

1995

Attachment, Social Support, and Violence in Adolescent Delinquents

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Attachment, Social Support, and Violence in Adolescent Delinquents

A dissertation submitted in partial fulfillment of the requirements for the degree of Doctor of Philosophy at Virginia Commonwealth University.

By

**James Randolph Craft, M.S.
Virginia Commonwealth University, 1991**

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December, 1995**

Acknowledgements

I would first like to thank the members of my committee for taking time out from their busy schedules to help me with my dissertation. I know you have a great many responsibilities to attend to, and I appreciate your having taken on the extra responsibility of being on my committee.

A very special thanks goes to Dr. Marilyn Erickson, my chair and faculty adviser. Dr. Erickson's assistance has been invaluable, not only on my dissertation, but in the many other ways she has helped me throughout my program. I truly believe I would not have completed this process if it had not been for Dr. Erickson. I will always be grateful for the help and support you gave me when I really needed it. Thanks again.

I would also like to thank Dr. Adrienne Keller and Dr. Elizabeth McGarvey for allowing me to use their data, answering all my many questions, giving me a job, and generally helping me out wherever they could. Jewel Holmberg truly is a jewel and I would like to thank her for all her help in dotting the "i"s and crossing the "t"s. All of you helped me

to see that research could be fun ,exciting, and interesting.

Thanks also go to Dr. Dennis Waite, the Division of Youth and Family Services, and the staff of the Reception and Diagnostic Center for allowing me to use adolescents' criminal history records and for helping me with access to those records. The staff went out their way to help me when those records weren't where they were supposed to be. People who say state workers aren't competent have not met this staff.

Finally, to my wife Debbie, there just aren't enough thanks out there to give you to make up for the support you have given me. You didn't lose faith in me, even when I did. You stuck by me while I pursued my dream for many years. Now it's your turn to dream. We'll get there together.

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List of Abbreviations

AAQ	Adolescent Attachment Questionnaire
DYFS	Division of Youth and Family Services for the State of Virginia
PBI	Parental Bonding Instrument
PSS-Fa	Perceived Social Support Scale - Family

Abstract

ATTACHMENT, SUPPORT, AND VIOLENCE IN ADOLESCENT DELINQUENTS

By James R. Craft, M.S.

A dissertation submitted in partial fulfillment of the requirements for the degree of Doctor of Philosophy at Virginia Commonwealth University.

Virginia Commonwealth University, 1995

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Attachment relationships between children and their primary caretakers have been hypothesized to contribute to internal working models of subsequent relationships with others. Poor attachment might lead to internal working models which devalue later relationships, making the perpetration of violence against others more likely. One focus of this study was to propose a model which combined parental bonding, adolescent attachment, and perceived family support to predict the severity of violence used against others by adolescent delinquents. A second focus was to test the proposed model in predicting the total number of violent offenses

committed by adolescent delinquents. One hundred and forty-five male adolescents, who had been convicted of at least one violent crime against another person, were tested using three instruments; (1) the Parental Bonding Instrument, (2) the Adolescent Attachment Questionnaire, and (3) the Perceived Social Support Scale - Family. It was hypothesized that higher bonding, attachment, and family support scores would be negatively correlated with Severity of Crime. It was also hypothesized that the proposed model would account for a greater proportion of the variance for Severity of Crime than for Total Number of Violent Crimes. Partial support for the first hypothesis was found. The results of hierarchical regression analyses revealed that the model accounted for twice the variance for Severity of Crime than for Total Number of Violent Crimes. The model also gained statistical significance for Severity of Violence, but not for Total Number of Violent Crimes. It appears that attachment may play some role in the severity of violence used against others, but does not appear to have a significant impact on the number of violent crimes committed. Possible family dynamics in this population and study methodology issues are discussed which might have accounted for the lack of stronger results.

Introduction

Attachment Theory

Attachment involves the establishment of affectional bonds between an infant and a primary caretaker. This bond is a primary component in attachment and is the result of caretaker-infant interactions. The bond serves to activate what Bowlby (1969/1982) termed "retrieval behavior" in the caretaker which protects the helpless child from predation by reducing the distance between the caregiver and infant.

The infant activates the bond using attachment behaviors such as crying or seeking to be picked up or held when feeling threatened. Gradually, the infant builds up expectations of responses based on interactions with the caretaker. These expectations influence the later phases of the attachment relationship. Parental care and control of the infant appear to strongly influence the formation of the attachment bond (Parker, Tupling, & Brown, 1979).

Attachment relationships are defined by three key features: (1) the secure base effect, (2) separation protest, and (3) proximity-seeking to a

preferred figure (Weiss, 1982). The term "secure base" was coined by Ainsworth (1982), to describe the child's use of the attachment figure in relationship to exploratory behavior. Children use the caregiver as a secure base from which they can explore the environment. Anderson (1972) noted that young children appear to have an invisible limit to the distance they will venture away from their mothers. As children near that limit, they make increasing visual contact with the mother. Increased distance appears to increase the child's discomfort, and a return to the secure base of the mother is necessary before exploration or play is resumed.

When threatened with separation from the mother, young children protest by crying, screaming, shouting, and kicking. Bowlby (1969/1982) hypothesized that this behavior was a normal response to the threat to an attachment bond and had the function of attempting to restore the bond, to punish the caregiver, and to prevent future separations.

When the child seeks proximity to a person, it is a discriminated figure, that is, someone with whom the child is familiar. Bowlby originally compared this proximity-seeking to the phenomenon of imprinting reported by Lorenz (1952) whose ethological perspective, along with Harlow's

(1952), influenced Bowlby's work. Unlike birds, for whom imprinting must occur within a critical period shortly after hatching, human attachment appears to develop over longer periods of time.

Human attachment develops in three phases. The first phase occurs between the ages of birth and six months. The infant orients and begins to recognize the mother's face, marking the beginning of an interactional pattern between child and mother characterized by mutual smiling responses.

Wright (1991) and Stern (1985) viewed these reciprocal responses as beginning the development of an internal world where attachment could be represented and regulated. Recognition of the mother's face is the beginning of a sense of history for the child, as well as the provision of a sense of agency when the child produces a smile from the mother (Holmes, 1993).

Phase two begins around six months and continues until three years of age. Attachment at this stage is based on what Bowlby termed "set-goals." He compares this system to a thermostat that operates on a feedback loop. The infant's set-goal is to keep close enough to the mother

to use her as a secure base and to exhibit separation protest when the attachment is threatened. It is the beginning of a reciprocal relationship between caregiver and child, as the caregiver responds to the signals of the child and the child modifies behavior based on this response (Holmes, 1993).

Phase three is the final stage and begins around the age of three. This stage is characterized by the continued formation of a reciprocal relationship between parent and child. Children begin to see the caregiver as a separate person with their own goals and plans which are not uniquely tied to them (Holmes, 1993).

More sophistication develops in trying to influence the caregiver to maintain attachment. During the second phase the child cried or clung to the caregiver. Now, the child may plead, bribe, sulk, or use charm to forestall separation. Actions chosen will be based on experience with the caregiver and the child's own "internal working model" of the attachment relationship (Holmes, 1993).

Bowlby (1969/1982) referred to internal working models as cognitive maps of the world and an individual's place in that world. The

person uses that model to perceive events, forecast the future, and construct plans. A primary feature of this model concerns the attachment figure. Identity and location of the attachment figure as well as their ability to respond when needed become important.

Proximity and contact produce a sense of security within the child (Bishop, 1975). The knowledge that an attachment figure is accessible and responsive provides strong feelings of security, encouraging the maintenance of the relationship between the child and the attachment figure (Bowlby, 1982). Holmes (1993) points out that internal working models are affective in nature as well as provide information about the location and responsiveness of the caregiver. The affective nature of the models reflects the notion of caretaker acceptance, and confidence in the availability of the caregiver in times of need.

The acceptability and confidence (or lack of it) in the caretaker become incorporated into an internal working model of the self (Bowlby, 1973). The models of the attachment figure and the self are likely to develop to be complementary and mutually confirming.

“Thus an unwanted child is likely not only to feel unwanted by his parents but to believe that he is essentially unwantable,

namely unwanted by anyone. Conversely, a much-loved child may grow up to be not only confident of his parent's affection but confident that everyone else will find him lovable too" (Bowlby, 1973 p.204-205).

Bowlby (1969/1982) cites clinical evidence suggesting that these models are resistant to change, changing slowly and imperfectly, if change occurs at all. In times of stress, an individual usually reverts to using the models that were constructed early in life (Bowlby, 1973).

Bowlby hypothesized that there are "common variations" in the way a caregiver responds to an infant's attachment behaviors. These variations form styles of responsiveness that are predictable and consistent. As the infant develops, these repeated experiences form the basis for "representational models of attachment and of the self" (Bowlby, 1977, p. 141).

The behaviors and affects embedded in these representational models are transferred to future relationships. Bowlby believed that there was a strong causal relationship between an infant's early experiences with attachment figures and the subsequent ability to form affectional bonds. It was Bowlby's belief that these behaviors and affects contributed to the formation of psychopathology in later life. Horner (1984) has stated the

failure to form bonds leads to personality disturbances characterized by an inability to experience guilt, and failure to develop lasting relationships.

The child is likely to develop secure attachment if the caregiver is consistently available and responsive to attachment needs. The child acquires confidence that help is available when needed. Early interaction with caregivers who are available and responsive leads to the formation of an internal working model of relationships based on trust that individuals will be helpful.

"Establishing a secure adaptive attachment relationship may be viewed as a major developmental task of the first year, having consequences for subsequent tasks such as exploration and mastery of the inanimate environment, achieving a concept of the autonomous self, and competence in the peer group"
(Sroufe and Waters, 1977 pg. 1195).

Children who do not experience consistently available and responsive caregivers are likely to develop insecure attachment. Deutsch and Erickson (1989) found that families with youths classified as conduct disorder-undersocialized aggressive experienced more stressful life events during their first 4 years of life than youths classified as conduct disorder-socialized aggressive. These stressful events are likely to have affected

caregivers' abilities to be sensitive and responsive to their children.

Bowlby differentiated three styles of behavior resulting from insecure attachment relationships. Insecure attachment results from experiences which cause the infant to doubt the reliability of the response of the attachment figure. These styles are: anxious attachment, compulsive self-reliance, and compulsive care-giving (Bowlby, 1977).

Anxious attachment results from a history of interactions between caregiver and child that includes persistent unresponsiveness or rejection by a parent, prolonged separation from a parent, and threats of withdrawal of love, abandonment or suicide. These experiences lead a person to live in constant anxiety of losing the attachment figure. As a result, anxiously attached individuals have a low threshold for manifesting attachment behavior (Bowlby, 1977).

Compulsive self-reliance (Parkes, 1973) involves behaviors which overtly appear to be the opposite of anxious attachment. Persons developing compulsive self-reliance inhibit attachment feelings and behaviors and do not seek the help of others under any condition. They may even deny any desire for close relationships. These individuals are

deeply distrustful of close relationships and terrified of allowing themselves to rely on anyone else, seeking to avoid either the pain of rejection or pressure to be someone else's caretaker. There is likely to be much underlying resentment which will be directed against weaker persons, but there is also an unexpressed yearning for love and support (Bowlby, 1977).

A third type of insecure attachment is compulsive care-giving. In this instance, the person has close relationships, but is always the care-giver and never receives care. The typical childhood experience resulting in this form of attachment is a role reversal in which the child was required to care for the mother or younger siblings. The child constructs the belief that the only affectional bond available is provided through care-giving (Bowlby, 1977).

While these styles are manifested differently, they share the underlying dynamic of anxious insecurity and feared loss. Bowlby thought that these responses, and the processes leading to these responses, were also active in older individuals.

In Volume II of Attachment and Loss (1973), Bowlby devoted a section to reviewing studies of adolescents and young adults. He noted that

the pattern of attachment found in these individuals resulted from early attachment in childhood. Bowlby (1944) also linked parental loss or neglect to the development of conduct disorders and phobias in adolescents.

Early Studies of Attachment

Mary Ainsworth devised a standardized laboratory procedure for eliciting and measuring attachment behaviors in infants. The procedure is termed the "strange situation" (Ainsworth & Bell, 1970). Eight "episodes" involving interaction between an infant (all were approximately twelve months old), the infant's mother, and a stranger comprise the procedure.

Infant behaviors (playing with the mother, interacting with a stranger (mother not present), solitary play, and upon reunion with the mother after separation) were observed. The study found differences between infants in terms of such behaviors as proximity seeking and proximity avoiding, exploration of the environment, and contact maintaining and resisting behaviors (after reunion).

In a later study using the strange situation procedure, Ainsworth and her colleagues (Ainsworth, Blehar, Waters, & Wall, 1978) found three

consistent patterns of behaviors among infants related to their attachment to their mothers. Pattern B related to securely attached infants. These infants actively played, sought contact after a brief separation, and were readily comforted by their mothers. Pattern A refers to infants classified as insecurely attached/avoidant. Here, infants tended to avoid their mothers when reunited and were not readily comforted. Pattern C classified infants as insecurely attached/ambivalent. These infants oscillated between seeking proximity and resisting contact and interaction. Some infants in this class exhibited angry behavior toward their mothers, while others were more passive.

Ainsworth has emphasized that the attachment behavioral system remains active throughout life. The system goal of achieving felt security and the affective consequences of failure to achieve the goal is the same from infancy into adulthood.

The measurement of attachment has been extended beyond infancy. West and his colleagues (West, Sheldon, & Reiffer, 1987) developed a scale to measure adult attachment. Eight subscales comprise the measure: (1) insecure base, (2) fear of losing the attachment figure, (3)

nonreciprocity of the attachment relationship, (4) separation protest, (5) nonuse of the attachment figure, (6) nonavailability of the attachment figure, (7) proximity-seeking, and (8) nonresponsiveness of the attachment figure. These subscales are based on the work of Weiss (1982), Bowlby (1969; 1973), Hinde (1982), and Henderson, Duncan-Jones, & Byrne (1980) in adult attachment.

The resulting scale permits assessment of the various dimensions of adult attachment using a self-report measure. This scale has been modified (Keller, West, & Adam 1992) to measure attachment relationships between adolescents and parents. Current studies are correlating subscale scores with classifications using the Adult Attachment Interview (George, Kaplan, & Main, 1985 ; Keller, 1994 personal communication).

Stability of Attachment

Stroufe and Fleeson (1986) noted the ability of the attachment relationship to serve as an organizer of behavior. The organization is a product of the dyadic relationship between the infant and caregiver. Early behavioral organization results in subsequent relationships being based on

attitudes, expectations, and understandings of the roles from previous relationships. Individuals will select and shape each other based on the experiences from previous relationships, recreating aspects of relational systems previously established.

Given the organizational nature of attachment, assessments of attachment (Ainsworth, 1978; West, Sheldon, & Reiffer, 1987) can then be seen as measures of the infant-caregiver relationship (Sroufe & Fleeson, 1986). Additionally, given the premise that the infant-caregiver relationship forms a basis for subsequent social interactions, these attachment classifications should predict the quality of future relationships, showing stability over time.

Several studies (Main & Weston, 1981; Waters 1978) have documented the stability of attachment relationships over a six month period. In a five year longitudinal study, Main, Kaplan, and Cassidy (1985) found stability between attachment to mother at age one and age six.

Other longitudinal studies have also found stability in attachment. Grossmann and Grossmann (1991) reported the results of longitudinal studies conducted with two separate populations of German children. One

study found that children classified as having secure attachment at age one were more self-reliant and socially competent at age five. Children classified as avoidantly attached were more likely to exhibit behavioral problems four years later. In a separate study using the same population, researchers could classify children at the age of six with 87% accuracy based on their classification at age one (Wartner, 1987).

Follow-up studies were conducted with these children at the age of 10 (Grossmann & Grossmann, 1991). The studies showed that children classified as securely attached in early childhood were more open about negative emotions, more socially appropriate, and reported more relationship-oriented strategies in dealing with stressful situations. Children classified as avoidantly or ambivalently attached (i.e., alternating between seeking and avoiding proximity to the caregiver) reported fewer friendships and problems of exploitation and exclusion by peers.

Using a population of preschool children, Erickson, Sroufe, and Egeland (1985) examined the relationship between the quality of attachment and behavior problems. Children were classified at both 12 and 18 months using Ainsworth's (Ainsworth, et al., 1978) system and later

observed in preschool at the age of 4 ½ - five years old. The classifications were found to remain stable over this period. Anxiously attached children demonstrated more behavior problems, less self-confidence, and poorer social skills than securely attached children. Anxious/avoidant children were less compliant and expressed more negative emotion than either anxious/ resistant or securely attached children.

Attachment classifications show stability in the prediction of aggression. Renken, Egeland, & Marvinney (1989) determined that for males, classification of avoidant attachment at 18 months was highly predictive of aggressive behavior over a three year period (grades one - three).

Attachment style, established in early infancy appears to remain stable during childhood. Many studies have been able to predict attachment in later years using classifications performed from the first year to year and a half of infancy. Behaviors such as aggression against others as well as personal characteristics (e.g., self-esteem, social competence) may be predicted from attachment classifications. The stability and predictability of attachment, as well as behaviors related to attachment, support Bowlby's

(1973) concept of internal working models of relationships.

Violence and Attachment

Main (1977) studied infants who avoided their attachment figures in stressful situations. This avoidance of the mother was found to be related to a constellation of behaviors. These infants tended to avoid their mothers after brief separations, did not approach other adults who attempted to establish friendly social interactions, and actively avoided visual or physical contact. Some infants assaulted or threatened to assault their mothers and engaged in other forms of angry behavior.

George and Main (1979) also investigated the social interactions of neglected or abused infants. Results showed abused children physically assaulted other infants twice as often as control infants. Half of the abused children, but none of the controls, assaulted or threatened to assault caregivers. When all categories of verbal and non-verbal aggressive behaviors were combined, the abused infants used aggression against caregivers four times as often as controls. The children in this study were more aggressive, inhibited in approaching others, and avoidant in response to friendly overtures compared to their matched controls (George & Main,

1979).

Children are more likely to be seen as "difficult" children by both parents and teachers when they are aggressive and less responsive to friendly overtures (George & Main, 1979). These children are more likely to be singled out for abuse within their families and are less likely to receive favorable attention from teachers (Friedrich & Boriskin, 1976). It seems likely that a repeated pattern of abuse and neglect will affect future social interactions with others reinforcing aggressive and avoidant behaviors.

George and Main (1979) also concluded that abused infants bear some resemblance in their social behavior to their parents, suggesting a continuity in the transmission of behavior from parents to children. Attachment theory would predict a multigenerational transmission of attachment behaviors as the primary attachment relationship serves to organize an infant's attachment system for subsequent relationships (Sroufe & Waters, 1977; Grossmann & Grossmann, 1991).

DeLozier (1982) hypothesized that abusive mothers would have a greater incidence of disrupted childhood attachment. More frequent and

severe indications of current attachment disorders were also predicted. Abusive mothers were found to have a clear pattern of attachment disorder compared to controls. These disorders appear to have originated from threatened disruptions of attachment during their own childhood, also the use of severe discipline during that time.

In examining the current attachment disorders of these mothers, DeLozier (1982) found high levels of anger and anxiety, feelings of rejection and self-blame, and low self-reliance. The mothers were more anxious in response to mild separation stimuli and more angry in response to strong separation stimuli. They had experienced threats of abandonment and separation during childhood also threats to their physical well-being and to the physical safety of their caretakers. These findings suggest that both attachment needs and deficits experienced as children can continue into adulthood.

Melnick and Hurley (1969) found abusing mothers to possess severely frustrated dependency needs and to have an inability to empathize with their children. Frustrated dependency needs may lead to a role reversal in the mother-child relationship where the parent looks to the child

to act as an attachment figure. Bowlby (1977) has suggested that the pressure a caretaker exerts on the child to fulfill this need results in anger that the child cannot express due to the fear of the total loss of caretaking. This anger persists into adult life and is expressed toward someone weaker.

Attachment in early childhood seems to play a significant role in the later use of violence against others. Parental rejection or abuse can produce insecure attachment in infants that may lead to ambivalence, avoidance, and anger in relationships with caretakers and others. This anger can be manifested in angry behavior against caretakers and peers. When anger cannot be expressed directly toward caretakers due to fear of the total loss of caretaking, violence may be directed toward weaker victims. (Bowlby, 1969/1982). While this pattern of behavior begins in childhood, it can continue into adult life.

Statement of the Problem

Violent crime among juveniles is an increasing problem in today's society. Adolescent homicide rates have reached the highest levels in history (Elliott, 1994). The National Youth Survey (Elliott, Huizinga, & Menard, 1989) reported that by the age of 17, 36% of African-American

males and 25% of non-Hispanic white males committed one or more serious violent offenses (defined as aggravated assault, robbery, or rape). Fifty percent of these offenses involved the use of a weapon.

The onset of committing serious violent offenses appears to begin in early adolescence through young adulthood. The risk for committing serious violent offenses is very low through age eleven (< 0.5%), increases to 5.1% by age 16, and drops to one percent after the age of 20. Over 60% of all males who will ever commit a serious violent offense are actively involved by age 17 (Elliott, 1994).

Elliott, Huizinga, & Ageton (1985) and Elliott, Huizinga, & Menard (1989) proposed a model for the onset of serious violent offending. This model found substantial indirect effects from family bonding. Elliott, Huizinga, & Ageton (1985), suggested that the stability of aggressiveness-violence over the lifespan was due more to a stability in the nature of social relationships than to an underlying individual predisposition. Together these findings lend support for Bowlby's (1973) concept of internal working models and attachment's place in the development of violence against others.

The study of attachment, while extensive, has been focused primarily on infants and children. Few studies with adolescents have correlated criminal violence with measures of attachment. The literature on attachment requires further expansion into the period of adolescence in order to document the continued stability of attachment which has been shown in children (Grossmann & Grossmann, 1991). Studies with adolescents will provide a bridge between childhood and adult attachment which has been documented (Main & Goldwyn, 1984).

One purpose of this study is to provide an examination of Bowlby's (1973) concept of internal working models for the construction of interpersonal relationships. Early attachment experiences with a primary caregiver form the basis for internal working models. These models carry with them expectations for future relationships. Inadequate attachment experiences will likely produce poor expectations in terms of future relationships.

Poor relationship expectations often have a number of consequences. Securing and maintaining relationships can be difficult; trust in others might be absent; perceived social support within the family could be low.

If an individual does not develop an internal working model of relationships as nurturing, fulfilling, and reciprocal, less importance will be placed on them. The person does not expect other people to meet his or her needs and may be less likely to act towards those individuals in a way which might facilitate need fulfillment. Since the person feels no bond or perhaps no possibility of forming a bond with others, it will be easier to perpetrate violence against them. There is also the possibility that violent behavior may be due, in part, to unexpressed anger toward a caregiver. Bowlby (1969/1982) believed that this anger might be expressed toward someone weaker, since expression toward a caregiver might result in the total loss of care.

Another goal of this study is to examine possible etiological factors in adolescent violence. If poor attachment is associated with the commission of violent crimes against others, prevention of adolescent violence would require education of parents concerning the effects of poor attachment very early in children's lives.

While internal working models are resistant to change, modifications are possible when life conditions are altered (Bowlby, 1969/1982).

Improving the attachment quality between youths and their caretakers (or providing alternative attachment relationships) may revise internal working models of relationships and lessen the probability of violence against others.

Correlation, of course, does not demonstrate causality. However, this study may provide useful information into the possible etiology of violent crime among adolescents. Information from this study may also contribute to future preventive programs.

Hypotheses

- 1.) Maternal bonding will be significantly related to the severity of violence committed by adolescents.
 - (a) Mother Affection/Care, as measured by the Parental Bonding Instrument, will be significantly and negatively related to the severity of violence.
 - (b) Mother Overprotection/Control, as measured by the Parental Bonding Instrument, will be significantly and positively related to the severity of violence.
- 2.) Paternal bonding will be significantly related to the severity of violence committed by adolescents.
 - (a) Father Affection/Care, as measured by the Parental Bonding Instrument, will be significantly and negatively related to the severity of violence.
 - (b) Father Overprotection/Control, as measured by the Parental Bonding Instrument, will be significantly and positively related to the severity of violence.
- 3.) Adolescent attachment will be significantly related to the severity of violence committed by adolescents.
 - (a) Insecure Base of Attachment, Nonreciprocity of the Attachment Relationship, Nonuse of the Attachment Figure, and Nonavailability of the Attachment Figure, as measured by the Adolescent Attachment Questionnaire, will be significantly and positively related to the severity of violence.
 - (b) Feared Loss of the Attachment Figure and Separation Protest, as measured by the Adolescent Attachment Questionnaire, will be significantly and negatively related to the Severity of

Violence.

- 4.) Insecure attachment style will be significantly related to the severity of violence committed by adolescents.**
- (a) Angry Withdrawal, and Compulsive Self-Reliance as measured by the Adolescent Attachment Questionnaire, will be significantly and positively related to the severity of violence.**
 - (b) Compulsive Careseeking and Compulsive Caregiving, as measured by the Adolescent Attachment Questionnaire, will be significantly and negatively related to the severity of violence.**
- 5.) Perceived social support within the family, as measured by the Family Support Scale, will be significantly and negatively related to the severity of violence.**
- 6.) Parental Bonding, Adolescent Attachment, and Family Support will predict more variance in Severity of Violence than Total Number of Violent Crimes.**

Method

Participants

Participants were adolescent male offenders (ages 13-17) recruited from the Reception and Diagnostic Center (RDC) in Bon Air, Virginia. RDC is the central processing facility for all youths remanded to the custody of the Department of Youth and Family Services (DYFS) after being convicted of a criminal offense. These participants were part of a larger National Institute of Drug Abuse funded study entitled "Correlates of AIDS Risk and Drug Use in Detained Youth" conducted by the Institute for Substance Abuse Studies and the Department of Psychiatric Medicine, at the University of Virginia. The testing took place at the RDC, on an individual basis, with the questionnaires being read aloud to each participant and the answers being recorded by the tester. The average time for completion of all questionnaires in the study was 90 minutes.

Two hundred eighty-seven participants were initially selected from the subject pool because they had been administered all instruments necessary for the present study. Ninety-five participants were eliminated from the study because they had not committed a violent crime against an

individual. Forty-seven additional subjects were eliminated due to failure to complete all questions on one or more testing instruments. The final number of participants in the present study was 145.

The mean age of the participants in this study was 15.8 years (S.D.=1.3). The ethnic composition of the study population was 57 percent African-American, 39 percent Caucasian, and 3 percent Native American. An additional one percent of the participants did not classify themselves as belonging to any of those three groups.

Before the youths were asked to participate in the study, written permission was obtained from their' legal guardians. Before entering into the study, the youths were informed about the study, and written consent was obtained. Participants were offered five dollars for completing the packet. This money was deposited in accounts maintained for each resident by DYFS.

Research Design

The present study examined the relationship among bonding to parents, attachment to parents, perceived social support within the family, and violent crimes of adolescent offenders. Sixteen predictor variables,

self-report measures completed by the adolescent offender, were used.

Four predictor variables were obtained from the Parental Bonding Instrument (Appendix A): (1) Affection/ Care - Mother, (2) Affection/ Care - Father, (3) Control - Mother, and (4) Control - Father. Eleven predictor variables were procured from the Adolescent Attachment Questionnaire (Appendix B): (5) Insecure Base of Attachment, (6) Fear of Losing the Attachment Figure, (7) Nonreciprocity of the Attachment Relationship, (8) Separation Protest, (9) Nonuse of the Attachment Figure, (10) Nonavailability of the Attachment Figure, (11) Proximity-Seeking, (12) Angry Withdrawal pattern of insecure attachment , (13) Compulsive Careseeking pattern of insecure attachment, (14) Compulsive Caregiving pattern of insecure attachment, and (15) Compulsive Self-Reliance pattern of insecure attachment . One predictor variable was obtained from the Perceived Social Support Scale - Family (Appendix C): (16) Family Support.

Two criterion variables, Severity of Violence and Total Number of Violent Crimes were used in the present study; these data were obtained from records maintained by the Department of Youth and Family Services

(Appendix D). The data collection system maintained by DYFS allowed for the recording of as many as 24 total offenses for each subject. Up to nine of the total were current offenses. A current offense was any criminal conviction for which the subject was presently incarcerated. Up to 15 of the remaining offenses were prior offenses. Prior offenses were criminal convictions for which the participants had been previously incarcerated. If a subject amassed a total number of current offenses greater than nine and/or prior offenses greater than 15, the most severe crimes were listed in the record until each limit was reached. Only those offenses considered violent crimes against persons were used in the study. Crimes which involved only damage to property or fell below a set severity level (Misdemeanor 1) were culled from the participants records and were not used in computing the Severity of Violence variable.

Instruments

Parental Bonding Instrument (Appendix A)

The Parental Bonding Instrument (PBI) (Parker, Tupling, & Brown, 1979) is a 25 item self-report scale designed to examine the child's perception of the parental contribution to a parent-child bond. The PBI

measures two principal source variables which may influence the parental contribution to bonding: (1) parental care, and (2) parental control. The instrument contains four scales: Affection/Care - Mother (12 items), Affection/Care - Father (12 items), Control - Mother (13 items), and Control - Father (13 items). Each item is rated on a four point scale (“very like” to “very unlike”). Respondents are asked to rate each parent separately according to how accurately the item corresponds to memories of parental behaviors during the respondent’s life.

Parker reported three week test-retest reliability coefficients of .76 and .63 for the Care and Overprotection scales. He also found split-half reliabilities of .88 for the Care scale and .74 for the Overprotection scale (Parker et al., 1979).

Subsequent research using the PBI has documented the stability of the instrument. Wilhelm and Parker (1990) conducted a ten year longitudinal study and reported mean test-retest coefficients of .74 and .77 for two five year intervals, and .65 for the ten year interval. The factor structure of the PBI has also proven to be stable (Arrindell, Hanewald, & Kolk, 1989; Cubis, 1989; Mackinnon, Henderson, Scott, & Duncan-Jones,

1989). Evidence for the validity of the PBI with nonclinical populations has generally been supportive (Parker, 1989).

Studies using the PBI have revealed significant relationships between parental representations and current parent-child conflict (Mackinnon et al., 1989), and perceptions of social support (Sarason, Sarason, & Shearin, 1986). Parker (1983) found that siblings' ratings of parents were correlated and that mothers' ratings of themselves were also correlated with their children's ratings of the mother, suggesting PBI scores reflect actual, not imagined parental behaviors.

For the regression analyses in the present study, an internal reliability level of .70 was established as the criterion for each scale. The four PBI scales were modified to achieve this criterion. Four of the 10 items were deleted from each of the Mother and Father Affection/Care scales. These deletions resulted in α levels increases from .47 to .72 for the Mother scale and from .50 to .72 for the Father scale. Three of 10 items were eliminated from the Control - Mother scale. These eliminations increased the scale alphas from .56 to .69. Two of 10 items from the Control - Father scale were deleted. The α level increased from .59 to .69

(See Appendix A - stars indicate deleted items).

Adolescent Attachment Questionnaire (Appendix B)

The Adolescent Attachment Questionnaire (AAQ) (Keller, West, & Adam, unpublished manuscript) is a 75 item self-report instrument asking respondents about their relationship with the parent (or person who is most like a parent) that they currently feel closest to. Each statement is scored on a five-point Likert-type scale ranging from "strongly disagree" (1) to "strongly agree" (5). Each item loads only on a single scale. Participants are asked to identify the parent (or parent figure) they felt closest to and the length of time of their acquaintance. Mothers were identified as the closest parent by 70 percent of the participants, fathers by 20 percent, and 10 percent said someone other than mothers or fathers was the closest parent. Eighty-six percent of the participants had known the other attachment figure for more than ten years, nine percent had relationships of seven to ten years, four percent knew the other attachment figure four to six years, and one percent had relationships of one to three years.

The questionnaire measures seven characteristics of attachment: (1) Insecure Base of Attachment, (2) Fear of Losing the Attachment Figure, (3)

Nonreciprocity of the Attachment Relationship, (4) Separation Protest, (5) Nonuse of the Attachment Figure, (6) Nonavailability of the Attachment Figure, and (7) Proximity-Seeking. Scales are comprised of five items each. Four scales assess the primary patterns of insecure attachment: (1) Angry Withdrawal, (2) Compulsive Careseeking, (3) Compulsive Caregiving, and (4) Compulsive Self-Reliance. Each of these scales is composed of 10 items.

Reliability and validity of the AAQ was assessed using a community sample of 672 junior and senior high school students (Keller, West, & Adam, 1992). The mean alpha coefficient for scales measuring the characteristics of attachment was .75 (range = .54 - .87). Test-retest (5-6 weeks) reliability coefficients ranged from .67 to .89 (mean = .77). For the scales measuring the primary patterns of attachment, the mean alpha coefficient was .75 (range = .69 - .83) and the mean test-retest coefficient was .75 (range = .60 - .85).

The AAQ is a modified version of the Adult Attachment Questionnaire (West, Sheldon, Reiffer, 1987), with changes in the wording of questions to reflect parent-child relationships rather than adult

relationships. West and his colleagues (1987) conducted a study on the Adult Attachment Questionnaire to determine the reliability of the instrument. All scales had alpha coefficients above .70 (.74 - .92). A discriminant function analysis using psychiatric outpatients patients and hospital volunteers correctly classified 84% of the nonpatients and 76% of patients. The Adolescent Attachment Questionnaire and its forerunner, the Adult Attachment Questionnaire demonstrate adequate validity to justify continued use.

In keeping with the stated criterion of $\alpha \geq .70$, subscales of the AAQ were modified to gain that level of reliability. One item was deleted from Feared Loss of Attachment Figure raising the α level from .62 to .68. One item was deleted from Insecure Base , improving reliability from .67 to .72. The scale measuring the Angry Withdrawal attachment style was modified through the deletion of 2 items, producing an increase in α from .67 to .73 (see Appendix B - stars indicate deleted items).

Perceived Social Support Questionnaire - Family (Appendix C)

The Perceived Social Support Questionnaire - Family (PSS-Fa) (Procidano & Heller, 1983) is a twenty item self-report questionnaire.

Items on the scale refer to feelings and experiences occurring in family relationships. Each statement has three possible answers: "yes", "no", or "don't know". For each item, the response indicative of perceived social support is scored as +1 allowing a range of scores from zero (no perceived social support) to twenty (maximum perceived social support).

Procidano and Heller (1983) reported a test-retest reliability coefficient of .83 over a one month interval. The internal consistency coefficient of the scale was found to be .90. Factor analysis revealed unifactorial scale composition. PSS-Fa was significantly and negatively related to scales measuring psychopathology (MMPI scales two, seven, and eight; $r = -.43, -.33, \text{ and } -.33$). A subsequent study found that the PSS-Fa was stable and not influenced by temporary attitudinal changes (Procidano & Heller, 1983). The PSS-Fa appears to possess adequate reliability and internal consistency to justify its continued usage.

A modified version of this scale was used to improve reliability. Two items were deleted improving the reliability of the scale from .67 to .73 (see Appendix C - stars indicate deleted items).

Violent Offenses (Appendix D)

Level of violence was determined from records of the Department of Youth and Family Services of the state of Virginia. These records, maintained for every youth committed to a juvenile detention center, document up to 9 current committing offenses and as many as 15 prior offenses.

Violent offenses are those which inflict bodily harm on individuals or have the potential to inflict such harm. There are eight classes of legal offenses which apply to violent crimes. A Felony 1 offense is a capital felony and is punishable by life in prison or the death penalty. Felony 2 crimes receive a prison sentence of twenty years to life in prison. Persons convicted of a Felony 3 crime are incarcerated for a period of ten to twenty years. Offenses designated as a Felony 4 carry a sentence of five to ten years incarceration. Individuals committing a Felony 5 crime go to prison for one to ten years. Felony 6 convictions result in a one to five year term. Sentences for Felony 9 offenses are determined based on the nature and severity of the offense. Misdemeanor 1 crimes are punishable by up to a one year incarceration.

One criterion measure, Severity of Violence , was calculated using both current and prior offenses for each subject. A weight was assigned to each offense based on the severity of the crime as determined by the Virginia Criminal Code. Each violent offense was assigned a weight based on the designation of the crime: (1) Felony 1 = 7, (2) Felony 2 = 6, (3) Felony 3 = 5, (4) Felony 4 = 4, (5) Felony 5 = 3, (6) Felony 6 = 2, (7) Misdemeanor 1 = 1. The sentences designated for Felony 9 convictions were determined by referring to the Code of Virginia. The midpoint of the sentence range for each Felony 9 offense was determined. This midpoint was compared to the midpoints of the other Felony or Misdemeanor offenses. Midpoints were calculated by adding together the minimum and maximum sentences prescribed by statute and dividing by two. Felony 9 offenses were then assigned the weight of the Felony or Misdemeanor which most closely matched its midpoint.

The assigned weights for each offense were added together and divided by the total number of offenses for each individual subject. This calculation produced the Severity of Violence variable for each subject. Total Number of Violent Offenses was computed for each participant by

adding together all current and prior offenses recorded in the youth's offense file.

Procedure

All participants' parents or legal guardians were contacted by letter for written permission before recruitment. After receiving permission, appointments were made with participants at RDC to solicit their participation.

Prospective participants were given a verbal explanation of the study, limits of confidentiality, as well as an explanation that they were not required to participate and were free to withdraw from the study at any time. Written permission for participation was obtained from every subject. Participants declining to participate were immediately returned to their cottages (See Appendices E and F for permission forms).

Participants were asked for demographic information about their race and age. All questionnaires were read to all participants, and were recorded by the researcher to help insure understanding, accuracy, and completion of forms. Total time for answering all questionnaires averaged approximately 90 minutes.

Results

Table 1 presents the means and standard deviations for all variables used in the study. In order to compare the study participants with normative data, means and standard deviations were first computed using the original scales. The Affection/Care subscale scores for both parents was about one standard deviation above the normative mean. The means for both the Mother and Father Control subscales were about two standard deviations above the mean for the normative group indicating that the participants perceived substantially more control by their parents than the normative group. All scores for the Adolescent Attachment Scale and the Perceived Social Support - Family scale were within one standard deviation of the normative groups.

Table 2 presents the means and standard deviations for the revised scales used in the regression analysis. Table 3 presents the intercorrelations for the four subscales of the revised Parental Bonding Instrument. Affection/Care - Mother correlated positively with Control - Mother and Affection - Father. Affection - Father also positively correlated with Control - Father. Control - Mother correlated positively with Control - Father. These findings differ from those of Parker, Tupling, and Brown (1979) who found that Affection/Care correlated negatively with Control ($r=-.24, p<.001$).

Table 1
Means and Standard Deviations for Original Scales
with Study Population and Normative Groups

Variable	Study Group		Normative Group	
	Mean	S.D.	Mean	S.D.
Parental Bonding Instrument				
Affection/Care - Mother	38.7	8.6	28.5	not available
Affection/Care - Father	34.3	10.0	24.6	not available
Control - Mother	26.8	7.7	13.8	not available
Control - Father	26.1	8.2	11.7	not available
Adolescent Attachment Questionnaire				
Insecure Base of Attachment	13.3	3.8	11.1	3.7
Fear of Losing Attachment Figure	12.1	3.6	10.8	3.3
Nonreciprocity of Attachment	10.1	3.1	11.4	3.4
Separation Protest	13.0	4.4	10.2	3.2
Nonuse of Attachment Figure	13.0	4.1	13.3	4.0
Nonavailability of Attachment Figure	9.8	3.2	10.3	3.7
Proximity-Seeking	13.8	4.2	11.6	3.5
Attachment Styles				
Angry Withdrawal	25.2	5.5	22.6	5.7
Compulsive Careseeking	28.0	6.7	25.0	6.0
Compulsive Caregiving	32.6	5.3	33.4	5.3
Compulsive Self-Reliance	24.2	5.4	24.0	5.8
Perceived Social Support				
Social Support - Family	11.8	4.1	13.4	5.6
Criterion Variables				
Severity of Violence	2.9	1.1		
Total Number of Violent Crimes	5.5	3.3		

Table 2
Means and Standard Deviations for Revised Study Variables

Variable	Mean	Standard Deviation
Parental Bonding Instrument		
Affection/Care - Mother	17.4	4.5
Affection/Care - Father	20.0	5.6
Control - Mother	22.9	5.6
Control - Father	24.5	6.1
Adolescent Attachment Questionnaire		
Insecure Base of Attachment	10.9	3.4
Fear of Losing Attachment Figure	8.1	3.2
Nonreciprocity of Attachment	10.1	3.1
Separation Protest	13.0	4.4
Nonuse of Attachment Figure	13.0	4.1
Nonavailability of Attachment Figure	9.8	3.2
Proximity-Seeking	11.2	3.8
Attachment Styles		
Angry Withdrawal	15.2	4.2
Compulsive Careseeking	28.0	6.7
Compulsive Caregiving	32.6	5.3
Compulsive Self-Reliance	24.2	5.4
Perceived Social Support		
Social Support - Family	34.3	4.3

Table 3
Correlations For Revised
Parental Bonding Instrument

	Control Father	Control Mother	Affection/Care Father
Affection/Care Mother	.01	.50 **	.18 ·
Affection/Care Father	.52 **	.12	
Control Mother	.23 **		

** $p \leq .01$

* $p \leq .05$

Tables 4 through 6 presents the correlations among the scales of the revised Adolescent Attachment Scale. Table 4 presents correlations among the attachment characteristics scales. Correlations greater than .45 was taken to indicate significant interrelationships among the attachment variables. Separation Protest appeared to be related to Proximity-Seeking and Insecure Base of Attachment. Nonavailability was associated with Fear of Losing the Attachment Figure.

Table 5 presents correlations among the attachment styles. Compulsive Careseeking and Compulsive Caregiving were positively correlated. Compulsive Self-Reliance was negatively correlated with all other attachment styles. Angry Withdrawal was negatively correlated with Compulsive Caregiving.

Table 6 presents correlations between attachment scales and attachment styles. There were a number of positive and negative correlations. The positive correlations included Compulsive Careseeking and Insecure Base of Attachment, Proximity Seeking, and Compulsive Self-Reliance and Nonuse of the Attachment Figure. The negative correlation included Compulsive Caregiving and

Table 4
Correlations Among Attachment Scales of the Revised Adolescent Attachment
Questionnaire

	Attachment Scales					
	Fear of Loss	Non - Reciprocity	Separation Protest	Nonuse Of Figure	Non - Availability	Proximity Seeking
Attachment Scales						
Insecure Base of Attachment	.06	-.30 **	.54**	-.22 **	-.07	.71 **
Fear of Losing Attachment Figure		.29 **	.09	.37 **	.47 **	.02
Nonreciprocity of Attachment			.18 **	.48 **	.57 **	-.46 **
Separation Protest				-.15 **	.01	.51 **
Nonuse of Attachment Figure					.47 **	-.32 **
Nonavailability of Attachment Figure						-.18 **

** $p \leq .01$

Table 5
Correlations Among Attachment Styles
of the Adolescent Attachment Questionnaire

Attachment Styles	Attachment Styles		
	Compulsive Careseeking	Compulsive Caregiving	Compulsive Self-Reliance
Angry Withdrawal	.08	-.29 **	-.21 **
Compulsive Careseeking		.48 **	-.22 **
Compulsive Caregiving			-.46 **

** $p \leq .01$

Table 6
Correlations Between Attachment Scales and Attachment Styles
of the Revised Adolescent Attachment Questionnaire

Attachment Scales	Attachment Styles			
	Angry Withdrawal	Compulsive Carescking	Compulsive Caregiving	Compulsive Self-Reliance
Insecure Base of Attachment	.10	.61 **	.40 **	-.10
Fear of Losing Attachment Figure	.53 **	.02	-.25 **	.54 **
Nonreciprocity of Attachment Relationship	.42 **	-.30 **	-.56 **	.52 **
Separation Protest	.21 **	.43 **	.35 **	-.01
Nonuse of Attachment Figure	.35 **	-.30 **	-.48 **	.65 **
Nonavailability of Attachment Figure	.60 **	-.12 **	-.39 **	.58 **
Proximity Seeking	.06	.63 **	.49 **	-.21 **

** $p \leq .01$

Nonreciprocity of Attachment Relationship, and Compulsive Careseeking and Nonuse of the Attachment Figure.

Correlations Between the Predictor Variables and Severity of Violence

Table 7 presents the correlations between the predictor variables and the criterion variable Severity of Violence. Only one of the four hypothesized variables, Control - Mother, was found to be significantly positively correlated with Severity of Violence.

Predictors of Severity of Violence

Table 8 presents the results of an hierarchical regression analysis to assess the model for predicting Severity of Violence. For the purpose of controlling demographic variables which were hypothesized to relate to Severity of Violence, Step 1 of the analysis included the variables Age and Ethnicity. Both variables entered into the model at this step and accounted for three percent of the variance.

Because Mother/Father Affection and Mother/Father Control are part of parental bonding which was hypothesized to precede attachment, these four variables were entered together in Step 2 of the regression analysis.

These variables accounted for a ΔR^2 of .06. The overall model,

Table 7
Correlations Between Predictor Variables and Severity of Violence

Predictor Variables	Severity of Violence
Parental Bonding Instrument	
Affection/Care - Mother	.15
Affection/Care - Father	-.10
Control - Mother	.16
Control - Father	.07
Adolescent Attachment Questionnaire	
Insecure Base of Attachment	-.04
Fear of Losing Attachment Figure	.08
Nonreciprocity of Attachment	.06
Separation Protest	-.13
Nonuse of Attachment Figure	.02
Nonavailability of Attachment Figure	.05
Proximity-Seeking	.00
Attachment Styles	
Angry Withdrawal	.10
Compulsive Careseeking	.00
Compulsive Caregiving	-.12
Compulsive Self-Reliance	.02
Perceived Social Support	
Family Support	.12

* $p \leq .05$

Table 8
Hierarchical Regression Results of Severity of Violence

Predictor Variables	F	df	ΔR^2	R^2	β	Overall Model p
Demographic Variables	2.2	142 (2)	.03			.12
Ethnicity					.10	
Age					-.15	
Parental Bonding Instrument	2.4	138 (6)	.06	.09		.03
Affection/Care - Mother					.17	
Affection/Care - Father					-.22	
Control - Mother					.05	
Control - Father					.16	
Adolescent Attachment Questionnaire - Subscales	1.7	131 (13)	.05	.14		.08
Insecure Base					-.06	
Fear of Losing Att. Figure					.11	
Nonreciprocity of Relationship					.07	
Separation Protest					-.25	
Nonuse of Att. Figure					-.09	
Nonavailability of Att. Figure					-.03	
Proximity-Seeking					.20	
Adolescent Attachment Questionnaire - Styles	1.5	127 (17)	.03	.17		.10
Angry Withdrawal					.24	
Compulsive Careseeking					.06	
Compulsive Caregiving					.00	
Compulsive Self-Reliance					-.10	
Perceived Social Support - Family Support	1.7	126 (18)	.03	.20		.04
Family Support					.20	

* $p \leq .05$

accounting for nine percent of the variance gained significance at Step 2. In Step 3 of the analysis, the seven subscales of the Adolescent Attachment Questionnaire were entered. The change in R^2 at Step 3 increased to 14% the total amount of variance accounted for in the model, but the model was not significant at this step.

In Step 4 of the regression analysis, the variables representing the four attachment styles were entered. The ΔR^2 at Step 4 was .03, increasing the overall R^2 for the model to .17. The model did not attain significance at this step.

Perceived Family Social Support was entered in Step 5 of the regression analysis. The addition of this variable resulted in an R^2 increase of .03. Overall, 20% of the variance was accounted for by the predictors. The model gained significance at Step 5.

Correlations Between the Predictor Variables and Total Number of Violent Crimes

Table 9 presents the correlations between the predictor variables and the criterion variable Total Number of Violent Crimes. No predictor variables were found to be significant for Total Number of Crimes. Severity of Violence and Total Number of Violent Crimes were not

Table 9
Correlations Between Predictor Variables and Total Number of Violent Crimes

Predictor Variables	Total Number of Violent Crimes
Parental Bonding Instrument	
Affection/Care - Mother	-.06
Affection/Care - Father	.05
Control - Mother	-.07
Control - Father	-.04
Adolescent Attachment Questionnaire	
Insecure Base of Attachment	.00
Fear of Losing Attachment Figure	.12
Nonreciprocity of Attachment	-.08
Separation Protest	-.05
Nonuse of Attachment Figure	.06
Nonavailability of Attachment Figure	.01
Proximity-Seeking	.02
Attachment Styles	
Angry Withdrawal	.03
Compulsive Careseeking	.05
Compulsive Caregiving	.10
Compulsive Self-Reliance	.03
Perceived Social Support Family Support	.13

significantly correlated ($r = .01$ $p < .92$).

Predictors of Total Number of Violent Crimes

Table 10 presents the results of a second hierarchical analysis. This analysis was undertaken to determine how well the predictors of Severity of Violence would predict Total Number of Violent Crimes. The steps undertaken were identical to the initial regression analysis. Step 1 entered the variables age and ethnicity, and accounted for two percent of the variance. The model was not significant at this step.

Step 2 entered the four scales of the Parental Bonding Instrument. The R^2 at this step was .03. These variables only increased the variance accounted for by one percent. Once again the model did not reach significance.

The seven attachment scales of the AAQ were entered in the third step. These variables accounted for an additional three percent of the variance, bringing the R^2 to .06. The model was not significant at this step.

Step 4 included the four attachment style scales from the AAQ. The resulting ΔR was .03, bringing the total variance accounted for to .09. The model failed again to gain significance.

The final step in the regression entered the Perceived Social Support

Page 53 was missing
at time of digitization.

- Family variable. Family Support accounted for one percent of the variance. The overall model, accounting for 10 percent of the variance, was not significant.

Discussion

The results of the hierarchical regression of the criterion variable, Severity of Violence, support the overall model that accounted for 20 percent of the variance. The scores from the Parental Bonding Instrument contributed six percent of the total variance; the greater the Affection/Care from fathers reported by the adolescent, the lower the Severity of Violence. The Affection/Care from mothers was not a significant predictor.

These findings suggest that receiving affection/care from fathers may have helped to moderate the severity of violence perpetrated by these male adolescent offenders. A caring adult male may help to provide the adolescent with a bonding experience that serves as a model for other relationships. Previous research has found an association between lack of parental involvement and both delinquency and aggression. Loeber and Stouthamer-Loeber (1986) conducted a meta-analysis of concurrent and longitudinal studies focusing on the relationship of family factors to delinquency. Lack of parental involvement was found to be the factor with the greatest association to both delinquency and aggression. The association was greater for fathers than mothers.

Fathers appear to gain more influence with their sons during adolescence. Jacob (1974) and Steinberg (1981) found that as sons matured through adolescence (to age 16), sons deferred to their fathers more and interrupted them less when involved in a structured family task. There was more initial agreement between fathers and their 16 year old sons on an unrevealed differences task (Jacob, 1974). The sons were found to have increased their influence in the family. This influence was gained, at least in middle-class families, through the loss of influence by the mother (Jacob, 1974; Steinberg, 1981). Adolescence appears to be a developmental phase during which affection and care shown by fathers may be particularly meaningful to sons. The value that is placed on the adolescent - father relationship may help to increase the value of all relationships.

It is interesting that Affection/Care - Mother did not have a significant influence on Severity of Violence. The amount of Affection/Care received from mothers was comparable to the Affection/Care received from fathers, but the impact it has on adolescent delinquent males appears to differ. The lack of influence of Affection/Care - Mother might be attributed to the general loss of influence mothers

appear to suffer in families with adolescent sons (Jacob, 1974; Steinberg, 1981). The mothers' loss of influence within the family structure may result in decreased influence with their adolescent sons. This loss of influence may be reflected in the sons' discounting the importance of their affectional ties with their mothers. The increased importance of the fathers' affectional ties to their sons may come at the expense of mothers' relationships with their sons.

The youths in this study reported somewhat higher levels of Affection/Care from both parents than did participants in normative studies. In addition, an even greater relative amount of Control from both parents was also reported. The amount of Control demonstrated by both parents was almost two standard deviations above the normative mean.

Control - Mother was correlated with an increase in Severity of Violence. Pedersen (1994), using the Parental Bonding Instrument (Parker, 1983) to assess parental relations, mental health, and delinquency in adolescents, found that boys perceived their mothers as more controlling and that this higher level of control was associated with higher levels of delinquency, as well as, a combination of anxiety, depression, and

delinquency in some individuals. The results of this study would seem to add support to Pedersen's findings. While Control - Mother was correlated with increased Severity of Violence, it was not a significant variable in the regression. This lack of significance is most likely due to the correlation between Affection/Care - Mother and Control - Mother. The results of the present study would seem to implicate Control in determining the Severity of Violence. The extent of its influence is as yet unclear. The role that Control plays in delinquency and violence merits further attention in future studies.

It is interesting that the Affection/Care and Control scales were positively correlated in the present study, while these scales were negatively correlated in the normative groups. There may be dynamics in the families of delinquent adolescents that are different from those seen in non-delinquent families. Patterson, Dishion, and Bank (1984) have identified what they term "coercive family process" which sometimes leads to increased physical violence in antisocial children. This process occurs, in part, because of poor disciplinary practices by parents and lack of involvement by parents in their children's lives. These parents are more

punitive, but the punishments tend to be less effective in curbing antisocial behavior. The punishments tend to be what is described as “nattering”, behavior such as mild threat, disapproval, or scolding. As the antisocial behavior increases, so does the nattering. The parents attempt to use more control to solve the problem, but the adolescents do not experience the nattering as sufficiently aversive to stop their antisocial behavior.

The youths in this study may see Control and Affection/Care as related because the type of behaviors they most often see from their parents are attempts to control them. If control is what is most often offered as attention, it may come to be a substitute for affection. Alternatively, the youths may perceive that attempts to control their behavior are their parents’ way of showing they care about them. In either case, affection and control become increasingly confounded.

Scores on the Adolescent Attachment Questionnaire accounted for a total of eight percent of the variance. Separation Protest was significantly and negatively related, in the regression, to the Severity of Violence. None of the other attachment subscales or styles proved to be predictive of Severity of Violence. Bowlby (1969/1982) noted that Separation Protest

had the function of attempting to restore the bond between the child and the attachment figure. Individuals who are protesting, still care about maintaining the relationship between themselves and their attachment figures and believe that those relationships can provide comfort and support. Relationships that provide comfort and support would likely be valued by the individual. Caring about and valuing relationships appear to influence the severity of violent crimes. As proposed, individuals who place more value on relationships may be less likely to endanger relationships through more severe violence.

Correlations between scales of the Adolescent Attachment Questionnaire point to the nature of attachment in this population. The pattern of correlations between the attachment scales and attachment styles may help to clarify their interaction.

Self-Reliance was positively correlated with Nonuse, Nonavailability, Nonreciprocity, and Fear of Losing the Attachment figure. These correlations suggest that Self-Reliance may develop out of the necessity of dealing with the Feared Loss of the Attachment Figure. The adolescent may have no other choice than to come to depend upon himself

since the attachment figure does not meet his needs. It is impossible to know with correlational data the sequence of events that leads to Self-Reliance. Fear of Losing the Attachment Figure may result from an inability of the attachment relationship to form, which also may give rise to the formation of Self-Reliance.

Proximity-Seeking was negatively correlated with Self-Reliance. It would seem to follow that Proximity-Seeking would be negatively correlated with Self-Reliance. Proximity-seeking behaviors are used in an attempt to draw the attachment figure closer to be used as a source of security and comfort. Individuals who have developed Compulsive Self-Reliance no longer believe that the attachment figure can be depended on to provide such support and comfort. Consequently, proximity-seeking behaviors are less likely to be used.

An unusual finding from the regression analysis concerned social support from the family, namely, the positive correlation between social support and severity of violence. This finding accounted for three percent of the variance. The literature on family social support and antisocial behavior generally reports that antisocial behavior is negatively correlated

with family social support (Yoshikawa, 1994; Sampson & Laub, 1994; Agnew, 1993; Tolan, 1988; Walsh & Beyer, 1987; Zelkowitz, 1987; Canter, 1982). Several possible reasons may be considered to explain the results found in this study.

Bowlby (1973) suggested that some children are presented with conflicting information regarding their parents' behavior and feelings towards them. These children may experience their mother as unresponsive, unloving, or harmful in some way. On the other hand, the mother, or others in the family, may tell the children that the mother is loving and that any problems that occur are the result of their misbehavior. The children use this information to build working models of their attachment figures and their relationship to them. These children are faced with the dilemma of how to reconcile the conflicting information received in order to construct a working model.

Bowlby (1973) suggests three possible solutions to this dilemma. First, a model may be constructed based on what these children have experienced. The children, having experienced their parents as unloving, may construe relationships as unloving and unfulfilling. This model

requires the children to disregard what they are told by their parents and to accept that their parents are unloving and untruthful. This is a difficult task because they may have no other primary relationships to depend upon. This course is psychologically risky because it may result in a complete breakdown of the relationship between the parents and children and increase the risk of abandonment, either physically or psychologically, for the children.

Second, a model may be constructed which involves complete compliance with the parents' view of the relationship. The children discount any personal experience and accept responsibility and blame for the poor relationship. Harmony in the relationship is maintained through the loss of self. A model may be constructed whereby loving relationships are seen as unattainable for these children because they are bad or unworthy.

The third, and most common, solution in Bowlby's view involves children attempting to maintain both views and oscillating between them. In this solution, two different working models are constructed. The participants in the present study may be individuals who have made that

third choice. It could be that they have one working model which sees relationships as harmful or unfulfilling and leads to higher violence against others. Another model would also be in place which portrays the family as supportive. The conflicting models could account for the results seen in this study.

Another explanation involves the questionnaire itself. The Perceived Social Support Scale - Family (Procidano and Heller, 1983) does not ask about social support specifically from parents, but includes the entire family. It may be that the participants in this study gain their family support primarily from family members other than parents. Blyth, Hill, and Thiel (1982) examined significant relationships in the lives of early adolescents and determined that parents are not the only significant familial relationships. While parents were listed as significant to their adolescents, with 93 percent listing one or both parents, other family relationships were also important. Seventy-seven percent of the youths listed siblings as being significant. Also, 76 percent of the males listed at least one extended family member as significant in their lives.

If relationships between the participants and their parents were poor,

these youths might intentionally seek support from other family members. The participants could have reported on support from other family members including siblings. The non-parental family members may have supported the youth's use of violence, while the parents were unaware that such behavior was taking place.

It might also be suggested that the parents simply supported the youth's violent behavior. It may be that this support is direct or indirect. Parents may act in ways that directly influence their offspring to do the same. The parents may have engaged in illegal behavior themselves which their adolescent witnessed or heard about and emulated. The parents may fail to label their child's activities as delinquent or display attitudes condoning or encouraging violence. The parents might have attempted to protect their children from trouble with police or others due to the youths' delinquent acts (Loeber & Stouthamer-Loeber, 1986).

The support of violence or delinquent behavior may be more indirect. Parents may not allow deviant behaviors inside the home, but may condone it outside (Sutherland & Cressey, 1966). For example, these parents may encourage their sons to be "tough" or to "stand up for

themselves”, thus encouraging the use of violence against non-family members, but not at home. Whether directly or indirectly, these parents may be supporting behaviors in their sons that could increase the severity of violence against others.

A final explanation which should be considered is that the participants did not respond truthfully to the family support questionnaire. There may be several possible explanations why this could have occurred. First, the participants may not have wanted to admit to problems within the family. Hill and Holmbeck (1986) suggested that some respondents may “fake good” or not report conflict because their family systems attempt to manage conflict by not acknowledging its existence. The youths in this study may be attempting to conceal the lack of support they feel in order to conform to family rules concerning conflict within the family.

Second, the youths may have felt the need to respond in a positive way due to unintentional response demands from researchers or personal suppositions regarding expected performance. Testing was conducted without observers or scripted instructions which would have better insured uniformity of presentation and lack of unintentional influence on

participants. Also, while the youths were asked not to discuss the questionnaires with any of the other incarcerated youths, there was no way to prevent such conversations and possible biasing of future participants.

While lack of truthfulness must be considered, given the other results in the study, it seems to be a less plausible explanation for the family support results. If the participants were either trying to conceal family conflict or attempting to respond in a positive way, this bias should have affected all results, not just the family support variable.

The proposed model was a better predictor Severity of Violence than for Total Number of Violent Crimes. The model predicted 10 percent of the variance when predicting Total Number of Violent Crimes and was not statistically significant. The model predicted twice as much variance for Severity of Violence and was statistically significant.

The results of the two hierarchical regressions suggest that different factors may be involved in severity and number of violent crimes. While all the factors cannot be ascertained from the present study, it appears that bonding and attachment play less of a role in affecting the total number of violent crimes committed than to the Severity of Violence.

It must also be recognized that while the present study focused specifically on bonding and attachment in predicting Severity of Violence, 80 percent of the variance in the prediction was unaccounted for. This result suggests that while bonding and attachment may be involved in determining the Severity of Violence, other variables are also involved. Further research needs to be done identifying these variables in order to gain more understanding. Greater understanding may help to improve prediction in the future.

Future research should consider several improvements in methodology. The first recommendation concerns the nature of the instruments which were self-report and retrospective. The responses rely on memory, with no means of verifying the accuracy of the reports. Concurrent testing of parents using the same instruments would have provided information on the parental perspective and the difference between parent and youth perspectives. Parents could be asked to respond to the questionnaire to reflect the amount of bonding, attachment, or support they provided for the youth. Researcher have found that perceived social support differs from actual available support and that this perception

is based on working models of the self and others (Blain, Thompson, and Whiffen, 1994; Sarason et al., 1991).

Severity of Violence is a general measure of crimes committed against persons. Future studies should focus on more specific crimes or groups of crimes. This focus could provide more information about the way in which attachment affects youth criminal activities. Future studies may find specific areas of attachment or specific types of insecure attachment that are associated with specific crimes.

Future studies need to assess youths before they enter adolescence. A prospective study could identify individuals with mild antisocial activities (skipping school, poor conduct in class, cheating) and identify types of insecure attachment and specific problems in attachment. After these assessments have been made, these youths could be followed to determine whether they do go on to commit criminal acts and what type of crime. Studies of this type would provide better information concerning attachment and criminal behavior.

The results of the present study provide support for the role of attachment and parental bonding in predicting the severity of violent crimes

committed by adolescents. Future work must be done in refining the proposed model through prospective testing and increased specificity regarding both attachment and criminal activity, as well as, determining other variables which may help to predict the severity of violence used in the criminal behavior of male adolescents.

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Appendix A
Parental Bonding Instrument

PARENTAL BONDING INSTRUMENT
PBI SCALE

Directions

This questionnaire lists various attitudes and behaviors of parents. As you remember your MOTHER your first 12 to 17 years would you fill in the box under the most appropriate response across from each statement.

MY MOTHER...

Hardly ever
A little
A lot/medium
Mostly

- 1. Spoke to me with a warm and friendly voice. P B I S C A L E
- 2. Did not help me as much as I needed. P B I S C A L E
- 3. Let me do those things I like doing. P B I S C A L E
- 4. Seemed emotionally cold to me. * P B I S C A L E
- 5. Appeared to understand my problems and worries. P B I S C A L E
- 6. Was affectionate to me. P B I S C A L E
- 7. Liked me to make my own decisions. P B I S C A L E
- 8. Did not want me to grow up. P B I S C A L E
- 9. Tried to control everything I did. P B I S C A L E
- 10. Invaded my privacy. * P B I S C A L E
- 11. Enjoyed talking things over with me. P B I S C A L E
- 12. Frequently smiled at me. P B I S C A L E
- 13. Tended to baby me. P B I S C A L E
- 14. Did not seem to understand what I needed or wanted. * P B I S C A L E
- 15. Let me decide things for myself. P B I S C A L E
- 16. Made me feel I wasn't wanted. * P B I S C A L E
- 17. Could make me feel better when I was upset. P B I S C A L E
- 18. Did not talk with me very much. * P B I S C A L E
- 19. Tried to make me dependent on her. * P B I S C A L E
- 20. Felt I could not look after myself unless she was around. * P B I S C A L E

	Hardly ever	A little	A lot/medium	Mostly
■ 21. Gave me as much freedom as I wanted.				
■ 22. Let me go out as often as I wanted.				
■ 23. Was overprotective of me.				
■ 24. Did not praise me.				
■ 25. Let me dress in any way I pleased.				

PARENTAL BONDING INSTRUMENT
PBI SCALE

Directions

This questionnaire lists various attitudes and behaviors of parents. As you remember your FATHER your first 12 to 17 years would you fill in the box under the most appropriate response across from each statement.

MY FATHER...

	A lot/medium Mostly	A little	Hardly ever
1. Spoke to me with a warm and friendly voice.	()	()	()
2. Did not help me as much as I needed. *	()	()	()
3. Let me do those things I like doing.	()	()	()
4. Seemed emotionally cold to me. *	()	()	()
5. Appeared to understand my problems and worries.	()	()	()
6. Was affectionate to me.	()	()	()
7. Liked me to make my own decisions.	()	()	()
8. Did not want me to grow up.	()	()	()
9. Tried to control everything I did.	()	()	()
10. Invaded my privacy. *	()	()	()
11. Enjoyed talking things over with me.	()	()	()
12. Frequently smiled at me.	()	()	()
13. Tended to baby me.	()	()	()
14. Did not seem to understand what I needed or wanted. *	()	()	()
15. Let me decide things for myself.	()	()	()
16. Made me feel I wasn't wanted. *	()	()	()
17. Could make me feel better when I was upset.	()	()	()
18. Did not talk with me very much.	()	()	()
19. Tried to make me dependent on him.	()	()	()
20. Felt I could not look after myself unless he was around. *	()	()	()

- 21. Gave me as much freedom as I wanted.
- 22. Let me go out as often as I wanted.
- 23. Was overprotective of me.
- 24. Did not praise me.
- 25. Let me dress in any way I pleased.

	Hardly ever	A little	A lot/medium	Mostly
	()	()	()	()
	()	()	()	()
	()	()	()	()
	()	()	()	()
	()	()	()	()

Appendix B

Adolescent Attachment Questionnaire

ADOLESCENT ATTACHMENT QUESTIONNAIRE

Instructions

On the following pages you will find 75 statements about your relationship to one of your parents. For each statement, fill in the appropriate box for how strongly you agree that the statement is typical of you.

For the 75 statements, please think of your relationship with the parent (or the person in your life who is most like a parent to you) you feel closest to right now.

1. The parent I feel closest to is:

<input type="checkbox"/> My mother	<input type="checkbox"/> My father
<input type="checkbox"/> A person like a parent to me	

2. How long have you known this person? *

<input type="checkbox"/> Less than 1 year	<input type="checkbox"/> 1-3 years
<input type="checkbox"/> 4-6 years	<input type="checkbox"/> 7-10 years
<input type="checkbox"/> More than 10 years	

The statements about your relationship with your parent are below. Please think about each statement and answer carefully, but do not worry if some statements are hard to answer exactly. Do the best you can and trust your own judgments.

Remember, THIS IS NOT A TEST; there are no right or wrong answers. The statements simply describe different relationships. Thank you for your help.

strongly agree	
agree	
somewhat agree/disagree	
disagree	
strongly disagree	

3. I turn to my parent for many things, including comfort and reassurance.
4. I wish there was less anger in my relationship with my parent.
5. I put my parent's needs before my own. *
6. My life is so full of problems that I have to depend a lot on my parent.
7. I get frustrated when my parent is not around as much as I would like.
8. I feel it is best not to depend on my parent.
9. I try to anticipate my parent's needs.
10. I want to get close to my parent, but I keep pulling back.
11. It's hard for me to believe that I'll always have my parent's love.

strongly agree —
 agree —
 somewhat agree/disagree —
 disagree —
 strongly disagree —

- 12. I often feel too dependent on my parent.
- 13. I feel comfortable with my parent going away for a few days. *
- 14. I can't get on with my work if my parent has a problem.
- 15. I worry about losing my parent. *
- 16. I'm confident that my parent will listen to me.
- 17. I know better than to ever expect my parent to take my worries seriously.
- 18. I enjoy taking care of my parent.
- 19. If I make a decision, I always check it out with my parent.
- 20. I enjoy helping my parent whenever I can.
- 21. I don't object when my parent goes away for a few days.
- 22. I'm confident that my parent will try to understand my feelings.
- 23. I wish that I could be a child again and be taken care of by my parent.
- 24. I'm not the type to be a "martyr" for my parent.
- 25. I worry that my parent will let me down.
- 26. I wouldn't want my parent relying on me.
- 27. I resent it when my parent spends time away from me.
- 28. I have to have my parent with me when I'm upset.
- 29. I have to force myself to keep going when my parent is absent.
- 30. I rely on myself and not my parent to solve my problems.
- 31. When I'm upset, I am confident my parent will be there to listen to me.
- 32. I find it difficult to imagine turning to my parent for help.
- 33. I usually discuss my problems and concerns with my parent.
- 34. I sympathize with my parent when he/she is upset.
- 35. I feel abandoned when my parent is away for a few days.

strongly agree —
 agree —
 somewhat agree/disagree —
 disagree —
 strongly disagree —

- 36. I have a terrible fear that my relationship with my parent will end.
- 37. I do not need my parent to take care of me.
- 38. My parent only seems to notice me when I am angry.
- 39. I talk things over with my parent.
- 40. The further I am from my parent, the more insecure I feel.
- 41. When I'm upset, the most important thing is to be with my parent.
- 42. It's easy for me to be affectionate with my parent.
- 43. I expect my parent to take care of his/her own problems.
- 44. I'm afraid that I will lose my parent's love.
- 45. I feel lost if I'm upset and my parent is not around.
- 46. I'm furious that I don't get any comfort from my parent.
- 47. Being with my parent is my only security.
- 48. I'm so used to doing things on my own that I don't ask my parent for help.
- 49. I'm confident that my parent will always love me.
- 50. I'm never certain about what I should do until I talk to my parent.
- 51. I would be helpless without my parent.
- 52. Things have to be really bad for me to ask my parent for help.
- 53. I get really angry at my parent because I think he/she could make more time for me.
- 54. It bothers me that I can't seem to get close to my parent.
- 55. I often feel angry with my parent without knowing why.
- 56. I'm not likely to run to my parent every time I get upset.
- 57. Taking care of my parent is not my mission in life.
- 58. I feel that the hardest thing to do is to stand on my own.

strongly agree —
 agree —
 somewhat agree/disagree —
 disagree —
 strongly disagree —

- 59. I feel that there is something wrong with me because I'm remote from my parent.
- 60. I can count on my parent to be available if I need him/her.
- 61. I'm quite capable of organizing my own life.
- 62. I protest strongly when my parent leaves on a trip.
- 63. I would turn away if my parent asked me for advice.
- 64. When my parent feels insecure, I try to reassure him/her. *
- 65. I resent having to handle problems on my own because my parent is often unavailable.
- 66. I can motivate myself when my parent is away on a short trip.
- 67. I don't make a fuss over my parent.
- 68. I enjoy being close to my parent.
- 69. When my parent needs to talk, he/she can count on me.
- 70. I don't sacrifice my own needs for the benefit of my parent.
- 71. I only turn to my parent when I absolutely have to.
- 72. My parent is always disappointing me.
- 73. I want to be available when my parent needs me.
- 74. I feel much more insecure when my parent is away.
- 75. When I am anxious, I desperately need to be close to my parent.
- 76. It makes me feel important to be able to do things for my parent.
- 77. I get annoyed at my parent because it seems I have to demand his/her caring and support.

Appendix C

**Perceived Social Support
Family Scale**

PERCEIVED SOCIAL SUPPORT FROM FAMILY
PSS-FA SCALE

Directions

The following statements refer to feelings and experiences which occur to most people at one time or another in their relationships with their FAMILIES.

For each statement, there are three possible answers: YES, NO, DON'T KNOW. Please fill in the box under the answer you choose for each item.

- | | Don't know |
|---|-------------|
| | No |
| Yes | |
| ■ 1. My family gives me the moral support I need. | () () () |
| ■ 2. I get good ideas about how to do things or make things from my family. | () () () |
| ■ 3. Most other people are closer to their family than I am. * | () () () |
| ■ 4. When I confide in the members of my family who are closest to me, I get the idea that it makes them uncomfortable. | () () () |
| ■ 5. My family enjoys hearing about what I think. | () () () |
| ■ 6. Members of my family share many of my interests. | () () () |
| ■ 7. Certain members of my family come to me when they have problems or need advice. | () () () |
| ■ 8. I rely on my family for emotional support. | () () () |
| ■ 9. There is a member of my family I could go to if I were just feeling down, without feeling funny about it later. | () () () |
| ■ 10. My family and I are very open about what we think about things. | () () () |
| ■ 11. My family is sensitive to my personal needs. | () () () |
| ■ 12. Members of my family come to me for emotional support. | () () () |
| ■ 13. Members of my family are good at helping me solve problems. | () () () |
| ■ 14. I have a deep sharing relationship with a number of members of my family. | () () () |
| ■ 15. Members of my family get good ideas about how to do things or make things from me. | () () () |
| ■ 16. When I confide in members of my family, it makes me uncomfortable. | () () () |
| ■ 17. Members of my family seek me out for companionship. | () () () |
| ■ 18. I think that my family feels that I'm good at helping them solve problems. | () () () |

Don't know
No
Yes

19. I don't have a relationship with a member of my family that is as close as other people's relationships with family members. *
20. I wish my family were much different.

() () () ()

Appendix D

Violent Offense Classification

Violent Offense Classification

<u>Offense</u>	<u>VAJIS Code</u>	<u>Applicable DYFS Code</u>
Murder/ Voluntary	003	M11 - 1st Degree (F2) M16 - 2nd Degree (F3) M17 - Felony (F3) M01 - Abd. for Ext (F1) M02 - Drug Dist. (F1) M03 - During Rape (F1) /For. Sod M04 - For Hire (F1) M05 - Police Off. (F1) M06 - Multiple Mur. (F1) M07 - Prisoner (F1) M08 - Rob./Att. Rob. w/weapon (F1) M09 - Victim < 12 (F1) during abduct.
Attempted Murder	004	M20 - Att. Murder (F3)
Rape	020	R12 - Intercourse (F9) Fem. thru her men.incap/help. R13 - Intercourse (F9) fem. by force, threat, intim. R14 - Intercourse (F9) fem. <13 R20 - Type Unclear (F9)
Attempted Rape	022	R21 - Att. Sex. Ast (F9)
Arson of a Building	155	I02 - Night/Occ. (F2) I03 - Night/Unoc. (F3) I07 - Pub./Occ. (F3)
Forcible Sodomy	400	R17 - By force (F9) R18 - Victim <13 (F9)
Other Sex Offenses Violent	473	R09 - Object (F9) Penetration by Force

Assault/Felonious	040	R10 - Victim < 13 (F9)
		A01 - Adult. Food (F3) w/int. to Kill
		A07 - Mal. Inj. of (F3) Police Off.
		A08 - Mal. Inj. w/ (F9) Caustic Sub.
		A13 - Poison Food (F3)
		A16 - Wound/Perm. (F2) Damage
		A17 - Wound w/Mal. (F3) Intent
		A09 - Shoot, Cut, (F3) or Stab
Kidnapping	070	K02 - Fem <16 (F2) Immoral Purp.
		K03 - By Prisoner (F3)
		K04 - w/Intent to (F2) Defile
		K06 - Extortion (F2)
		K07 - Fail to (M2) Disclose/Help
Burglary/Armed	101	B05 - Bank w/Int. (F2) to Commit Larceny
Breaking & Entering \Armed	107	B02 - Occ. Dwell. (F2) Deadly Weapon
		B04 - Dwelling (F2) Night/Deadly Weapon
		B09 - Int. to (F2) Larceny/DW Dwelling
		B12 - Int. to (F2) Larceny/DW Other
		B06 - Dwelling (F3) w/Int. to Murder, Rape, Rob
		B07 - Int. Murder (F2) Deadly Weapon Dwelling
		B10 - Int. Murder (F2) DW/Other
		B13 - Oth. Struct. (F3) w/Int. to Murder, Rape, Rob

Manslaughter/Voluntary	010	M14 - Vol. Mansl. (F5)
/Involuntary	011	M12 - Inv. Mansl. (F5)
		M13 - Vehic./Inv. (F5)
Use of Firearm		
/Com. Felony	012	A03 - First Offense (F9)
		A04 - Subs. Offense (F9)
Robbery/Armed	030	RY4 - Bus w/use of (F9)
		gun
		RY6 - Res w/use of (F9)
		gun
		RY8 - Str w/use of (F9)
		gun
Robbery/Bank	031	RY2 - Bank (F9)
Robbery/Other	032	RY1 - Assault/Viol (F9)
		RY3 - Business (F9)
		RY5 - Residence (F9)
		RY7 - Street (F9)
Robbery/Attempted	033	RY9 - Attempted (F9)
Assault/Felonious	040	
		A02 - During Comm. (F6)
		of Felony
		A12 - Non Mal. Inj. (F6)
		Caustic Sub.
		A14 - Asslt. by (F5)
		Prisoner
		A18 - w/o Mal. Int. (F6)
		A23 - Non Mal. Inj. (F6)
		Police Off.
Shooting into an	044	W19 - Mal. Firearm (F4)
Occupied Building		Discharge at
		Occ. Building
		W38 - Unlawful (F6)
		Discharge Occ.
		Bldg.
Shooting into an		
Occupied Vehicle	045	V38 - Shoot, Throw (F6)
		Missiles at
		Train, Car
		Vessel w/o
		Malice
		V39 - Shoot, Throw (F4)
		Missiles at
		Train, Car

		Vessel with Malice
Kidnapping	070	K01 - Abd. Force (F5) K05 - Assisting or (F5) Threatening
Attempted Kidnapping	071	K12 - Att. Kidnap. (F5)
Arson	155	I08 - Public/Unoc. (F4) I13 - Pers. Prop. (F4) During Felony I14 - Value >\$200 (F4) I05 - Unocc >\$200 (F4)
Other Sex Offenses Violent	473	R01 - Agg. Sex. Bat. By Force (F9) R02 - Victim <13 (F9)
Carrying a Concealed Weapon	480	W04 - 2nd Convict. (F6) W05 - 3rd Convict. (F5)
Threats/False Communications		I19 - Threat >15 (F5)
Assault/Simple	050	A05 - Hazing of (M1) Student A06 - Police Off. (M1) A15 - Simple Aslt. (M1) A10 - Simple, Mob (M1)
Brandishing a Firearm	061	W02 - Brandishing (M1) /Pointing
Carrying a Concealed Weapon	480	W03 - Carrying (M1) Concealed Weapon W08 - Courthouse, (M1) Carrying Weapon into
Arson of a Building	155	I06 - Value <\$200 (M1) I15 - Pers. Prop. (M1) Value <\$200
Threats/False Communications		I20 - Threat <15 (M1)
Other Sex Offenses Violent	473	R04 - Sex. Battery (M1)

Appendix E

**Permission Letters Sent
To Parents**

September 1994

Dear Parent,

With your permission, we would like to ask your son/daughter to take part in a study of teenage behaviors and beliefs about high-risk activities like use of alcohol and drugs. The study is paid for by the federal government and conducted by faculty of the University of Virginia. It will be going on at the Learning Centers for the next three years.

This study will help us understand teenagers who are having problems and how to help them avoid problems in the future.

This study is completely voluntary: each teenager can choose whether or not to participate. Anyone who does participate can stop anytime. Each person who completes the survey will receive \$5.00.

The survey will not identify anyone by name. No results will be reported on individuals--only on groups of participants.

The survey will take about two or three hours to complete. We will have someone in the room to answer questions and provide help.

If you have any questions about this study, please call Dr. McGarvey or Dr. Keller at the University of Virginia. Call collect and indicate that you are a "Learning Center parent." The number is 804-924-1868.

If you agree to allow us to ask your son or daughter to participate, please sign and return the bottom portion of this letter. We have given you a stamped, self-addressed envelope to use.

Thank you for your assistance.

Sincerely,

Dr. Elizabeth McGarvey

Dr. Adrienne Keller

I agree that my child, _____, can be asked to participate in the
(please print child's name)
 study described above by Dr. McGarvey and Dr. Keller

 Signature

 Date

Please print your name _____

Dear Parent,

The Department of Youth & Family Services is forwarding this letter to you. We do not have your name, address or any other identification unless you give it to us. We would like to ask your son/daughter to take part in a study of teenage behaviors and beliefs about high-risk activities like use of alcohol and drugs. The study is paid for by the federal government and conducted by faculty of the University of Virginia. It will be going on at the Learning Centers for the next three years.

This study will help us understand teenagers who are having problems and how to help them avoid problems in the future. This study is completely voluntary; each teenager can choose whether or not to participate. Any youth who does participate can stop anytime. Each person who completes the survey will receive a \$5.00 credit to be used while at the Learning Center.

The survey will not identify anyone by name. No results will be reported on individuals-only on groups of participants. The survey will take about two hours to complete. We will have someone in the room with the youth to answer questions and provide help at all times.

If you have any questions about this study, please call Dr. McGarvey or Dr. Keller at the University of Virginia. Call collect and indicate that you are a "Learning Center parent." The number is 804-924-1868.

If you agree to allow us to ask your son or daughter to participate, please sign and return the bottom portion of this letter. We have enclosed a stamped, self-addressed envelope to use.

Thank you for your assistance.

Sincerely,

Dr. Elizabeth McGarvey

Dr. Adrienne Keller

I agree that my child, _____, can be asked to participate

(please print child's name)

in the study described above by Dr. McGarvey and Dr. Keller

Signature

Date

Please print your name _____

August 1994

Dear Parent.

This letter is a second request for your permission to ask your son/daughter to take part in a study of teenage behaviors and beliefs about high-risk activities like use of alcohol and drugs. The study is paid for by the federal government and conducted by faculty of the University of Virginia. It will be continuing at the Learning Centers for the next year.

This study will help us understand teenagers who are having problems and how to help them avoid problems in the future.

This study is completely voluntary: Each teenager can choose whether or not to participate. Anyone who does participate can stop anytime. Each person who completes the survey will receive \$5.00.

The survey will not identify anyone by name. No results will be reported on individuals--only on groups of participants.

The survey will take about two or three hours to complete. We will have someone in the room to answer questions and provide help.

If you have any questions about this study, please call Dr. McGarvey or Dr. Keller at the University of Virginia. Call collect and indicate that you are a "Learning Center parent." The number is 804-924-1868.

If you agree to allow us to ask your son or daughter to participate, please sign and return the bottom portion of this letter. We have given you a stamped, self-addressed envelope to use.

Thank you for your assistance.

Sincerely,

Dr. Elizabeth McGarvey

Dr. Adrienne Keller

I agree that my child, _____, can be asked to participate in the study described above by Dr. McGarvey and Dr. Keller.

(please print child's name)

Signature Date

Please print your name _____

September 1994

Dear Parent,

This letter is a second request for your permission to ask your son/daughter to take part in a study of teenage behaviors and beliefs about high-risk activities like use of alcohol and drugs. The study is paid for by the federal government and conducted by faculty of the University of Virginia. It will be going on at the Learning Centers for the next three years.

This study will help us understand teenagers who are having problems and how to help them avoid problems in the future.

This study is completely voluntary. Each teenager can choose whether or not to participate. Anyone who does participate can stop anytime. Each person who completes the survey will receive \$5.00.

The survey will not identify anyone by name. No results will be reported on individuals--only on groups of participants.

The survey will take about two or three hours to complete. We will have someone in the room to answer questions and provide help.

If you have any questions about this study, please call Dr. McGarvey or Dr. Keller at the University of Virginia. Call collect and indicate that you are a "Learning Center parent." The number is 804-924-1868.

If you agree to allow us to ask your son or daughter to participate, please sign and return the consent form attached to this letter. We have given you a stamped, self-addressed envelope to use.

Thank you for your assistance.

Sincerely,

Dr. Elizabeth McGarvey

Dr. Adrienne Keller

I agree that my child, _____,
(please print child's name)

can be asked to participate in the study of teenage behaviors and beliefs about high-risk activities like use of alcohol and drugs (as described in the attached letter from Dr. McGarvey and Dr. Keller).

Signature Date

Please print your name: _____

July 1994

Dear Parent,

This letter is a second follow-up request for your permission to ask your son/daughter to take part in a study of teenage behaviors and beliefs about high-risk activities like use of alcohol and drugs. The study is paid for by the federal government and conducted by faculty of the University of Virginia. It will be continuing at the Learning Centers for the next year.

This study will help us understand teenagers who are having problems and how to help them avoid problems in the future.

This study is completely voluntary. Each teenager can choose whether or not to participate. Anyone who does participate can stop anytime. Each person who completes the survey will receive \$5.00.

The survey will not identify anyone by name. No results will be reported on individuals - only on groups of participants.

The survey will take about two or three hours to complete. We will have someone in the room to answer questions and provide help.

If you have any questions about this study, please call Dr. McGarvey or Dr. Keller at the University of Virginia at 804-924-1868. Call collect and indicate that you are a Learning Center parent.

Please indicate whether you agree to allow your child to be interviewed for this study and sign and return the the form attached to this letter in the enclosed stamped, self-addressed envelope.

Thank you for your assistance.

Sincerely,

Dr. Elizabeth McGarvey

Dr. Adrienne Keller

Please print child's name: _____

Please check one:

I agree that my child can be asked to participate in the study of teenage behaviors and beliefs about high-risk activities like use of alcohol and drugs (as described in the attached letter from Dr. McGarvey and Dr. Keller).

I do not agree for my child to be asked to participate in the study of teenage behaviors and beliefs about high-risk activities like use of alcohol and drugs (as described in the attached letter from Dr. McGarvey and Dr. Keller).

Signature

Date

Please print your name: _____

Appendix F
Participant Permission Form

PARTICIPANT'S NAME

I understand that I am volunteering to be interviewed for a research project. My answers will be confidential and anonymous. I can quit anytime I want. I will receive \$5.00 in credit for completing the survey.

SIGNATURE**DATE**

**INTERVIEWER'S
INITIALS**

Appendix G

Data Use Authorization



June 9, 1994

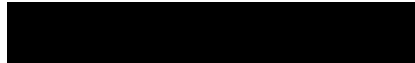
James R. Craft
6222 Club Road
Richmond, VA 23228

Dear Randy:

As we have discussed, you have our permission to use the data from the NIDA-funded study, "Correlates of AIDS Risk and Drug Use in Detained Youth," which is being conducted at the Learning Centers, for your dissertation research.

If you have any questions or need my assistance, please feel free to contact me.

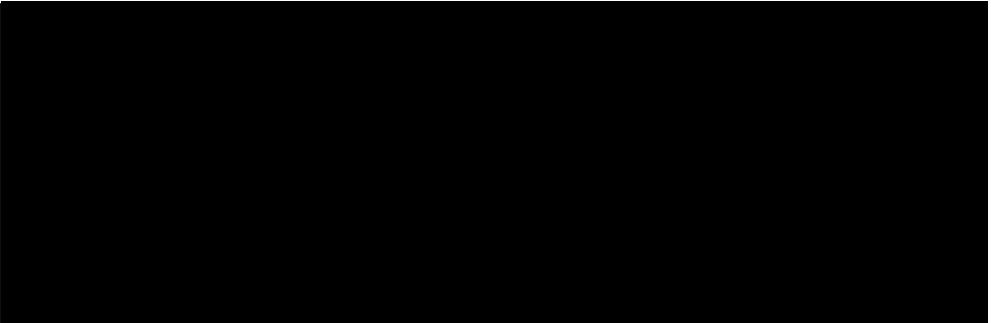
Sincerely,



Adrienne E. Keller, Ph.D.
Assistant Professor
Director, Division of Mental Health Services Research

AEK:jrh

Vita



Running head: ATTACHMENT AND VIOLENCE

Attachment, Social Support, and Violence

in Adolescent Delinquents

James R. Craft and Marilyn T. Erickson

Virginia Commonwealth University

This project was completed as a Doctoral Dissertation
requirement by the first author under the supervision of the second author.

Reprint requests should be addressed to Marilyn T. Erickson, Ph.D.,

Department of Psychology, Virginia Commonwealth University,

Box 2018, Richmond, Virginia 23284-2018

Abstract

Attachment relationships between children and parents have been hypothesized to contribute to internal working models of subsequent relationships. Poor attachment might lead to devaluing later relationships, making the perpetration of violence more likely. This study proposed a model which combined parental bonding, adolescent attachment, and perceived family support to predict the severity of violence used by adolescents. Male adolescents, convicted of violent crimes, were tested using three instruments; (1) the Parental Bonding Instrument, (2) the Adolescent Attachment Questionnaire, and (3) the Perceived Social Support Scale - Family. Hierarchical regression analysis revealed that the model accounted for twenty percent of the variance for Severity of Crime. Family and study methodology issues are discussed which might have accounted for the lack of stronger results.

Attachment, Social Support, and Violence in Adolescent Delinquents

Attachment Theory

Attachment involves the establishment of affectional bonds between an infant and a primary caretaker. This bond is a primary component in attachment and is the result of caretaker-infant interactions. The bond serves to activate what Bowlby (1969/1982) termed "retrieval behavior" in the caretaker which protects the helpless child from predation by reducing the distance between the caregiver and infant.

Attachment relationships are defined by three key features: (1) the secure base effect, (2) separation protest, and (3) proximity-seeking to a preferred figure (Weiss, 1982). The term "secure base" was coined by Ainsworth (1982), to describe the child's use of the attachment figure in relationship to exploratory behavior. Children use the caregiver as a secure base from which they can explore the environment. When threatened with separation from the mother, young children protest with behaviors which restore the mother's proximity.

Human attachment develops in three phases. The first phase, orienting towards the mother, occurs between the ages of birth and six months and marks the beginning of an interactional pattern of reciprocal responses between child and mothers. Wright (1991) viewed these reciprocal responses as beginning the development of an internal world where attachment could be represented and regulated.

Phase two begins around six months and continues until three years of age.

Attachment at this stage is based on what Bowlby termed "set-goals." The infant's set-goal is to keep close enough to the mother to use her as a secure base and to exhibit separation protest when the attachment is threatened. Phase three is the final stage and begins around the age of three. Children begin to see the caregiver as a separate person with their own goals and plans which are not uniquely tied to them (Holmes, 1993).

Bowlby (1969/1982) referred to "internal working models" as cognitive maps of the world and an individual's place in that world. The person uses that model to perceive events, forecast the future, and construct plans. A primary feature of this model concerns the attachment figure. Identity and location of the attachment figure as well as their ability to respond when needed become important. Proximity and contact produce a sense of security within the child (Bishop, 1975).

The acceptability and confidence (or lack of it) in the caretaker become incorporated into an internal working model of the self (Bowlby, 1973). The models of the attachment figure and the self are likely to develop to be complementary and mutually confirming. As the infant develops, these repeated experiences form the basis for "representational models of attachment and of the self" (Bowlby, 1977, p. 141). The behaviors and affects embedded in these representational models are transferred to future relationships.

The child is likely to develop insecure attachment if the caregiver is not

consistently available and responsive to attachment needs. Bowlby differentiated three styles of behavior resulting from insecure attachment relationships. These styles are: anxious attachment, compulsive self-reliance, and compulsive care-giving (Bowlby, 1977). While these styles are manifested differently, they share the underlying dynamic of anxious insecurity and feared loss.

In Volume II of Attachment and Loss (1973), Bowlby devoted a section to reviewing studies of adolescents and young adults. He noted that the pattern of attachment found in these individuals resulted from early attachment in childhood. Bowlby (1944) also linked parental loss or neglect to the development of conduct disorders.

Statement of the Problem

Violent crime among juveniles is an increasing problem in today's society. The onset of committing serious violent offenses appears to begin in early adolescence through young adulthood. Most individuals who will ever commit a serious violent offense are actively involved by age 17 (Elliott, 1994).

The purpose of this study is to provide an examination of Bowlby's (1973) concept of internal working models for the construction of interpersonal relationships. Early attachment experiences with a primary caregiver form the basis for internal working models. If an individual does not develop an internal working model of relationships as nurturing, fulfilling, and reciprocal, less importance may be placed on them. The person

does not expect other people to meet his or her needs and may be less likely to act towards those individuals in a way which might facilitate need fulfillment. Since the person feels no bond or perhaps no possibility of forming a bond with others, it may be easier to perpetrate violence against them.

Hypotheses

1.) Both mother and father bonding will be significantly related to the severity of violence committed by adolescents.

(a) Mother and Father Affection/Care, as measured by the Parental Bonding Instrument, will be significantly and negatively related to the severity of violence.

(b) Mother and Father Overprotection/Control, as measured by the Parental Bonding Instrument, will be significantly and positively related to the severity of violence.

2.) Adolescent attachment will be significantly related to the severity of violence committed by adolescents.

(a) Insecure Base of Attachment, Nonreciprocity of the Attachment Relationship, Nonuse of the Attachment Figure, and Nonavailability of the Attachment Figure, as measured by the Adolescent Attachment Questionnaire, will be significantly and positively related to the severity of violence.

(b) Feared Loss of the Attachment Figure and Separation Protest, as measured by the Adolescent Attachment Questionnaire, will be significantly and negatively related to

the Severity of Violence.

4.) Insecure attachment style will be significantly related to the severity of violence committed by adolescents.

(a) Angry Withdrawal, and Compulsive Self-Reliance as measured by the Adolescent Attachment Questionnaire, will be significantly and positively related to the severity of violence.

(b) Compulsive Careseeking and Compulsive Caregiving, as measured by the Adolescent Attachment Questionnaire, will be significantly and negatively related to the severity of violence.

5.) Perceived social support within the family, as measured by the Family Support Scale, will be significantly and negatively related to the severity of violence.

6.) Parental Bonding, Adolescent Attachment, and Family Support will predict a statistically significant amount of variance relating to Severity of Violence.

Method

Participants

Participants were adolescent male offenders (ages 13-17) recruited from the Reception and Diagnostic Center (RDC) in Bon Air, Virginia. These participants were part of a larger National Institute of Drug Abuse funded study entitled "Correlates of AIDS Risk and Drug Use in Detained Youth" conducted by the Institute for Drug Abuse Studies, Department of Psychiatric Medicine, at the University of Virginia.

Two hundred eighty-seven participants were initially selected from the subject pool because they had been administered all instruments necessary for the present study. Ninety-five participants were eliminated from the study because they had not committed a violent crime against an individual. Forty-seven additional subjects were eliminated due to failure to complete all questions on one or more testing instruments. The final number of participants in the present study was 145.

The mean age of the participants in this study was 15.8 years (S.D.=1.3). The ethnic composition of the study population was 57 percent African-American, 39 percent Caucasian, and 3 percent Native American. An additional one percent of the participants did not classify themselves as belonging to any of those three groups.

Before the youths were asked to participate in the study, written permission was obtained from their' legal guardians. Before entering into the study, the youths were informed about the study, and written consent was obtained. Participants were offered five dollars for completing the packet.

Research Design

The present study examined the relationship among bonding to parents, attachment to parents, perceived social support within the family, and violent crimes of adolescent offenders. Sixteen predictor variables, self-report measures completed by the adolescent offender, were used. Four predictor variables were obtained from the Parental Bonding Instrument: (1) Affection/ Care - Mother, (2) Affection/ Care - Father, (3) Control - Mother, and (4) Control - Father. Eleven predictor variables were procured from the

Adolescent Attachment Questionnaire: (5) Insecure Base of Attachment, (6) Fear of Losing the Attachment Figure, (7) Nonreciprocity of the Attachment Relationship, (8) Separation Protest, (9) Nonuse of the Attachment Figure, (10) Nonavailability of the Attachment Figure, (11) Proximity-Seeking, (12) Angry Withdrawal pattern of insecure attachment, (13) Compulsive Careseeking pattern of insecure attachment, (14) Compulsive Caregiving pattern of insecure attachment, and (15) Compulsive Self-Reliance pattern of insecure attachment. One predictor variable was obtained from the Perceived Social Support Scale - Family: (16) Family Support.

One criterion variable, Severity of Violence, was used in the present study; this data was obtained from records maintained by the Department of Youth and Family Services. Only those offenses considered violent crimes against persons were used in the study. Crimes which involved only damage to property or fell below a set severity level (Misdemeanor 1) were culled from the participants records and were not used in computing the Severity of Violence variable.

Instruments

Parental Bonding Instrument

The Parental Bonding Instrument (PBI) (Parker, Tupling, & Brown, 1979) is a 25 item self-report scale designed to examine the parental contribution to a parent-child bond. Respondents are asked to rate each parent separately according to how accurately the item corresponds to memories of parental behaviors during the respondent's life. Subsequent research using the PBI has documented the stability of the instrument (Wilhelm and

Parker, 1990; Cubis, 1989).

For the regression analyses in the present study, an α level of .70 was established as the criterion for each scale. The four PBI scales were modified to achieve this criterion. Four of the 10 items were deleted from each of the Mother and Father Affection/Care scales (items 4, 10, 14, and 16). These deletions resulted in α levels increases from .47 to .72 for the Mother scale and from .50 to .72 for the Father scale. Three of 10 items were eliminated from the Control - Mother scale (items 2, 19, and 20). These eliminations increased the scale alphas from .56 to .69. Two of 10 items from the Control - Father scale were deleted (items 4 and 20). The α level increased from .59 to .69

Adolescent Attachment Questionnaire

The Adolescent Attachment Questionnaire (AAQ) (Keller, West, & Adam, 1992 unpublished manuscript) is a 75 item self-report instrument asking respondents about their relationship with the parent (or person who is most like a parent) that they currently feel closest to. The questionnaire measures seven characteristics of attachment: (1) Insecure Base of Attachment, (2) Fear of Losing the Attachment Figure, (3) Nonreciprocity of the Attachment Relationship, (4) Separation Protest, (5) Nonuse of the Attachment Figure, (6) Nonavailability of the Attachment Figure, and (7) Proximity-Seeking. Scales are comprised of five items each. Four scales assess the primary patterns of insecure attachment: (1) Angry Withdrawal, (2) Compulsive Careseeking, (3) Compulsive Caregiving, and (4) Compulsive Self-Reliance. Each of these scales is composed of 10 items.

In keeping with the stated criterion of $\alpha = .70$, subscales of the AAQ were modified to gain that level of reliability. One item was deleted from Feared Loss of Attachment Figure (item 13) raising the α level from .62 to .68. One item was deleted from Insecure Base, (item 64) improving reliability from .67 to .72. The scale measuring the Angry Withdrawal attachment style was modified through the deletion of 2 items, (items 5 and 15) producing an increase in α from .67 to .73.

Perceived Social Support Questionnaire - Family

The Perceived Social Support Questionnaire - Family (Procidano & Heller, 1983) is a twenty item self-report questionnaire. Items on the scale refer to feelings and experiences occurring in family relationships.

A modified version of this scale was used to improve reliability. Two items were deleted (items 3 and 19) improving the reliability of the scale from .67 to .73.

Violent Offenses

A weight was assigned to each offense based on the severity of the crime as determined by the Virginia Criminal Code. Each violent offense was assigned a weight based on the designation of the crime: (1) Felony 1 = 7, (2) Felony 2 = 6, (3) Felony 3 = 5, (4) Felony 4 = 4, (5) Felony 5 = 3, (6) Felony 6 = 2, (7) Misdemeanor 1 = 1. The sentences designated for Felony 9 convictions were determined by referring to the Code of Virginia. The midpoint of the sentence range for each Felony 9 offense was determined. This midpoint was compared to the midpoints of the other Felony or Misdemeanor offenses. Midpoints were calculated by adding together the minimum and maximum

sentences prescribed by statute and dividing by two. Felony 9 offenses were then assigned the weight of the Felony or Misdemeanor which most closely matched its midpoint.

The assigned weights for each offense were added together and divided by the total number of offenses for each individual subject. This calculation produced the Severity of Violence variable for each subject.

Procedure

All participants' parents or legal guardians were contacted by letter for written permission before recruitment. Prospective participants were given a verbal explanation of the study, limits of confidentiality, as well as an explanation that they were not required to participate and were free to withdraw from the study at any time. Written permission for participation was obtained from every subject. Total time for answering all questionnaires averaged approximately 90 minutes.

Results

Correlations Between the Predictor Variables and Severity of Violence

Table 1 presents the correlations between the predictor variables and the criterion variable Severity of Violence. Only one of the four hypothesized variables, Control - Mother, was found to be significantly positively correlated with Severity of Violence.

Predictors of Severity of Violence

Table 2 presents the results of an hierarchical regression analysis to assess the model for predicting Severity of Violence. For the purpose of controlling demographic

variables which were hypothesized to relate to Severity of Violence, Step 1 of the analysis included the variables Age and Ethnicity. Both variables entered into the model at this step and accounted for three percent of the variance.

Because Mother/Father Affection and Mother/Father Control are part of parental bonding which was hypothesized to precede attachment, these four variables were entered

Table 1

Correlations Between Predictor Variables and Severity of Violence

Predictor Variables	Severity of Violence
<u>Parental Bonding Instrument</u>	
Affection/Care - Mother	.15
Affection/Care - Father	-.10
Control - Mother	.16
Control - Father	.07
<u>Adolescent Attachment Questionnaire</u>	
Insecure Base	-.04
Nonreciprocity of Attachment	.06
Fear of Losing Attachment Figure	.08
Separation Protest	-.13
Nonuse of Attachment Figure	.02
Nonavailability of Attachment Figure	.05
Proximity-Seeking	.00
<u>Attachment Styles</u>	

Predictor Variables	Severity of Violence
Angry Withdrawal	.10
Compulsive Careseeking	.00
Compulsive Caregiving	-.12
Compulsive Self-Reliance	.02
<u>Perceived Social Support</u>	
Family Support	.12

* $p \leq .05$

Table 2

Hierarchical Regression Results of Severity of Violence

Predictor Variables	F	df	ΔR^2	R^2	β	Overall Model p
Demographic Variables						
Ethnicity	2.2	142 (2)	.03			.12
Age					.10	
					-.15	
Parental Bonding Instrument	2.4	138 (6)	.06	.09		.03

Affection/Care - Mother				.17	
Affection/Care - Father				-.22	
Control - Mother				.05	
Control - Father				.16	
Adolescent Attachment	1.7	131 (13)	.05	.14	.08
Questionnaire - Subscales					
Insecure Base				-.06	
Fear of Losing Att. Figure				.11	
Nonreciprocity of Relationship				.07	
Separation Protest				-.25	
Nonuse of Att. Figure				-.09	
Nonavailability of Att. Figure				-.03	
Proximity-Seeking				.20	
Adolescent Attachment	1.5	127 (17)	.03	.17	.10
Questionnaire - Styles					
Angry Withdrawal				.24	
Compulsive Careseeking				.06	
Compulsive Caregiving				.00	
Compulsive Self-Reliance				-.10	

Perceived Social Support	1.7	126 (18)	.03	.20	.04
Support - Family					
Family Support				.20	

* $p \leq .05$

together in Step 2 of the regression analysis. These variables accounted for a ΔR^2 of .06. The model, accounting for nine percent of the variance gained significance at Step 2.

In Step 3 of the analysis, the seven subscales of the Adolescent Attachment Questionnaire were entered. The change in R^2 at Step 3 increased to 14% the total amount of variance accounted for in the model, but the model was not significant at this step. Questionnaire were entered. The change in R^2 at Step 3 increased to 14% the total variance accounted for in the model, but the model was not significant at this step.

In Step 4 of the regression analysis, the variables representing the four attachment styles were entered. The ΔR^2 at Step 4 was .03, increasing the overall R^2 for the model to .17. The model did not attain significance at this step.

Perceived Family Social Support was entered in Step 5 of the regression analysis. The addition of this variable resulted in an R^2 increase of .03. Overall, 20% of the variance was accounted for by the predictors. The model gained statistical significance at Step 5.

Discussion

The results of the hierarchical regression of the criterion variable, Severity of Violence,

support the overall model that accounted for 20 percent of the variance. The scores from the Parental Bonding Instrument contributed six percent of the total variance; the greater the Affection/Care from fathers reported by the adolescent, the lower the Severity of Violence. The Affection/Care from mothers was not a significant predictor.

These findings suggest that receiving affection/care from fathers may have helped to moderate the severity of violence perpetrated by these male adolescent offenders. A caring adult male may help to provide the adolescent with a bonding experience that serves as a model for other relationships.

Fathers appear to gain more influence with their sons during adolescence. Jacob (1974) found that as sons matured through adolescence (to age 16), sons deferred to their fathers more and interrupted them less when involved in a structured family task. The sons were found to have increased their influence in the family. This influence was gained, at least in middle-class families, through the loss of influence by the mother (Jacob, 1974). Adolescence appears to be a developmental phase during which affection and care shown by fathers may be particularly meaningful to sons. The value that is placed on the adolescent - father relationship may help to increase the value of all relationships.

It is interesting that Affection/Care - Mother did not have a significant influence on Severity of Violence. The lack of influence of Affection/Care - Mother might be attributed to the general loss of influence mothers appear to suffer in families with adolescent sons (Jacob, 1974). The increased importance of the fathers' affectional ties to

their sons may come at the expense of mothers' relationships to sons.

Control - Mother was correlated with an increase in Severity of Violence.

Pedersen (1994), using the Parental Bonding Instrument (Parker et al., 1979), found that boys perceived their mothers as more controlling and that this higher level of control was associated with higher levels of delinquency. The results of the present study seem to add support to Pedersen's findings. The results of the current study would seem to implicate Control in determining the Severity of Violence. The role that Control plays in delinquency and violence merits further attention in future studies.

Scores on the Adolescent Attachment Questionnaire accounted for a total of eight percent of the variance. Separation Protest was significantly and negatively related, in the regression, to the Severity of Violence. None of the other attachment subscales or styles proved to be predictive of Severity of Violence. Bowlby (1969/1982) noted that Separation Protest had the function of attempting to restore the bond between the child and the attachment figure. Individuals who are protesting, still care about maintaining the relationship between themselves and their attachment figures and believe that those relationships can provide comfort and support. Relationships that provide comfort and support would likely be valued by the individual. Caring about and valuing relationships appear to influence the severity of violent crimes. As proposed, individuals who place more value on relationships may be less likely to endanger relationships through violence.

An unusual finding from the regression analysis concerned social support from the

family, namely, the positive correlation between social support and severity of violence. This finding accounted for three percent of the variance. The literature on family social support and antisocial behavior generally reports that antisocial behavior is negatively correlated with family social support (Yoshikawa, 1994; Tolan, 1988). Several possible reasons may be considered to explain the results found in this study.

It might be suggested that the parents supported the youth's violent behavior. It may be that this support is direct or indirect. Parents may act in ways that directly influence their offspring to do the same. The parents may have engaged in illegal behavior themselves which their adolescent witnessed or heard about and emulated. The parents may fail to label their child's activities as delinquent or display attitudes condoning or encouraging violence. The parents might have attempted to protect their children from trouble to the youths' delinquent acts (Loeber & Stouthamer-Loeber, 1986).

The support of violence or delinquent behavior may be more indirect. Parents may not allow deviant behaviors inside the home, but may condone it outside (Sutherland & Cressey, 1966). For example, these parents may encourage their sons to be "tough" or to "stand up for themselves", thus encouraging the use of violence against non-family members, but not at home. Whether directly or indirectly, these parents may support behaviors in their sons that could increase the severity of violence against others.

It must be recognized that while the present study focused specifically on bonding and attachment in predicting Severity of Violence, 80 percent of the variance in the

prediction was unaccounted for. This result suggests that while bonding and attachment may be involved in determining the Severity of Violence, other variables are also involved. Further research needs to be done identifying these variables in order to gain more understanding. Greater understanding may help to improve prediction in the future.

Future research should consider several improvements in methodology. The first recommendation concerns the nature of the instruments which were self-report and retrospective. Researchers have found, for example, that perceived social support differs from actual available support and that this perception is based on working models of the self and others (Blain, Thompson, and Whiffen, 1994).

Severity of Violence is a general measure of crimes committed against persons. Future studies should focus on more specific crimes or groups of crimes. This focus could provide more information about the way in which attachment affects youth criminal activities. Future studies may find specific areas of attachment or specific types of insecure attachment that are associated with specific crimes.

The results of the present study provide support for the role of attachment and parental bonding in predicting the severity of violent crimes committed by adolescents. Future work must be done in refining the proposed model through prospective testing and increased specificity regarding both attachment and criminal activity, as well as, determining other variables which may help to predict the severity of violence used in the criminal behavior of male adolescents.

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