

THE RELATIONSHIP OF PERSONALITY AND PARENTAL AND PEER  
ATTACHMENTS WITH THE EXPERIENCE AND EXPRESSION  
OF ANGER AMONG JUVENILE OFFENDERS

By

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The Relationship of Personality and Parental and Peer Attachments with  
the Experience and Expression of Anger Among Juvenile Offenders

**Introduction**

There is significant amount of adolescent crime across the United States (Office of Juvenile Affairs, 2007; Pastore & Maguire, 2003; Snyder, 2002; U.S. Bureau of the Census, 2006). Though many juvenile offenders will not become life-long criminals, some will continue to engage in negative behaviors, resulting in legal violations (Loeber, 1990; Shaw, 1983). These offenders are likely to become part of our adult penal system. It is important to explore facets of juvenile delinquency that may put adolescents at risk for further problems as well as adult crime.

**Anger**

While researchers have studied correlates of aggression in juvenile delinquents, few have explored the relationship between anger and aggression among juvenile delinquents (Cornell, Peterson, & Richards, 1999; Deffenbacher & Swaim, 1999; Graham, Hudley, & Williams, 1992).

Anger can have both positive and negative effects on individuals. When anger is expressed often and inappropriately, it is maladaptive in nature. According to Spielberger (1999), there were two types of anger experience: state anger and trait anger. State anger is an emotional reaction to specific situations and it varies in intensity and duration whereas trait anger is a characteristic way of experiencing anger across a variety of situations (Spielberger, 1999). Spielberger (1999) also suggested there were two types of anger expression: anger-in and anger-out. Anger-In is the tendency one has to suppress or hold in their anger where as anger-out is the tendency express one's anger

outwardly on to others or objects (Spielberger, 1999). Spielberger (1999) also indicated there were two types of anger control: anger control-in and anger control-out. According to Spielberger (1999), anger control-in is the ability to calm down or cool off when angry whereas anger control-out is the ability to control angry feelings by not expressing anger outwardly toward others or objects.

Among juvenile offenders, anger has been related to attributional styles (i.e., more hostile attributions), age of first offense (i.e., onset at younger ages), type of offenses (i.e., more violent crimes), traumatic events, provocation (Eaken, 2001; Plattner, Karnik, Jo, Hall, Schallauer, Carrion, et al., 2007) and aggression (Cornell et al., 1999; Deffenbacher & Swaim, 1999; Graham et al., 1992). According to Cornell et al. (1999), trait anger, anger-out, and anger control were correlated with physical aggression; however, trait anger and anger-out were correlated with verbal aggression among juvenile offenders (Cornell et al., 1999).

More research is needed to explore the personal and relational factors related to anger experience and expression in juvenile offenders. One of the purposes of this study is to explore the relationship of parental and peer attachment styles and anger experience and expression in a sample of juvenile offenders.

### **Attachment**

Affectional bonds, otherwise known as attachment, can have a significant positive and/or negative impact on how children, adolescents, and adults tend to respond in ambiguous situations and in their relationships in general. Bowlby (1969) theorized that infants and toddlers develop expectations of their parents and/or caregivers to better understand their abilities to interact with others. Moreover, these expectations came to be

known as internal working models and were the basis of future relationships (Bowlby, 1969). Ainsworth (1978) explored parent-infant and parent-child interactions in terms of how infants and children handled ambiguous or strange situations in which the infant or child was temporarily separated from their mother. Both Bowlby and Ainsworth theorized three types of attachment styles including secure, anxious-avoidant, and anxious-ambivalent.

Bartholomew and Horowitz (1991) focused more on adolescents and adults and developed four attachment styles: secure, preoccupied, fearful-avoidant, and dismissing. Securely attached adolescents have a positive view of self and others and are comfortable with intimacy and independence (Bartholomew & Horowitz, 1991). Preoccupied adolescents have a negative view of self and positive view of others (Bartholomew & Horowitz, 1991). Adolescents with fearful-avoidant attachments tend to have a negative view of self and others, and dismissing adolescents have a positive view of self and negative view of others (Bartholomew & Horowitz, 1991).

More recently, theorists and researchers have paid attention on the role of relationships with parents and peers on the maintenance of juvenile delinquency. Hirschi (1969) theorized that adolescents with more secure attachments to their parents are less likely to exhibit delinquent behavior whereas adolescents with more insecure attachments to their parents tend to exhibit delinquent behavior (i.e., Social Control Theory). According to Hirschi (1969), when we are able to attach to caregivers, we are able bond with society. If attachments are weakened, we are less likely to be sensitive to the needs of society and more likely to engage in socially unacceptable behavior.

Researchers have confirmed that insecure parental and peer attachments have



been associated with internalizing (i.e., depression, anxiety, social withdrawal) and externalizing (i.e., conduct problems, aggression) problems among juvenile offenders (Dekovik, 1999; Elgar, Knight, Worrall, & Sherman, 2003; Leas & Mellor, 2000; Nicholson, 2000). Insecure parental and peer attachments have been related to violent offending and aggression (Gurevich, 1996; Marcus & Betzer, 1996). Marcus and Betzer (1996) found that father attachment significantly predicted antisocial behavior whereas mother and peer attachment did not. Additionally, Marcus and Betzer (1996) found secure attachments to mothers, fathers, and peers were inversely related to antisocial and aggressive behavior. Insecure parental attachments have also been found to be predictive of general offending behaviors among juvenile offenders (Longshore, Chang, & Messina, 2005; Nelson & Rubin, 1997). Of interest, no research to date has been conducted to explore how parental and peer attachments may be related to anger experience and expression for juvenile offenders, which is one of the purposes of the present study.

Another purpose of the study is to explore how personality factors are related to anger experience and expression in juvenile offenders. In the next section, research on the correlates of personality dimensions for juvenile offenders will be summarized.

## **Personality**

Researchers have used measures of personality to study juvenile offender populations. The Minnesota Multiphasic Personality Inventory (MMPI; Butcher et al, 1992) has been the most commonly cited personality measure to differentiate delinquents and non-delinquents on personality factors. In particular, juvenile offenders score significantly higher than non-offending adolescents on MMPI-A scales 4 (i.e., Psychopathic Deviate; Pd ), 8 (i.e., Schizophrenia; Sc), and 9 (i.e., Mania; Ma); also

known collectively as the excitatory scales) and sometimes 6 (Paranoia; Pa; e.g., Briggs, Wirt, & Johnson, 1961; Espelage, Cauffman, Broidy, Piquero, Mazerolle, & Steiner, 2003; Hathaway & Monachesi, 1957; Hathaway, Monachesi, & Young, 1960; Morton & Farris, 2002; Morton, Farris, & Brenowitz, 2002; Pena, Megargee, & Brody, 1996; Williams-Anderson, 2004), which measure traits of chronic anger/deviance, reality testing problems, mania, and paranoia respectively.

Other researchers have studied personality factors among juvenile delinquents using the Millon Adolescent Personality Inventory (MACI). Juvenile delinquency has been associated with antisocial, anxious, reactive depressive personality typologies (Stefurak, Calhoun, & Glasser, 2004; Krischer, Sevecke, Lehmkuhl, & Pukrop, 2007) as well as impulsive/reactive, psychopathic, and conforming personality characteristics (Taylor, Kemper, Loney, & Kistner, 2006).

Eysenck (1977) theorized that juvenile delinquency was related to psychosis and extraversion, and less with neurotic tendencies. Two groups of researchers (Alexio & Norris, 2000; Van Dam, Janssens, & De Bruyn, 2003) who used the Eysenck Personality Questionnaire – Revised have confirmed Eysenck’s theory that psychosis and extraversion were related to juvenile delinquency, whereas other researchers have found that either psychoticism (Heaven & Virgen, 2001), extraversion (Romero, Luengo, & Sobral, 2001) using the Eysenck Personality Questionnaire - Revised, and/or neuroticism using the Neuroticism Extraversion Openness scale (neuroticism related to vandalism/theft only; Heaven, 1996; Heaven & Virgen, 2001) were related to juvenile delinquency, but not as Eysenck had originally theorized.

Though research is lacking regarding the link between personality and attachment in juvenile offenders, there is some research evidence to suggest that insecure and dismissive attachments are associated with depressive symptoms, psychopathology, and psychopathic tendencies in juvenile offenders (Allen, Hauser, & Borman-Spurrell, 1996; Barb, 2005; Leas & Mellor, 2000).

However, only one group of researchers to date has explored personality characteristics and/or psychopathology in relation to the experience and expression of anger (Wood & Newton, 2002). Wood and Newton (2002) administered the Novaco Anger Scale, the Gudjonsson Blame Attribution Inventory, and the Eysenck Personality Questionnaire and found that higher scores on psychoticism and neuroticism were predictive of anger arousal among juvenile offenders. Additionally, researchers found that recidivists scored higher on the cognitive, arousal, and behavioral domains of the Novaco Anger Scale than did non-recidivists.

Personality factors have been associated with aggressive and externalizing behavioral problems among adolescent youth in general (Daderman, 1999; John, Caspi, Robins, Moffitt, & Stouthamer-Loeber, 1994; Muris, Meesters, & Blijlevens, 2007; Taylor, Kemper, & Kistner, 2007). In particular, non-delinquent adolescent males with externalizing disorders (i.e. aggression, lying, stealing, inattention, impulsivity, and hyperactivity) were scored lower on Agreeableness and Conscientiousness and higher on Extraversion, whereas boys with internalizing problems (i.e. anxiety, somatic complaints, and withdrawal) scored higher on Neuroticism and lower on Conscientiousness (John et al., 1994). Similarly, Muris et al. (2007) found that higher levels of Extraversion were related to more externalizing problems. Taylor et al. (2007) administered the Millon

Adolescent Clinical Inventory (MACI) and found that non-delinquent adolescent males in psychopathic and impulsive/reactive groups had externalizing problems, while males in the anxious/inhibited group had more internalizing problems based on the five MACI clinical subgroups (i.e. Anxious/Inhibited, Impulsive/Reactive, Psychopathy, Unremarkable, Conforming.) Moreover, conduct-disordered juvenile delinquents had higher scores on verbal aggression, psychoticism, impulsiveness, and detachment (Daderman, 1999).

In summary, only a few studies have been conducted to explore the relationship of attachment styles and personality. In addition, little research has been conducted on personality characteristics and anger experience and expression in juvenile offenders, which is another purpose of the present study. The MMPI-A scales of 4 (Psychopathic Deviate), 6 (Paranoia), 8 (Schizophrenia), and 9 (Mania) were used given that previous researchers, as mentioned earlier, have explored 4, 8, 9, and sometimes 6 as personality characteristics of juvenile offenders. These personality scales were explored in relation to anger experience and expression.

### **Purpose of the Study**

The purpose of the present study was to explore the bivariate and linear relationships of parental and peer attachments and personality factors with the experience and expression of anger among juvenile offenders. The research questions for this study were: 1) What are the bivariate relationships between and among parental and peer attachments, personality indicators (i.e., scales 4, 6, 8, and 9), and anger experience (Trait Anger) and anger expression (Anger-In, Anger-Out, Anger Control-Out, Anger Control-In)? 2) What is the linear relationship between parental and peer attachments and anger

experience (Trait Anger) and anger expression (Anger-In, Anger-Out, Anger Control-Out, Anger Control-In)? 3) What is the linear relationship of personality indicators (i.e., scales 4, 6, 8, and 9), and anger experience (Trait Anger) and anger expression (Anger-In, Anger-Out, Anger Control-Out, Anger Control-In)?

It is hypothesized that there will be significant and positive correlations between preoccupied and fearful parental and peer attachments with chronic anger and anger-out and anger in; personality dimensions of antisocial characteristics and mania (scales 4 and 9 of the MMPI) will be significantly and positively related to chronic anger and anger-out; personality dimensions of paranoia and unusual experiences and beliefs (scales 6 and 8 of the MMPI) will be significantly and positively related to chronic anger and anger-in. In terms of linear relationships, it is hypothesized that parental and peer attachments will be significant predictors of chronic anger, anger-out, and anger-in. It is also hypothesized that the four personality dimensions (4, 6, 8, and 9) of the MMPI will be significant predictors of chronic anger, anger-out, and anger-in.

## **Method**

### **Participants**

Participants in this study consisted of 94 male adolescents residing in a Midwestern juvenile correctional facility, ranging in age from 14 to 19 years. Participants consisted of juvenile offenders in medium and maximum security treatment programs at Midwestern juvenile correctional facility. Each juvenile at the facility was invited to participate in the study. Of the 126 juveniles invited to participate in the study, nine denied participation.

The researcher obtained previously administered MMPI-A profiles on each juvenile at the facility and differentiated between valid and invalid profiles based on the proposed validity cutoffs proposed by Archer (1992). Though each juvenile was invited to participate in the study, only those with valid profiles were used in the statistical analyses. Of the 117 juveniles who participated in the study, 20 obtained invalid MMPI-A profiles and were omitted from the data analysis.

Of the 97 participants, three were missing significant amounts of data and were omitted from the data analysis. The mean age of the remaining 94 individuals was 17.09 (SD = 1.05), with a range of 14-19 years. All of the participants were male. The majority of participants identified themselves as African American (44.7%, n = 42); 17% identified as Caucasian/White (n = 16); 10.6% identified as Native American (n = 10); 6.4% identified as Hispanic (n = 6); 1.1% identified as Asian (n = 1); and 20.2% identified as multiracial (n = 19). See Table 2 for means and standard deviations of demographic information of the sample.

The majority of participants in the study were either sophomores (29.8%, n = 28); juniors in high school (27.7%, n = 26); 13.8% were seniors in high school (n = 13); and 10.6% were freshman in high school (n = 10). Nine of participants in the study had a high school diploma (9.6%) and 8 received their GED (8.5%).

Yearly family income was also collected via the demographics page. Seventy one and three tenths percent of participants answered they did not know their family income (n = 67). Three and two tenths percent of participants reported that their families make less than \$10,000 per year (n = 3), 3.2% reported \$10,001-15,000 (n = 3), 1.1% reported \$15,001-20,000 (n = 1), 2.1% reported \$20,001-30,000 (n = 2), 3.2% reported \$30,001-

40,000 (n = 3), 1.1% reported 40,001-50,000 (n = 1), 1.1% reported \$50,001-60,000 (n = 1), 1.1% reported \$60,000-70,000 (n = 1), 1.1% reported \$70,001-80,000 (n = 1), 1.1% reported \$80,001-90,000 (n = 1), and 3.2% reported \$90,001 or above (n = 3).

Additionally, 7.4% of participants reported their parents were unemployed (n = 7).

With regard to security level, 66% identified themselves as being in medium security (n = 62) and 34% identified themselves as being in maximum security (n = 32). Juvenile offenders are differentiated between security levels based on types/severity of crime, testing results at intake, previous behavioral history, treatment compliance, and institutional compliance including violence against staff and other residents. Juveniles in maximum security tend to have more severe crimes (i.e. murder, rape, shooting with intent to kill) and behavioral problems including previous assaults on institutional staff and residents. Furthermore, maximum security residents often have more clinically significant testing results indicating higher need for secure settings and treatment. Maximum security is a more secure setting with more structure and lower number of juveniles. The majority of participants identified their crime as violent (88.3%, n = 83) and 11% identified their crime as non-violent (11.7, n = 11).

In terms of type of crime, 27.7% of participants reported their crime as Robbery with a Firearm (n = 26); 25.5% reported Assault and Battery (n = 24); 19.1% reported Robbery (n = 18); 16% reported a sex offense (n = 15); 12.8% reported Shooting With Intent to Kill (n = 12); 6.4% reported Murder (n = 6); 4.3% reported an offense involving a vehicle (n = 4); 3.2% reported Possession of Stolen Property (n = 3); 3.2% reported a drug offense (n = 3); 2.1% reported Possession of a Firearm (n = 2); 2.1% reported a

probation violation (n = 2); and 1.1% reported Arson (n = 1). See Table 1 for the demographics of this sample.

## **Measures**

Instruments used in this study included a demographic sheet, the Minnesota Multiphasic Personality Inventory – Adolescent (Butcher et al., 1992), the Inventory of Parent and Peer Attachment (Armsden & Greenberg, 1987), and the State-Trait Anger Expression Inventory (Spielberger, 1999).

**Demographic sheet.** The demographic sheet was used for descriptive purposes only. Participants are asked to provide demographic information about themselves including their age, gender, race, academic year (i.e., freshman, sophomore, junior, or senior), security level, number of total offenses, type of offense (i.e., violent or non-violent), family income level, and to specify who they indicated as fulfilling their mother and father figures. Additionally, they were asked to indicate how many years those individuals played a role in their life.

**Minnesota Multiphasic Personality Inventory – Adolescent (MMPI-A; Butcher et al, 1992).** The MMPI-A was developed as an adolescent version of the original MMPI-2. The items from the MMPI-2 were adapted and/or omitted to create the MMPI-A. In addition, some items were added in order to capture the unique personality experiences of adolescents. The MMPI-A is a 478-item self-report questionnaire designed to assess personality and psychopathology in adolescents 14-18 years of age. The MMPI-A can be administered in an individual or group format. Individuals respond either “true” or “false” to each item. The MMPI-A consists of 69 scales in total, including 10 clinical scales: Scale 1 (Hysteria; Hs), Scale 2 (Depression; D), Scale 3



(Hypochondriasis; Hy), Scale 4 (Psychopathic Deviate; Pd), Scale 5 (Masculinity-Femininity; Mf), Scale 6 (Paranoia; Pa), Scale 7 (Psychasthenia; Pt), Scale 8 (Schizophrenia; Sc), Scale 9 (Mania; Ma), and Scale 0 (Social Introversion; Si). For the purposes of this study, only scales 4, 6, 8, and 9 will be used.

Scale 4 was originally developed to identify psychopathic personalities (Archer, 1992). It covers content areas including “family conflicts, problems with authority figures, social isolation, delinquency, and absence of satisfaction in everyday life” (Archer, 1992, p. 176). High scores on scale 4 are indicative of “anger, impulsivity, interpersonal and emotional shallowness, interpersonal manipulateness, and unpredictability” (Archer, 1992, p. 176).

Scale 6 was created to assess ideas of reference, suspiciousness, feelings of persecution, moral self-righteousness, and rigidity (Archer, 1992). Additionally, high scores on scale 6 are characteristic of anger, resentment, hostility, problems with reality testing, and social withdrawal (Archer, 1992).

Scale 8 was developed to identify individuals with schizophrenia; however, also includes “content areas involving bizarre thought process, peculiar thoughts, social isolation, difficulties in concentration and impulse control, and disturbances in mood and behavior” (Archer, 1992, p. 197) High scorers on scale 8 are usually described as alienated, confused, and delusional (Archer, 1992).

Scale 9 was developed to identify individuals with hypomanic symptoms, including grandiosity, egocentricity, irritability, elevated mood, and cognitive and behavioral overactivity (Archer, 1992). High scores on scale 9 are indicative of

“impulsivity, excessive activity, narcissism, extraversion, and preference for action rather than thought and reflection” (Archer, 1992, p. 200).

The MMPI-A Clinical Scales are considered significant if they are at or above a T-score of 65 (Archer, 1992). Elevations indicate endorsement of symptoms related to that scale. Additionally, the MMPI-A has Supplementary Scales, Content Scales, Harris-Lingoes, and Si Scales; however, none of these supplementary scales will be used in this study.

The MMPI-A includes 7 validity scales: Cannot Say Scale (?), Variable Response Inconsistency Scale (VRIN), True Response Inconsistency Scale (TRIN), Frequency (F), F2, Lie (Lie), and Defensiveness (K). Profiles will be screened for validity prior to being used in the study. Researchers will use the validity cutoffs proposed by Archer (1992) as follows: Cannot Say Scale < 30 (raw score); VRIN < 80 (T-score); TRIN < 80 (T-score); F and F2, 90 (T-score); L < 70 (T-score); and K < 70 (T-score).

Test-retest (1-week) reliability estimates of the clinical scales of the MMPI-A clinical scale scores have ranged from .65 to .84 (Butcher et al., 1992). Internal consistency reliability coefficients for the ten clinical scales of the MMPI-A range from .40 to .91 (Butcher et al., 1992).

The MMPI-A appears to measure four unique constructs based on factor analysis results (Butcher et al., 1992): general maladjustment (i.e., high loadings by most scales), over-control (i.e., high loadings on scales L, K, and 9). The third and fourth factors have high loadings on scale 0 and 5.

The MMPI-A clinical scales have been significantly related to other measures of adolescent psychopathology, thus showing evidence of convergent validity (Cashel, Rogers, Sewell, & Holliman, 1998).

**Inventory of Parent and Peer Attachment (IPPA; Armsden & Greenberg, 1987).** The IPPA is a 75-item self-report questionnaire which measures the quality of parent and peer attachments in late adolescence and adults. The IPPA was developed based on Bowlby's attachment theory regarding the emphasis of trust in the accessibility and responsiveness of attachment figures. While the IPPA is based on Bowlby's theory, attachment was explored more globally and not by the subtypes of attachment.

The IPPA has three scales: Mother Attachment, Father Attachment, and Peer Attachment. The first set of 25 items includes statements regarding the adolescent's feelings about their relationship with their mother or mother figure. The second set of 25 items includes statements regarding the adolescent's feelings about their relationship with their father or father figure. The third set of 25 items includes statements regarding the adolescent's feelings about their relationships with peers. Participants rate each item on a 5-point Likert scale (i.e., "Almost Always True", "Often True", "Seldom True", "Sometimes True", or "Almost Never True").

For the Mother, Father, and Peer Attachment Scales, total scores can be calculated as well as subscale scores for each scale. The three subscales for each scale include: Trust, Communication, and Alienation. The Trust scale measures the extent to which adolescents trust that their parent(s)/parental figure(s) or peers are available and supportive, thus leading to a secure relationship. The Communication scale measures the extent to which adolescents view their parent(s) or parental figure(s) and peers as being

responsive and helpful. The Alienation scale measures the extent to which adolescents feel insecure or detached from parent(s)/parental figure(s) or peers.

Three-week test-retest reliability coefficients were .93 for the Parent Attachment scales and .86 for the Peer Attachment scale (Armsden & Greenberg, 1987). Cronbach alphas for the parent scales were .91 for Trust, .91 for Communication, and .86 for Alienation. For the peer scales, .91 for Trust, .87 for Communication, and .72 for Alienation (Armsden & Greenberg, 1987).

The internal consistency reliability estimates for the IPPA scales for this sample were as follows: Mother Trust ( $\alpha=.90$ ), Mother Communication ( $\alpha=.84$ ), Mother Alienation ( $\alpha=.78$ ), Father Trust ( $\alpha=.92$ ), Father Communication ( $\alpha=.88$ ), and Father Alienation ( $\alpha=.77$ ). For the peer scales, Peer Trust ( $\alpha=.90$ ), Peer Communication ( $\alpha=.91$ ), and Peer Alienation ( $\alpha=.71$ ). For the purposes of this study, the subscales of the mother, father, and peer attachment scales were used in the analyses of this study.

The IPPA scales have been significantly related to measures of family conflict, support, and cohesion (Armsden & Greenberg, 1987) as well as family and social self-concept (Armsden & Greenberg, 1987), thus providing evidence for the convergent validity of the IPPA.

On the demographic sheet, participants were asked to specify the person they identify as their mother and father figure. Additionally, they were asked to indicate how many years that individual has played a role in their life. With regard to mother figure, the majority of participants identified their biological mother (80.9%,  $n = 76$ ), 7.4% identified grandmother ( $n = 7$ ), 3.2% identified a sister ( $n = 3$ ), 3.2% identified an aunt ( $n = 3$ ), 2.1% identified an adopted mother ( $n = 2$ ), 1.1% identified a stepmother ( $n = 1$ ), and

1.1% identified a teacher (n = 1). Participants reported mother figures played a role in their lives for an average of 15.09 years (ranging from 3 to 19 years).

With regard to father figure, the majority of participants identified their biological father (68.1%, n = 64), 17% identified stepfather (n = 16), 6.4% identified grandfather (n = 6), 3.2% identified an uncle (n = 3), , 2.1% identified an adopted father (n = 2), 1.1% identified a brother (n = 1), and 1.1% identified a teacher (n = 1). Participants reported father figures played a role in their lives for an average of 10.92 years (ranging from 0 to 19 years).

**The State-Trait Anger Expression Inventory (STAXI-2; Spielberger, 1999).**

The STAXI-2 is a 57-item self-report measure of the experience (state and trait anger) and expression of anger (anger out and in; anger control efforts, anger expression index). The State Anger (S-Anger) Scale assesses anger as an emotional state at the time of administration. The Trait Anger (T-Anger) Scale assesses how often an individual experiences anger over time and across situations. The Anger-In (AX-I) scale measures the degree to which an individual holds in or suppresses anger. The Anger-Out (AX-O) Scale measures the degree to which anger is directed outward and in aggressive ways. The Anger Control-Out (AC-O) Scale measures to ability to control their anger expression outwardly with others. The Anger Control-In (AC-I) Scale measures an individual's ability to calm down or cool off. A total Anger Expression score (AX-Ex) can also be calculated with the AX-I, AX-O, AC-I, and AC-O scales.

Individuals respond to S-Anger items using a 4-point Likert scale (1 = "not at all", 4 = "very much so"). Participants respond to T-Anger items using a 4-point Likert scale (1 = "almost never", 4 = "almost always"). For anger expression and anger control scale

items (i.e., AX-I, AX-O, AC-O, AC-I, AX-Ex), individuals are asked to report how often they express and/or control their anger, using a 4-point Likert scale (1 = “almost never”, 4 = “almost always”).

According to Spielberger (1996), adolescents scoring above the 75<sup>th</sup> percentile are said to experience and express anger in a maladaptive way, which will impair ideal functioning. Individuals scoring below the 25<sup>th</sup> percentile experience and express little anger (Spielberger, 1996).

There is no information provided for the test-retest reliability for the STAXI-2 subscales (Claiborn, 1992). Internal consistency reliability estimates for S-Anger and T-Anger scales range from .78 to .89 (Spielberger, 1999). Internal consistency reliability estimates for the anger expression and control scales range from .73 to .93 (Spielberger, 1999).

The internal consistency reliability estimates for the STAXI-2 scales for this sample were as follows: State Anger ( $\alpha=.96$ ), Trait Anger ( $\alpha=.91$ ), Anger Expression-Out ( $\alpha=.75$ ), Anger Expression-In ( $\alpha=.75$ ), Anger Control-Out ( $\alpha=.88$ ), and Anger Control-In ( $\alpha=.88$ ). For the purposes of this study, the State Anger, Trait Anger, Anger Expression-Out, Anger Expression-In, Anger Control-Out, and Anger Control-In were used in the analyses of this study.

The STAXI-2 scales have been significantly related to other anger-related instruments (Deffenbacher, 1992; Spielberger, 1999), including anger, hostility, personality, and physiological arousal (Deffenbacher, 1992; Spielberger, 1999), thus providing evidence of its convergent validity.

## **Procedure**

Upon admittance to the custody of juvenile corrections, all juvenile offenders are given the Minnesota Multiphasic Personality Inventory - Adolescent (MMPI-A) along with other measures, during their intake session. The tests administered aid in determining the security placement of each juvenile in group homes, medium security, or maximum security facilities. In addition to testing results, type and severity of crime, past criminal history and involvement with juvenile corrections, behavior at other correctional facilities, and court recommendations determine specific placement for juvenile offenders. The Midwestern juvenile correctional facility is a male juvenile offender treatment facility with medium and maximum security level juveniles.

In order to gain admittance to the Midwestern juvenile correctional facility to invite juvenile offenders to participate the study, a letter of intent for the study was sent to the Superintendent of the Midwestern juvenile correctional facility and then on to the Chief Psychologist and Director. Each of the individuals was informed of the purpose of this study and its importance in relation to juvenile offender treatment. The Superintendent, Chief Psychologist, and Director gave permission for the study to occur at Midwestern juvenile correctional facility.

Participants from the Midwestern juvenile correctional facility were recruited to participate in the present study. The researcher described the study to the juveniles and informed them that participation in the study was strictly voluntary and that refusal to participate would not negatively impact their treatment. The researcher read a script (See Appendix C) that described the purpose and procedure of the study. Juveniles who

volunteered to participate read an informed consent form explaining the purpose of the study, the benefits and risks of the study (See Appendix B for a copy of the informed consent form). The informed consent form also asked for permission for their MMPI-A scores from their psychological evaluations to be available for the research study. Each participant received a copy of the informed consent form to keep. The signed informed consent forms were kept separately from the packet in order to ensure participant's responses could not be identified.

The participants were given a packet of questionnaires to complete during group administrations. Each packet included a demographics sheet, the Inventory of Parental and Peer Attachment (IPPA) and the State-Trait Anger Expression Inventory (STAXI-2). The questionnaires were placed in a random order within the packet to control for order effects. The total time required for completing the questionnaires was approximately 30 minutes. The participants were compensated a candy bar for completing the questionnaires. Given that they were in a facility receiving treatment, they were not provided with a resource list of counseling services.

All participants were given an identification number so that their MMPI-A scores could be connected to their packet of questionnaires. The MMPI-A test scores were written on the outside of the packet for each participant. No names were written on the packet or the questionnaires. A code key was created to list the participants names and the identification number so that the MMPI-A scores could be matched with the packet of questionnaires for data entry purposes. This code key was kept separately from data in a locked filing drawer at the Midwestern juvenile correctional facility during data collection. This code key was destroyed once all of the MMPI-A scores were written on



the participants' survey packets. The packets were placed in a locked file cabinet at the Midwestern juvenile correctional facility and all information has been kept confidential.

## **Results**

### **Correlations**

Pearson correlations were conducted to explore the bivariate relationships between and among the main study variables of personality indicators (scales 4, 6, 8, and 9), attachment to parents and peers, and the experience and expression of anger. See Table 3 for the correlation matrix.

**Attachment subscales.** In general, for this sample of juvenile offenders, attachments to mothers/mother figures, fathers/father figures, and peers were not significantly correlated with one another.

**Personality subscales.** The MMPI-A subscales (4, 6, 8, and 9) were significantly and positively correlated with one another. The Psychopathic Deviate subscale (4) was significantly and positively correlated with Paranoia (6), Schizophrenia (8), and Mania (9;  $r$ 's = .49, .57, and .29 respectively,  $p < .01$ ). Paranoia (6) subscale was significantly and positively correlated with Schizophrenia (8) and Mania (9;  $r$ 's = .83 and .53 respectively,  $p < .01$ ). The Schizophrenia subscale (8) was significantly and positively correlated with Mania (9;  $r = .63$ ,  $p < .01$ ).

**Anger subscales.** There were significant correlations between state anger and trait anger ( $r = .42$ ,  $p < .01$ ), state anger and anger expression in ( $r = .24$ ,  $p < .05$ ), trait anger and anger expression-out ( $r = .36$ ,  $p < .05$ ), trait anger and anger control efforts ( $r$ 's = -.41 and -.39,  $p < .01$  respectively for ACO and ACI), state anger and anger control in

( $r = -.22, p < .01$ ), anger control out with anger control-in ( $r = .87, p < .01$ ), anger out with anger in ( $r = .50, p < .01$ ).

*What are the bivariate relationships between parental attachments and anger experience (State Anger, Trait Anger)?*

Mother attachment was negatively correlated with state anger ( $r = -.26, p < .05$ ). Father attachment was negatively correlated with state anger ( $r = -.22, p < .05$ ). There were no significant correlations for trait anger with mother or father attachment.

*What are the bivariate relationships between parental attachments and anger expression (Anger-In, Anger-Out, Anger Control-In, Anger Control-Out)?*

Mother attachment was negatively correlated with anger-out ( $r = -.22, p < .05$ ). There were no significant correlations for father attachment with the expression of anger.

*What are the bivariate relationships between peer attachments and anger experience (State Anger, Trait Anger)?*

Peer attachment was negatively correlated with state anger ( $r = .22, p < .05$ ). Peer attachment was not significantly correlated with trait anger.

*What is the relationship between peer attachments and anger expression (Anger-In, Anger-Out, Anger Control-In, Anger Control-Out)?*

Peer attachment was significantly correlated with anger control-out ( $r = .22, p < .05$ ).

*What is the relationship between personality indicators (i.e. scales 4, 6, 8, and 9) and anger experience (State Anger, Trait Anger)?*

Two personality scales were positively correlated with trait anger: scale 8 ( $r = .29$ ,  $p < .01$ ) and scale 9 ( $r = .29$ ,  $p < .01$ ). None of the personality scales were significantly correlated with state anger.

*What are the bivariate relationships between the personality indicators (i.e. scales 4, 6, 8, and 9) and anger expression (Anger-In, Anger-Out, Anger Control-In, Anger Control-Out)?*

There were two personality scales that were positively correlated with anger-out: scale 4 ( $r = .24$ ,  $p < .05$ ) and scale 8 ( $r = .25$ ,  $p < .05$ ). All four personality scales were positively correlated with anger-in: scale 4 ( $r = .31$ ,  $p < .01$ ) and scale 6 ( $r = .32$ ,  $p < .01$ ) scale 8 ( $r = .36$ ,  $p < .01$ ) and scale 9 ( $r = .21$ ,  $p < .05$ ). The personality scales were not significantly related to anger control-out or anger control-in.

### **Regressions**

A series of multiple regressions were conducted to explore personality and parent and peer attachment subscales as predictors of the experience and expression of anger in juvenile offenders. Given that parental and peer attachment subscales as well as the personality indicators were not related to anger control-in and anger control-out efforts in the correlational analyses, multiple regression analyses were not conducted for these anger control subscales. Multiple regressions were conducted for state and trait anger as well as anger expression-in and anger expression-out.

*Do parental and peer attachments significantly predict the experience (State Anger, Trait Anger) of anger in juvenile offenders?*

A multiple regression analysis was conducted to evaluate how well parental and peer attachment predicted state anger in juvenile offenders. Mother, father, and peer

attachments (overall scores) were the predictor variables and state anger was the criterion variable. Attachments to mothers, fathers, and peers were significantly and linearly related to state anger,  $F(3, 89) = 4.62, p < .01$ . Attachment to mothers, fathers, and peers accounted for a total of 13.5% of the variance in state anger, which was a small effect. Examination of individual effects of each independent variable revealed that peer attachment was the only significant predictor in the model ( $\beta = -.20, t = -2.10, p < .05$ ). See Table 4.

In a second regression, attachment with mother, father, and peers were the predictor variables and trait anger was the criterion variable. There was not a significant linear relationship between the subscales measuring attachment to mothers, fathers, and peers and trait anger,  $F(3, 89) = 1.2, p > .05$ . See Table 4.

*Do parental and peer attachments significantly predict anger expression (Anger-In, Anger-Out) in juvenile offenders?*

Attachment with mother, father, and peers were the predictor variables and anger-out was the criterion variable. There was not a significant linear relationship between the subscales measuring attachment to mothers, fathers, and peers and anger-out,  $F(3, 89) = 1.66, p = > .05$ . See Table 4.

In the second regression, attachment with mother, father, and peers were the predictor variables and anger-in was the criterion variable. There was not a significant linear relationship between the subscales measuring attachment to mothers, fathers, and peers and anger-in,  $F(3, 89) = 1.92, p > .05$ . See Table 4.

*Do personality indicators predict the experience of anger (State Anger, Trait Anger) in juvenile offenders?*

Multiple regression analyses were conducted to explore the linear relationship of personality indicators (MMPI-A scales 4, 6, 8, 9) and the experience of anger in juvenile offenders. The first regression analysis was performed to determine if personality indicators significantly predicted state anger. Results indicated that personality indicators did not significantly predict state anger,  $F(4, 89) = .77, p > .05$ . See Table 5.

A second multiple regression analysis was conducted to explore the linear relationship of personality factors with trait anger in juvenile offenders. MMPI-A scales 4, 6, 8, and 9 were the predictor variables and trait anger was the criterion variable. MMPI-A scales 4, 6, 8, and 9 were significantly and linearly related to trait anger,  $F(4, 89) = 3.19, p < .05$ . MMPI-A scales 4, 6, 8, and 9 accounted for a total of 12.5% of the variance in trait anger. This was a small effect size. See Table 5.

*Do personality indicators predict the expression of anger (Anger-Out, Anger-In) in juvenile offenders?*

Multiple regression analyses were conducted to explore the linear relationship of personality indicators (MMPI-A scales 4, 6, 8, 9) and the expression of anger in juvenile offenders. The first regression analysis was performed to determine if personality indicators significantly predicted anger-out. Results indicated that personality indicators did not significantly predict anger-out,  $F(4, 89) = 2.10, p > .05$ . See Table 6.

A second multiple regression analysis was conducted to explore the linear relationship of personality factors with anger-in among juvenile offenders. MMPI-A scales 4, 6, 8, and 9 were the predictor variables and anger-in was the criterion variable. MMPI-A scales 4, 6, 8, and 9 were significantly and linearly related to anger-in,  $F(4, 89) = 3.84, p < .01$ . MMPI-A scales 4, 6, 8, and 9 accounted for a total of 14.7% of the

variance in anger-in. With regard to effect size, personality indicators only yielded a small effect on anger-in. While the MMPI-A scales 4, 6, 8, and 9 were collectively significant predictors of trait anger and anger-in, the individual scales were not significant predictors of trait anger and anger-in. See Table 6.

*Do parental and peer attachments predict anger experience in juvenile offenders above and beyond personality indicators?*

A hierarchical multiple regression was conducted with state anger as the criterion variable. The MMPI-A scales 4, 6, 8, and 9 were entered into the first block and accounted for 3.4% of the variance in state anger, which was not significant,  $F(4, 88) = .77, p > .05$ . The attachment scales for mothers, fathers, and peers were entered into the equation next, which accounted for 11.6% of the variance after controlling for the relationship of personality and state anger. Attachments to mothers, fathers, and peers were found to be significant predictors of state anger,  $F \text{ Change}(3, 85) = .12, p < .05$ . This is a small effect size. See Table 7.

In the second hierarchical regression, trait anger was the criterion variable. The personality indicators (MMPI-A scales 4, 6, 8, and 9) were entered into the first block and the attachment subscales were entered into the second block. The MMPI-A scales 4, 6, 8, and 9 accounted for 11.7% of the variance in trait anger,  $F(4, 88) = 2.92, p < .05$ . Attachment to mothers, fathers, and peers accounted for additional 1.6% of the variance after controlling for the relationship of personality indicators and trait anger, but it was not significant,  $F \text{ Change}(3, 85) = .51, p > .05$ . See Table 7.

*Do parental and peer attachments predict anger expression in juvenile offenders above and beyond personality indicators?*

Two hierarchical regressions were conducted to answer this research question: one for anger expression-out and the other for anger expression-in. In the first regression, MMPI-A scales 4, 6, 8, and 9 were entered in the first block and accounted for 8.1% of the variance in anger-out,  $F(4, 88) = 1.93, p > .05$ . The attachment scales (mother, father, and peer) were entered into the second block and accounted for 1.7% of the variance after controlling for the relationship of personality and anger-out, which was not significant,  $F \text{ Change}(3, 85) = .53, p > .05$ . See Table 7.

Another hierarchical regression was conducted with anger expression in as the criterion variable. The MMPI-A scales 4, 6, 8, and 9 were entered into the first equation and accounted for 14.9% of the variance in anger-in scores,  $F(4, 88) = 3.85, p < .01$ . Attachment to mothers, fathers, and peers were entered in the second block, which accounted for 3.3% of the variance after controlling for the relationship of personality indicators and anger-in, which was not significant,  $F \text{ Change}(3, 85) = 1.14, p > .05$ . See Table 7.

In summary, mother attachment was significantly correlated with state anger and anger-out. Father attachment was only significantly correlated with state anger. Peer attachment was significantly correlated with state anger and anger control-out. Personality indicators (scales 4, 6, 8, 9) were also found to be significantly correlated with anger. Scale 4 was positively correlated with anger-out and anger-in. Scale 6 was only found to be correlated with anger-in, while scale 8 was significantly correlated with trait anger, anger-out, and anger-in. Scale 9 was positively correlated with trait anger and anger-in. Attachment to parents and peers was a significant predictor of state anger in juvenile offenders. Personality indicators (scales 4, 6, 8, 9) were significant predictors of

trait anger and anger-in among juvenile offenders. Parental and peer attachments were significant predictors of state anger above and beyond the relationship between personality indicators and state anger.

### **Discussion**

This study was conducted to explore the relationships of personality and parental and peer attachment with the experience and expression of anger in male juvenile offenders. While researchers have focused their attention on the role aggression in juvenile delinquency, research has placed less emphasis on the relationship between anger and juvenile delinquency. More specifically, research is lacking the exploration of the relationship between the experience of anger and juvenile delinquency. Among juvenile offender populations, anger has been related to aggression (Cornell et al., 1999, Deffenbacher & Swaim, 1999; Graham et al., 1992), and therefore, it is an important to understand the contributing factors of anger as it relates to juvenile delinquency in an effort to develop and utilize more informed practice.

Overall, results indicated that attachment to parents and peers were predictive of state anger in a male juvenile offender population; however, they were not predictive of trait anger. Moreover, personality (i.e. MMPI-A scales 4, 6, 8, 9) was also predictive of trait anger and suppressing anger; however, they were not predictive of state anger. Results also indicated significant positive and negative correlations between attachment figures (i.e. mother, father, peers) and anger and personality (i.e. MMPI-A scales 4, 6, 8, 9) and anger. Juvenile offenders in this study were less angry in the moment when the quality and nature of their relationships with parents and peers was more secure. The importance of juvenile offenders' relationships with mothers is also noted in that more



secure attachments with mothers was associated with less anger aggression. In addition, juvenile offenders who had more secure attachments with peers were more likely to control the outward expression of their anger.

### **Attachment and Anger Experience**

Attachment to parents and peers were significant predictors of state anger. When mother, father, and peer attachments were considered together, they were found to be significant predictors of anger as an emotional state at the time of test administration. Overall, attachment to parents and peers accounted for 13.5% of the variance in state anger scores. These findings are not surprising as previous research has indicated that attachment to parents and peers is a significant predictor of externalizing and internalizing problems in adolescents (Dekovic, 1999). Furthermore, insecure attachment has been shown to be related to higher levels of anger and hostility among non-offender adolescents (Winterowd, McCracken, & Wertheimer, 2000; Meesters & Muris, 2002). While insecure attachments have been related to higher levels of anger and hostility, this was the first time these relationships were found for juvenile offenders. These findings are consistent with previous research which indicates secure attachments are related to lower levels of state and trait anger and less expression of anger towards others (Winterowd, et al., 2001).

Previous studies have found that parental and peer attachments are predictive of trait anger (Winterowd, et al., 2001; DePriest, 2000; Troisi & D'Argenio, 2004). Surprisingly, results did not support previous research or the hypothesis that parental and peer attachment were predictive of trait anger. According to Deffenbacher et al. (1996), trait anger is a stable part of the personality allowing individuals to be prone to anger and

experience anger in the moment. From this perspective, it is likely trait anger was better accounted for by personality indicators than parental and peer attachment in this study.

### **Attachment and Anger Expression**

Bowlby (1973) suggested individuals with insecure attachments were likely to use anger dysfunctionally. Research has suggested that insecure attachments are related to problem behavior as well as juvenile delinquency (Longshore, Chang, & Messina, 2005; Nelson & Rubin, 1997). Juvenile offenders typically exhibit more aggressive behaviors and have difficulty managing negative emotions. From my professional experience working with juvenile offenders, there are increased rates of exhibiting negative emotions rather than "bottling up" emotions and suppressing them. Surprisingly, this study did not support these findings as results suggested attachment to parents and peers was not a significant predictor of the expression of anger. One possible explanation for the discrepancy in these findings is the variability of attachment figures of the participants. Though speculative, another explanation could be that among juvenile offenders there are other variables that account for the expression of anger such as poor coping skills, dangerous environments, and criminal activity.

### **Peer Attachment and Anger**

Parental and peer attachment are important in understanding anger in the moment for these juvenile offenders. According to Dekovic (1996), associating with deviant peers is a predictor of externalizing and internalizing problems and peers have an important role in risk and protective factors. This study found juvenile offenders with insecure attachments or detached relationships from peer groups are more likely to experience state anger; therefore, suggesting peer relationships are important in the

experience of anger at a given moment in time. Given that these juvenile offenders are in a residential treatment facility with one another, there may be trust and communication issues as well as experiences of alienation among peers that may foster anger in the moment. This finding supports previous research which indicated insecure attachment to peers is related to more state anger (DePriest, 2000). The adolescents in the present study were also more likely to control the expression of their anger if their relationship with peers was more secure. The results of the present study support previous research indicating that secure peer attachment is beneficial to adolescents. In particular, secure peer attachment is related to more emotional awareness, positive expressiveness, empathy, and prosocial behavior (Laible, 2007). If adolescents are secure in their peer relationships, they are more likely to have positive coping mechanisms for emotions and therefore have a healthier experience of anger in the moment and are more likely to control the expression of their anger with others. When individuals have more emotional competence, they likely experience less state anger because they better deal with the experience of anger. It is important to understand the relationship between peer attachment and anger as adolescents spend large amounts of time with peers. Moreover, adolescents often respect peer relationships and support from peers rather their parents. Further, this finding is important in a juvenile offender treatment setting because juveniles are constantly with peers on the units or in the facility. This finding suggests the importance of taking advantage of juvenile treatment settings in managing the experience of anger. More specifically, juvenile treatment providers can focus on including juvenile group members and teaching social skills in order to decrease the experience of anger.

## **Mother attachment and anger**

More insecurity in attachments with mothers was associated with more anger in the moment as well as more anger aggression for these adolescents. It is possible juveniles experienced more anger in the moment when filling out questionnaires as it may have made them reflect on their current feelings and situations, including their incarceration, being separated from their mother figures, or feeling bad about the relationships with their mother figures (i.e. having an insecure attachment). If a juvenile began thinking about the negative situations, it is likely their current state of anger increased which would explain the increased state anger scores. While randomization of the instruments occurred, it may not have controlled for expression of state anger because informing participants of the purpose of the study may have primed them to be more aware of their anger state or feel more anger in the moment.

In regards to anger aggression, previous research has indicated attachment to parents is one of the most important factors in externalizing problems, including aggression (Dekovic, 1996). Results of the current study support findings of Laible (2007) who found that secure attachment to parents was indirectly related to anger aggression. It is likely juvenile offenders who are more insecurely attached to their mothers are more likely to direct their anger outwardly toward others because they lack a social model of appropriate behaviors as proposed by Hirschi (1969). Furthermore, insecurely attached juveniles (in this case, to mothers/mother figures) likely lack the desire to act in a socially desirable manner (i.e. not act on their anger aggressively) because they do not experience anxiety when thinking about acting out. This is consistent with Social Control Theory (Hirschi & Gottfredson, 1994).

It was hypothesized mother attachment would be also be related to trait anger and anger-in; however, results do not support this hypothesis. This is surprising considering the literature on attachment theory that suggests the primary caretaker, often the mother, has more impact on the psychological well-being on an individual than other caretakers (Bowlby, 1973). Furthermore, Dekovic (1996) found that insecure parental attachments were related to internalizing problems. It is possible other factors, including individual differences, better account for trait anger and anger-in in this study. Mother attachment problems were also related to more deviance and/conflicts with authority figures 4 (or impulsiveness, disregard and shallowness) and unusual thinking and experiences 8 (or more bizarre thought processes, social isolation, difficulties in concentration and impulse control). This finding suggests the importance of the relationship with mother figures and the personality qualities for psychological functioning of juvenile offenders.

### **Father Attachment and Anger**

Father attachment was only found to have an inverse relationship with state anger suggesting the more secure a juvenile offender feels with their father figure, the less they experience state anger in the moment. Previous research found that father attachment predicted antisocial behavior (Marcus & Betzer, 1996); however, results of this study did not suggest a relationship between father attachment and the expression of anger. While this was the only significant finding related to father/child relationship in this study, it remains extremely significant for this population considering many juvenile offenders are from single parent homes and do not have traditional father figures (biological or step fathers) comparatively to non-offender adolescent populations. During test administration, juveniles often had difficulty identifying father figures and many stated

they never knew their fathers. From my personal experience working with juvenile offenders, many report poor relationships with males or lack of relationships with male role models.

Overall, parental and peer attachment prove to be important in relation to the experience and expression of anger. More specifically, parental and peer attachment were found to be predictive of state anger. Not surprisingly, mother attachment was found to be the most significant attachment relationship. Father attachment was only found to be related to state anger when juveniles identified an insecure relationship. Similar findings occurred in relation to peer attachment. Juveniles experienced more state anger when they viewed their peer relationships as more insecure.

This study also explored the relationship between personality (MMPI-A scales 4, 6, 8, 9) and the experience and expression of anger among juvenile offenders. While previous research has focused its attention on personality as it relates to anger, research is lacking in regards to MMPI-A specific scales and their relation to anger. Therefore, this variable was exploratory in nature with some guidance from the literature.

### **Personality and Trait Anger**

In the correlational findings, scales 8 and 9 were related to trait anger. Individuals who were characterized by having bizarre and peculiar thoughts and difficulties with concentration and impulse control as well as experiencing social isolation, alienation and confusion (scale 8) were more likely to experience trait anger. This scale is often used to identify individuals with schizophrenia; however, some individuals do not meet criteria and commonly feel different from others and generally report unusual experiences. This finding was expected as it is consistent with Wood and Newton (2002) which found that

psychoticism was predictive of anger. Juvenile offenders with hypomanic symptoms which may include grandiosity, egocentricity, irritability, elevated mood, and impulsivity (scale 9) were also more likely to experience trait anger. Similarly, prior research suggests neuroticism is predictive of anger (Wood & Newton, 2002).

The personality indicators (MMPI-A scales 4, 6, 8, 9) were significant predictors of trait anger, explaining 12.5% of the variance in trait anger. Juveniles experiencing chronic anger/deviance, reality testing problems, mania, and paranoia are likely to experience increased levels of anger across time and situations. Similarly, Grisso (1998) suggested impulsivity, anger, and lack of empathy were common among juvenile delinquents; however, it was the level of personality psychopathology that differentiated juvenile delinquents and non-juvenile delinquents on these variables. Higher levels of psychopathology among juvenile delinquents were found to predict trait anger in this study.

### **Personality and Anger Suppression**

All personality scales were related to anger suppression. Surprisingly, higher scores on scale 4 are also related to increased suppression anger. This finding is inconsistent with Taylor et al. (2007) which suggested individuals with impulsive/reactive and psychopathology personalities were more likely to have externalizing problems. One explanation for this finding is individuals with increased antisocial attitudes, lack of regard for others, and emotional shallowness are not as moved by or affected by their emotions as others, and therefore, they are more able to suppress those feelings they do experience. Furthermore, it is likely they choose suppress their anger because they simply do not care or lack a desire to solve uncomfortable emotions.

Juvenile offenders with higher reported feelings of paranoia are more likely to suppress anger. Individuals with higher scores on scale 6 tend to be suspicious, untrustworthy, rigid and experience problems with reality and social withdrawal (Archer, 1992), and therefore, this result is consistent with predicted findings. It is assumed that when these individuals experience anger, they are likely to suppress their anger because they are socially withdrawn and potentially apprehensive about the consequences of expressing anger outwardly due to their inherent paranoia. Likely, these individuals turn inwardly in order to avoid potential feelings of persecution.

Juveniles with characteristics related to poor reality testing and feeling different from others (scale 8) are also more likely suppress anger. They may suppress their anger as a result of their social isolation and alienation. Generally, delusional or peculiar thoughts may be the driving force behind whether an individual will express their anger outwardly or suppress anger. For example, if a juvenile offender has a delusion involving another person trying to get secrets from them, they may hold in anger to remain isolated from those people.

Correlations indicate juveniles with more characteristics related to mania (scale 9) have increased anger suppression. This finding was not expected because theoretically, these characteristics point to an increased risk of the outward expression of anger. In my experience working with juvenile offenders, those with higher energy levels, extraversion, irritability, and grandiosity were more prone to act out and receive disciplinary action, in part, because these juveniles were more impulsive. This finding is not consistent with the inherent traits associated with hypomania. An explanation for this finding is the overall subclinical elevations on this scale among the sample. Though



these juveniles may possess some characteristics aligned with scale 9, they may not reach the level which their behaviors become uncontrollable due to their increased levels of energy.

Personality (MMPI-A scales 4, 6, 8, 9) also predicted the extent to which juveniles hold in or suppress their anger accounting for 14.7% of the variance. Juvenile offenders with higher levels of psychopathology with regards to chronic anger/deviance, reality testing problems, mania, and paranoia were more likely to suppress their anger. It was assumed personality would be predictive of the expression of anger outwardly or aggressively rather than holding in or suppressing anger because of the inherent definitions of MMPI-A scales 4, 6, 8, and 9. This provides evidence for the relationship between personality indicators and internalization of problems. As an individual experiences more chronic anger/deviance, reality testing problems, mania, and paranoia, the more likely they are to internalize their anger.

### **Personality and Anger Aggression**

Correlational findings indicated scales 4 and 8 were related to anger aggression. Increased impulsivity, lack of regard for others and rules, and emotional shallowness (scale 4) increased the likelihood of expressing anger outwardly and aggressively. This finding is consistent with original assumptions because individuals with higher scores on scale 4 tend to present with more antisocial traits and have a disregard for others as well as have traits of entitlement and irritability. When these individuals experience negative emotions such as anger, they tend to deal with emotions in a way that suits them best without considering how their actions may affect others (i.e. act out aggressively or yell at someone).

Results indicate juveniles with delusional and unusual experiences as well as poor reality testing (as reflected in scale 8) are more likely to express anger outwardly toward others. Juvenile offenders with characteristics or who meet criteria for schizophrenia may express their anger outwardly because they have difficulties with reality testing, difficulty with impulse control, and sometimes delusional experiences. For example, if a juvenile offender has a delusion which involves another person attempting to attack them, they may act out their anger aggressively in an attempt to save or protect themselves.

Overall, personality is important in relation to trait anger and expression of anger. Personality as a whole and individual factors were found to be related to anger suppression suggesting the importance of focusing attention on personality traits in treatment in an attempt to teach and improve positive expression of feelings and experiences, including anger. Personality related to trait anger but not state anger which can be explained because state anger is measured in the moment opposed to over time. This is speculative in nature, but it seems personality is not significantly related to state anger because it is a trait and its impact more important on other trait variables.

It should be noted there were no variables, attachment or personality, related to or predictive of the ability to control anger expression outwardly or the ability to calm down or cool off. Previous research has found some relation between attachment and anger control out and anger control in (DePriest, 2000; Winterowd et al., 2001). DePriest (2000) indicated peer trust, communication, and alienation were related to the ability to control anger expression outwardly or the ability to calm down or cool off. Similarly, Winterowd et al. (2001) suggested secure attachment increased the likelihood an individual could control their anger expression outwardly. The ability to control the

outward expression of anger or to cool off are likely learned behaviors rather the result of felt attachment to parents and peers and personality traits.

### **Personality and Attachment with Anger**

Parental and peer attachment added significantly to the understanding of state anger when the relationships between personality and state anger were controlled. Though this finding is consistent with proposed hypotheses, it is surprising parental and peer attachment did not add significantly to the understanding of trait anger, anger aggression, or anger suppression when personality was controlled. As previously discussed, it is possible that juveniles experienced increased anger in the moment when asked to reflect on their relationships with mothers, fathers, and peers. When incarcerated, many juveniles have difficulty adjusting due to separation from caregivers. From my professional experience, many juveniles feel abandoned and unsupported upon incarceration because they do not get visits, phone calls, or letters as frequently as they expected. Furthermore, many juveniles report losing friends during this time because they "realize who their real friends are." In this respect, many find that their friends were not as loyal as they once believed. Juveniles often experience similar feelings regarding parents for various reasons. Some parents are unable to visit or pay for phone calls because of financial hardships in low socioeconomic systems (i.e. cannot get off work, do not have a car, live far from the facility, have many kids at home without a babysitter). It is assumed some parents do not visit because they do not want reinforce the behavior which got their child in trouble with the law. Though speculative, it is possible that parents who experience an insecure attachment with their child are less likely to visit, call, or write letters as they do not feel a strong connection to their child. All of these

potential situations could cause a juvenile to feel angrier in the moment when asked to reflect on their relationships.

### **Limitations of the Study**

There were several limitations to the study. An archival data source for the MMPI-A was employed for the purposes of this study. When using archival data, the ability to control aspects of the study, such as test administration, selection of participants, and demographic variables recorded are lost.

While MMPI-As were administered near the beginning of incarceration for each juvenile offender, the IPPA and STAXI-2 were given at different points in time for each juvenile offender. All juveniles are administered the MMPI-A during intake procedures prior to entering the Midwestern juvenile correctional facility while in detention centers or at the beginning of their incarceration at the Midwestern juvenile correctional facility. Because MMPI-As are administered at the initial stages of incarceration, it is likely juveniles were anxious or in a different mindset than when they took the other measures in the study. While the IPPA and STAXI-2 were given to each participant within the same two week time period, participants were at varied points in their sentences. More specifically, participants may have been near the beginning, middle, or end of their time at Midwestern juvenile correctional facility rather than all within the same period of incarceration. It is likely participants near the end of their sentence and with more treatment exposure may have exhibited learned coping skills in regards to anger. Moreover, it is possible results on the measures were not consistent with one another because of the different times of administration. For example, juveniles may have been upset or angry when given the MMPI-A but calm when given the IPPA and STAXI-2.

It should also be noted that the mean for MMPI-A scales were not clinically significant. Because participants were given the MMPI-A near the beginning of incarceration or just prior to incarceration at the Midwestern juvenile correctional facility, it is likely they had more defensive approaches or attempted to present themselves in a more favorable light as a protective factor. It should be noted, however, that participants were selected based on valid MMPI-A profiles; therefore, defensiveness or social desirability among participants did not significantly skew scores on scale 4, 6, 8, and 9.

Another limitation of this study is the sampled population. All participants were male juvenile offenders which are not representative of all juvenile offenders given females were not included in this study. Additionally, the majority of the sample included African American males, which is not representative of racial distributions among adolescents as a whole. However, this sample tends to be more representative of juvenile offender populations. Future studies need to address the issues of race and gender as they relate to attachment and anger in juvenile offenders.

The IPPA and STAXI-2 are self-report measures that do not include a measure of response bias or a validity scale. This may allow respondents to answer in a socially desirable manner without researchers being aware, hence, real differences in mental attachment to parents and peers and the experience and expression of anger may be masked by self-reporting bias. When using self-report measures, participants may not answer questions honestly, which may have influenced the results of the study. Additionally, participants completed the IPPA and STAXI-2 in group administrations. This could have affected the results of the study because participants could have been distracted or less likely to be open and honest regarding their attachment and anger. For

participants with lower reading levels, group administration could have affected their ability to concentrate and comprehend the materials. Each participant was given a candy bar for participating in the study. It is likely participants agreed to complete the measures in order to receive a candy bar rather than because they were interested in the outcome of the study.

Many juvenile offenders do not come from nuclear families in which both biological mothers and fathers are in the home. In order to best describe this sample, participants were asked to identify their mother and father figures on the attachment scales (i.e. biological mother/father, adoptive mother/father, stepmother/father, aunt/uncle, sister/brother, grandmother/grandfather, female/male teacher). Though this differentiation helped researchers understand the individuals in the mother and father roles, it is not a homogeneous sample. Further, this does not allow researchers to discern between the effect of proper parental attachment and the effect of parent figure roles in an individual's life. Similarly, participants knew their parental attachment figures for varying amounts of time (range = 3-19 years) limiting the generalizability of these findings to any one type of parental figure.

### **Suggestions for Further Research on Anger Among Juvenile Offenders**

Several areas could be considered for future research. This study found that parental and peer attachment is related to and predicts state anger. It would be interesting to further evaluate the nature and quality of the relationships with mothers, fathers, and peers as they relate to state as well as trait anger. Though this study explored level of insecurity in regards to attachment to mothers, fathers, and peers, future research should evaluate different attachment styles as they relate to state and trait anger. Correlational

and regression analyses were used in this study which does not allow causal statements to be made; however, future research could attempt to make causal relationships between attachment and anger in order to better understand the role attachment plays in the experience and expression of anger.

This study found that personality predicted trait anger and the ability to suppress or hold in anger. Future research could further explore this finding to better understand what types of personality or characteristics relate to the experience of anger and the ability to suppress anger. Specifically, research could better tease out the nuances of personality that predict trait anger or anger suppression.

Another suggestion for future research would be to look at attachment relationships in a qualitative manner. This study employed the use of self-report measures, and while those measures helped obtain the desired information, it is unclear whether participants were totally honest in their responses about attachment and anger. It would be interesting for future research to use a qualitative approach to measure attachment through clinical interviews or observations between parents and children or peers. Additionally, future research may be used to gain the parent's perspective of the child's attachment and experience and expression of anger. It would be interesting to compare the results of the child's perception of attachment and the parent's perception of attachment as they relate to the experience and expression of anger by the child.

Though the current study did not show that parental and peer attachment were related to or predicted the expression of anger, it would be interesting for future research to further investigate the subject. Furthermore, future research should explore the differences between violent and non-violent juvenile offenders on parental and peer

attachment and the expression of anger. It may also be of interest for future research to look at the differences of parental and peer attachment and the experience and expression of anger among different security levels, types of crime, and gender.

### **Implications for Theory and Practice**

Attachment to parents and peers likely play an important role on the experience of anger in male juvenile offenders. Parental and peer attachments were found to be predictive of state anger, concluding overall attachment is related to the subjective experience of anger. Importantly, parental and peer attachment are not related to trait anger or outward aggression and coping skills with regard to anger. It is possible that participating in this type of research and thinking about one's relationships with others may have made them feel more angry in the moment—made them more aware of their experiences—so there may need to be some debriefing afterwards. As a general rule, it is probably helpful to work with these youth on their attachments with others whether it is family therapy or not and to help them express their feelings including their anger. An implication for practice may be that family therapy be implemented in juvenile justice settings more regularly and rigorously. Moreover, therapist could implement or spend more time processing parent/child relationships and providing psychoeducation regarding healthy parent/child relationships in juvenile facilities or through homebound programs. Similarly, probation agencies could better monitor and place emphasis on the focus of family relationships. Mother attachment appears to have additional importance beyond other types of attachment; therefore, facilities could provide more therapeutic focus on mother/child relationships through family therapy and psychoeducation.



Though family therapy may be effective in improving attachment relationships among juvenile offenders and primary care providers, it is likely family therapy will not be effective for all juvenile offenders. According to Main and Weston (1981), though individuals may have insecure relationships with mothers and/or fathers they can still form important relationships with others, they have opportunities to interact with. Furthermore, forming new secure relationships can influence interactions with new people and mitigate the effects of insecure attachments from childhood (Main & Weston, 1981). Individuals should be given opportunities to form new, positive relationships with adults (George & Main, 1979.) This can occur in the therapeutic relationship with the therapist acting as an attachment figure and providing a safe environment (Sonkin, 2005; Stern, 2004).

With regard to peers, it is important for juveniles to feel secure and attached as there is relationship between juveniles feeling insecure and detached from their peers and the subjective experience of anger. As a result, juveniles could benefit from psychoeducational groups regarding healthy relationships with peers. Additionally, therapists could promote the importance of modeling appropriate peer relationship behavior and relationship building. An institutional setting provides an automatic milieu which can be easily adapted by therapeutic providers into a prosocial treatment setting.

Many juvenile justice settings focus on and place importance on externalizing behaviors (i.e. fighting) in order to promote safety and appropriate social behaviors. As a result, it is likely these settings overlook other types of anger expression. It is important juvenile settings do not dismiss the importance of holding in or suppressing anger as it can lead to both internalizing and externalizing problems if not addressed. When

providing treatment in juvenile settings, therapists should teach and promote positive coping skills in order to guard against aggressive behaviors and anger suppression.

Personality appears to be related to how often a juvenile experiences anger across time and situations. Therapists may be able to alleviate some subjective experience of anger by focusing on personality issues in treatment. Participants in this study only approached clinical significance on the MMPI-A, suggesting trait and characteristic levels of maladaptive personality. While in group therapy, therapists could model and teach appropriate social skills in an effort to decrease feelings of alienation, socially awkward behavior, and other maladaptive styles of interaction commonly seen in personality pathology represented in scales 4, 6, 8, and 9. Notably, findings of this study point to the importance of subclinical elevations on scales 4, 6, 8, and 9 regarding anger experience across time and anger suppression. Though not clinically significant, subclinical elevations should not be dismissed as they can still predict the experience of anger across time and anger suppression.

### **Summary**

The purpose of this study was to explore the relationships of parental and peer attachment and personality (MMPI-A scales 4, 6, 8, 9) with the experience and expression of anger in a male juvenile offender population. Attachment to parents and peers were found to be correlated and predicted of the experience and expression of anger. Though mother attachment appeared to be the most significant relationship as it relates to state anger and anger-out, father attachments were related to state anger and peer attachments were related to state anger and anger control-out. Personality is related to the experience and expression of anger, including trait anger, anger aggression, and

anger suppression. Future research may be used to determine causality, the influence of others variables in understanding anger (i.e. gender, types of crime, violent offenses, security levels, parental perceptions), specific attachment styles with anger, and different types of personality as they relate to anger. Implications for practice include helping juvenile offenders to build upon and strengthen relationships with parents and peers. Specifically, a focus could be placed on increased healthy communication with parents and peers. Additionally, juvenile offenders could benefit from increased amount of group therapy and family therapy incorporating social skills training, modeling positive behavior and relationships, as well as psychoeducation regarding healthy relationships and anger management. Group therapy and individual therapy may also incorporate more focus on personality traits in order to decrease the negative experience and expression of anger.

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Table 1

*Demographics of the Sample (n = 94)*

Age	m = 17.09	sd = 1.05	range = 14-19
Gender		n	%
Male		94	100
Race		n	%
African American		42	44.7
Hispanic		6	6.4
Indian/Native American		10	10.6
White/Caucasian		16	17
Asian		1	1.1
Multiracial		19	20.2
Year in High School		n	%
Freshman		10	10.6
Sophomore		28	29.8
Junior		26	27.7
Senior		13	13.8
H.S. Diploma		9	9.6
GED		8	8.5



Table 1 (continued)

Family Income	n	%
<10,000	3	3.2
10,001-15,000	3	3.2
15,001-20,000	1	1.1
20,001-30,000	2	2.2
30,001-40,000	3	3.2
40,001-50,000	1	1.1
50,001-60,000	1	1.1
60,001-70,000	1	1.1
70,001-80,000	1	1.1
80,001-90,000	1	1.1
90,001 or above	3	3.2
unemployed	7	7.4
unknown	67	71.3

Table 1(continued)

Mother Figure	n	%
Biological Mother	76	80.9
Adoptive Mother	2	2.1
Grandmother	7	7.4
Aunt	3	3.2
Sister	3	3.2
Teacher	1	1.1
Stepmother	1	1.1
Father Figure	n	%
Biological Father	64	68.1
Adoptive father	2	2.1
Grandfather	6	6.4
Uncle	3	3.2
Brother	1	1.1
Teacher	1	1.1
Stepfather	17	16

Table 2

*Means and Standard Deviations for IPPA, STAXI-2, and MMPI-A*

Measure Subscales	Mean	Standard Deviation	Range
<u>IPPA</u>			
Mother Attachment	83.32	10.98	61-125
Father Attachment	75.57	19.76	25-125
Peer Attachment	81.94	17.47	25-125
<u>STAXI-2</u>			
State Anger	26.29	12.59	15-60
Trait Anger	23.85	7.80	10-40
Anger-Out	18.32	4.69	8-29
Anger-In	17.95	4.80	8-32
Anger Control-Out	19.13	5.78	8-32
Anger Control-In	18.85	6.04	8-32
<u>MMPI-A</u>			
Scale 4	63.22	10.24	44-88
Scale 6	55.49	12.19	38-92
Scale 8	54.53	13.43	31-92
Scale 9	58.13	12.25	37-96

Table 3

*Correlation Matrix of IPPA Subscales and STAXI-2 Subscales*

	MTOT	FTOT	PTOT	SA	TA	AXO	AXI	ACO	ACI	S4	S6	S8	S9
MTOT	1.00												
FTOT	.18	1.00											
PTOT	.17	.01	1.00										
SA	-.26*	-.22*	-.25*	1.00									
TA	-.17	.03	-.09	.42**	1.00								
AXO	-.22*	-.09	-.04	.15	.36**	1.00							
AXI	-.19	-.16	.10	.24*	.15	.50**	1.00						
ACO	.10	.01	.22*	-.22*	-.41**	-.17	.50**	1.00					
ACI	.04	-.09	.21*	.27**	-.39**	-.06	-.06	.87**	1.00				
S4	-.38**	-.19	-.16	.14	.16	-.05	.31**	-.05	-.02	1.00			
S6	-.13	.09	.01	.02	.16	.02	.32**	.02	.11	.49**	1.00		
S8	-.27**	.07	-.04	.08	.29**	-.05	.36**	-.05	.04	.57**	.83**	1.00	
S9	-.15	.09	.07	.11	.29**	.16	.21*	-.08	-.07	.29**	.53**	.63**	1.00

\*p&lt;.05 \*\* p&lt;.01

Table 3 (continued)

*Correlation Matrix of IPPA Subscales, MMPI-A Scales, and STAXI-2 Subscales*

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MTOT = Mother Attachment

FTOT = Father Attachment

PTOT = Peer Attachment

SA = State Anger

TA = Trait Anger

AXO = Anger-Out

AXI = Anger-In

ACO = Anger Control-Out

ACI = Anger Control-In

S4 = MMPI-A Scale 4 (Psychopathic Deviate)

S6 = MMPI-A Scale 6 (Paranoia)

S8 = MMPI-A Scale 8 (Schizophrenia)

S9 = MMPI- A Scale 9 (Mania)

Table 4

*Summary of Multiple Regressions for Attachment as Predictors of State Anger, Trait Anger, Anger-Out, and Anger-In*

Variable	Beta	SE Beta	$\beta$	$R^2$	$F$	$p$
<i>State Anger</i>				.14	4.62	<.01
Mother Attachment	-.13	.07	-.19			
Father Attachment	-.09	.05	-.18			
Peer Attachment	-.15	.07	-.21*			
<i>Trait Anger</i>				.04	1.20	>.05
Mother Attachment	-.07	.05	-.16			
Father Attachment	.15	.03	.05			
Peer Attachment	-.40	.05	-.09			
<i>Anger-Out</i>				.05	1.66	>.05
Mother Attachment	-.05	.03	-.21			
Father Attachment	-.01	.02	-.06			
Peer Attachment	-.01	.03	-.03			
<i>Anger-In</i>				.06	1.92	>.05
Mother Attachment	-.04	.03	-.15			
Father Attachment	-.03	.02	-.14			
Peer Attachment	-.02	.03	-.08			

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

Table 5

*Summary of Multiple Regressions for Personality as Predictors of State Anger, Trait Anger, Anger-Out, and Anger-In*

Variable	Beta	SE Beta	$\beta$	$R^2$	$F$	$p$
<i>State Anger</i>				.03	.77	>.05
Scale 4	.19	.16	.15			
Scale 6	-.16	.20	-.16			
Scale 8	.05	.20	.05			
Scale 9	.11	.14	.11			
<i>Trait Anger</i>				.13	3.19	<.05
Scale 4	.01	.09	.02			
Scale 6	-.17	.12	-.27			
Scale 8	.22	.12	.38			
Scale 9	.12	.08	.19			
<i>Anger-Out</i>				.09	2.10	>.05
Scale 4	.07	.06	.15			
Scale 6	-.07	.07	-.18			
Scale 8	.10	.07	.29			
Scale 9	.01	.05	.03			
<i>Anger-In</i>				.15	3.84	<.05
Scale 4	.07	.06	.16			
Scale 6	.03	.07	.07			
Scale 8	.08	.07	.22			
Scale 9	-.00	.05	-.01			

\*  $p < .05$

\*\*  $p < .01$

Table 6

*Hierarchical Regressions for Attachment and Personality as Predictors of State Anger and Trait Anger*

Variable	Standard $\beta$ Coefficient	$R^2$ Change	F	df
<i>State Anger</i>				
Step 1				
Scale 4	.140			
Scale 6	-.149			
Scale 8	.083			
Scale 9	.101			
		.034	.77	4, 88
Step 2				
Mother Attachment	-.174			
Father Attachment	-.195			
Peer Attachment	-.223			
		.12	2.13	3, 85
<i>Trait Anger</i>				
Step 1				
Scale 4	.031			
Scale 6	-.268			
Scale 8	.346			
Scale 9	.201			
		.12	2.92	4, 88
Step 2				
Mother Attachment	-.075			
Father Attachment	.013			
Peer Attachment	-.101			
		.02	1.86	3, 85

Note: Each group of rows presents results of a separate hierarchical regression equation.

\*  $p < .05$       \*\*  $p < .01$



Table 7

*Hierarchical Regressions for Attachment and Personality as Predictors of Anger-Out and Anger-In*

Variable	Standard $\beta$ Coefficient	$R^2$ Change	F	df
<i>Anger-Out</i>				
Step 1				
Scale 4	.162			
Scale 6	-.177			
Scale 8	.264			
Scale 9	.035			
		.081	1.93	4, 88
Step 2				
Mother Attachment	-.119			
Father Attachment	-.062			
Peer Attachment	-.012			
		.02	1.31	3, 85
<i>Anger-In</i>				
Step 1				
Scale 4	.149			
Scale 6	.066			
Scale 8	.231			
Scale 9	-.013			
		.15	3.85	4, 88
Step 2				
Mother Attachment	-.049			
Father Attachment	-.165			
Peer Attachment	-.071			
		.03	2.70	3, 85

Note: Each group of rows presents results of a separate hierarchical regression equation.

\*  $p < .05$       \*\*  $p < .01$

## APPENDICES

## APPENDIX A

### Review of the Literature

## **Review of the Literature**

Juvenile arrest rates are at an all time high in the United States. The U.S. Bureau of the Census (2006) reported more than 200 million arrests among juveniles in 2003, a 77% increase from 1980. Drug abuse arrests alone have increased 10%, along with an 8% increase of possession arrests from 1980 to 2003. The rising trend of juvenile arrests has implications for increased delinquent recidivism (Thornberry, Huizinga, & Loeber, 2004). Snyder (2002) stated that, in 2000, there were an estimated 2.4 million juveniles arrested in the United States. Pastore and Maguire (2003) estimated that 90,555 juveniles between the ages of 13 and 18 were in the custody of juvenile facilities in 2001. In the state of Oklahoma, there were a total of 23,124 referrals to the juvenile justice system in 2006 (Office of Juvenile Affairs, 2007). Of those 23,124 juveniles, 9,262 were first time offenders and 1,329 engaged in violent crimes (Office of Juvenile Affairs, 2007). These alarming statistics are particularly of interest because adolescents in the juvenile system today may be our adult offenders in the future. Though it is true many adolescents in the juvenile system today will not end up in adult facilities, those who do will show increasingly severe behaviors as they age. It is likely these behaviors will become lifelong maladaptive patterns of behavior.

According to Loeber (1990), juvenile delinquency is a subset of antisocial behavior involving a legal violation. Juvenile delinquency can also be defined as “a pattern of illegal behavior committed by a minor” (Shaw, 1983, p. 889). Juvenile delinquency has proven to have a number of negative outcomes in adulthood, such as crime, substance abuse, financial and educational problems, unemployment and divorce

(Sampson & Laub, 1990). Loeber (1990) outlines three developmental paths that contribute to delinquency which include the Aggressive-Versatile Path, the Non-aggressive Path, and the Exclusive Substance Abuse Path. The Aggressive-Versatile Path begins during preschool years and involves aggressive and non-aggressive conduct problems and hyperactivity, where as the Non-aggressive Path begins in late childhood or early adolescence and involves non-aggressive conduct problems such stealing, lying, and cheating (Loeber, 1990). These behaviors often surface around deviant peers. The Exclusive Substance Abuse Path begins in early to middle adolescents and does not involve a considerable precursor to conduct problems; however, does involve substance use (Loeber, 1990).

In this literature review, I summarized what we know about the experience of anger and aggression in juvenile offenders as well as their experiences in relationships with others, particularly their attachment styles, along with an exploration of personality variables that related to offending behaviors and among juvenile offenders specifically.

### **Anger**

Many juvenile delinquents tend to have problems with anger which, in turn, influences their aggressive behaviors and decisions to engage in criminal behavior. Anger can have positive and negative effects on individuals in general. It is a functional response to stressors that each individual experiences at varying levels. Anger can serve as a protective factor in adolescents, in that, the experience of anger can help adolescents improve their self-assertion in social situations and find their place socially (Winterowd et al., 2001). Anger can be a normal reaction to provocation or frustrations, and, in turn,

protection of oneself physically and psychologically (Towl & Crighton, 1996). The experience of anger can enhance motivation and goal-setting.

While there are positive implications of anger, there are a number of negative consequences for experiencing anger as an emotion. Novaco (1994) reported that anger can be destructive, physically and psychologically harmful, and the precursor to other problems, such as depression and aggression. Suinn (2001) reported that experiencing the emotion of anger leaves individuals compromised to contracting illnesses, at risk for increased pain, and heart problems. Anger has been found to precede the diagnosis of conduct disorder (Rule & Nesdale, 1976). Often times, anger becomes a maladaptive emotion when it leads to expressions frequently, inappropriately, or unwarranted for the situation (Towl & Crighton, 1996).

Anger is often characterized by aggression and hostility. While these constructs are interrelated, they are separate constructs that should not be included in the definition of anger. Spielberger, Rehieser, and Sydeman (1995) separate these constructs by defining anger as an emotion, hostility as an attitude, and aggression as a behavior. In fact, higher levels of anger have been associated with an increased risk for aggressive expression (Novaco, 1994).

Several researchers have confirmed the relationship between anger, hostility, and aggression in adolescents (Cornell et al., 1999; Deffenbacher & Swaim, 1999; and Graham et al., 1992).

Cornell et al. (1999) explored the usefulness of anger self-report measures in assessing aggressive behaviors in incarcerated juvenile offenders. Sixty-five male

juvenile delinquents completed the Novaco Anger Scale, the State-Trait Anger Inventory, and an adapted Social Desirability Scale. Offense history, staff ratings, and aggressive incident reports were also collected in this study. Though the anger scales were not predictive of prior violent offenses, Trait Anger, Anger-Out, and Anger Control were significantly correlated with physical aggression among juvenile offenders. Verbal aggression significantly correlated with the anger (i.e., NAS Part A), Trait Anger, and Anger Out. Results indicated that both measures of anger moderately predicted physical aggression among juvenile offenders while incarcerated. These researchers theorized that anger proneness may be a precursor to aggressive behavior in juvenile offenders.

Graham et al. (1992) explored the attribution-affect-action link among aggressive and non-aggressive ethnic minority adolescents. Forty four Latino and African American adolescents were labeled as aggressive by teacher and peer ratings and matched with 44 non-aggressive adolescents. Participants were given scenarios involving negative outcomes initiated by a peer. They were asked to make judgments regarding the peer's intentions, their own feelings of anger, and the likelihood they would be aggressive towards the peer in the scenario. Researchers found that all participants believed the act was intentional on the part of the peer. Of interest, aggressive participants perceived the negative outcome as more intentional than non-aggressive participants. On the affective domain, participants reported feeling less angry in the pro-social condition and most angry during the hostile condition. Overall, aggressive participants reported feeling more anger than their non-aggressive counterparts. In addition, aggressive participants were more likely to prefer to "get even" and "have it out right then and there" compared to the

non-aggressive participants. In sum, these researchers found that aggressive adolescents were more likely to experience anger toward the peer and to report an interest in engaging in hostile behaviors toward the peer. This study gives further evidence that higher levels of anger were related to aggressive expression.

Deffenbacher and Swaim (1999) explored aggressive anger expression in an adolescent sample. Participants consisted of 526 Caucasian male, 662 Caucasian female, 603 Hispanic male, and 780 Hispanic female 7-8<sup>th</sup> graders, and 699 Caucasian male, 966 Caucasian female, 858 Hispanic male, and 1,193 Hispanic female 9-12<sup>th</sup> graders. Participants were given the Anger Expression Scale and the Anger, Depression, and Anxiety Rating Scales. A three-factor model was developed, including, Expression Through Verbal Assault, Physical Assault Toward People, and Physical Assault Toward Objects. Results indicated that anger, anxiety, and depression correlated with the 3-factor model; however, anger more strongly correlated with the model than depression or anxiety. These researchers provide more evidence to support the link between anger and aggression.

It is possible for an individual to feel anger as an emotion but not act out on the feeling physically. There is also a possibility for an individual to feel anger and not show an attitude about it (i.e., not be hostile toward others). Anger can be associated with aggression and hostility; however, it is a construct that can stand alone. Researchers have attempted to define anger; yet, it is one of the most unclear emotional constructs in the literature. There are many definitions of anger which include both behaviors and emotional states.



Novaco's (1978) anger model indicates that anger is an expression regarding interactions between external events, cognitions, and behaviors. Interpretations of aversive events through scripts and schemas arbitrate information into behaviors (Novaco, 1978); therefore, if an aversive situation is interpreted as negative, then anger will likely be experienced (Novaco, 1978). These scripts provide information on how to deal with anger and when to experience anger (Averill, 1982). Novaco's conceptualization of anger poses that deviant forms of anger and aggression may be formed when there is maladaptive socialization. Furthermore, when children observe and take in inappropriate ways of expressing and controlling anger, they develop deviant forms of anger (Averill, 1982; Kassinove & Sukhodolsky, 1995).

Anger is an ever changing state of emotion which is characterized by physiological stimulation and hostile thoughts (Novaco, 1994). Anger is an emotional response to an aversive situation, which is both cognitive and physiological in nature (Novaco, 1997). Similarly, Kassinove and Sukhodolsky (1995) define anger as a negative emotional state varying in length and intensity which is related to emotional stimulation and a discernment of being mistreated by others. Moreover, Kassinove and Sukhodolsky (1995) linked the anger experience with cognitive distortions and maladaptive behaviors. Averill (1982) defined anger as a socially constructed emotion with three levels of interaction: psychological, sociocultural, and biological.

For the purposes of this study, Spielberger's (1996) definition of anger was used. Spielberger (1996) defines anger as an emotional state which can vary in intensity or as a personality trait. Spielberger (1988) proposed a model of anger that differentiated

between anger experience and anger expression. According to Spielberger (1988), anger experience is a subjective experience that varies in intensity and duration. Anger expression, on the other hand, is an individual's tendency to act on their anger outwardly, holding it in, or coping with it (Spielberger, 1988).

**State-trait anger theory.** “State-trait anger theory proposes trait anger as a fundamental individual difference in the propensity to become angry” (Spielberger 1988, as cited in Deffenbacher, et al., 1996, p. 145). Furthermore, Deffenbacher (1996) added that individuals with high trait anger become angry with higher intensities and frequencies than individuals who experience low trait anger. The study also found that trait anger was positively correlated with the occurrence of state anger. Deffenbacher (1996) further explains that individuals with higher anger, in general, exhibit more maladaptive coping styles and experience more negative consequence from their anger. The study also found that individuals who experienced higher trait anger were angered by more situations and more often than others. Their anger was also reported to be more intense on more occasions. Individuals experiencing higher anger were more likely to have negative consequences when they exhibited anger out because they had more dysfunctional coping styles and they used more outwardly harmful and inwardly suppression expressions of anger (Deffenbacher, 1996).

Spielberger (1999) proposed there were two types of anger: state and trait. State anger is defined as an emotional physiological state which is made up of subjective feelings and physiological stimulation. State anger is experienced on an emotional continuum from little to no anger such as annoyance or irritation up to high intensity

emotions such as rage and ferocity. It also moves on a physiological continuum from little to no physiological arousal to intense sympathetic arousal, muscle tension, and the release of adrenal hormones (Deffenbacher et al., 1996). State anger occurs as a reaction to situations and varies in duration and intensity (Spielberger, 1999). Spielberger (1999) defines trait anger as a disposition to experience the emotion of anger as an aspect of personality. Trait anger is thought of as a stable personality aspect of anger proneness or tendency to experience state anger (Deffenbacher et al., 1996).

Anger is also distinguished by its expression and control (Spielberger, 1999). Spielberger (1999) further separated anger expression and control into categories: anger expression out, anger expression in, anger control out, and anger control in. Anger expression out is defined as anger expressed outwardly to others or objects. Anger expression in is directed inwards to the self or the suppression of anger. Anger control out is the ability to control anger by preventing the expression of anger outwardly onto others or objects. Anger control in is the ability to suppress anger emotions by calming or soothing oneself.

**General strain theory.** Theories have been developed to conceptualize the development and maintenance of behaviors of juvenile delinquency. Agnew (1992) differentiated between two types of strain: objective and subjective. Objective strain are events or situations rejected by most people in a given group, such as physical assault. Subjective strain pertains to events that are rejected by those experiencing them or have experienced them, such as divorce or death (Agnew, 1992). According to Froggio (2008), the experience of subjective strain has been positively related to experiencing

more negative emotions. There are three identified types of subjective strain: when we prevent or threaten individuals from achieving their positive goals, when we remove or threaten to remove positive stimuli, and when we present or threaten to present individuals with negative stimuli.

Agnew's (1992) general strain theory posits that perceived loss of control of circumstances or strain leads to feelings of frustration and anger. Strain is defined as a situation where positive stimuli are removed or negative stimuli are presented, particularly focusing on negative relationships with others (Agnew, 1992). Perception of an adverse environment will lead to strongly negative emotions that motivate one to engage in crime. When strains are present in relationships they tend to stimulate negative emotions, such as anger, which foster a need to change the circumstance (Agnew, 1992). Agnew distinguished between trait and state anger, focusing on state anger in his general strain theory. Often times, delinquency is a means to change the uncontrolled circumstance to gain greater control and to alleviate strain in one's life (Agnew, 1992). Agnew (1992) explained a connection between delinquency and being stuck in aversive situations. When stuck in aversive situations, feelings of anger, frustration, rage, and resentment emerge (Agnew, 1992). In this scenario, anger fosters a sense of retaliation, lends to antisocial behaviors, and lowers inhibitions because the juvenile feels justified (Agnew, 1992).

Blockage of pain-avoidance behavior often leads to frustration and can reinforce the use of illegal behaviors or anger-based delinquency. Agnew (1985) tested the theory of pain-avoidance behavior as it relates to juvenile delinquency. Survey data was

collected from 2, 213 10<sup>th</sup> grade adolescent boys. Information was collected regarding environmental aversion (e.g., parental punitiveness, mean teacher, and dissatisfaction with school), anger, social control/subcultural deviance measures of delinquency (i.e., seriousness, interpersonal aggression, and escape attempts from school). Results indicated that environmental aversions were significantly and positively related to anger. Additionally, individuals in aversive environments become angry, which in turn, results in delinquency (i.e. seriousness, interpersonal aggression, and escape attempts from school). Environmental aversion had a larger effect on interpersonal aggression than any other variables, including parental attachment, grades, aspirations, and values. Parental punitiveness, having a mean teacher, and experiencing dissatisfaction with school was related to the seriousness of delinquency. Researchers concluded that the blockage of pain-avoidance behavior is a major factor in juvenile delinquency.

Broidy (2001) examined general strain theory regarding the relationship between anger, coping, and criminal outcomes. Participants included 896 males and female college students with an average age of 21. Measures focused on failure to achieve goals, stressful events, emotions, coping strategies, criminal outcomes, self-esteem, family emotions, disciplinary atmosphere, deviant peers, and deviant opportunities. Results indicate that strain-induced anger increased the likelihood of criminal outcomes. All types of strain were found to be related to anger, including lack of fairness in outcomes of goals and stressful events. Stressful events were more likely to elicit anger.

**Anger and juvenile delinquents.** There is little research examining the experience of anger in juvenile delinquents, rather research has focused on the outward

expression of anger or aggression in juvenile delinquents. Deffenbacher, Oetting, Thwaites, Lynch, Baker, and Stark (1996) conducted eight studies in order to present support for state-trait anger theory. The purpose of the studies were to test the central postulates of state-trait anger theory: (a) trait anger indicates a tendency to become easily angered, (b) trait anger indicates a tendency to respond with more intense anger when provoked, (c) high trait anger individuals will deal with anger less well and be less positive and constructive, (d) high trait anger individuals are more likely to experience negative anger consequences, and (e) trait anger should relate to other anger constructs than non-anger constructs. All eight studies included introductory psychology students identified as high anger students (i.e. scoring in the upper quartile of the Trait Anger Scale) and having problems with anger as well as low anger students. Students were given the Trait Anger Scale, Anger Inventory, Anger Situations, Anger Log, Anger Symptom Index, State Anger Scale, Coping Strategies measure, Anger-In and Anger-Out, Trait Anxiety Inventory, and resting blood pressure and pulse exams. Results of studies 1-3 indicated that high anger participants reported greater anger when provoked, greater anger-related physiological arousal, higher state anger and maladaptive coping when provoked, and higher suppression and negative expression of anger than low anger participants. Results of studies 4-5 indicated that high anger participants experienced more intense and frequent anger consequences. Results of studies 6-8 indicated that trait anger was more correlated with aspects of anger than other emotions, thoughts, and behaviors. In conclusion, researchers report that higher anger individuals experienced

anger from provocation easier, more frequently and intensely on a weekly basis, indicating they get angry at more things than low anger individuals.

Anger has been shown to be pervasive in juvenile delinquent populations. General strain theorists have conceptualized the role of anger in juvenile delinquency. Anger has been associated with attributional patterns (Eaken, 2001), age of offenders (Eaken, 2001), the type of offenses (i.e., violent) (Eaken, 2001), traumatic events (Plattner, Karnik, Jo, Hall, Schallauer, Carrion, et al., 2007) in juvenile offenders. It appears that provocation plays a role in anger experience and ultimately delinquent behavior.

Eaken (2001) explored the relationship between self-reported levels of anger and attributional patterns in a juvenile offender population and the chronicity of their offending and the development of violent acts. Researchers also examined whether self-reported levels of state and trait anger were related to the number of violent offenses. Lastly, Eaken (2001) explored whether self-reported levels of state and trait anger was predictive of chronicity of offending. The study included 152 male juvenile offenders, ranging in ages 13-18. Chronic offenders had an average of 6.65 arrests and 9.21 charges while non-chronic offenders had less than 2.19 arrests and 3.36 charges. Violent offenders 1.66 violent offenses and offenses included battery, sex offenses, robbery, and intimidation. Participants were given the STAXI and an Attributional Questionnaire, which was made up of vignettes. When compared to non-violent offenders, violent offenders were found to have higher scores on State Anger, Trait Anger, Anger-In, Anger-Out, and Anger-Control. Violent offenders reported higher rates of Trait Anger

and Anger -Out, where as non-violent offenders reported higher rates of Anger-Expression. Results indicate that high levels of Trait Anger and age of first offense were predictive of violent offenses. In addition, researchers found that State and Trait Anger did not predict chronicity; however, level of anger was related to type of offense committed. Significant differences were found between violent and non-violent offending juveniles, attributing more hostile intent against antagonists in ambiguous situations; however, there were little differences between groups on most interpreted situations. Researchers believed that violent offenders may have a predisposition to respond to provocation with higher levels of state anger. Researchers recommended more research on attributional styles among juvenile offenders. Moreover, researchers suggested more research be done to differentiate between male and female violent offenders. It was also suggested that more research be conducted on anger during emotionally-charged situations.

Plattner et al. (2007) examined the role of trauma in the development of delinquency through reactions to stressful events by expressed emotions. Participants were 56 male and female juvenile delinquents, ranging in ages 11-16. A comparison group was used of 169 male and female high school students, ages 14-18. Participants were given the Childhood Trauma Interview, the Weinberger Adjustment Inventory – Modified, the Stress Inducing Speech Task, and the Visual Analogue Arousal Scale. Results indicate that delinquents show significantly higher levels of negative state and trait emotions than the non-delinquent high school group. Moreover, the number of trauma events was found to be correlated with trait emotions. State emotions,



particularly anger, were found to be correlated with severity of trauma. Anger and sadness were significantly related to one another in the delinquent subsample. These findings imply that juvenile delinquents respond to stressful situations with a greater range of emotions and with convergence of sadness and anger. This helps to explain why juvenile delinquents have reactive aggression; their functional emotions are compromised in stressful situations.

In summary, aggression has been linked with the experience of anger. Though anger has been shown to precede aggression, the experience of anger does not necessitate aggressive behaviors. General strain theory suggests that when individuals experience situations that produce strain, they often feel frustrated and angry. Furthermore, in an attempt to reduce this strain, individuals often turn to delinquency to change their circumstances. Research indicates that anger has been connected with provocation, attributional patterns, age of offenders, the type of offenses, and traumatic events among juvenile offenders.

Attachment as it relates to juvenile delinquency will be explored in the following section. Additionally, the relationship between attachment and the experience and expression of anger will be discussed.

### **Attachment**

Researchers have focused on role of family functioning in the development of antisocial behaviors among juvenile offenders. It is important to address family relationships and interactions (Nye, 1958) when working with juvenile offenders given

that caregivers and peers tend to have an important influence in mediating and maintaining delinquent behavior among adolescents (Aseltine, 1995).

As proposed by Bowlby (1969), attachment theory has provided a framework in which to understand lifelong development. Additionally, attachment theory helps to understand the “propensity of human beings to make strong affectional bonds to particular others” (Bowlby, 1977, p. 201). Paterson and Moran (1988) define attachment theory as a bond that is developed with another individual who is stronger and wiser than the individual. Bowlby (1988) suggested that this attachment behavior, to be close to the stronger and wiser individual, is a form of protection. Infants develop their expectations of others and begin to understand their own abilities to interact with others through their parent’s accessibility, sensitivity, and responsiveness (Bowlby, 1969). Bowlby referred to these expectations of self and others as internal working models. Bowlby believed that internal working models guide and provide structure for future relationships (Bowlby, 1980). Moreover, problems in attachment may lead to future maladaptive relationships.

Bowlby’s attachment theory inspired the research of Mary Ainsworth. Through the “strange situation” research study, Ainsworth described three responses patterns: secure, anxious-avoidant, and anxious-ambivalent (Ainsworth et al., 1978).

Securely attached infants used their mothers as a secure base in which they explored things around them. When separated from their mother, they were upset; however, welcomed their mothers’ return. Securely attached individuals feel more confident in their parent’s ability to meet their needs (Brown & Whiteside, 2008). Mothers of securely attached infants were supportive and responsive to their infant.

Anxious-avoidant infants appeared to not need their mothers and avoided their mothers upon their return. Mothers of avoidant infants tended to express little emotion and had little physical contact with their infants.

Anxious-ambivalent infants refused to explore and appeared to be extremely anxious when separated from their mothers. Upon the return of their mothers, they oscillated between wanting contact and having tantrums. These infants are likely to respond to their mothers in anxious and angry ways (Brown & Whiteside, 2008). Mothers of anxious-ambivalent infants were inconsistent in their responses towards their infants. Campos et al. (1983) reported that approximately 62% of infants are securely attached, 23% are anxious-avoidant, and 15% are anxious-ambivalent.

Ainsworth's response patterns were thought to indicate how individuals would deal with others in interpersonal relationships. Securely attached individuals tend to be more affectionate, relaxed, energetic, impulsive, and outgoing. Furthermore, these individuals are persistent and cooperative (Tanaka et al., 2008). Insecurely attached individuals were the opposite of securely attached individuals, in that they were fearful, preoccupied, had low self-directedness, and had more experiences of being bullied (Tanaka et al., 2008). Individuals with insecure attachments are at a greater risk for experiencing fear and anxiety and other psychosocial problems than are securely attached individuals (Brown & Whiteside, 2008).

Attachment theory literature has primarily focused on infancy and childhood. Much of the research done extending infancy and childhood has been dedicated to the development of measures for attachment relationships in adolescents and adulthood

(Vermeer, 1997). Based on Bowlby's attachment theory, Bartholomew added to Ainsworth's attachment classification system by focusing on adolescent and adult attachment styles. Bartholomew identified four attachment styles which incorporated two levels of "self" (positive and negative) and "others" (positive and negative). : secure, preoccupied, fearful-avoidant, and dismissing. Secure attachments include having a positive view of self and others. These securely attached individuals are comfortable with intimacy and autonomy feel worthy and lovable, and have the expectation that others are accepting and responsive (Bartholomew & Horowitz, 1991). Individuals with preoccupied attachments tend to have a negative view of self and positive view of others. These individuals tend to be preoccupied with relationships and feel unworthy (Bartholomew & Horowitz, 1991). Individuals with fearful attachment style tend to have negative views of self and others. In particular, they tend to be fearful of intimacy and are socially avoidant (Bartholomew & Horowitz, 1991). Moreover, they are likely to feel unworthy and are untrusting and rejecting of others. Individuals with a dismissing attachment style tend to have a positive view of self and negative view of others. These individuals tend to be dismissing of intimacy and are counter-dependent (Bartholomew & Horowitz, 1991). This is likely to happen because these individuals feel lovable, yet guard themselves against the negative disposition of others.

It has been argued that juvenile delinquency occurs, in part, as a result of weak or insecure attachments with others. This will be discussed in the next section.

**Attachment and juvenile delinquency.** Juvenile delinquency can often times be traced back to the impact of significant individuals in childhood. The quality of parental

attachment may play a role in juvenile delinquency (Rosen, 1985). More serious criminal behaviors were related to security of attachment to caregivers and peers. Adolescents who learn early in life not to trust others are likely to become lonely or feel as if they do not belong (Nunn, 1997). Moreover, it is likely these individuals turn to delinquent behavior because they have no conceptualization of attachment to others (Nunn, 1997). Bonds to society develop from attachment to early caregivers and family life in general (Nunn, 1997). Attachments allow individuals to become sensitive to the opinions of others and develop the ability to take on perspectives of others (Hirschi, 1969).

Hirschi theorized that the more attached adolescents are attached to their parents, the less delinquent behavior they will exhibit in society. Conversely, the less attachment there is, the more likely they will exhibit delinquent behavior. Families can be seen as a micro-systems of the larger society (Nunn, 1997).

When bonds to others and/or society are weakened, the societal forces that typically keep individuals from committing delinquent behaviors are reduced (Hirschi, 1969). According to Social Control Theory, delinquent behaviors arise due to weak bonds, including problems with attachments (i.e., affection for others and social institutions), commitments (i.e., investment in personal goals), involvement (i.e. the amount of time one spends on activities), and beliefs (i.e., commitment one has to conventional values; Anderson, Holmes, & Ostresh, 1999).

According to Hirschi and Gottfredson (1994), there are two types of social control that keep individuals from exhibiting delinquent behavior: internal control and external control. Internal controls are internally motivated or forms of self-control whereas

external controls are controls that are on the outside of an individual (Nunn, 1997).

Individuals tend to experience anxiety when thinking about committing a crime (Hirschi & Gottfredson, 1994) because of the potential consequences they may receive from their attachment figure. Adolescents who have secure attachments tend to care about their parents' reactions and consider those reactions prior to committing a crime (Anderson et al., 1999). The opposite can also be true; if adolescents have insecure attachments with their parents, they tend to disregard their parent's values and/or reactions and are at risk for committing delinquent acts.

Externalizing behaviors include substance use, conduct problems, school problems, and juvenile delinquency (Dekovik, 1999). They are problems that are turned outward, rather than into the self. Dekovik (1999) indicates that externalizing problems are more noticeable and have more consequences; therefore, they are more often studied than internalizing problems. Loeber (1990) suggests that externalizing problems are more often studied than internalizing because many adolescents participate in some antisocial behaviors throughout their adolescence. Internalizing behaviors are problems turned inward (e.g. depression, anxiety, withdrawal) (Dekovik, 1999). Internalizing behaviors are more difficult to spot because they typically do not draw the same attention or consequences as externalizing behaviors do (Dekovik, 1999).

To date, there are six research findings to support the relationship between parental-adolescent attachment problems and behaviors associated with juvenile delinquency (i.e., internalizing and externalizing behaviors; type of offenses; Anderson et al., 1999; Dekovic, 1999; Gurevich, 1996; Leas & Mellor, 2000; Longshore et al.,

2005; Marcus & Betzer, 1996; Nicholson, 2000). However, one researcher did not find a relationship between attachment and juvenile offenses (Nunn, 1997). Of interest, only a few researchers have explored the relationship of peer attachment and offender behaviors (i.e., Dekovic, 1999; Marcus & Betzer, 1996; Nicholson, 2000; Nunn, 1997).

Dekovic (1999) explored the importance of risk and protective factors regarding individual attributes of adolescent, family attributes, and extrafamilial attributes. Additionally, this study examined what impact risk and protective factors had on internalizing and externalizing problems. Participants included 508 families with adolescents (254 females and 254 males). Measures administered included the Depressive Mood List, single-item to assess well-being and happiness, single-item to assess suicidal thoughts, Mini-VOEG, 18-item scale for oppositional and aggressive behaviors, 6-item scale for low achievement motivation, Rosenberg's Self-Esteem Scale, parental strictness scale, 10-point scale assessing support, association with deviant peer questions, 4-items assessing extreme peer orientation, Utrecht Coping List, GPA, Inventory of Parent and Peer Attachment, 6-item scale assessing monitoring of activities, and an 8-item scale assessing acceptance by peers. Results indicate that Association with Deviant Peers is a predictor of internalizing and externalizing problems. Furthermore, low parental support and low self-esteem were predictive of internalizing problems. Attachment to parents and peers were the most significant predictors of externalizing problems. In conclusion, researchers suggested that family factors were related to internalizing and externalizing problems; however, peers had a more important role in risk and protective factors as they relate to development of problem behavior.

Researchers recommended that future research be conducted on the role of risk and protective factors on dysfunction.

Gurevich (1996) examined the relationships among attachment, social information processing deficits, and violent behavior in juvenile offenders. Participants included 108 male juvenile offenders, ages 15-18. Measures administered included the Adolescent Attachment Questionnaire. Social Information processing was assessed with vignettes and questionnaires regarding hostile attributional bias, response access bias, preference for aggressive solutions, and response evaluation bias. Violent behavior was assessed through number of violent convictions committed, seriousness of violent convictions, number of violent incidents, and staff ratings of physical aggression. Reactive and instrumental aggression were measured through staff ratings. Juvenile offenders who reported more insecure attachments had more violent offenses than those who had more secure attachments to their primary caregiver. The Lack of Secure Base (i.e. the inability to maintain feelings of security in the absence of the parent) and Role Reversal subscales (i.e. degree to which the adolescent feels the need to care for the parent).were related to history of violence offenses. Moreover, Lack of Secure Base (i.e. the inability to maintain feelings of security in the absence of the parent) predicted Hostile Attributional Bias. Higher scores on the Role Reversal type of insecure attachments predicted aggressiveness of solutions generated for the attributional vignettes. Researchers recommended that future research incorporate attachments beyond primary caregivers, as many juvenile delinquents have several attachment figures



throughout their lives, such as teachers, mentors, foster parents, biological parents, and peers.

Nicholson (2000) investigated the relationship between parental and peer attachment and juvenile delinquency. This study included 102 juvenile offenders. Participants were interviewed regarding parents and peers, and given the Relationship Questionnaire and the Important People Questionnaire. Additionally, researchers reviewed criminal histories of participants. Results indicate that adversity early on in life was related to adolescent criminal behaviors. Insecure attachments with mothers, fathers, and peers were related to more serious criminal behaviors. Moreover, the greater security of attachment to mothers and fathers were associated with less serious criminal behavior. Researchers have recommended that future research be conducted with female participants and that more attention be given to offenders' relationships with their fathers.

Leas and Mellor (2000) investigated the contributions of risk-taking behavior, parental attachment, and depression to delinquency. Participants included 108 university students and youth group members (ages 17-23). Measures administered included the Australian Self-report Delinquency Scale, the Adolescent Risk-taking Questionnaire, the Inventory of Parent and Peer Attachment, and the Beck Depression Inventory. Risk-taking and attachment were significantly related to each other, and risk-taking behavior uniquely predicted total delinquency. Parent attachment was not a significant predictor of delinquency; however, parental trust and communication inversely predicted delinquent behavior. Results suggest that adolescents who have high risk-taking behavior or poor are more likely to participate in delinquent behavior.

Nunn (1997) investigated the relationship between attachment and total number of criminal charges in 97 juvenile delinquents. Measures administered included the Inventory of Parent and Peer Attachment and a demographic questionnaire. Additionally, researchers obtained information regarding the number of criminal charges for each participant to determine the extent of juvenile delinquency. None of the defined relationships between the Inventory of Parent and Peer Attachment and the extent of juvenile delinquency were shown to be statistically significant. Researchers recommended that future research should include a sample of delinquents with various charges.

Longshore et al. (2005) explored the relationships between low self-control, social bonds, deviant peers, and involvement in offending. Additionally, researchers examined “social bonds and deviant peers as mediators of the relationship between low self-control and offending” (Longshore et al., 2005, p.423). Participants for this study were gathered from data collected from five Treatment Alternatives to Street Offending evaluations. This study consisted of 359 adolescents (257 males and 92 females). During the original data collection, participants were interviewed originally and six months later for follow-up. Interviews included questions regarding low self-control, attachment, commitment in offending, conventional moral belief, deviant peer association, and number of times offenses occurred. Researchers found that low self-control was inversely related to each measure of bonding and positively related to deviant peer associations and offending. Low self-concept effected offending when it was mediated by conventional moral beliefs and attachment. Attachment and conventional moral reasoning were found to be

predictors of offending. The results of this study lend further support to the association between attachment and offending behavior.

Marcus and Betzer (1996) examined whether attachment to parents and peers were related to antisocial behavior, whether there were gender differences in attachment and antisocial behavior, and whether the contribution of each attachment relationship to antisocial behavior would be unique. Participants consisted of 16 adolescents (72 males and 91 females) with the average age of 12.7. Measures included the Inventory of Parent and Peer Attachment and a 23-item delinquency report, which included law violations, age of first offense, and frequency of offenses. Secure attachments to mothers, fathers, and peers were found to be inversely related to antisocial behavior, aggressive behavior, and non-aggressive behavior. Boy's attachments to mother and father were positively correlated with attachment to best friend; however, girl's attachment to best friend was not correlated with mother and father attachment. Father attachment significantly predicted antisocial behavior; however, mother and peer attachment did not. Antisocial boys reported lower attachment levels (across the board) than lower antisocial boys; however, high antisocial girls reported lower attachments with parents than with peers. This study lends further support that attachments to parents and peers play an important role in the development of juvenile delinquency problems.

Anderson et al. (1999) explored differences between boys and girls on attachment to parents, peers, and school. Moreover, this study examined the effects of different attachments on the severity of delinquency. There were a total of 123 adolescents (72 males and 51 females), ages 12 to 18, who completed measures of attachment for parents,

peers and school and an attitude toward school scale. Number of parents in the household was also included. Results indicate there were no differences between boys and girls on attachment with parents, peers, or school, number of parents, or attitude toward school. The variables of attachment to school and number of parents were negatively related to severity of delinquency. Attachment to parents and peers and attitude toward school were not related to severity of delinquency. For boys, attachment to parents and number of parents in the household were negatively correlated with severity of delinquency; however, attachment to school and peers were negatively correlated with severity of delinquency among girls. Researchers recommended that future research focus on comparing incarcerated juveniles and non-delinquent adolescents.

Elgar, Knight, Worrall, and Sherman (2003) investigated the relationship between attachment and behavioral problems in juvenile offenders. Additionally, the study compared rural and urban differences in attachment and behavioral problems. This study was comprised of 68 male juvenile offenders, ages 15 to 18. Participants were administered the Adolescent Attachment Questionnaire, the Drug Use Screening Inventory – Revised, and the Youth Self-Report. Findings suggest insecure attachments were correlated with behavioral problems (internalizing and externalizing), substance use, and poor family functioning. Moreover, behavioral problems were correlated with the Angry/Distress and Availability subscales on the Adolescent Attachment Questionnaire. Researchers recommended that future research be conducted in the juvenile offender population to determine the predictive significance of attachment on

criminal activity.

Nelson and Rubin (1997) explored the relationship between parental attachment and juvenile delinquency. This study included 133 adolescents (66 males and 67 females) ages 13 to 18. Participants were administered the Inventory of Parent and Peer Attachment, the Indexes of Direct and Indirect Control, and a delinquency questionnaire from the Index of Delinquency Measures. Results indicate higher delinquency was related to insecure attachments to mothers and fathers. It was recommended that future research continue look at the role of attachment on functional and dysfunctional behaviors among juvenile offenders.

In summary, it has been found that attachment to parents is a significant predictor of externalizing and internalizing problems. Moreover, research indicates that parental trust and communication are negatively related to juvenile delinquency. Insecure attachment has been found to be predictive of offending behaviors.

While some researchers have explored parental attachment in relation to aggressive and criminal behaviors among juvenile offenders, no researchers to date have explored how parental and peer attachments related to anger experience and expression in juvenile offenders. This research is needed given we need to better understand the factors that trigger anger and anger aggression which are often precursors to acting out behaviors and criminal actions. In the next section, the research on attachment and anger will be explored.

**Attachment and Anger.** It is important to explore the relationship between attachment styles and the expression of anger in juvenile delinquents. The research

evidence to date suggests that attachment styles can maintain and aid in the development of delinquent behaviors (Anderson et al., 1999; Dekovic, 1999; Gurevich, 1996; Leas & Mellor, 2000; Longshore et al., 2005; Marcus & Betzer, 1996; Nicholson, 2000). Often times, the delinquent behaviors can be seen through one's expressions of anger. There is increasing evidence that attachment plays a role in emotion regulation in childhood and adolescence (Calamari & Pini, 2003; DePriest et al., 2000; Winterowd et al., 2001; Meesters & Muris, 2002; Mikulincer, 1998; Muris et al., 2004; Troisi & D'Angenio, 2004).

Bowlby (1973) hypothesized that individuals with insecure attachment styles are likely to become suspicious and hostile because of their fear of abandonment. This suspiciousness and hostility can sometimes be acted out with dysphoria or anger when psychological distance is increased from attachment figures (Bowlby, 1973). Bowlby posed that working models played an important part in the experience of anger. Bowlby (1973) posited that anger was a functional response to other's negative attachment behavior. Furthermore, Bowlby (1973) claimed that insecurely attached individuals were likely to take the functional response of anger and turn it into a dysfunctional response. According to Bowlby, anger can be used to depress negative behavior, rise above obstacles, and preserve attachment bonds. Bowlby (1988) claimed that when anger does not depress negative behavior, dysfunctional anger can arise and relationships are weakened; therefore, insecurely attached individuals likely experience recurrent dysfunctional anger.

Ten studies to date have been conducted exploring the relationships between

attachment and anger, and attachment and aggression in adolescents. Results indicate that insecure attachments have been associated with aggression (Allen et al., 1997; Laible, 2000;), anger (Calamari & Pini, 2003; DePriest et al., 2000; Winterowd et al., 2001; Meesters & Muris, 2002; Mikulincer, 1998; Muris et al., 2004; Troisi & D'Angenio, 2004), hostile attribution bias (Vermeer, 1997), depressive symptoms (Allen et al., 1997) in adolescents.

Laible (2007) explored whether the relationships between attachment and behavior were mediated by emotional competence. The study included 117 adolescents, 65 females and 52 males. Participants were giving the Inventory of Parent and Peer Attachment, subscales from the Interpersonal Reactivity Questionnaire, Self-Expressiveness Questionnaire, Toronto Alexithymia Scale – 20, scales from the Prosocial Tendencies Measure, and the Suppression of Aggression subscale from the Weinberger Adjustment Inventory. Results indicate that peer attachment was related to all factors related to emotional and social competencies. Secure attachments to peers were related to more emotional awareness, positive expressiveness, empathy, and prosocial behavior. Moreover, these adolescents reported less negative dominant expressiveness and less aggression. Secure attachments to parents were related to high levels of positive expressiveness, emotional awareness, and prosocial behaviors and low negative dominant expressiveness. Secure attachments to parents and peers predicted prosocial and aggressive behavior. Parent and peer attachment were found to be indirectly related to aggressive behavior. Researchers concluded that secure attachments to peers endorsed socioemotional competence in adolescence.

Vermeer (1997) indicated there is evidence that insecure attachments can be related to both emotional and behavioral problems. Vermeer (1997) explored the relationship between adolescent attachment and problem solving in juvenile delinquents. The study included 108 male juvenile delinquents, ages 15-18. They were administered the Adolescent Attachment Questionnaire and a measure of social problem solving. Insecure attachment was found to be related to more hostile attributional bias during ambiguous situations. Furthermore, when adolescents perceived they had more responsibility for their caregivers, they had decreased competence in social problem solving situations. Insecure attachment was not found to be related to peer approval for aggression. Researchers recommended more research be done regarding the relationship between attachment and social problem solving.

Allen et al. (2007) explored relationship between attachment and psychosocial functioning. Participants included 167 seventh and eighth graders, 80 male and 87 female. Measures administered included the Adult Attachment Interview, Q-Sort, observations of autonomy and relatedness with parent, modified Conflict Tactics Scale, interaction with closest friend, observation of autonomy and relatedness with peers, nomination sociometric measure of popularity, questionnaire for negative peer pressure, Inventory of Parent and Peer Attachment, Child Depression Inventory, and the Child Behavior Checklist. Results indicate that insecure attachments are related to increased levels of externalizing behaviors and higher levels of depressive symptoms among adolescents. Researchers concluded that attachment is related to patterns of psychological function and dysfunction.



Meesters and Muris (2002) conducted a study examining the relationship between attachment and aggression. Participants included 139 female undergraduate students. Participants were administered the Adult Attachment Questionnaire and the Dutch version of the Aggression Questionnaire. Researchers found that securely attached individuals displayed less aggression than insecurely attached individuals. Moreover, insecurely attached participants reported higher levels of anger and hostility.

DePriest et al. (2000) examined the relationship of peer attachment with the experience of anger and expression of anger in adolescents. The study was comprised of 359 adolescents (ages 11-19) who were administered the Inventory of Parent and Peer Attachment and the State-Trait Anger Expression Inventory – 2. Results indicate that peer trust was negatively correlated with state anger, trait anger, anger-out, anger-in, and anger expression. Peer trust was positively correlated with anger control-in and anger control-out. Peer communication was negatively correlated with state anger, trait anger, anger-out, and anger expression; however, it was positively correlated with anger control-in and anger control-out. Peer alienation was positively correlated with state anger, trait anger, anger-out, anger-in, and anger expression; however, it was negatively correlated with anger control-in and anger control-out. Researchers recommended that psychologists help adolescents build better relationships with peers and give more attention to those who feel alienated.

A study by Winterowd et al. (2001) investigated the relationship of parent and peer attachment and the experience and expression of anger. Participants included 328 adolescents (ages 11-19) from rural areas. Participants were given the Inventory of

Parent and Peer Attachment and the State-Trait Anger Expression Inventory. Results indicate that attachments are related to the experience and expression of anger. Secure attachments were found to be related to lower levels of state anger, trait anger, and anger expression. Individuals who reported secure attachments to parents and peers were found to be less likely to express their anger and suppress their anger; however, they were more likely to control their anger and reported less intense anger. Researchers also found that the more secure an individual is in their attachment, the less intense they experience anger. Researchers recommended that future research on anger and adolescents be conducted in ethnically diverse populations.

Troisi and D'Argenio (2004) explored the relationship between anger and depression through attachment theory. Participants included 87 young men, with a mean age of 20.3. Measures administered included the Beck Depression Inventory, the State-Trait Anger Scale, the Italian version of the Relationship Questionnaire, and the Attachment Style Questionnaire. It was found that individuals with preoccupied and fearful attachments reported higher levels of trait anger than securely attached and dismissively attached individuals. Individuals with anxious attachments reported higher levels of trait anger. Researchers found a negative correlation between the Trait scale and the Confidence Scale and a positive correlation between the Trait scale and the Preoccupation with Relationships scale. Researchers concluded that anxious and avoidant attachments are associated with higher levels of trait anger. While this study yields interesting results, the participants were college age young men. It is unclear how generalizable these findings are to adolescent youth ages 13 to 18.

Calamari and Pini (2003) examined the relationship between dissociative experiences, anger proneness, and attachment in female adolescents. Participants included 162 female students, with a mean age of 17.5. Participants were administered the Dissociative Experience Scale, Italian version of the State-Trait Anger Expression Inventory, and the Adult Attachment Questionnaire. Findings suggest that insecurely attached females reported higher levels of state anger and anger-in. Furthermore, state anger scores were significantly different between ambivalent and secure attachment, avoidant and secure, and secure and insecure attachments. Avoidant attachment was positively correlated with anger-in, anger expression, and state anger, where as secure attachment had a negative correlation with anger-in, trait anger/temperament, and state anger. Because this study only included female adolescents, researchers recommended that future research be conducted to explore the role of attachment in males.

Mikulincer (1998) conducted three studies. Study one explored attachment and anger proneness, anger expression, anger goals, and response to anger. Participants included 100 students (56 women and 44 men) who were administered the Attachment Style Scale, the Multidimensional Anger Inventory, and the Experience of Anger Scale. Study two examined attachment style, physiological signs of anger, and attribution of hostile intent. Participants included 30 students (18 women and 12 men) who were administered the Attachment Style Scale and given six scenarios with anger eliciting and non-anger eliciting situations. Study three examined attachment differences in anger outcome. Participants included thirty students (10 secure, 10 avoidant, and 10 anxious-ambivalent). Participants were given lexical-decision tasks. Results indicate that

securely attached individuals had lower anger proneness, more adaptive anger responses, more constructive anger goals, and more positive affect in anger episodes than insecurely attached individuals. It was also found that anxious-avoidant individuals were unable to identify signs of anger, while anxious-ambivalent individuals tended to direct anger inwardly and had a lack of control. Insecurely attached individuals were more likely to place anger against the self.

Muris et al. (2004) explored how attachment styles and parental rearing behaviors were involved in the development of anger and hostility. Participants included 441 adolescents (228 boys, 213 girls) ages 12-16. Participants were administered an attachment measure, the EMBU, the Attachment Questionnaire, and the Trait Anger subscale of the State-Trait Anger Scale. Results indicate that avoidantly and ambivalently attached adolescents reported higher anger and hostility than securely attached adolescents. It was found that higher levels of negative parental rearing and lower levels of positive parental involvement are associated with higher levels of anger and hostility. Avoidantly attached adolescents reported lower levels of emotional warmth, higher levels of rejection, and more inconsistency compared to securely attached adolescents. Ambivalently attached adolescents reported higher levels of rejection and control by parents compared to securely attached adolescents. Participants included non-delinquent adolescents, while the present study is interested in juvenile delinquent males.

Though there are discussions in the literature of the linkages between anger and aggression and between anger and attachment in young adult and adult populations, there are gaps in the literature regarding the linkages between anger and attachment in juvenile

adolescents. Moreover, the literature is lacking in studies examining the relationship between anger and attachment in juvenile offender populations.

### **Personality**

Researchers have used measures of personality to study juvenile offender populations. The Minnesota Multiphasic Personality Inventory (MMPI; Butcher et al, 1992) has been the most commonly cited personality measure to differentiate delinquents and non-delinquents. In particular, juvenile offenders score significantly higher than non-offending adolescents on MMPI scales 4, 8, and 9 (also known as the excitatory scales; Hathaway & Monachesi, 1957) and sometimes 6 (e.g., Briggs, Wirt, & Johnson, 1961; Espelage, Cauffman, Broidy, Piquero, Mazerolle, & Steiner, 2003; Hathaway & Monachesi, 1957; Hathaway, Monachesi, & Young, 1960; Morton & Farris, 2002; Morton, Farris, & Brenowitz, 2002; Pena, Megargee, & Brody, 1996; Williams-Anderson, 2004) which measure traits of chronic anger/deviance, reality testing problems, mania, and paranoia respectively.

**MMPI-A and Juvenile Delinquents.** Understanding personality factors of juvenile delinquents may provide a better understanding of the development and maintenance of criminal behavior. Three personality factors have been recognized as contributing to potential violence in adolescents: impulsivity, anger, and lack of empathy (Grisso, 1998). According to Grisso (1998) impulsivity, anger, and lack of empathy can be seen in normal adolescents, as well as delinquents; therefore, delinquents and non-delinquents differed in their level of psychopathology reported. Grisso (1998) demonstrated the significance of differentiating these three personality factors in terms of

state versus trait characteristics. Standardized personality tests help clinicians establish whether personality characteristics are traits by determining the degree of psychopathology (Groth-Marnat, 2003). The MMPI was originally developed to differentiate individuals exhibiting normal behavior from those exhibiting deviant behavior (Groth-Marnat, 2003). Since the inception of the MMPI into clinical practice, several studies have been conducted using the MMPI to distinguish delinquent adolescents from non-delinquent adolescents.

Several researchers have found that delinquents score higher on scales 4, 8, and 9 (also known as the excitatory scales) on the MMPI-A compared to non-delinquent adolescents. Hathaway and Monachesi (1957) examined personality patterns among pre-delinquent males. Participants included 1,467 males from ninth grade classrooms. All participants were administered the MMPI. This study consisted of two follow-up examinations of records corresponding with the males in the sample. Participants were assigned a delinquency rating based on their records of criminal involvement. Results indicate that Scales 1, 3, and 6 are infrequent among non-delinquents, as well as scales 0, 2, and 5. Furthermore, Scales 4, 8, and 9 were found to be related with higher rates of delinquency. Scales related to a decrease in the rate of delinquency are considered inhibitory scales whereas scales related to high rates of delinquency are called excitatory scales (Hathaway and Monachesi, 1957). It was concluded that males with rebellious, excitable, and schizoid traits were more likely to be delinquent.

Hathaway et al. (1960) attempted to extend previous research and further explore MMPI profiles of juvenile delinquents. There were a total of 11,329 male (n = 5,701)

and female (n = 5,628) ninth graders. Participants were administered the MMPI. In addition, record reviews of police and court reports were completed at a three-year follow-up. Three MMPI scales were identified as excitatory (4, 8, and 9) because the traits measures were related to higher rates of delinquency. Conversely, scales 0, 2, and 5 were labeled as inhibitory scales because they were related to lower rates of delinquency. Scales 1, 2, 6, and 7 were labeled as variable codes. Results indicate that boys with elevated excitatory scales had 20 percent higher rates of delinquency, where as boys with inhibitory codes had only “six to eight tenths percent of the general rate” (Hathaway et al., 1960, p.439) of delinquency.

Briggs et al. (1961) explored the ability of the MMPI scales to predict delinquency. These researchers used Hathaway and Monachesi’s (1951) sample of males (n = 1,958). Boys with code types including combinations of the excitatory scales (48/84, 49/94, and 8/9, 9/8) were more likely to become juvenile delinquents.

Another group of researchers have found different patterns of scores on the MMPI-A that differentiate delinquents from non-delinquents, all of which include scale 6. Morton et al. (2002) examined patterns of scores on clinical, supplementary, and content scales of the MMPI-A in a juvenile offender population. The MMPI-A was administered to 655 male juvenile delinquents, ages 13 to 17. Researchers found that low scores on Scale 5 (Masculinity/Femininity) and elevations on Scale 6 (Paranoia) and Scale 4 (Psychopathic Deviate) were most characteristic of juvenile delinquents. Scales 4, 5, and 6 correctly classified boys as delinquents with a high degree of accuracy (80%).

Morton et al. (2002) recommended that future research focus on the potential relationship between Scale 5 (low scores) and externalizing behaviors among juvenile offenders.

Pena et al. (1996) examined MMPI –A base rates, patterns, and configurations among juvenile delinquents. Another aim of the study was to explore differences of MMPI-A scales and subscales between delinquents and non-delinquents. The participants, 162 male juvenile delinquents aged 13 to 17, were administered the MMPI-A. The MMPI-A scores of this juvenile delinquent sample were compared with the MMPI-A scores for the normative sample of 805 male non-delinquent adolescents and with MMPI patterns of 7,783 male delinquents identified in a literature review. Results indicate Scales 4, 6, and 9 as the most prominent clinical scales among juvenile delinquents. Moreover, the 49/94 code type was the most common.

Williams-Anderson (2004) investigated the ability of the MMPI-A clinical scale to differentiate chronic offenders and general offenders. Participants included 156 male juvenile offenders, ages 15 to 17. Measures administered included the MMPI-A, the Shipley Institute of Living Scale, and the Test of Adult Basic Education. Scale 2 differentiated between chronic and general offenders. Chronic offenders endorsed more pathology than general offenders, with most chronic offenders reflected in elevations of Scales 6, 4, and 2. Researchers recommended that any further research regarding differentiation of chronic and general offenders should be conducted with female populations.

Espelage et al. (2003) conducted a cluster analysis to identify profiles and mental health profiles among male and female juvenile offenders. One hundred forty one male



and female juvenile offenders were administered the MMPI and the Massachusetts Youth Screening Instrument – Second Version. Two clusters emerged for males: Normative which included no clinically elevated scores, and Disorganized which included elevations on Scale 8, 6, 4, and 7. Two clusters emerged for females: Impulsive-Antisocial which consisted of elevations on Scale 4, and Irritable-Isolated which consisted of elevations on Scales 4, 8, 6, and 7.

For the purposes of this study, the MMPI-A scales of 4, 6, 8, and 9 will be the personality domains of focus because they were the most frequent scale elevations in juvenile delinquent studies (Briggs et al., 1961; Espelage et al., 2003; Hathaway and Monachesi, 1957; Hathaway et al., 1960; Morton et al., 2002; Pena et al., 1996; and Williams-Anderson, 2004;).

**Personality and juvenile delinquency.** Juvenile delinquency is multifaceted and involves the interaction of environmental and individual factors; however, many theories of criminology focus mainly on sociological and environmental factors as main contributors of juvenile delinquency. Some researchers have explored juvenile delinquent typologies using other measures of personality besides the MMPI, such as the Million Adolescent Personality Inventory (MACI; Stefurak et al., 2004; Morton & Farris, 2002; and Taylor et al., 2006), the Dimensional Assessment of Personality Pathology – Basic Questionnaire (Krischer et al., 2007), the Youth Self Report (Krischer et al., 2007), MMPI-A, and the California Personality Inventory (Donnellan et al., 2002). Juvenile delinquency has been associated with antisocial, anxious, reactive depressive personality

typologies (Stefurak et al., 2004; Krischer et al., 2007) as well as impulsive/reactive, psychopathic, and conforming personality characteristics (Taylor et al., 2006).

Some researchers have examined personality disorder typologies among juvenile delinquents, often using the MACI. The MACI identifies twelve different personality disorder features including Introversive, Inhibited, Doleful (i.e., depressive personalities), Submissive, Dramatizing, Egotistic, Unruly, Forceful, Conforming, Oppositional, Self-Demeaning, and Borderline Tendency and seven different clinical syndromes including Eating Dysfunctions, Substance Abuse Proneness, Delinquent Predispositions, Impulsive Propensity, Anxious Feelings, Depressive Affect, and Suicidal Tendency (Millon & Davis, 1993). Stefurak et al. (2004) examined personality disorder typologies among 103 male juvenile offenders, ages 13 to 17. Participants were administered the MACI and the Behavioral Assessment System for Children – Self Report of Personality. Results produced clusters of profiles: Cluster One, Disruptive Antisocial; Cluster Two, Compliant Antisocial; Cluster Three, Anxious Prosocials; Cluster Four, Reactive Depressives. All clusters were found to be high on Social Insensitivity and Family Discord and low on Body Disapproval and Eating Dysfunctions. Researchers recommended more research be conducted to understand the reasons why adolescents internalize versus externalize their problems.

Taylor et al. (2006) attempted to classify severe juvenile delinquents based on the personality and clinical scales of the Millon Adolescent Clinical Inventory. Six hundred fifty four male juvenile delinquents (ages 12 to 19) were administered the MACI, and information was collected regarding criminal history, cognitive ability, and suicidal

behavior. Results indicate that impulsive/reactive and psychopathic groups had more severe criminal histories. Five groups of personality disorders among offenders emerged in the cluster analysis: Impulsive/Reactive, Anxious/Inhibited, Psychopathy, Conforming, and Unremarkable. The impulsive/reactive and anxious/inhibited groups reported more suicidal behaviors and poor psychosocial functioning than the Anxious/Inhibited, Conforming, and Unremarkable groups. Impulsive/reactive offenders exhibited verbal deficits and were at increased risk for ongoing antisocial behaviors and recidivism. The conforming group of offenders exhibited personality factors, such as rigidity, seriousness, emotional restriction, and compliance. Researchers concluded that the conforming group was made up of severe juvenile offenders and they are likely to use impression management and follow rules. Moreover, researchers suggested that personality and clinical features may inform prevention to identify at risk adolescents.

Researchers have used other measures of personality, besides the MMPI-A and the MACI, when studying factors related to juvenile delinquency, including the California Psychological Inventory, the Dimensional Assessment of Personality Pathology – Basic Questionnaire, and the Youth Self Report. The results of these studies will be summarized next.

Krischer et al. (2007) explored the relationship between dimensional measures of personality disorder features and offending behavior among juvenile delinquents. One hundred forty six juvenile delinquents (75 males and 71 females), ranging from 14 to 19 years of age, were administered the Dimensional Assessment of Personality Pathology – Basic Questionnaire and the Youth Self Report. Generally, juvenile delinquents scored

higher on personality disorder traits (i.e. Emotional Dysregulation, Dissocial Behavior, Inhibitedness, Cognitive Distortions, Identity Problems, Affective Ability, Oppositionality, Anxiousness, Suspiciousness, Insecure Attachment, Self-harm, Narcissism, Stimulus Seeking, Rejection, Callousness, Conduct Problems, and Restricted Expression) than adult control groups. Moreover, compared to non-delinquent adolescents, juvenile delinquents scored higher on Emotional Dysregulation, Dissocial Behavior, Compulsivity, Inhibitedness, Identity Problems, Affective Ability, Suspiciousness, Insecure Attachment, Stimulus Seeking, Callousness, Conduct Problems, and Restricted Expression. Researchers concluded that the interaction of emotional instability and antisocial personality pathology is related to juvenile offenders.

Donnellan et al. (2002) investigated the relationships between personality differences and age of first offense and frequency of arrests among juvenile delinquents. Participants included 2,837 male juvenile offenders, ages 13 to 17. Subjects were administered the California Personality Inventory in 1964 and 1965 and arrest records were collected on the participants in 1984 and 1985. After the twenty year lapse in time, 2,489 participants remained for analyses. Results indicate that personality differences with age of first offense and frequency of offenses were correlated with normal orientation and values, including communality, good impression, responsibility, self-control, socialization, tolerance, and well-being. Results also indicate significant differences on cognitive and intellectual functioning among offenders. Furthermore, chronic offenders were found to be less motivated and with lower intelligence.

Researchers recommended that future research focus on personality interrelates with other psychological, sociological, and legal variables in the development of delinquency.

Morton and Farris (2002) examined the differences between structural summary scores in the normative sample with structural summary scores in a juvenile delinquent sample. The MMPI-A was administered to 655 male juvenile delinquents, ages 13 to 17. Results indicate that Immaturity is most characteristic of juvenile delinquents. Moreover, Familial Alienation was found to distinguish between delinquents and non-delinquents. Delinquents had higher average scores on General Maladjustment and Psychoticism than the normative sample. Researchers concluded that delinquent males exhibit ego immaturity, self-centeredness, poor insight, poor judgment, and poor interpersonal skills. It is recommended that this study be replicated in other delinquent samples, in order to identify adolescents who are at high risk for delinquency.

Researchers have focused on the relationship between personality and juvenile delinquency and some have confirmed Eysenck's (1977) theory which suggests that Psychoticism, Neuroticism, and Extraversion are all related to juvenile delinquency (Alexio & Norris, 2000; Heaven, 1996; Heaven & Virgen, 2001; Romero et al., 2001; Taylor et al., 2006; and Van Dam et al., 2003). Neuroticism has been found to be related to vandalism/theft; however, Neuroticism and Extraversion were not found to be related to delinquency among juvenile offenders (Heaven, 1996). Extraversion has been found to correlate with crime against others and level of reasoning among juvenile offenders (Alexio & Norris, 2000). Higher scores on Psychoticism and Extraversion were found to be related with delinquency (Alexio & Norris, 2000) and to distinguish recidivists from

non-recidivists (Van Dam et al, 2003) whereas Romero et al. (2001) only found Extraversion to correlate with delinquency. Heaven & Virgen (2001) found that Psychoticism and Neuroticism were related to delinquency.

Alexio and Norris (2000) investigated the theories of Eysenck and Kohlberg as they relate to juvenile offenders. One hundred one male juvenile offenders, ages 16-21, were used in this study. Participants were administered the short scale of the Eysenck Personality Questionnaire – Revised, the Sociomoral Reflection Measure, the Self-Reported Delinquency scale, Raven’s Standard Progressive Matrices, and a demographic form. Results indicate that psychoticism was positively correlated with Self-Reported Delinquency and property crimes. Extraversion was found to positively correlate with crimes against others. It was found that Extraversion related to level of reasoning. Moreover, scores on the Raven’s positively correlated with sociomoral reflection. Researchers concluded that high scores on Psychoticism and Extraversion are related to delinquency. Researchers recommended that future research employ the use of matched groups of non-delinquents.

Heaven and Virgen (2001) explored the influences of personality factors, family control, and delinquent peers on males’ self-reported delinquency. This study consists of two groups of males from two different Catholic high schools. Group one included 110 males, and group two included 89 males, ages 12 to 15. Measures administered included the Eysenck Personality Questionnaire, Parental Discipline Style, Delinquent Companionship, and Self-Report Delinquency. Delinquency was related to Psychoticism, companionship, love withdrawal, punitiveness, and Neuroticism.

Moreover, Psychoticism had a significant effect on self-reported delinquency and an indirect effect on companionship. This study was the first to show the interconnections between personality, family, and peer groups. Researchers recommended that future research further validate the models found in this study, as well as in female populations. A limitation of this study is that participants included non-delinquent adolescents. Moreover, researchers looked at self-reported delinquency rather than objective information on delinquent behaviors.

Romero et al. (2001) examined the relationship between self-reported antisocial behavior and temperament variables among non-delinquent and delinquent adolescents. The Juvenile version of the Eysenck Personality Questionnaire, an impulsivity measure, the Sensation Seeking Scale, and the Antisocial Behavior Questionnaire was administered to three groups of participants: 435 school-attending males (ages 14 to 19), 529 school-attending females (ages 14 to 19), and 95 juvenile male delinquents (ages 14 to 20). Results suggest that Psychoticism was related with antisocial behavior. Neuroticism was only significantly correlated in the school-attending males and females. Extraversion was correlated with delinquency in males and females; however, it was found to be a significant predictor of antisocial behavior in females. Impulsivity was also found to be significantly related with antisocial behavior. Sensation seeking was related to delinquent behavior. Researchers concluded that these findings lend support to the importance of including personality variables into criminological theories. It was recommended that future research continue to focus on cognitive, affective, and

behavioral tendencies associated with juvenile delinquency, as these factors can help inform prevention and treatment in this population.

Van Dam et al. (2003) investigated which of the personality models, PEN or Big Five, differentiated between juvenile offenders and college students, self-reported recidivist and non-recidivists, and officially recorded recidivists and non-recidivists. Participants were administered the Eysenck Personality Questionnaire – Revised, Short Big Five Questionnaire, self-report questionnaire of recidivism, and police records were checked for official recidivism rates for 96 male juvenile delinquents (ages 13 to 25) and 204 male adolescents attending vocational training college (ages 15 to 24). Students were higher than juvenile delinquents on PEN's Extraversion and Big Five factors Agreeableness and Openness. PEN's Extraversion was higher in officially recorded recidivists than non-recidivists. Furthermore, PEN's Psychoticism and Big Five factors Neuroticism and Agreeableness differentiated self-reported recidivists from non-recidivists. PEN's Psychoticism predicted self-reported recidivism. Researchers recommended more studies be conducted on personality factors on larger samples. While this study includes ages 13 to 25, more studies need to be conducted on the age ranges of 14 to 19.

Heaven (1996) examined the relationship between self-reported delinquency and the Big Five dimensions of personality in a series of studies. In the first study, 216 male and female high school students, ages 16 to 19, completed the Self-Report Delinquency scale and the NEO. Results indicate that males score significantly higher than females on the delinquency scales. There were no significant relationships between Extraversion,



Openness, and delinquency for males or females. Conscientiousness was found to be significantly negatively correlated to vandalism/theft but not to interpersonal violence for males and females. Neuroticism was found to be significantly related to interpersonal violence for females and vandalism/theft for males. This study did not lend support to Eysenck's (1977) theory of delinquency, in that Extraversion was not correlated with juvenile delinquency and Neuroticism was only correlated with vandalism/theft.

The second study was designed to replicate and extend the first study. Participants included 90 freshman psychology students, ages 18 to 22. All participants were administered the Revised NEO Personality Inventory. Neuroticism was not related to delinquency measures; however, trust, altruism, and excitement-seeking were significantly related to delinquency. It was found that compliance was related with violence, while self-discipline was related to vandalism. The results of this study do not support previous research on personality and delinquency because Neuroticism was not related to juvenile delinquency.

**Personality and Attachment.** There is some research evidence to support that attachment is linked with depressive symptoms, psychopathology, and psychopathic tendencies. Only three groups of researchers to date have examined the relationship between personality and attachment among juvenile offenders (Leas & Mellor, 2000; Allen et al., 1996, Barb, 2005). Studies found that depression, poor parental attachment (Leas & Mellor, 2000), insecure and dismissive attachments (Allen et al., 1996) low levels of empathy and moral reasoning (Barb, 2005) were related to juvenile delinquency.

Leas and Mellor (2000) investigated the contributions of risk-taking behavior, parental attachment, and depression to delinquency. Participants included 108 university students and youth group members (ages 17-23) and all were administered the Australian Self-report Delinquency Scale, the Adolescent Risk-taking Questionnaire, the Inventory of Parent and Peer Attachment, and the Beck Depression Inventory. Depression uniquely predicted total delinquency. While parent attachment was not a significant predictor of delinquency, when the subscales of parent attachment were assessed individually, parental trust and communication inversely predicted delinquent behavior. Results suggest that adolescents who have symptoms of depression, high risk taking behaviors, and poor parental attachment are more likely to participate in delinquent behavior. Unfortunately, this study only included non-delinquent adolescents ranging from 17 to 23 years of age. The present study will be focusing on a juvenile delinquent population ranging from 14 to 19 years of age.

Allen et al. (1996) examined severe adolescent psychopathology within an adult attachment perspective. The Adult Attachment Interview, the Hopkins Symptom Checklist – 90 – R, and the Global Self-Worth scale from the Adult Self-Perception Scale were administered to 142 (71 female and 71 male) adolescents ranging in ages 14 to 17. Additionally, researchers received information regarding total number of times an offense was committed and total number of times drugs were used. Results indicated that delinquent behavior was correlated with being male, having insecure attachments, dismissive attachment relationships, and failures to resolve past traumatic experiences. Deprecation of attachment relationships was also positively correlated with hard drug

use. Insecure attachments and adult attachment lacking consistency and security may cause vulnerabilities to psychopathology which may weaken an individual's capability to have and/or understand positive social relationships. Adolescents with insecure and avoidant attachments are more likely to demonstrate antisocial behaviors and develop psychopathology. Because adolescents with insecure and avoidant attachments may view their attachment figures negatively, home environments may be uneasy and hostile. This study is limited in its participant selection of non-delinquent adolescents and its measure selection of the Adult Attachment Interview. The present study will include a delinquent population and the Inventory of Parental and Peer Attachment.

Barb (2005) investigated the relationship between psychopathic tendencies, attachment, moral reasoning, and empathy among juvenile delinquents. Participants included 29 male juvenile delinquents, ages 13 to 17, who completed the Hare Psychopathy Checklist: Screening Version interview and questionnaires assessing empathy, moral reasoning, and parental attachment. The ability to empathize was lacking for juveniles with psychopathic tendencies. Attachment levels were not significantly related to empathy or level of moral reasoning. However, there was a significant difference between juvenile delinquents and nondelinquents on levels of moral reasoning, in that nondelinquents had higher levels of moral reasoning. A limitation of this study is that questionnaires were used to assess empathy, moral reasoning, and parental attachment, rather than well established measures. The current study will use the Inventory of Parent and Peer Attachment to measure parental attachment among juvenile offenders.

In summary, researchers have found that depression, poor parental attachment (Leas & Mellor, 2000), insecure and dismissive attachments (Allen et al., 1996) and low levels of empathy and moral reasoning (Barb, 2005) were related to juvenile delinquency. Though three studies have been conducted to explore the relationship between personality and attachment, more research is needed. More specifically, studies should include populations of juvenile delinquents.

**Personality and Anger.** While the majority of research on personality research with juvenile offenders has focused on the personality factors that differentiate offending and non-offending adolescents, more research is needed to understand the personality factors associated with the experience and expression of anger in juvenile offenders since anger is often the precursor to aggressive and/or delinquent behavior. There is some research evidence to suggest that personality traits are related to internalizing (i.e. anxiety, somatic complaints, and withdrawal) and externalizing behaviors (i.e. aggression, lying, stealing, inattention, impulsivity, and hyperactivity) in juvenile delinquent populations (Daderman, 1999; John et al., 1994; Muris et al., 2007; Taylor et al., 2007); however, supporting research is scarce. In fact, only one researcher to date has explored personality variables and anger among juvenile offenders, which is one of the foci of the present study.

John et al. (1994) explored the relationships between personality factors of the Five-Factor Model and juvenile delinquency, psychopathology, school performance, and intelligence, SES, and race. This study consisted of 484 male adolescents randomly selected from fourth-grade classrooms in Pittsburgh. Measures administered included the

California Child Q-Set, the Self-Reported Antisocial Behavior Scale, the Self-Reported Delinquency Questionnaire, Teacher Report Form of the Child Behavior Checklist, teacher ratings on reading, writing, spelling, and math skills, short form of the Wechsler Intelligence Scale for Children – Revised, and socioeconomic status. Results indicate delinquent boys and adolescents with externalizing disorders were low on Agreeableness and Conscientiousness, and high in Extraversion. Boys with internalizing problems were found to be more neurotic and less conscientious. Researchers recommended that future research focus on differentiating behavior disorders with the Big Five personality factors. A limitation of this study is that only non-delinquent adolescents were included and participants completed a self-reported delinquency questionnaire, thus no objective measures of delinquent behavior were assessed.

Taylor et al. (2007) explored the contribution of personality/clinical subtype to predict institution maladjustment in a juvenile offender population. Participants included 652 males, ages 12 to 19, in a residential training school. Researchers used archival data including total number of institutional supervision placements, criminal history information (i.e. age of admission, age of first arrest, number of arrests, number of arrests for crimes against others, use of aggression in offense, and length of stay), and the Millon Adolescent Clinical Inventory. Results suggest that membership in the impulsive/reactive and psychopathy group were related to increased institutional supervision placements. Individuals in the psychopathy group had increased impulsivity and conduct problems. Impulsive/reactive group members presented with internalizing symptoms, such as depression, borderline personality features, emotional liability,

negative views of self, and suicidal ideation. Adolescents with the anxious/inhibited type exhibited signs of depression, negative views of self, and suicidal ideation; however, this group was not associated with increased institutional supervision programs. Researchers concluded that impulsive/reactive and psychopathy group members presented with more externalizing problems. Researchers recommended that future studies use other systems to classify juvenile offenders. This information can prove important when trying to predict at risk behaviors during institutionalization.

Muris et al. (2007) investigated the relationships between self-reported reactive and regulative temperament and psychological symptoms and personality traits in adolescence. The Early Adolescent Temperament Questionnaire – Revised and the Junior version of the Eysenck Personality Questionnaire were administered to 208 adolescents (114 boys and 94 girls) from elementary schools. The mean age of participants was 10.9. Results indicate that reactive temperament of negative affectivity was related to internalizing and externalizing symptoms; however, regulative temperament of effortful control was negatively related to internalizing and externalizing symptoms. Moreover, it was found that fear and low attention control were related to internalizing symptoms, where as anger/frustration, low activation, and inhibitory control were related to externalizing symptoms. Higher levels of extraversion were found to relate to higher externalizing symptoms. Limitations of this study include that participants were non-delinquent and had a mean age of 10.9. For the purposes of the current study, participants will consist of delinquent males ranging from 14 to 19 years of

age. This study lends support to the notion that personality factors are related to internalizing and externalizing symptoms.

Daderman (1999) examined differences of personality-scale scores between severely conduct-disordered juvenile delinquents and normal male adolescents. Participants consisted of 47 male juvenile delinquents meeting criteria for Conduct Disorder (ages 14 to 20) and 82 normal male adolescents from a longitudinal study. Measures administered included the Karolinska Scales of Personality, the Eysenck Personality Questionnaire, and the Zuckerman Sensation-Seeking Scales. Results suggest that higher scores on psychopathy related characteristics and low conformity were found in the delinquent sample. Conduct-disordered juveniles had lower scores on inhibition of aggression and higher scores on verbal aggression. They also exhibited higher scores on psychoticism, impulsiveness, and detachment; however, had lower scores on socialization and social desirability. This study included participants meeting criteria for Conduct Disorder; however, the current study will have no diagnostic inclusion criteria. Practical implications of this study suggest a need for individual treatment programs for severely conduct-disordered juvenile delinquent males.

Only one study to date has explored the relationship between personality and anger among juvenile offenders. Wood and Newton (2002) investigated the relationship between anger, personality, and blame attribution in male offenders. Participants consisted of 69 male offenders, ages 18 to 31, and were administered included the Novaco Anger Scale, the Gudjonsson Blame Attribution Inventory, and the Eysenck's Personality Questionnaire. Results indicate that recidivism and high scores of

psychoticism and neuroticism were predictive of anger. A limitation of this study is the age range of the participants. There needs to be more research on adolescent delinquent populations in understanding the relationship between anger and personality. These findings suggest that personality factors should be taken into consideration when dealing with anger and developing anger treatment programs in offender populations.

Higher scores on scales 4, 8, and 9 (i.e. the excitatory scales) differentiated juvenile delinquents compared to non-delinquents. Moreover, other studies have included scale 6 as an identifier for juvenile delinquents compared to nondelinquents. Juvenile delinquency has also been related to notable characteristics, such as emotional dysregulation, stimulus seeking, callousness, insensitivity, and impulsivity, which are often times seen in personality disorders and psychopathology. However, most research regarding personality in juvenile offender populations have adopted Eysenck's (1977) theory of personality, suggesting Neuroticism, Extraversion, and Psychoticism are related to juvenile delinquency; however, support is not conclusive. Neuroticism has been found to be related to vandalism/theft and in some studies, related to juvenile delinquency. Some studies have suggested that Extraversion and Psychoticism are related to juvenile delinquency. Other studies have found that Neuroticism is not related to juvenile delinquency. While some studies have included one or more factors of Eysenck's (1977), none have since found that all three factors are associated with delinquency. Personality factors including depression, psychopathology, and psychopathic traits have been linked to insecure attachment in nondelinquent and delinquent adolescents. Furthermore, the



relationship between personality and anger has been explored; however more research is needed in juvenile offender populations.

### **Summary**

There has been no known research conducted to explore the relationships of attachment and personality with anger experience and expression among juvenile offenders. There has been an abundance of research on aggression in juvenile offenders; however, research is lacking in examining the experience and expression of anger and juvenile offenders. Of the few studies conducted, attributional patterns, age of offenders, type of offenses, and provocation have all been found to correlate with anger in juvenile offenders.

Insecure attachments have been related to juvenile delinquency. Moreover, attachment has been linked with internalizing and externalizing behaviors. Anger has been found to be related to attachment, in that, insecure attachment styles have been linked to increased experiences of anger among adolescents. However, literature is lacking regarding the relationship between attachment and anger in juvenile offenders.

Though personality has been studied extensively among juvenile offenders, personality has not been studied in relation to attachment and anger in this population. Research has shown that adolescents scoring high in Psychoticism and Extraversion and low in Neuroticism are at higher risk for juvenile delinquency.

The purpose this study was to explore the relationship of parental and peer attachments and personality dimensions with the experience and expression of anger in a sample of juvenile offenders in medium and maximum security settings.

APPENDIX B

Informed Consent

## Informed Consent Form

You are invited to participate in a study exploring how adolescents feel about their relationships with parents/caregivers and their friends, how they typically think, feel, and act, and how adolescents experience and express their anger. Participation in this study involves the completion of two questionnaires and a demographic form, which should take approximately 30 minutes to complete. With your permission, the researchers of this study will also have access to your MMPI-A test scores; you completed this personality measure when you entered treatment at Rader.

The potential benefit of participating in this study is an increased awareness of your relationships with significant people in your life, how you typically think, feel, and act, and how you experience and express your anger. There are no foreseeable risks in participating in this study.

Participation in this study is completely voluntary, meaning that you can participate in this study or chose not to participate. If you choose to participate, please complete the questionnaires in this study. There is no penalty for not participating and you have the right to withdraw your consent and participation at any time. Participants will receive a candy bar to thank you for your time and participation in this study, assuming that you complete all of the questionnaires. Please know that your decision whether to participate or not participate in this study will not affect the treatment you receive at L.A Rader Center.

All information collected in this study is strictly confidential and anonymous. No one at the L.E. Rader Center will know your individual responses to the questionnaires. Any written results will include group findings and will NOT include individual information that would identify you. Your informed consent form will be separated from the packet of questionnaires so that there is no way to associate your survey responses with your identity. The data will be stored securely and only the researchers of this study will have access to your survey responses.

Your participation in this study is greatly appreciated. If you have any questions concerning this study, please feel free to contact Lesli Johnson, M.A. or Carrie Winterowd, Ph.D., the researchers of this study, at (405) 744-6040. If you have questions about your rights as a research volunteer, you may contact Dr. Sheila Kenison, IRB Chair, 219 Cordell North, Stillwater, OK 74078, (405) 744-1676 or [irb@okstate.edu](mailto:irb@okstate.edu).

If you agree to participate and agree to make your MMPI-A scores available to the researchers, please sign below.

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

APPENDIX C

Assent Form

Assent Form

Dear Student,

We are interested in learning how adolescents feel about their relationships with parents/caregivers and their friends, how they typically think, feel, and act, and how adolescents experience and express their anger. In order to understand this, we would like you to fill out some forms. Participation in this study involves the completion of two questionnaires and a demographic form, which should take approximately 30 minutes to complete. With your permission, the researchers of this study will also have access to your MMPI-A test scores; which was completed when you entered treatment at Rader.

Participation in this study is completely voluntary, meaning that you can participate in this study or chose not to participate. There is no penalty for not participating and you have the right to withdraw at any time. You will receive a candy bar to thank you for your time and participation in this study, assuming that you complete all of the questionnaires.

All information collected in this study is strictly confidential and anonymous. No one at the L.E. Rader Center will know your individual responses to the questionnaires. Any written results will include group findings and will NOT include individual information that would identify you.

Sincerely,

Lesli Johnson, M.A.  
Graduate Student, Oklahoma State University

Carrie Winterowd, Ph.D.  
Associate Professor, Oklahoma State University

I have read this form and agree to help with your project. The researcher has explained this form to me.

\_\_\_\_\_  
(your name)

\_\_\_\_\_  
(your signature)

\_\_\_\_\_  
(date)

## APPENDIX D

### Script

## Script for Recruitment

You are invited to participate in a study exploring how adolescents feel about their relationships with parents/caregivers and their friends, how they typically think, feel, and act, and, in particular, how adolescents experience and express their anger. Participation in this study would involve the completion of two questionnaires and a demographic form, which should take approximately 30 minutes to complete.

The potential benefit of participating in this study is an increased awareness of your relationships with significant people in your life, and how you experience and express your anger. There are no foreseeable risks in participating in this study. No staff member will have access to your survey responses. Your decision to participate or not participate in this study will not impact your treatment at Rader.

You will receive a candy bar if you choose to participate and complete the questionnaires.

APPENDIX E  
Demographics Sheet





10. Your family Income:

Less than 10,000 \_\_\_\_\_

10,001 to 15,000 \_\_\_\_\_

15,001 to 20,000 \_\_\_\_\_

20,001 to 30,000 \_\_\_\_\_

30,001 to 40,000 \_\_\_\_\_

40,001 to 50,000 \_\_\_\_\_

50,001 to 60,000 \_\_\_\_\_

60,001 to 70,000 \_\_\_\_\_

70,001 to 80,000 \_\_\_\_\_

80,001 to 90,000 \_\_\_\_\_

90,001 or above \_\_\_\_\_

APPENDIX F  
Institutional Review Board

Oklahoma State University Institutional Review Board

Date: Tuesday, April 07, 2009  
IRB Application No ED0910  
Proposal Title: The Relationship of Personality and Parental and Peer Attachments with the Experience and Expression of Anger Among Juvenile Offenders  
Reviewed and Processed as: Full Board

Status Recommended by Reviewer(s): Approved Protocol Expires: 2/10/2010

Principal Investigator(s):

Lesli Johnson 1200 N. Perkins Rd. #15Q Stillwater, OK 74075	Carrie Winterowd 434 Willard Stillwater, OK 74078
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The IRB application referenced above has been approved. It is the judgment of the reviewers that the rights and welfare of individuals who may be asked to participate in this study will be respected, and that the research will be conducted in a manner consistent with the IRB requirements as outlined in section 45 CFR 46.

The final versions of any printed recruitment, consent and assent documents bearing the IRB approval stamp are attached to this letter. These are the versions that must be used during the study.

As Principal Investigator, it is your responsibility to do the following:

1. Conduct this study exactly as it has been approved. Any modifications to the research protocol must be submitted with the appropriate signatures for IRB approval.
2. Submit a request for continuation if the study extends beyond the approval period of one calendar year. This continuation must receive IRB review and approval before the research can continue.
3. Report any adverse events to the IRB Chair promptly. Adverse events are those which are unanticipated and impact the subjects during the course of this research; and
4. Notify the IRB office in writing when your research project is complete.

Please note that approved protocols are subject to monitoring by the IRB and that the IRB office has the authority to inspect research records associated with this protocol at any time. If you have questions about the IRB procedures or need any assistance from the Board, please contact Beth McTernan in 219 Cordell North (phone: 405-744-5700, beth.mcternan@okstate.edu).

Sincerely,



Shelia Kennison, Chair  
Institutional Review Board

## VITA

Lesli Rey Johnson

Candidate for the Degree of

Doctor of Philosophy

Dissertation: THE RELATIONSHIP OF PERSONALITY AND PARENTAL AND PEER ATTACHMENTS WITH THE EXPERIENCE AND EXPRESSION OF ANGER AMONG JUVENILE OFFENDERS

Major Field: Educational Psychology

Biographical:

Personal Data: Born in Beaumont, TX on December 3, 1981 to Ray and Gladys Johnson.

Education: Graduated from McNeil High School in Austin, TX in May 2000; received Bachelor of Arts in Psychology from Texas Tech University, Lubbock, TX, in May 2004; received Master of Arts in Clinical Psychology from Ball State University, Muncie, IN, in May 2006. Completed degree requirements for the Doctor of Philosophy degree with a major in Educational Psychology in August 2010.

Experience: Employed by Allen County Juvenile Justice Center (2005-2006); employed by Stillwater Domestic Violence Services (2006-2007); employed by Office of Juvenile Affairs (2007-2009); employed by Oklahoma State University as a graduate assistant (2006-2009); employed by Federal Medical Center Devens (2009-Present).

Professional Memberships: American Psychological Association Graduate Student Divisions.

Name: Lesli Rey Johnson

Date of Degree: December, 2010

Institution: Oklahoma State University

Location: Stillwater, Oklahoma

Title of Study: THE RELATIONSHIP OF PERSONALITY AND PARENTAL AND  
PEER ATTACHMENTS WITH THE EXPERIENCE AND  
EXPRESSION OF ANGER AMONG JUVENILE OFFENDERS

Pages in Study: 135

Candidate for the Degree of Doctorate of Philosophy

Major Field: Educational Psychology

Scope and Method of Study: The purpose of this study was to explore the relationships of parental and peer attachment and personality (MMPI-A scales 4, 6, 8, and 9) with the experience and expression of anger in a male juvenile offender population. Participants consisted of 94 male juvenile offenders currently incarcerated at a juvenile correctional facility. Researchers had access to archival MMPI-As and administered a demographic sheet, the State Trait Anger Expression Inventory - Second Version and the Inventory for Parent and Peer Attachment.

Findings and Conclusions: Mother attachment was significantly related to state anger and anger-out. Father attachment was significantly related to state anger. Peer attachment was significantly related to state anger and anger control-out. Personality was related to the experience and expression of anger, including trait anger, anger aggression, and anger suppression. Future research could be conducted to explore the influence of others variables in understanding anger (i.e. gender, types of crime, violent offenses, security levels, parental perceptions), specific attachment styles with anger, and different types of personality as they relate to anger. Implications for practice include helping juvenile offenders to build upon and strengthen relationships with parents and peers. Juvenile offenders could benefit from increased amount of group therapy and family therapy incorporating social skills training, modeling positive behavior and relationships, psychoeducation regarding healthy relationships, and more focus on personality traits in order to decrease the negative experience and expression of anger.

ADVISOR'S APPROVAL: Dr. Carrie Winterowd