study is the Relationship dimensions scale. This scale assesses the level of cohesion, expressiveness and conflict. Cronbach's Alpha for internal consistency for these scales is: .78 (cohesion), .69 (expressiveness), and .75 (conflict). Test-retest reliability was also in the acceptable range (varying from .68 to .86) (Moos & Moos, 1986).

**Family Inventory of Life Events and Changes (FILE)**

Developed by McCubbin, Patterson, and Wilson (1983), the FILE is a 71-item self-report instrument designed to provide an index of family stress. It assesses the pile-up of events experienced by a family. The FILE has nine scales: Intrafamily Strains, Marital Strains, Pregnancy and Childbearing Strains, Finance and Business Strains, Work-Family Transitions and Strains, Illness and Family “Core” Strains, Losses, Transitions “In and Out”, and Legal. Reliabilities for the FILE were calculated using data from a sample of 322 families who have a chronically ill child.
(myelomeningocele or cerebral palsy) and yielded an overall reliability (Cronbach's alpha) of .72 and an overall scale reliability of .81. These alphas represent an acceptable level of reliability. Test-retest reliability for the total scale was calculated using data from families of high school, undergraduate, and graduate students. Test-retest reliability for the Total Scale with a one-month interval was calculated and yielded .80.

Initial validities for each of the scales of the FILE were established by McCubbin et. al (1983) using discriminant analyses between low conflict and high conflict families who had a child with a) cerebral palsy or b) myelomeningocele. High conflict families with a child with cerebral palsy experienced significantly higher pile-up of changes in three areas: a) intrafamilial strains; b) work-family transitions and strains; and c) total life changes. Further validity assessments were made by correlating the scales (including the total scale) of the FILE with the Family Environment Scale (FES) (Moos, 1974). Total recent life changes correlated negatively with the FES dimensions of cohesion (-.24), independence (-.16), and organization (-.14) and correlated positively with conflict (.23), and therefore provide evidence for the construct validity of the FILE.
Child Behavior Checklist -- Teacher and Parent versions

Content validity on the CBCL was established by Achenbach and Edelbrock (1983; 1991) to tap a broad range of problems and competencies of clinical concern to parents and mental health workers. Clinically referred children received significantly higher scores (p<.005) than demographically similar nonreferred children. These findings establish the CBCL's usefulness for indicating problems related to significant mental health concerns. Evidence of construct validity is provided by correlations of total behavior problem scores of the CBCL with total scores of other instruments whose content appeared most similar to the profiles on the CBCL, ranging from .71 to .92.

Reliability of the CBCL is evidenced by high test-retest correlations and by inter-rater agreement. Teacher and parent ratings of problem behaviors were collected for this study; however, teacher CBCLs were used as the index of problem behaviors for purposes of the statistical analyses. Due to the low return rate of parent measures, it was necessary to use the teacher ratings to test the major hypotheses. Teacher ratings are reported to have high 15-day test-retest reliabilities, with
correlations of .92 for boys and .99 for girls. Between teachers, inter-rater reliability for Problem Behaviors was adequate, with .53 for boys and .66 for girls.

Revised Children's Manifest Anxiety Scale (RCMAS) - Total Anxiety Scale

Developed by Reynolds and Richmond (1978), the RCMAS is a 37-item, brief self-report inventory that measures the level and nature of anxiety in 6- to 19-year-olds. It was designed specifically for group or individual administration. The child responds to each statement by circling a "Yes" or "No" answer to indicate that the item is generally descriptive or not generally descriptive of the child's feelings or actions. The RCMAS provides scores for Total Anxiety and four subscales: Worry/Oversensitivity, Social Concerns/Concentration, Physiological Anxiety, and a Lie Scale.

For the purposes of this study, the Lie Scale and the Total Anxiety scale was used. Designed to detect acquiescence, social desirability, or the deliberate faking of responses, the Lie subscale is composed of nine items. Scores which exceed the test mean by one standard deviation or more (i.e., Lie subscale scaled score > 13) were selected out of the final analyses. This was necessary in order to
address the possibility that many children, and particularly those children with avoidant attachment styles might provide positively skewed or inaccurate presentations of themselves. Coefficient alpha reliability estimates for the Lie subscale were .70 for 11- and 12-year-old females and were .75 and .76 for 11- and 12-year-old males, respectively. The Total Anxiety scale raw scores may vary from 0 to 28. An internal consistency estimate (Kuder-Richardson formula 20, KR$_{20}$, the special case of alpha with dichotomous items) of .83 was obtained with the test development sample of 329 children. A cross-validation sample of 167 children from grades 2, 5, 9, 10, and 11 yielded a similar reliability estimate of .85. A factor analysis of the RCMAS included 4,972 children in the standardization sample. Items were factor analyzed initially through the method of principal factors with $R^2$ in the diagonal of the item correlation matrix as the initial communality ($h^2$) estimates. The five-factor solution included the Total Anxiety scale and the three anxiety subscales and Lie Scale described above. Reynolds (1980) investigated the construct validity of the RCMAS under concurrent administration with the State-Trait Anxiety Inventory for Children. The 42 children in the sample scored very near the mean of the normative sample for each scale:
For the RCMAS, $M = 13.8$, $SD = 5.6$; for STAIC Trait scale, $M = 39.3$, $SD = 7.6$. A large, significant correlation occurred between the RCMAS and the STAIC Trait scale ($r = .85$, $p < .001$) and thus provided considerable support for the construct validity of the RCMAS as a measure of chronic manifest anxiety. Some caution should be taken with regard to interpretation as the RCMAS has not yet conducted extensive research with children of diverse cultural backgrounds.

*Children’s Assessment of Social Support (CASS) - Appraisal Scale*

Developed by Dubow and Ullman (1989), The Children’s Appraisal of Social Support (CASS) was originally developed as a self-report survey assessing three potential aspects of social support in elementary school children: the frequency of supportive behaviors available from the child’s support network (Scale of Available Behaviors, or SAB); the child’s subjective appraisals of family, teacher, and peer support (APP); and the size of the child’s social support network (NET). For the purposes of this study, the Appraisals scale (APP) was used to examine how the child views support from his or her peers, family, and teachers. The recent edition of the APP scale has been revised from its original version
(Dubow, 1997). This scale has been tested on samples of children in grades three through seven. For sixth graders, the APP scale achieved a one-week test-retest reliability of .88 for the total scale, .79 for the peer subscale, .87 for the family subscale, and .84 for the teacher subscale. Validity was reported to be similar to that established in the original scale (Dubow and Ullman, 1989). In this original study, Cronbach’s alpha for the 31-item APP was .88. The APP was subject to a principal components analysis with a varimax rotation. A three-factor solution emerged, with eigenvalues ranging from 6.90 to 2.34, accounting for 22%, 8%, and 8% of the variance, respectively. When comparisons were made between the APP scale and several measures used to assess validity, results provided evidence for the convergent and discriminant validity of the APP. Strong correlations were found between the APP Peer Support subscale and established measures of loneliness. The APP subscale was also found to correlate highly with an established social support index. For the purposes of this study, the APP scale was used to assess children’s perceived support from peers, teachers, and family.

Data Analyses

Stepwise Multiple Regression Analyses were used to test the extent to which several independent variables were able
to predict problem behaviors. The dependent variable of Problem Behaviors was taken from either teacher form of the CBCL or the child’s report on the RCMAS. The independent variables in this equation were scores on scales measuring attachment style characteristics, family conflict, cohesiveness, and expressiveness (subscales of the FES), as well as appraisal of social support (overall score on the APP scale), and the parent rating of level of environmental stress (AFILE). A Stepwise Multiple Regression Analysis computed the amount of variance in problem behavior explained by each independent variable individually and by all of the variables collectively. This omnibus test revealed the extent to which the avoidant adolescent’s working model of attachment could explain differences in problem behavior. Further analyses demonstrated the importance of attachment in the prediction of internalized problems. The omnibus stepwise regression also revealed the extent to which several related attachment, family environment, stress, and perceived support variables helped to explain differing levels of problem behaviors and internalized problems.

Second, it was useful to explore differences in problem behaviors across attachment styles. For the purpose of this analysis, individuals were classified as either Secure, Anxious, Fearful Avoidant, or Dismissing Avoidant by their
scores on the ASQ. Individuals were included in this analysis only if they could be clearly labeled as one of the four attachment styles (high on the critical scales and low on others). A mean Problem Behavior Score (dependent variable) was computed for each of these four styles. Each of the attachment styles were subdivided into males and females so that the independent variable of gender could be examined with respect to differences in problem behaviors. An analysis of variance tested the hypothesis that there would be significantly higher levels of problem behaviors among individuals classified as Avoidant (including Fearful and Dismissing subtypes) than would exist among those classified as either Preoccupied or Secure. Mean Problem Behavior Scores for each of the four attachment styles were considered. Finally, exploratory correlational analyses were conducted to provide preliminary validity evidence for the revised Friendship Questionnaire (FQ).
Chapter 3: Results

Analyses were conducted using SPSS statistical software package (version 7.5) for Windows. Results will be presented according to variable and type of analyses.

The Prediction of Problem Behaviors

Attachment and Problem Behaviors: A stepwise multiple regression analysis was used to examine the hypotheses that attachment is predictive of problem behaviors. The five ASQ scales - Discomfort With Closeness, Relationships as Secondary, Need for Approval, Preoccupied with Relationships, and Confidence - were entered as predictor variables while CBCL Total Problem Behavior scores were used as the dependent variable. As outlined earlier, the Discomfort with Closeness and Relationships as Secondary scales provided a measure of avoidant attachment while the Need for Approval and Preoccupied with Relationships scales were indicators for preoccupied attachment. The Confidence Scale was the indicator of secure attachment. The relationship between avoidant attachment and problem behaviors was not substantiated. Higher scores on Discomfort with Closeness and Relationships as Secondary, the two scales of avoidant attachment, did not account for a significant proportion of the variance associated with Total
Problem Behaviors. However, lower levels of Confidence (secure attachment) were predictive of Problem Behaviors, $R^2 = .151$, df = 113, $p < .001$. Independent regression analyses with males and females demonstrated that the relationship between attachment and problem behaviors is different across gender. When females were considered separately, none of the attachment styles accounted for a significant proportion of the variance associated with problem behaviors. However, low levels of Confidence accounted for 15% of the variance associated with Problem Behaviors for males, $R^2 = .251$, df = 61, $p < .001$.

These findings suggest the need to examine the relationship between attachment and problem behaviors separately for males and females. T-tests were conducted to test the hypothesis that males would demonstrate higher problem behaviors and higher levels of avoidant attachment. No significant gender differences were found for either problem behaviors or avoidant attachment. However, problem behaviors for males were at least partially explained by low levels of Confidence (secure attachment), whereas attachment style was not significantly predictive of problem behaviors for females.

Perhaps the relationship between attachment and problem behaviors can be more thoroughly examined by exploring the predictive power of attachment with internal and
externalized problem behaviors separately. Further regression analyses were conducted with males and females to explore the relationship between attachment and both internal and external problem behaviors separately. The CBCL Internalizing Problems scale was used as the dependent measure of internal problems in the first two analyses and the CBCL Externalizing Problems provided the dependent measure in the second set of analyses. All five attachment scales were entered as predictor variables in both sets of analyses. For females, attachment was insignificant in the prediction of both internal and external problem behaviors, as measured by the CBCL. For males, however, low levels of Confidence (the indicator for insecure attachment) accounted for a significant proportion of the variance associated with both Internalizing Problems, $R^2 = .240$, df = 61, $p < .001$, and Externalizing Problems, $R^2 = .194$, df = 61, $p < .001$. Furthermore, Preoccupation with Relationships accounted for an additional 6% of the variance associated with Internalizing Problems, beyond what was accounted for by low levels of Confidence, $R^2 = .099$, df = 61, $p < .001$. These findings illustrate the importance of attachment in the prediction of both internal and external problem behaviors for males. Results also provide evidence for important gender differences with regard to attachment and problem behaviors that may require a different examination of the
variables involved.

One explanation for these gender differences is that the teacher reports of problem behaviors do not provide a complete picture of the problems experienced by middle school children. Rather, a full account of problem behaviors may need to include a measure of internalized problems that may or may not be immediately apparent to parents and teachers. Hymel and Rubin (1985) argue that teacher and parent ratings of behavior problems do not adequately capture the wider range of problems that exist for adolescents. Reliability estimates for the Child Behavior Checklist (Achenbach and Edelbrock, 1983) suggest that children provide a much more accurate assessment of their problems than do teachers or parents. Evidence from studies with Attention Deficit Disorders also suggest that children are more able to report their internal problems than either their teachers or parents (Hinshaw, 1994; Robin, 1994).

As discussed earlier, Papini and Roggman (1992) have provided evidence that attachment may serve a protective role in buffering children from feelings of incompetence, depression, or anxiety. It seems that a more comprehensive understanding of problem behaviors must include a self-report measure of internalized problems that may or may not be apparent on the surface. Therefore, Total Anxiety scores on the Revised Children's Manifest Anxiety Scale (RCMAS)
were used to provide an internalized self-report measure of problems. A separate set of regression analyses were conducted to explore the role of attachment and other variables in predicting manifest anxiety, as one example of internalized problems experienced by children.

**Attachment and Internalized Problems:** When internalized problems, as indicated by RCMAS Total Anxiety scores, were considered as a dependent variable, the hypothesis that attachment is predictive of problem behaviors was supported (See Table 2 on the following page). A stepwise multiple regression analysis combining both genders demonstrated that three of the five scales measuring different attachment styles, Need for Approval, Confidence, and Preoccupied with Relationships, accounted for a combined 34.4% of the variance associated with Total Anxiety, $R^2 = .344$, $df = 145$, $p < .001$. 

Table 2.

Summary of Stepwise Regression Analysis (n = 145)

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>R</th>
<th>R²</th>
<th>Percent Change R²</th>
<th>Sig. Level</th>
<th>Std. Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>Need for Approval</td>
<td>.261</td>
<td>.433</td>
<td>.188</td>
<td>.188</td>
<td>.000</td>
<td>10.28</td>
</tr>
<tr>
<td>Confidence</td>
<td>-.327</td>
<td>.547</td>
<td>.300</td>
<td>.112</td>
<td>.000</td>
<td>9.58</td>
</tr>
<tr>
<td>Preoccupied with Relationships</td>
<td>.246</td>
<td>.586</td>
<td>.344</td>
<td>.044</td>
<td>.000</td>
<td>9.31</td>
</tr>
</tbody>
</table>

B = Standardized beta coefficients

Interestingly, the two scales which were indicators for avoidant attachment, Discomfort with Closeness and Relationships as Secondary, were not among these scales. Instead, the two scales measuring Need for Approval and Preoccupied with Relationships (indicators for preoccupied attachment) were predictive of Total Anxiety, $R^2 = .188$, df = 145, $p < .001$ and $R^2 = .174$, df = 145, $p < .001$, respectively. When combined with Need for Approval and Preoccupied with Relationships, low levels of Confidence (secure attachment) added significantly to the explanation of internalized problems. Together, low levels of secure attachment and high levels of preoccupied attachment accounted for a combined 38% of the variance associated with
internalized problems, $R^2 = .380$, df = 145, $p < .001$.

Again, interesting gender differences emerged in the prediction of internalized problems. For females, the Preoccupied and Discomfort with Closeness scales were significantly correlated with Total Anxiety. Preoccupied attachment explained 28.8% of the variance, $R^2 = .288$, df = 68, $p < .001$. Discomfort with Closeness, a scale measuring avoidant attachment, accounted for an additional 10% of the variance associated with Total Anxiety. (See Table 3, on the following page).
Table 3.
Summary of Stepwise Regression Analyses

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>R</th>
<th>R²</th>
<th>Percent Change R²</th>
<th>Sig. Level</th>
<th>Std. Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>Females n = 68</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Preoccupied with Relationships</td>
<td>.383</td>
<td>.536</td>
<td>.288</td>
<td>.288</td>
<td>.000</td>
<td>8.68</td>
</tr>
<tr>
<td>Discomfort with Closeness</td>
<td>.341</td>
<td>.617</td>
<td>.380</td>
<td>.092</td>
<td>.000</td>
<td>8.16</td>
</tr>
<tr>
<td>Males n = 75</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Confidence</td>
<td>-.377</td>
<td>.405</td>
<td>.164</td>
<td>.164</td>
<td>.000</td>
<td>11.38</td>
</tr>
<tr>
<td>Need for Approval</td>
<td>.355</td>
<td>.538</td>
<td>.289</td>
<td>.125</td>
<td>.000</td>
<td>10.57</td>
</tr>
</tbody>
</table>

B = Standardized beta coefficients

For males, Total Anxiety was correlated with lower levels of Confidence and higher levels of Need for Approval. By itself, low Confidence explained 16.4% of the variance associated with Total Anxiety. However, Need for Approval with low Confidence explained a significantly larger proportion of the variance than was explained by Confidence, or secure attachment, alone, $R^2 = .289$, df = 75, $p < .001$. These results provide additional evidence that less secure attachment plays an important role in the prediction of problem behaviors for males, including both behavior
problems and internalized problems. Furthermore, the degree of internalized problems experienced by males is related to need for approval.

These results suggest that attachment is important to a comprehensive understanding of problem behaviors. Findings further suggest that the relationship between attachment and problem behaviors is different for males and females. For males, low levels of secure attachment are consistently associated with both teacher-rated problem behaviors and internalized problems, as measured by the RCMAS. Preoccupation with Relationships is related to the presence of Internalized Problem Behaviors, as rated by teachers. Need for approval is also helpful in understanding self-reported internalized problems for males. For females, attachment does not appear to play a significant role in the explanation of teacher-rated problem behaviors. However, attachment plays an important role in explaining self-reported internalized problems for females. In particular, preoccupation with relationships and discomfort with closeness are significant predictors of internalized problems. Together, these attachment variables help explain a more significant proportion of the variance associated with internalized problems than either variable alone.
Problem Behaviors and Attachment Styles

The results of this study have thus far demonstrated a significant relationship between peer attachment characteristics and problem behaviors. It also seems worthwhile to explore whether individuals with different attachment styles exhibit different levels of problem behaviors. One-way analyses of variance were conducted to compare mean problem behaviors across the four attachment styles. In order to conduct an ANOVA, it was necessary to first assign subjects to discrete attachment categories according to their scores on the five scales of the ASQ. Criteria for classification were derived from Feeney et al.'s (1994) cluster analysis of the five ASQ scales. Subjects were labeled “Secure” if their scores on the Confidence scale were among the top third of the range of scores, and their scores on all other scales were below the median. Subjects were labeled “Avoidant” if their scores on Discomfort with Closeness and Relationships as Secondary were above the median. Subjects were labeled “Fearful” if their scores on all four “Insecure” scales were above the median and their scores on Confidence were among the lowest third of scores on this scale. Subjects were labeled “Preoccupied” if their scores on the Preoccupied with Relationships and Need for Approval scales were above the median, and their Relationships as Secondary scores were
below the median. Individuals were excluded from the final analyses if they could not be exclusively assigned to one of the four styles:

Unfortunately, the strict criteria for assignment to individual attachment styles resulted in a lower than desired number of subjects being available for the final analyses. A total of 73 subjects were available for the comparison of internalized problems, while only 60 subjects were included in the comparison of teacher-rated problem behaviors. Furthermore, the cells each contain a low number of subjects and findings should therefore be interpreted with caution. Final assignment of subjects into discrete attachment groups resulted in 16 Secure (22 percent), 19 Avoidant (26 percent), 26 Preoccupied (36 percent), and 12 Fearful (16 percent) subjects. These percentages reflect a slightly higher number of Preoccupieds than found in previous research (Campos et al., 1983, cited in Hazan & Shaver, 1987). An illustration of this breakdown of subjects by attachment and by gender is provided in Table 4, on page 69. Two 2-Way ANOVAs were conducted to examine the relationship between gender, attachment, and problem behavior. The first 2-Way ANOVA was conducted using CBCL Total Problem Behaviors as the dependent variable. This analysis revealed no significant differences in problem behaviors across attachment styles or gender. A second 2-way
ANOVA compared mean scores on internalized problems across gender and the four attachment styles. RCMAS Total Anxiety scores were used as the dependent measure of internalized problems. Subjects' mean Total Anxiety scores varied significantly, depending on attachment style, $F(3, 72) = 3.327, \ p = .025$. There were no significant gender differences on Total Anxiety scores. Tukey's HSD test was used to make post hoc comparisons between Total Anxiety mean scores across attachment styles, as illustrated in Table 4, on the following page.
Table 4.
Means and Standard Deviations for RCMAS Total Anxiety Scores
Across Attachment Styles

<table>
<thead>
<tr>
<th>Attachment Style</th>
<th>Secure</th>
<th>Avoidant</th>
<th>Preoccupied</th>
<th>Fearful</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>m=7</td>
<td>m=11</td>
<td>m=12</td>
<td>m=7</td>
</tr>
<tr>
<td></td>
<td>f=9</td>
<td>f=8</td>
<td>f=14</td>
<td>f=5</td>
</tr>
<tr>
<td>M</td>
<td>41.44</td>
<td>50.42</td>
<td>53.12</td>
<td>51.58</td>
</tr>
<tr>
<td>SD</td>
<td>9.29</td>
<td>9.00</td>
<td>11.96</td>
<td>8.37</td>
</tr>
</tbody>
</table>

n = 73

Individuals labeled Preoccupied had significantly higher levels of Total Anxiety than individuals labeled Secure. These results suggest that the role of attachment in the explanation of internalized problems can be further defined by examining the unique contributions of each of the four attachment styles individually.

Family Environment and Social Support Variables:
Several individual stepwise regression analyses were conducted to determine the importance of family environment and social support variables in the prediction of problem behaviors, as measured by the CBCL and the RCMAS. Family Conflict, Cohesion, and Expressiveness, as measured by the Family Environment Scale (FES) were entered as predictor
variables in the first equation. It was hypothesized that children's reports of high levels of family conflict and environmental stressors and low levels of expressiveness and cohesion would be predictive of teacher-rated problem behaviors, as measured by the CBCL. Contrary to this hypothesis, none of the family environment variables accounted for a significant proportion of the variance in problem behaviors. No evidence was found to substantiate the role of parent's reports of family stress in the explanation of problem behaviors. These findings seem to contradict previous research suggesting that family environment variables play an integral role in the development of problem behaviors among adolescents.

A separate stepwise regression analysis was conducted to determine the role of family environment variables in the prediction of internalized problems, as measured by the RCMAS Total Anxiety scale, for males and females. For males, lower family expressiveness accounted for 9.7% of the variance associated with Total Anxiety, $R^2 = .097$, $df = 70$, $p = .008$. Family conflict and cohesion did not explain a significant proportion of the variance and thus, did not enter the equation. Total Anxiety for females was associated with lower family cohesion, $R^2 = .097$, $df = 64$, $p = .012$, while neither conflict nor expressiveness were important to the explanation of Anxiety. These results suggest that
family environment variables, while not directly relevant to external problem behaviors, do play a role in the presence of internalized problems for males and females. Low levels of family expressiveness may be more important in the development of internalized problems for males, while low family cohesion is apparently more important among females. These results provide further support for a more comprehensive approach to examining the relationship between problem behaviors and attachment, along with related family environment variables, and gender-specific variables.

It was also hypothesized that social support and peer relationship variables would play an important role in the development of problem behaviors. It was expected that perceived support from parents, peers, and teachers, along with peer relationship problems would explain some of the variance in problem behaviors. The Appraisal of Social Support scale from the Children's Appraisal of Social Support (CASS) and Peer Relationship Problems, as measured by the Index of Peer Relationships (IPR), were entered as two predictor variables in each of two separate regression analyses. The first analysis used CBCL Total Problem Behaviors as the dependent measure of problem behaviors while the second group of analyses used the RCMAS Total Anxiety scale as the dependent measure of internalized
problems. Higher Appraisal of Social Support was found to be predictive of lower levels of behavior problems and accounted for 12% of the variance in problem behaviors among males and females combined, $R^2 = .120$, $df = 101$, $p = .001$. For males, the perception of others as unsupportive was particularly important in predicting problem behaviors, with lower Appraisal of Support predicting higher levels of Problem Behaviors, $R^2 = .277$, $df = 54$, $p < .001$. However, for females, Appraisal of Support was not important to the prediction of teacher-rated Problem Behaviors. Peer Relationship Problems did not account for a significant proportion of the variance associated with teacher-rated Problem Behaviors and thus did not enter the equation. When Total Anxiety was considered for males, lower Appraisal of Social Support also accounted for a significant proportion of the variance, $R^2 = .147$, $df = 67$, $p = .001$. This suggests that perceptions of others as unsupportive are associated with both teacher-rated problem behaviors and self-reported anxiety for males. For females, low Appraisal of Social Support from parents, teachers, and peers did not account for a significant proportion of the variance associated with teacher-rated problem behaviors. However, lower Appraisal of Social Support explained 12% of the variance associated with Total Anxiety for females, $R^2 = .120$, $df = 60$, $p = .006$. Again, Peer Relationship Problems did not account for a
significant proportion of the variance associated with Total Anxiety and thus did not enter the equation. Apparently, perceptions concerning the support of others are more important to understanding internalized rather than externalized problems for females. As with attachment, the prediction of problem behaviors seems to require a separate examination of relevant variables for males and females.

*Problem Behavior: An Integrative Approach:* Three hierarchical, stepwise multiple regression analyses were performed to test the hypothesis that problem behaviors are related to attachment, along with family environment and social support variables. Only those variables which demonstrated significant explanatory power in previous regression analyses were entered. The first regression equation tested the ability of these variables to predict problem behaviors for males. The next two analyses were conducted with males and females separately, to examine the importance of attachment, family environment, and social support variables in the prediction of internalized problems. A separate regression analysis was not conducted for problem behaviors in females as no variables were found to significantly predict problem behaviors.

For males, Confidence (secure attachment) and Appraisal
of Social Support were entered as independent variables. Confidence was entered before Appraisal of Social Support because it accounted for a larger proportion of the variance in problem behaviors with independent regression analyses reported earlier. Confidence accounted for a significant proportion of the total variance in Problem Behaviors, $R^2 = .327$, df = 54, $p < .001$. Low Appraisal of Social Support predicted an additional 6.3% of the variance. For males, low Confidence and low Appraisal of Support combined to explain 39% of the variance associated with problem behaviors, $R^2 = .390$, df = 54, $p < .001$.

Another hierarchical stepwise regression analysis was conducted to determine the contribution of attachment to the prediction of problem behaviors when the influence of social support has been accounted for. When Appraisal of Social Support was entered first, Social Support accounted for a larger proportion of the variance in problem behaviors, $R^2 = .273$, df = 54, $p < .001$. Confidence, the indicator for secure attachment, predicted an additional 11.7% of the variance.

Two analyses tested the hypothesis that attachment, independent of family environment and social support variables, predicts internalized problems for males and females. As reported earlier, several variables predicted internalized problems with females, including Preoccupation
with Relationships, Discomfort with Closeness, low Appraisal of Social Support, and low family Cohesion. Because they accounted for a larger proportion of the variance in females' Total Anxiety in analyses reported earlier, attachment variables were entered before family environment and social support variables. Preoccupation with Relationships and Discomfort with Closeness were entered into the first block while Social Support and family Cohesion were entered into the second block. Only the two attachment variables, Preoccupied with Relationships and Discomfort with Closeness significantly predicted internalized problems for females. Together, these variables accounted for approximately 31% of the variance associated with Total Anxiety for females, $R^2 = .314$, $df = 59$, $p < .001$. A similar trend appeared for males, whereby attachment was the only and the most significant predictor of Anxiety. For males, Need for approval accounted for 12.7% of the variance associated with Anxiety. When Confidence (secure attachment) was added to this equation, the two accounted for a combined 23.1% of the variance, $R^2 = .231$, $df = 67$, $p < .001$. While perceived social support and family expressiveness previously demonstrated significant predictive power in individual regression analyses, they did not provide additional explanatory power to understanding internalized problems in males.
In order to determine what influence attachment has in the prediction of problem behaviors and internalized problems when family environment and social support variables are considered first, it was necessary to conduct two more hierarchical stepwise regression analyses. For females, Appraisal of Social Support and family Cohesion were entered into the first block, while Preoccupation with Relationships and Discomfort with Closeness were entered into the second block. Internalized Problems, as measured by RCMAS Total Anxiety scores, represented the dependent variable. Appraisal of Social Support accounted for 12.9% of the variance associated with Anxiety, while Preoccupation with Relationships and Discomfort with Closeness accounted for an additional 19% of the variance. When combined, these variables explained 32% of the variance associated with Anxiety, $R^2 = .320$, $df = 59$, $p < .001$. This is similar to the amount of variance (31%) that was accounted for when attachment was entered before family environment and social support variables.

A hierarchical stepwise regression analysis was conducted for males to determine the contribution of attachment to the prediction of internalized problems when the influence of social support has been accounted for. Appraisal of Social Support and family Expressiveness were entered into the first block of predictor variables, while
Confidence and Need for Approval were entered into the second block. Appraisal of Social Support accounted for approximately 13% of the variance in Total Anxiety. Family Expressiveness explained an additional 8% of the variance, while Need for Approval explained an additional 7.7% of the variance associated with Anxiety. Together, these variables accounted for approximately 29% of the variance associated with Anxiety for males, $R^2 = .293$, df = 67, $p < .001$. Confidence did not account for any further variance beyond what was explained by the other variables and thus, did not enter the equation.

These results suggest that attachment is an important predictor of internal and external problem behaviors. These results also demonstrate the importance of related family environment and social support variables in the prediction of teacher-rated problem behaviors and internalized problems. This is not surprising, in light of Greenberg et al.‘S (1993) argument that attachment is one of several influences, and certainly not the only factor important to the development of problem behaviors in children and adolescents. Follow-up analyses examined the relationship between attachment, family environment, and social support variables to determine whether any overlap exists. Pearson Product Moment correlations revealed significant relationships between Confidence (secure attachment) and
other variables, as shown in Table 5, on the following page.
Table 5.
Summary of Correlational Analyses

<table>
<thead>
<tr>
<th></th>
<th>Appraisal of Social Support</th>
<th>Family Cohesion</th>
<th>Family Conflict</th>
<th>Family Expressiveness</th>
<th>Family Stress</th>
</tr>
</thead>
<tbody>
<tr>
<td>Confidence</td>
<td>.473**</td>
<td>.412**</td>
<td>-.332**</td>
<td>.242**</td>
<td>-.315*</td>
</tr>
<tr>
<td>Discomfort with Closeness</td>
<td>-.262**</td>
<td>-.075</td>
<td>.037</td>
<td>-.075</td>
<td>.224</td>
</tr>
<tr>
<td>Relationships as Secondary</td>
<td>-.222**</td>
<td>.006</td>
<td>.028</td>
<td>.036</td>
<td>.310*</td>
</tr>
<tr>
<td>Need for Approval</td>
<td>-.105</td>
<td>-.106</td>
<td>.115</td>
<td>-.120</td>
<td>.006</td>
</tr>
<tr>
<td>Preoccupied with Relationships</td>
<td>-.289**</td>
<td>-.106</td>
<td>.082</td>
<td>.000</td>
<td>.173</td>
</tr>
<tr>
<td>Appraisal of Social Support</td>
<td>1.000</td>
<td>.385**</td>
<td>-.281**</td>
<td>.081</td>
<td>-.337*</td>
</tr>
</tbody>
</table>

* = p < .05
** = p < .01

Apparently, there is a good deal of overlap between secure attachment and a subset of family environment and social support variables. This overlap may explain why family environment and social support variables did not contribute additional explanatory power to the first omnibus regression analyses of problem behaviors. Perhaps family environment and social support are so closely associated with attachment...
that neither could explain the additional variance in problem behaviors, beyond what was explained by attachment. When family environment and social support variables were entered first, however, attachment still added significant predictive power to the explanation of problem behaviors and internalized problems. This suggests that, while some overlap exists, attachment plays an important role in the development of problem behaviors and internalized problems, independent of family environment and social support influences.

Validity of the Friendship Questionnaire: Another purpose of this study was to provide initial validity data for a slightly modified version of Bartholomew's (1991) Relationship Questionnaire with this younger population. Very little research has been conducted with young adolescents in the area of attachment. The shortage of attachment measures with established validity with young adolescents suggests the need to explore further options. Correlations between the five scales of the Attachment Style Questionnaire and likert ratings of the four attachment styles on the Friendship Questionnaire yielded important relationships between the two measures (see Table 6 on the following page).
Table 6.

Correlations between Likert Ratings and Scales of the ASO

<table>
<thead>
<tr>
<th>ASQ Scales</th>
<th>Secure</th>
<th>Dismissing</th>
<th>Preoccupied</th>
<th>Fearful</th>
</tr>
</thead>
<tbody>
<tr>
<td>Confident</td>
<td>.290**</td>
<td>-.156</td>
<td>.045</td>
<td>-.142</td>
</tr>
<tr>
<td>Discomfort with Closeness</td>
<td>-.089</td>
<td>.080</td>
<td>.018</td>
<td>.243**</td>
</tr>
<tr>
<td>Relationships as Secondary</td>
<td>-.135</td>
<td>.212*</td>
<td>.114</td>
<td>.193*</td>
</tr>
<tr>
<td>Preoccupied with Relationships</td>
<td>-.062</td>
<td>-.114</td>
<td>.255**</td>
<td>.278**</td>
</tr>
<tr>
<td>Need for Approval</td>
<td>-.138</td>
<td>-.159</td>
<td>.095</td>
<td>.119</td>
</tr>
</tbody>
</table>

n = 139
* p < .05
** p < .01

The Likert rating of secure attachment, based on Bartholomew's (revised) Friendship Questionnaire, was positively correlated with Confidence, and negatively correlated with the four scales measuring aspects of insecurity. The Likert rating of dismissing attachment was moderately correlated with Relationships as Secondary. This is consistent with the concept of the dismissing attachment as dismissing of closeness with others and compulsively self-reliant (Bartholomew and Horowitz, 1991). Furthermore, it provides initial evidence for the validity of FQ in measuring aspects of avoidant attachment inherent in the
Further validity evidence is suggested by the positive correlation between the Likert rating of preoccupied attachment and the ASQ Preoccupied scale. The Likert ratings of fearful attachment was significantly correlated with three of the four ASQ scales measuring aspects of insecure attachment. This is partially consistent with Feeney et. al.'s (1994) findings that members of the fearful group, as categorized by the FQ, were very low in Confidence, but high on all of the insecure scales of the ASQ. Although significance was not achieved, the negative direction of the correlation between the Likert rating of fearful attachment and Confidence, as measured by the ASQ, suggests that there is some evidence for the ability of the FQ to tap similar dimensions of attachment. The moderate level of correlations achieved should signal some caution with regard to interpretation. Also, it is unclear why Need for Approval was not linked to Likert ratings of preoccupied and fearful attachment, as it has been with previous research (Feeney et. al, 1994). Further research with the FQ is needed to establish its usefulness with a young adolescent population.
CHAPTER 4: DISCUSSION

This study explored the role of attachment, along with a subset of family environment and social support variables, in the prediction of problem behaviors among middle school children. This study also examined the importance of these variables in the explanation of internalized problems among girls and boys. The hypothesis that avoidant attachment predicts problem behaviors was partially supported. Findings demonstrated important relationships among attachment, family environment, and social support variables that suggest the need for a more comprehensive and gender-specific view of problem behaviors. A number of important findings will be discussed, along with their implications for research and intervention.

Predictors of Teacher-rated Problem Behaviors

**Attachment**: Predictors of teacher-rated problem behaviors were different for males and females. For females, there were no significant predictors of teacher-rated problem behaviors. Perhaps the variables explored do not directly impact the development of behavior problems that are immediately apparent to teachers or outside observers. Instead, the influence of these variables may be manifest differently in females than it is for males.
For males, low levels of secure attachment were predictive of teacher-rated problem behaviors. As cited earlier, Lewis et al. (1984) found that high levels of secure attachment exerted a protective effect in shielding young boys from developing signs of psychopathology. Low levels of secure attachment have thus been shown to be an important factor in problem behaviors for males. Lacking confidence and security in the availability of care and support from others, these individuals probably derive little of the protection that such support can provide in shielding youth from negative outcomes. Males who demonstrate low levels of secure attachment evidence further uncertainty that others are available. This uncertainty may further distance them from the protective benefits that supportive friends offer.

When considered along with other variables in the omnibus analysis, low levels of secure attachment maintained significant predictive power with teacher-rated problem behaviors among males. Still, the relative impact of low security of attachment was lessened when other social support variables were considered first. This suggests that there are shared elements of both secure attachment and the perceived absence of social support which impact problem behaviors similarly for males. The moderate correlation between secure attachment and social support provides further evidence for this explanation.
The expected relationship between avoidant attachment and teacher-rated problem behaviors was not found. The lack of expected findings may be due to a number of factors. One explanation may be the length of the scale used to measure avoidant attachment. The low number of items may have limited the scale’s sensitivity. Perhaps this low number of items prohibited the scale from effectively measuring a pure form of avoidant attachment. The moderately high level of correlation between Discomfort With Closeness, the major scale of avoidant attachment, and other ASQ scales of insecure attachment suggests that this may not be a pure measure of avoidant attachment. Instead, it may tap several of the dimensions of insecure attachment. Feeney et. al (1994) further suggest that many of the scales of insecure attachment may share similar characteristics. The relatively few trials of the ASQ with this younger population may also suggest the need for caution with interpretation. Although wording was modified to make it more age-appropriate, it is possible that the terms “relationships” and “friendships” as used in the ASQ, carry inherently different meanings for 11- and 12-year-olds than they do for older children and adolescents.

Another explanation for the lack of findings with avoidant attachment may involve the exclusive examination of teacher-rated problem behaviors. By looking only at teacher
observations of behaviors, it seems that internal problems that exist for many children get overlooked. As stated earlier, many children suffer from a range of problems such as dysphoria and anxiety that may not be immediately apparent to teachers and parents. As will be discussed in the next section, the impact of avoidant attachment may be more accurately observed when self-reported internalized problems are considered among the full spectrum of problems experienced by children. Later discussion of findings will explore the relevance of avoidant attachment in the discussion of internal problems, such as anxiety.

Despite the lack of a direct relationship between avoidant attachment and teacher-rated problem behaviors, there was a significant relationship between low levels of secure attachment and problem behaviors. Avoidant attachment is one of the three dimensions of insecure attachment. Furthermore, avoidant attachment has demonstrated a high, negative correlation with secure attachment. This seems to suggest its importance as a key aspect of insecure attachment, which demonstrated predictive power with teacher-rated problem behaviors.

**Family Environment** None of the family environment variables were found to be significant predictors of teacher-rated problem behaviors. This seems to contradict findings that family environment is closely associated with
behaviors problems throughout childhood and adolescence. Other possible explanations for the lack of findings with family environment may involve the sensitivity of the measure used to assess family environment. Perhaps the child’s report of the family environment does not adequately capture the intricate patterns and qualities of relationships that exist within individual families. These reports may look very different than what would have been provided by parent reports of family environment. Furthermore, some children might have attempted to present their families in an overly positive light. While the RCMAS Lie scale was used to select out subjects attempting to present themselves in an overly positive light, it may not have been able to identify children who present their families in a socially acceptable manner. The lack of findings of a relationship between family environment and teacher-rated problem behaviors is probably due to problems with measurement. Future research will need to take advantage of multiple sources of information, including parents and possibly other family members.

Further discussion of results will demonstrate that family environment is important to the understanding of internalized problems. It seems possible that some children who experience anxiety and dysphoria as a result of disturbances in the family environment may later express
these internal disturbances as external problem behaviors. Conversely, children who focus their negative feelings inward may isolate or withdraw themselves from peer groups. The inward focus of these negative emotions may eventually manifest themselves as more severe psychological disturbances like anxiety or depression (Blatt, Hart, Quinlan, Leadbeater, and Auerbach, 1993).

**Social Support** Low ratings of social support from parents, teachers, and peers were significant predictors of teacher-rated problem behaviors for males. When considered separately from attachment variables, social support was an especially important factor in teacher-rated problem behaviors. This is consistent with research demonstrating that perceptions of social support are linked to positive outcomes for children (Seifer, Sameroff, Baldwin, & Baldwin, 1992). However, social support may share considerable overlap with secure attachment. Findings demonstrated that the order in which variables were entered impacted the relative predictive powers of each variable. When entered before attachment variables, social support plays a critical role in the explanation of teacher-rated problem behaviors for males. When entered after attachment, its diminished predictive powers suggests that there is strong overlap with attachment variables. This overlap seems explainable in light of the shared influence that social support and
attachment variables have for children. As outlined earlier, children who are securely attached tend to feel more confident in the availability and concern of others. This strong sense of support is likely to provide them with a secure base from which to explore new friendships and develop further networks of support. In fact, the stability of attachment may be due, in part, to the protective influence of social support. Children who perceive higher levels of support from parents and peers are perhaps better prepared to deal with the obstacles they face throughout development. Lower levels of perceived support are an inherent characteristic of insecure attachment and are closely related to attachment in the explanation of problem behaviors.

Prevention programming should thus focus attention on early parenting skills that effectively communicate parental availability and consistency of attention, love, and support. In this way, children's internal working models will reflect the belief that others are available and concerned for their well-being. As they develop relationships with peers, their confidence and positive model of themselves and others will enhance development of positive, healthy relationships. School-based prevention should aim to educate teachers about the importance of and techniques for communicating supportiveness to children in
the classroom. Perhaps current funding for behavior-based interventions could be better spent on fostering teacher-student and student-student relationships through better communication and problem-solving skills. Current prevention dollars may be spent more effectively when research-based findings are considered more closely in program design and development.

The lack of findings for females deserves further attention. While social support helped to explain teacher-rated problem behaviors for males, it was insignificant for females. Again, the consistent lack of findings for predictors of teacher-rated problem behaviors for females suggests that further consideration of internal problems is necessary. Future analyses will need to identify what antecedents or predictors exist for female problem behaviors.

Predictors of Internalized Problems (Anxiety)

Once again, interesting gender differences emerged in the prediction of internalized problems for children. For both males and females, internalized problems were predicted by a combination of attachment, family environment, and social support variables. However, the combinations of key variables were different for males and females. These differences will be discussed, along with their implications
for prevention programming and research.

It is necessary to consider these findings with caution, however, due to two important methodological limitations. The use of the ASQ and several other self-report measures is likely to lead to overstated correlations when the RCMAS is used as the dependent variable and self-report measure of anxiety. This source variation issue is an important methodological issue that must be considered when interpreting the following results. Further consideration should be given to the similarity between the Anxiety and Attachment constructs. Due to inherent overlap between these two constructs, any discussion of the analyses involving RCMAS Anxiety and ASQ scores should be interpreted with caution. Further analyses are necessary to confirm the findings, as reported below, that attachment is a predictor of internalized problems.

Attachment For males, low levels of Confidence (the indicator for insecure attachment) and high Need for Approval (the indicator for preoccupied attachment) demonstrated importance for both self-reported and teacher-rated problems. Apparently low security of attachment carries particular salience for boys in the development of both internal and external problem behaviors. Boys who lack confidence in themselves and in the availability of others
will generally exhibit more problem behaviors and report more internal feelings of anxiety. Need for Approval was also predictive of self-reported Anxiety. Need for Approval characterizes both the fearful and the preoccupied groups, according to Bartholomew's model (Bartholomew & Horowitz, 1991). This suggests that higher needs for acceptance and confirmation from others are also highly associated with the development of internal problems such as anxiety. In summary, the attachment characteristics that best predict the presence of anxiety can be described as follows: these boys rely more heavily on others for confirmation and approval, but they also lack confidence in the availability and support of others. Furthermore, they perceive themselves as less valuable and deserving of confirmation in general.

With an understanding of these attachment characteristics, it will be possible to more effectively address potential problems through early prevention. Specifically, prevention programs that enhance a personal sense of value and self-acceptance while fostering interpersonal skills will better protect boys from potential anxiety. Therapeutic interventions with boys already experiencing internal distress will need to more closely assess how these problems are related to attachment needs.

For girls, Preoccupation with Relationships and Discomfort with Closeness were significant predictors of
Anxiety. Although these results do not allow for definitive classification of individuals into discrete attachment categories, they do provide evidence for the relationship between avoidant attachment and internalized problems. Remember that Bartholomew's (1991) systematization of Bowlby's (1982) internal working models into a four-category classification scheme resulted in four prototypic attachment patterns: secure, preoccupied, fearful avoidant, and dismissing avoidant. Fearful individuals are described as being highly dependent on others for acceptance and affirmation; however, because of their negative expectations about others, they avoid intimacy to avert the pain of loss or rejection (Bartholomew & Shaver, pending publication). Current findings suggest that the best predictors of anxiety for girls include an anxious reaching out to others in order to fulfill dependency needs (Preoccupied) while distancing themselves in order to avoid the negative feelings associated with closeness to others (Discomfort with Closeness). Internal distress for girls appears to be related to a conflict between the simultaneous need for and distrust associated with feelings of closeness and acceptance from others. Of particular relevance is the finding that girls with primarily preoccupied or fearful avoidant attachment styles exhibit higher levels of internalized anxiety. Blatt et al. (1993), posit that,
different from boys, some girls experience a type of interpersonal dysphoria resulting from conflicts with interpersonal issues of dependency and loss of others. Individuals with this type of dysphoria experience fears of being abandoned and the simultaneous wish to be cared for. They have an intense need to be in contact with others. Results of this study, however, also demonstrate the presence of more avoidant attachment characteristics that seem to conflict with needs for closeness. Girls experience anxiety as a result of conflicting needs to be close and the need to avoid fears of pain or loss associated with closeness.

While not conclusive, these findings suggest that characteristics of both the preoccupied and the fearful avoidant attachment styles are determinants of anxiety for girls. If this is the case, previous conceptualizations of attachment problems may be misleading. In lieu of strict classification of individuals into discrete categories of attachment, it may be necessary to consider the outcomes associated with different clusters of attachment characteristics. As noted earlier, research is needed to confirm the predictive relationship between attachment and other internalized problems. Furthermore, research and prevention programming will need to focus on the importance of a gender-specific approach to problem behaviors and
internal problems for children.

Family Environment. Family environment factors also play a significant role with internalized problems. This study demonstrates the importance of family expressiveness and cohesion as two determinants of anxiety problems in children. Once again, the findings are specific to gender. For males, anxiety is determined in part by family expressiveness. As boys report less expressiveness among their immediate family members, they also report higher levels of anxiety. For females, anxiety is partially determined by family cohesion. As girls report lower cohesion among family members, they also report higher anxiety, or internal distress. These findings are consistent with research cited earlier, demonstrating the relationship between family environment or process variables and adverse outcomes for children (Waters et al., 1993; Greenberg et al., 1993). More importantly, research has consistently pointed to the fact that attachment is affected by many of the same family variables associated with disruptive behavior problems, and this carries important implications for future research. Specifically, research will need to focus on specific causal models that examine directionality of effect. Do family environment variables intervene with previously established attachment styles to mold new working models of attachment? Or do underlying dimensions of both
family environment and attachment have particular significance in the development of internal and external behavior problems? In any case, this study has highlighted important gender differences which will need to guide future models of examination.

**Social Support** As expected, childrens' low ratings of social support from parents, teachers, and peers were predictive of anxiety. However, when attachment was considered first, social support did not explain additional variance in the regression model. The explanation that attachment and social support contain considerable overlap is partially supported by the modest correlation between Confidence, the indicator for secure attachment, and childrens' Appraisal of Social Support. Furthermore, when social support was considered before attachment variables, secure attachment did not explain additional variance in the regression model. Instead, social support and family environment variables accounted for more than half of the variance associated with Anxiety for boys. Evidence therefore supports a connection between the characteristics of social support and secure attachment in the determination of internal problems for boys. A similar trend appeared for girls, where social support did not explain additional variance in the regression model unless it was entered before the attachment variables. However, when social
support was entered first, it still accounted for less than half of the total variance and thus attachment appears to play a larger role for girls.

**Validity of the Friendship Questionnaire (FQ)**

Results of this study provide support for the validity of the FQ in measuring peer attachment styles with a young adolescent population. The direction and pattern of correlations obtained were consistent with Feeney et al.'s (1994) findings. However, the low level of the correlations raises questions. It is possible that the lower correlations were due to the different focus of the ASQ and the FQ? For example, the ASQ asks the observer to answer questions about their attachment styles with respect to "others." "Others" is expected to provide a general focus, thereby allowing the individual to focus on their attachments to a general audience, which can include parents, peers, etc. The FQ asks individuals to discuss their attachment relationships to "friends." The different focus of the attachment relationships between the ASQ and the FQ deserve further attention. Future research might involve an examination of the predictors of problem behaviors and internalized problems from the perspective of peer attachments, as measured by the FQ.
Implications for Prevention Programming and Research

The results of this study highlight the importance of designing gender-specific prevention programs that address the precursors to both internalized and externalized behavior problems. Previous prevention efforts have more recently received considerable scrutiny for their single-dimension approaches to the problems of children (Kazdin, 1993). Rather than simply focusing on drug use or behavioral problems like fighting, school dropout, etc., recent approaches have considered the wider range of outcomes available to youth. For example, programs with a multidimensional focus attempt to enhance several dimensions of healthy development through activities that foster social skills, problem-solving and communication skills, emotion regulation, and self esteem. Children and their families are offered school and community-based resources, such as parenting classes and support groups. Systematic evaluation of such prevention efforts has demonstrated clear evidence for the superior effects of such multidimensional, as opposed to single-focus, programming. Similarly, mental health efforts have turned their attention to finding ways to address this wider range of outcomes through early prevention. Prevention dollars are being diverted to theory and research-based models that identify the precursors to problems while enhancing the protective effects of those
factors which have been shown to shield children from negative outcomes. Programs are increasingly driven by findings from research on factors associated with risk and resiliency in children.

This study has demonstrated the importance of gender in the debate over which factors lead to certain outcomes for boys and girls. Specifically, the factors that place boys at risk for negative outcomes appear to be quite different from factors that put girls at risk. Low levels of confidence in the availability and support of others and low sense of personal value are particularly important to the outcomes of boys. Low levels of expressiveness among family members further places boys at risk for internal problems. Prevention will therefore need to address the social networks and the sense of self-worth that boys feel. Activities that prevent social isolation or withdrawal will be particularly important, as will programs that teach communication and expressiveness among family members. Social support has proven to be an important factor for both boys and girls. However, factors that put girls at additional risk for poor outcomes include a low sense of cohesion or bonding between family members. Perhaps related to this are feelings of anxiety associated with conflicting needs for closeness or approval and avoidance of discomfort associated with closeness and vulnerability. Difficulties
with forming trust relationships can be addressed through family therapy and mentoring programs, like Big Sisters. As with boys, girls will likely benefit from prevention programs that foster social networking and supportive teacher-student relationships. Mentoring programs may provide for both of these elements. Additionally, however, prevention for girls will want to address issues of autonomy and interrelatedness, and particularly in the context of family relationships. Family or parental involvement in school- and community-based activities will likely enhance a sense of bonding or closeness between family members. Activities or organizations that foster a sense of personal identity and belonging may be another avenue toward protecting girls from negative outcomes. Certainly, this is not an exhaustive list of possible avenues for prevention.

Research is needed to determine how different clusters of attachment characteristics interact with social support and family environment factors in the development of problems. Very little research has been conducted with this age range and with slightly older adolescents; it seems fitting that analyses examine the role of these attachment characteristics with different age groups. Furthermore, it also seems necessary to explore causal models that discriminate the roles of family environment and attachment factors in a child’s development. For example, causal models
may be used to discern whether current family or peer relationships contribute further explanation to problems for children, independent of attachment characteristics which are theoretically based on early caregiver relationships within the family of origin. Research is needed to identify the specific aspects of social support and bonding that are critical to developmental outcomes. Is peer support more important than family support? Do particular relationships within the family carry more influence than others? Causal models can certainly shed light on how working models of attachment are linked to outcomes within and outside the family. Perhaps most importantly, this study highlighted the need for research and prevention programming that addresses different pathways for males and females.

Limitations of the Study

This study attempted to look at the role of attachment, along with a subset of family environment and social support variables, in the development of problems for children. It explored attachment style characteristics, gender, family environment, peer relationship characteristics, perceptions of supportiveness in family, teacher, and peer relationships, teacher-rated problem behaviors, and self-reported anxiety. However, one of the primary limitations of this study was the limited use of the ASQ with this younger
population in previous research. Little attachment research has been conducted with 11- and 12-year-olds, and few measures have attempted to adapt the language and comprehension appropriateness to middle school children. Perhaps some subjects would have higher scores on different attachment scales if they had interpreted the questions differently. For example, the inherent meaning of the words "friendships" and "relationships" could differ among children. One way that the author attempted to address this problem was to read the questions aloud during testing.

Another limitation of this study, as noted earlier, is the methodological issue of source variation associated with the use of self-report measures for both the predictor and dependent variables. As a result, the likelihood of overstated regression correlations suggests the need to interpret some of the regression findings as speculative. In particular, the findings for strong relationship between attachment and internalized problems should be interpreted with caution. Future research is needed to confirm these findings with the use of an alternative source for the dependent variable.

Another limitation of this study is the relatively homogenous sample. Subjects were primarily young, Caucasian, middle school students living in a small to medium-sized city with relatively little ethnic diversity. One exception
to this was the high incidence of Native American subjects participating. Still, these results provide us with little information about African American and Asian American, Latino, and other non-white children and families. Furthermore, the population used in this study was, for the most part, a nonclinical population. Follow-up analyses with a smaller sample of children who scored in the clinical range according to their CBCL scores revealed possible differences with respect to the clinical subsample. Unfortunately, the sample was too small to provide any reliable results and future studies will need to provide substantiation for these findings. Further research is necessary to explore attachment with these populations.

Another limitation of this study is the major reliance on self-report instruments. Due to the largely unconscious nature of attachment working models, it seems likely that much of what individuals report about themselves will not capture the less acknowledged aspects of an internal representation about the self and others. For this reason, many researchers have utilized peer report and observation, as well as interview techniques for measurement. Furthermore, the use of teacher report of problem behavior may have provided a very different picture than would have been obtained from parents or peers. Future research will benefit from the use of a variety of sources for
measurement. Again, very little research exists with this population, and future efforts will need to address problems associated with measurement.

Finally, the use of this population of middle school students poses a potential methodological concern. Due to the fact that these young adolescents are just beginning to undergo a major developmental transition, it is possible that they are also experiencing a higher degree of anxiety than individuals who are not currently entering adolescence. The higher anxiety level may potentially confound some of the findings, making them less generalizable to other populations. Research is certainly needed to explore the role of attachment at various stages of adolescence.
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Appendix 1. Attachment Style Questionnaire (Revised)

Show how much you agree with each of the following items by rating them on this scale: 1 = totally disagree; 2 = strongly disagree; 3 = slightly disagree; 4 = slightly agree; 5 = strongly agree; or 6 = totally agree.

Confidence 1. Overall, I am an okay person.
Confidence 2. I am easier to get to know than most people.
Confidence 3. I feel confident that other people will be there for me when I need them.
Discomfort 4. I prefer to take care of things by myself rather than depend on other people.
Discomfort 5. I prefer to be by myself.
R as S 6. To ask for help is to admit that you’re a failure.
R as S 7. People’s value should be judged by what they achieve.
R as S 8. Achieving things is more important than making friends.
R as S 9. Doing your best is more important than getting along with others.
R as S 10. If you’ve got a job to do, you should do it no matter who gets hurt
N for A 11. It’s important to me that others like me.
N for A 12. I try to avoid doing things that others won’t like.
N for A 13. It’s hard to make a decision unless I know what other people think.
R as S 14. My friendships with others are kind of superficial.
N for A 15. Sometimes I think I am no good at all.
Discomfort 16. I find it hard to trust other people.
Discomfort 17. I find it difficult to depend on others.
Preoccupation 18. I find that others are slower to get to know me as I would like.
Confidence 19. I find it pretty easy to get to know other people.
Discomfort 20. I think it’s easy to trust others.R
Discomfort 21. I am comfortable depending on other people. (R)
Preoccupation 22. I worry that others won’t care about me as much as I care about them.
Discomfort 23. I worry about people getting too close.
N for A 24. I worry that I won’t be as good as other people.
Discomfort 25. I am not sure I want to be close to others.
Discomfort 26. While I want to get close to others, I feel uneasy about it.
N for A 27. Sometimes I wonder why people would want to hang around with me.
Preoccupation 28. It’s very important to me to have a close friend.
Preoccupation 29. I worry a lot about my friendships.
Preoccupation 30. I wonder how I would do without somebody who loves me.
Confidence 31. I feel confident about getting along with others.
Preoccupation 32. I often feel left out or alone.
Confidence 33. I often worry that I do not really fit in with other people. (R)
Discomfort 34. Other people have their own problems, so I don’t bother them with mine.
N for A 35. When I talk over my problems with others, I kind of feel ashamed or foolish.
R as S 36. I am too busy with other things to put much time into friendships.
Confidence 37. If something is bothering me, others are usually aware and concerned.
Confidence 38. I am confident that other people will like and respect me.
Preoccupation 39. I get frustrated when others are not available when I need them.
Preoccupation 40. Other people often disappoint me.

*revised items are underlined
Appendix 2. Attachment Style Questionnaire

Show how much you agree with each of the following items by rating them on this scale: 1 = totally disagree; 2 = strongly disagree; 3 = slightly disagree; 4 = slightly agree; 5 = strongly agree; or 6 = totally agree.

| Confidence | 1. Overall, I am a worthwhile person. |
| Confidence | 2. I am easier to get to know than most people. |
| Confidence | 3. I feel confident that other people will be there for me when I need them. |
| Discomfort | 4. I prefer to depend on myself rather than on other people. |
| Discomfort | 5. I prefer to keep to myself. |
| R as S | 6. To ask for help is to admit that you’re a failure. |
| R as S | 7. People’s worth should be judged by what they achieve. |
| R as S | 8. Achieving things is more important than building relationships. |
| R as S | 9. Doing your best is more important than getting on with others. |
| R as S | 10. If you’ve got a job to do, you should do it no matter who gets hurt. |
| N for A | 11. It’s important to me that others like me. |
| N for A | 12. It’s important to me to avoid doing things that others won’t like. |
| N for A | 13. I find it hard to make a decision unless I know what other people think. |
| R as S | 14. My relationships with others are generally superficial. |
| N for A | 15. Sometimes I think I am no good at all. |
| Discomfort | 16. I find it hard to trust other people. |
| Discomfort | 17. I find it difficult to depend on others. |
| Preoccupation | 18. I find that others are reluctant to get as close as I would like. |
| Confidence | 19. I find it relatively easy to get close to other people. |
| Discomfort | 20. I find it easy to trust others. (R) |
| Discomfort | 21. I feel comfortable depending on other people. (R) |
| Preoccupation | 22. I worry that others won’t care about me as much as I care about them. |
| Discomfort | 23. I worry about people getting too close. |
| N for A | 24. I worry that I won’t measure up to other people. |
| Discomfort | 25. I have mixed feelings about being close to others. |
| Discomfort | 26. While I want to get close to others, I feel uneasy about it. |
| N for A | 27. I wonder why people would want to be involved with me. |
| Preoccupation | 28. It’s very important to me to have a close relationship. |
| Preoccupation | 29. I worry a lot about my relationships. |
| Preoccupation | 30. I wonder how I would cope without someone to love me. |
| Confidence | 31. I feel confident about relating to others. |
| Preoccupation | 32. I often feel left out or alone. |
| Confidence | 33. I often worry that I do not really fit in with other people. (R) |
| Discomfort | 34. Other people have their own problems, so I don’t bother them with mine. |
| N for A | 35. When I talk over my problems with others, I generally feel ashamed or foolish. |
| R as S | 36. I am too busy with other activities to put much time into relationships. |
| Confidence | 37. If something is bothering me, others are generally aware and concerned. |
| Confidence | 38. I am confident that other people will like and respect me. |
| Preoccupation | 39. I get frustrated when others are not available when I need them. |
| Preoccupation | 40. Other people often disappoint me. |
Appendix 3. (Friendship) Questionnaire

Secure

It is easy for me to become close to friends. I am comfortable depending on friends for help and having them depend on me. I don’t worry about being alone or having others not accept me.

Fearful

I am uncomfortable getting close to friends. I want close friendships, but I find it difficult to trust others completely, or to depend on them. I worry sometimes that I will be hurt if I allow myself to become too close to friends.

Preoccupied

I want to be completely close to friends, but I often find that they don’t want to get as close as I would like. I am uncomfortable being without close friendships, but I sometimes worry that others don’t value me as much as I value them.

Dismissing

I am comfortable without close friendships. It is very important to me to feel independent. I prefer not to depend on other people or have other people depend on me.

Notes: Each paragraph is rated on a 7-point scale ranging from ‘Not at all like me’ to ‘Very much like me’. The measure can be worded either in terms of general orientations to close relationships, orientations to romantic relationships, or orientation to a specific relationship (with ‘others’ changed to a specific partner ‘P’). The measure can also be reworded in the third person and used to rate others’ attachment patterns (e.g., close friends or romantic partners).

* revised words are underlined
Appendix 4. Relationship Questionnaire

Secure
It is easy for me to become emotionally close to others. I am comfortable depending on them and having them depend on me. I don’t worry about being alone or having others not accept me.

Fearful
I am uncomfortable getting close to others. I want emotionally close relationships, but I find it difficult to trust others completely, or to depend on them. I worry sometimes that I will be hurt if I allow myself to become too close to others.

Preoccupied
I want to be completely emotionally intimate with others, but I often find that they don’t want to get as close as I would like. I am uncomfortable being without close relationships, but I sometimes worry that others don’t value me as much as I value them.

Dismissing
I am comfortable without close emotional relationships. It is very important to me to feel independent and self-sufficient, and I prefer not to depend on others or have others depend on me.

Notes: Each paragraph is rated on a 7-point scale ranging from ‘Not at all like me’ to ‘Very much like me’. The measure can be worded either in terms of general orientations to close relationships, orientations to romantic relationships, or orientation to a specific relationship (with ‘others’ changed to a specific partner ‘P’). The measure can also be reworded in the third person and used to rate others’ attachment patterns (e.g., close friends or romantic partners).