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THE FIRST-TIME OFFENDER PROGRAM FOR JUVENILE DELINQUENTS: A BIOPSYCHOSOCIAL APPROACH TO ASSESSING OUTCOMES

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THE FIRST-TIME OFFENDER PROGRAM FOR JUVENILE DELINQUENTS:
A BIOPSYCHOSOCIAL APPROACH TO ASSESSING OUTCOMES

A DISSERTATION APPROVED FOR THE
DEPARTMENT OF EDUCATIONAL PSYCHOLOGY

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Abstract

This study was a program evaluation of a First-Time Offender Program for juvenile delinquents in a southwestern state. The study was theoretically based in the biopsychosocial model and utilizes a pre- and post-test design to assess participant changes in specific risk and protective factors associated with anti-social behavior and/or delinquent re-offense rates. The factors assessed included: non-severe pathology, behavior/conduct problems, and family relational functioning. Demographic information and pre- and post-test data were analyzed using descriptive statistics and paired samples T-tests. Multiple regression was used to explore the relationship between family relational functioning and youth pathology and behavior problems. The resulting sample for this study was small and the results should be interpreted cautiously. The findings provided partial support for the program's effectiveness at reducing non-severe pathology and behavior problems but not for improving family relationships. Analysis using multiple regression revealed that family relational functioning was predictive of non-severe pathology and behavior problems. Suggestions for improving the program and obstacles encountered during the evaluation process are discussed, as well as questions for future research, such as the effectiveness of the program with diverse populations of youth.

CHAPTER 1

Introduction

Juvenile delinquency has long been a struggle for communities and caregivers alike. It's estimated that in 2001, 16.6% percent of all crimes and 15.4% of violent crimes leading to arrest in the United States were committed by persons between the ages of 10 and 17 (Snyder, Puzzanchera, & Kang, 2003). These percentages translate to an estimated 2,273,500 crimes committed by adolescents in the United States in 2001. When these crimes are broken down into three categories, 96,520 juvenile arrests were related to violent crimes, 491,400 were considered property crimes such as burglary and arson, and 1,685,580 were labeled non-index crimes. This final category included for example, violation of liquor laws, curfew, and disorderly conduct to name a few. Youths also were victimized with significant frequency. Homicide (in 2002) was the third leading cause of death in 2002 for adolescents between the ages of 12 and 17. The 2002 adolescent homicide rate was down 44% lower than in 1993 and was at its lowest level since the mid 1980's (OJJDP, 2006). On average, four juveniles were murdered daily in the United States in 2002, for a total of 1600 juvenile murders. That number represents 10% of all US murders that year, of the total, 36% were female and approximately 39% were under 6 years of age, 8% were between the ages of 6 and 11, and 43% were between 15 and 17 years old. Forty-eight percent of all juveniles murdered in 2002 were killed with firearms; 22% were beaten to death, and 11% were killed with a knife or blunt object. From 1993 to 2003, juveniles ages 12 to 17 were about 2.5 times more likely than adults to be victims of nonfatal violent crime. Violence among youth is often self-directed as

well. OJJDP found that Youth ages 7 to 17 were almost as likely to victims of suicide as they are to be victims of homicide. Suicide was the third leading cause of death for males ages 7 to 17 and the fourth leading cause of death for females, in that same age range, from the early 1980's through 2001. The leading method of completed suicide was firearms, followed by suffocation, poisoning, and other unspecified means (OJJDP, 2006). American Indians were cited by the OJJDP report as having the highest suicide rate, almost doubling the white non-Hispanic rate and tripling the rates for other racial/ethnic groups. These shocking statistics underlie the complexity of youth crime in United States society.

In response to these statistics, several state and local initiatives have generated rehabilitation programs for juvenile offenders. Some programs utilize a multi-system approach, while others use a skill-based, teaching approach in working with juveniles to reduce delinquent behavior. In Oklahoma, the First-Time Offender Program (FTOP) was developed to reduce rates of re-offending by delinquent juveniles through the implementation of six skill-based curriculum domains. The program has undergone two studies. The first, which evaluated its referral system, recommended some positive changes for the system (Couch, 1997). The second study found that 90% of adolescent participants either strongly or somewhat agreed that participation made them better able to handle their problems (James, 1996, p. x; as cited in (Couch, 1997). These studies yielded favorable results, but have considerable methodological flaws. Currently, there is no data, beyond self-report surveys, suggesting that participants in the program increase their abilities or knowledge in the targeted skill sets. There also is no evidence that the skills taught in the program are generalized,

which would link them to the reduced rates of re-offense. This lack of data on the program's specific impact highlights the need for evaluation of the First-Time Offender Program.

The purpose of this evaluation was to measure the effectiveness of the First-time Offender program as used by local youth and family counseling agencies. This study was unique in its application of the biopsychosocial (BPS) approach to assess and explain the program's impact on participants and offers recommendations to enhance the impact of the FTO program on participants. Because this study assessed the changes in risk and protective factors associated with the BPS model, it focused on changeable individual, social/familial, and environmental elements related to child outcomes and delinquency in youth. The variables targeted here, which were identified in the literature as either risk or protective factors, include caregiver or youth reports of family relationship functioning, youth conduct problems, and non-severe pathology.

CHAPTER 2

Literature Review

Juvenile delinquency is a societal problem affecting the lives of virtually everyone in one way or another. State and local agencies spend tax dollars incarcerating, treating, and dealing in other ways with youth offenders. The actions of delinquents affect not only their own futures, but the lives of family members, friends, and others indirectly affiliated with them or their offenses.

The current study incorporates the theoretical constructs of the biopsychosocial (BPS) model in assessing the impact of the FTOP. The BPS model observes the interaction of individuals' physiological and psychological characteristics as well as the socio-cultural factors that contribute to individual and relational well-being. This approach does not lean on any single factor in explaining causation, but instead recognizes the inseparable connection of many factors.

To create effective treatments for youth exhibiting delinquent behaviors, it is imperative from a biopsychosocial perspective to identify mediating risk and protective factors associated with the development of both antisocial and pro-social behaviors. Current literature has identified and labeled some factors as either risk or protective factors based on their influence on children's development and life outcome (Bassarath, 2001; Dodge & Pettit, 2003; Rak & Patterson, 2001).

Risk and Protective Factors

Risk and protective factors are individual, socio-cultural, and environmental variables present in the lives of every child that play an interactive role in shaping the child's developmental pathway and outcome (Cummings, Davies, & Campbell, 2000).

In this study, the focus is on factors associated with anti-social activity or criminal re-offense in youth. These factors are classified as either dynamic or static (Cottle, Lee, & Heilbrum, 2001). Dynamic factors are changeable characteristics like caregiver-child relations, while static factors include unchangeable characteristics like the delinquent's age at first offense.

In a meta-analysis designed to identify the factors most strongly related to youth re-offense, Cottle, Lee, and Heilbrun (2001) categorized predictors into eight domains, (a) demographic factors, (b) offense history, (c) family and social factors, (d) educational factors, (e) standardized test scores, (f) substance abuse history, (g) clinical factors, and (h) formal risk assessment. Two categories, offense history and family/social factors, were identified as the most consistent predictors of recidivism. Specifically, age at first commitment and age of first contact with the law were the best predictors. Other factors which constitute the top five correlates with re-offense included, in descending order, non-severe pathology, family problems, and conduct problems. Ineffective use of leisure time, association with delinquent peers, and length of first incarceration also ranked high as predictors of re-offense.

Protective factors, on the other hand, are often thought of as characteristics that promote resilience to adversity or "variables that offset the effects of risk factors" (Bassarath, 2001). These characteristics, like risk factors, are often multidimensional and dynamic. They are not necessarily global traits. These protective factors may be context- or culture-specific, allowing a child to function adaptively in certain adverse situations and maladaptively in others (Cummings, Davies, & Campbell, 2000).

Several factors are identified by research as protecting against antisocial behavior in youth. One report classified protective factors into three categories: (a) individual variables such as gender, IQ, and social competence; (b) social/family variables, such as supportive adult relationships and familial pro-social norms; and (c) societal factors, such as social organization and increased economic equality (Bassarath, 2001).

The interactions of certain variables often create the risk or protective effects. For example, parental support for academic achievement (a social/family variable) may interact with a child's motivation and IQ (individual variables) to influence academic performance and reduce conduct problems at school. Both stronger academic performance and fewer conduct problems are negatively associated with juvenile recidivism (Cottle et. al, 2001).

The intertwined relationships between family functioning, child behavior problems, aggression, academic performance, self-efficacy, and delinquent behavior are well documented throughout the literature (Moose & Moose, 2002; Goldstein, Davis-Kean, & Eccles, 2005; Simons & Conger, 2007;Wissink, Dekovic, & Meijer, 2007; Cottle et. al, 2001; Ludwig & Pittman, 2007; Dodge & Pettit, 2003). From a biopsychosocial perspective, effective programs should address these and other factors associated with re-offense while strengthening factors associated with resiliency and adaptive functioning. The following sections review the literature on biological, psychological, and social factors that influence youth toward or away from delinquency.

Biological Factors Associated with Delinquency

The nature/nurture debate is fundamental to current understanding of delinquency. Individuals on both sides of the debate have revealed developmental pathways to delinquency, as well as protective factors that build resilience against negative outcomes such as persistent antisocial behavior. Biological research on antisocial behavior in youth has identified specific deficit areas that, in conjunction with ecological risk factors, are causally linked to antisocial development. The deficit areas are categorized here as neurological abnormalities and exposure to prenatal or perinatal toxins.

Neurological abnormalities. Neurological associations with antisocial behaviors in adults have been more extensively researched than delinquent or antisocial behaviors in juveniles. Available literature however, suggests that specific variations in brain function exist in adolescents who exhibit antisocial behaviors as compared to adolescents who do not (Raine, Moffitt, Caspi, Loeber, Stouthamer-Loeber, Lynam, 2005). Raine et al. (2005) looked at measures of neurological functioning in 325 adolescents according to three patterns of antisocial behavior, childhood-limited (CL), adolescent-limited (AL), and life-course persistent (LCP). The authors compared results for each classification group and a control group. Their results indicated that the CL and LCP groups had four times the rate of abuse history compared to the control group. The CL and LCP groups were found to have higher levels of poverty and neglect than adolescent-limited and control groups. Both CL and LCP group members demonstrated verbal and spatial impairments. The strongest relative impairment was in spatial memory, which is associated with temporal lobe

dysfunction, "particularly the mesial temporal lobe structures such as the hippocampus" (Raine et. al., 2005). Antisocial-neurocognitive links were independent of the influence of ADHD and psychosocial adversity. Raine et al., (2005) cited several studies that associate functional and structural impairments in hippocampal functioning among murderers, violent offenders, violent inpatients, alcoholic psychopaths, and unsuccessful psychopaths. Reduced blood flow in the right temporal cortex has also been observed in abused violent offenders during performance of a working memory task. Raine et. al., (2005) cited other studies which found that damage to the amygdala and the septal-hippocampal-frontal system structures resulted in increased aggression.

Raine (2002) hypothesized that early spatial impairments may reflect a disruption in right hemisphere affect regulation, potentially predisposing individuals to persistent antisocial behavior by interfering with affect recognition, fear conditioning, pain perception, withdraw from fearful stimuli, response inhibition, and possibly, early bonding and attachment. The finding, that moderate spatial impairments are associated with CL and LCP antisocial behavior, corroborates this hypothesis and may make a case for relating antisocial acts with attachment. Nigg and Huang-Pollock (Lahey, Moffitt, & Caspi, 2003, p. 227) found that juvenile delinquents tend to have 8-to 10-point deficits in IQ and demonstrate weaknesses in verbal reasoning and learning. These deficits reliably predicted persistent offending and antisocial outcomes. These findings provide some support for the theoretical perspective that antisocial behaviors originate from impairments in frontal lobe processes that were always present or began at early age. These impairments may result from, or contribute to insecure

attachment in early and subsequent relationships. This research also supports the idea that biological impairment predisposes these individuals by restricting their ability to cope and succeed pro-socially in society. That notion implies limited degree of responsibility on the part of these offenders and provides an argument for treating rather than incarcerating them.

Physiological, research has consistently identified frontal lobe abnormalities among antisocial youth and adults (Raine et al., 2005). The frontal lobes are responsible for complex cognitive functioning and encompass one-third of the human brain (Ishikawa and Raine, 2003). One primary role of the frontal lobes is referred to as executive functioning, which Spreen and Strauss (as cited in Ishikawa and Raine, 2003) defined "as a cluster of higher order cognitive processes involving initiation, planning, cognitive flexibility, abstraction, and decision making that together allow the execution of contextually appropriate behavior"(p. 281). Giancola and Zeichner (1994) described deficiencies in executive functioning as impairing one's ability to inhibit impulses and to generate socially acceptable responses to challenging situations. Deficits in executive functioning are associated with adolescent delinquency, even when controlling for ADHD, low IQ, early family adversity, SES, and gender (Ishikawa & Raine, 2003).

Specifically, deficits in structure and function of the orbital medial prefrontal cortex (OMPFC) and the dorsal lateral prefrontal cortex (DLPFC) were observed in antisocial individuals (Cozolino, 2006). These deficiencies in brain function are thought to specifically manifest as difficulties in affect regulation, impulse control,

autonomic arousal, and ability to relate to others (Cozolino, 2006), which predisposes affected individuals toward antisocial or delinquent behavior.

The orbito prefrontal cortex is thought to underlie non-aggressive antisocial behavior (Ishikawa and Raine, 2003). Cozolino (2006) describes the role of the orbital frontal area as associated with executive functioning. He considered it central to antisocial pathology because of its role in the interpretation of complex social and affective events that link it to nervous system response. It is also thought that the OFC plays a significant role in processing reward expectation for goal-directed behavior, providing individuals the ability to predict the behaviors of others (Schultz, Tremblay, & Hollerman, 2000). It is said to mediate reinforcers involved in such behaviors as gambling, food preference, and the development of attachment (Gallagher, McMahan, & Schoenbaum, 1999; Tremblay & Schultz, 1999; Cozolino, 2006). The orbito frontal cortex plays a role in regulating affect, as well as social awareness and self-awareness. It regulates autonomic reactivity and is implicated in motivational and emotion-based decision-making (Tremblay & Schultz, 1999; Dias et al., 1996; Teasdale et al., 1999, as cited in Ishikawa and Raine, 2003).

The dorsolateral prefrontal cortex is thought to underlie aggressive antisocial behavior (Ishikawa & Raine, 2003). It is associated with executive functions, such as information processing, working memory, and maintaining attention, as well as emotional centers linked with motivation (Ishikawa & Raine, 2003; Cozolino, 2006).

Corroborating the evidence linking frontal lobe deficiencies to antisocial behavior, studies indicate children and adolescents with traumatic injury to OMPFC or DLPFC regions are more likely to develop conduct disorder and externalizing

behavior problems (Butler, Rourke, Fuerst, & Fisk, 1997; Hux, Bond, & Skinner, 1998; Mittenberg, Wittner, & Miller, 1997). Studies show that those with trauma to frontal medial regions are aware of increases in aggression, whereas those with damaged orbitofrontal regions are typically unaware of their behavior changes. Similarly, studies of adult antisocial alcoholics show significantly reduced cerebral blood flow to the frontal and temporal lobes, as compared to alcoholics and non-alcoholics without antisocial personality disorder (Kuruoglu et al., 1996, as cited in Ishikawa & Raine, 2003).

Cozolino (2006) purports that because of these neurological deficits, antisocial individuals are less reactive to aversive stimuli when they or others experience it. This may result in decreased ability for these individuals to learn from environmental cues or punishment. Similarly, brain scans of antisocial individuals reveal lower levels of activation in social/emotional brain structures such as the amygdala, hippocampus, ventral striatum, and cingulate (Cozolino, 2006).

In addition, damage to the dorsal lateral or orbital frontal regions may also impair one's ability to relate to others and to understand the emotions and facial expressions of others (Blair, Colledge, & Murray, 2001; Stevens, 2001, Cozolino, 2006). Neurological damage in the areas of the cortex are associated with reduced empathy and cognitive flexibility (Eslinger, 1998; Shamay-Tsoory, Shur, Harari, & Levkovitz, 2003; Cozolino, 2006), which are necessary to navigate many interpersonal situations. Reduced cognitive flexibility may explain the objectification of others that is often seen in antisocial individuals. Delayed or deficient development and loss of cell growth are associated with adolescent delinquency, adult antisocial individuals,

and violent psychiatric patients. "The performance of antisocial individuals on various neuropsychological tests suggests that they suffer from response disinhibition, impaired ability to organize behavior and/or integrate information on complex tasks, and difficulty with adapting to changing environmental contingencies" (Ishikawa & Raine, 2003, p. 283). These impairments suggest direct, causal relations with antisocial behavior, compounded indirectly by a reduced ability to learn appropriate social functioning through observation and social learning.

Biological factors do not operate in isolation, however, social factors interact, increasing or decreasing one's predisposition for antisocial behavior. Many individuals with lesions to the frontal lobes do not develop antisocial traits. It is thought that particular neurological or social dispositions tend to "push" one toward a life of chronic antisocial activity (Raine, Stoddard, Bihrle, & Buchsbaum, 1998; as cited in Ishikawa and Raine, 2003). There is also evidence of an indirect path between prefrontal deficits and antisocial behavior. Social experience plays a significant role by affecting one's tendency toward adaptive or maladaptive coping throughout development. Antisocial individuals have been shown to be less responsive to common social learning or conditioning. As noted previously, prefrontal dysfunction associated with deficits in emotion recognition reduce an individual's responsivity to aversive social stimuli, thus contributing to the development of antisocial behavior by interfering with the socialization process (Ishikawa & Raine, 2003). Studies of DLPFC have revealed its foundational role in mediating such learning. Studies of antisocial groups have corroborated this notion, finding that antisocial individuals have poor fear

conditioning which is thought to relate to poor development of a conscience and a predisposition for antisocial thinking and behavior (Ishikawa & Raine, 2003).

Raine, Venables, and Mednick (1997) discussed another possible model explaining the prefrontal pathway toward antisocial behavior. They defined a process of autonomic under arousal, where individuals with low baseline arousal seek out stimulation in an effort to reduce the uncomfortable psychophysiological state of under arousal.

Moffitt (1993) hypothesized that from a developmental standpoint life-course persistent antisocial individuals suffer from an interaction of early health and family environmental risk factors (head injury, prenatal exposure, ADHD, delayed neural development, chaotic home life, abuse) that disrupts both the socialization process and the maturation of frontal gray and white matter. Moffitt purported that this interaction results in a child's failure to learn to inhibit impulses and decreases his responsiveness to discipline. These deficits in turn expose the child to social rejection, which may contribute to delayed social and neurological development. They also may predispose the child to socialization with similar peer groups, academic failure, and disregard for authority and societal norms. In later development, adolescents with unhealthy family experiences may not be neurologically equipped to meet the heightened demands for executive functioning associated with more freedom and the growing complexity of socialization. These deficits increase the likelihood of a host of problems which may perpetuate the divergent pathway from prosocial to antisocial development.

Prenatal and perinatal influences. Prenatal and perinatal exposure to risk may be the first of many interacting variables influencing the development of persistent

antisocial behaviors (Brennan, Grekin, & Mednick, 2003). Juvenile delinquents have been found to have more recorded prenatal complications than non-delinquents (Lewis, Shanok, & Balla, 1979). Research indicates delivery complications are significant predictors of future arrests for violence but not property offenses (Kandel & Mednick, 1991; Raine, Brennan, & Mednick, 1994; Brennan, Grekin, & Mednick, 2003). Moffitt (1993) theorized that neurological deficits from prenatal and perinatal exposure to toxins may result in a child exhibiting difficult temperament, poor behavioral and emotional regulation, and deficient cognitive abilities. All three are predictive of antisocial behavior. The behaviors resulting from such exposure set the stage for parent-child interactions that may evoke negative responses from caregivers rather than the support and safety needed for optimal development. Existing research states that prenatal deficits may play a larger role in youth with an early on-set offending and violence than those with adolescent-limited antisocial behavior (Brennan, Grekin, & Mednick, 2003).

Maternal smoking is associated with life-course specific antisocial behavior characterized as externalizing behaviors, such as defiance, conduct disorder, and substance abuse (Day, Richardson, & Goldschmidt, 2000; Wakschlag, Lahey, Loeber, Green, Gordon, & Leventhal, 1997; Brennan, Grekin, & Mednick, 2003) but not as internalizing behaviors (Orlebeke, Knol, & Verhulst, 1997, as cited in Brennan, Grekin, & Mednick, 2003). Studies are mixed in determining the impact of prenatal smoking on boys versus girls. Several studies report equally damaging effects while others report a stronger impact on males (Brennan, Grekin, & Mednick, 2003). Fetal brain development is faster in females than males, so it is possible that prenatal and

perinatal toxins may have differing effects on male and female offspring (Castle & Murray, 1991). Females may be more susceptible early in gestation and males later in gestation (Brennan, Grekin, & Mednick, 2003). A few studies have linked exposure to prenatal toxins to frontal lobe dysfunction. One study found that alcohol consumption during pregnancy was related to a reduced frontal cortex size (Wass, Persuitte, & Hobbins, 2001, as cited in Brennan, Grekin, & Mednick, 2003), and other studies have related frontal cortex size to fetal malnutrition and exposure to cocaine (Stern, Pugh, Resnick, & Morgane, 1984, as cited in Brennan, Grekin, & Mednick, 2003).

Prenatal and perinatal stress, such as maternal alcohol use and delivery complications, are associated with increased stress reactivity, in which higher levels of glucocorticoids are released in the blood stream and create harmful effects on the developing brain (Jacobson, Bihun, & Chiodo, 1999; Gunnar, 1998). Research on stress reactivity in children has found evidence suggesting that acting out behaviors of younger children are associated with hyperresponsivity to stress while acting-out behaviors of older children are associated with hyporresponsivity to stress. Similarly, Brennan, Grekin, & Mednick (2003) hypothesized that defensive aggression may be more associated with hyperresponsivity and offensive aggression more associated with hyporesposivity. Corroborating this line of research, a pilot study of aggressive youth in a foster care intervention program noted changes in diurnal cortisol patterns due to treatment intervention (Fisher & Stoolmiller 2002, as cited in Brennan, Grekin, & Mednick, 2003).

Frontal lobe dysfunction, social rejection, stress reactivity, and family dysfunction were found to influence the link between perinatal exposure and antisocial

behavior in juveniles (Brennan, Grekin, & Mednick, 2003). Werner (as cited in Brennan, Grekin, & Mednick, 2003) found that the effects of perinatal stress on delinquent outcomes was strongest for those in chaotic family environments. Perinatal risks are especially predictive in the presence of poor family functioning and low socio-economic status. Werner (1987; as cited in Brennan, Grekin, & Mednick, 2003) defined a "disruptive family" as experiencing marital discord, a child's separation from its mother, an absent father, illegitimacy of the child, and parental mental health problems, though optimal or improving parenting skills may protect against the negative impact of prenatal stress (Gunnar & Chisholm, 1999, as cited in Brennan, Grekin, & Mednick, 2003). As Moffitt (1993) suggested, biologically vulnerable individuals often find themselves in environments that exacerbate rather than alleviate their needs.

Similarly, social rejection is another mediating factor in the relationship between prenatal stress and antisocial outcomes (Brennan, Grekin, & Mednick, 2003). Social rejection predicts a number of antisocial behaviors, including both aggressive and non-aggressive types (Newcomb, Bukowski, & Pattee, 1993), and tends to be stable across social domains (Kupersmidt, Griesler, DeRosier, Patterson, & Davis, 1995). Perinatal factors can lead to social rejection by way of fetal brain damage that impairs the child's ability to function socially and acquire new social skills (Braun, Denault, Cohen, & Rouleau, 1994; Hornak, Rolls, & Wade, 1996). Frontal lobe impairment is associated with impulsivity, affect dysregulation and difficulty perceiving emotion on others' faces. These deficits prevent proper socio-emotional comprehension; a complex task associated with popularity in elementary schools

(Nowicki, & Duke 1992) and thought to relate to difficulty feeling emotions such as fear and sadness (Hornak, Rolls, & Wade, 1996). Supporting this notion, treatment approaches focusing on social skills development in schools have been found to decrease aggressive and delinquent behaviors (Reid, Eddy, Fetrow, & Stoolmiller, 1999; Tremblay, Pagani-Kurtz, Masse, Vitaro, & Pihl, 1995).

Psychological Factors Associated with Delinquency

Several psychological variables play a role in the development of antisocial behavior. These factors rarely act independently; in fact, the biopsychosocial approach argues that the interaction of variables creates pathways to positive or negative outcomes in youth. Research has identified several psychological factors associated with risk for criminal offending and re-offense. The following section describes factors predominantly identified in the literature and relevant to this study. These factors include: cognitive processing, association with delinquent peers, the effects of child maltreatment, and protective factors for resiliency that are seen as reducing the likelihood of criminal behavior.

Cognitive Processing Models of Antisocial Development.

In the field of psychology, it is commonly thought that life experience, socio-cultural context, and genetic predispositions play important roles in a child's development of social knowledge about the world and that memory facilitates the connection between past life events and present or future social-cognitive interpretations (Dodge & Pettit, 2003). The social-information processing model generally states that a child's history and environment play a constructivistic role in shaping his interpretation of life and social events. For instance, a child raised in the

presence of certain factors is more likely to develop cognitive biases for particular constructs, such as physically abused children's oversensitivity to angry facial expressions (Pollak, Cicchetti, Hornung, & Reed, 2000). Numerous studies have linked acts of aggression in children to deficits in social-information processing, thought to be directly related to such factors as harsh discipline, social rejection, and positive expectations for the use of aggression (Dodge & Pettit, 2003).

The model described by Weiss et al. (1992) identified a pathway by which early harsh discipline leads to increased aggression in children. It was described in four phases. In the first phase it was established that children receiving harsh or physical punishment were less attuned to social cues. In the second phase these children were found to generate more aggressive responses to hypothetical social problems. In the third, they demonstrated hostile attribution biases when interpreting peer intentions, and in the final phase the child expected positive outcomes for aggressive action. Weiss et al. further found that the effect of harsh discipline was maintained even after controlling for contextual variables, such as socio-economic status, marital violence, and child temperament. These findings illuminate the connection between a child's home environment and his aggression which is mediated by an interpretation of life events characterized by violence. This research speaks loudly of the responsibility of parents in shaping their child's view of the world and subsequently, his behavior.

Similarly, Shahinfar, Kupersmidt & Matza (2001) found that exposure to violence impacted adolescents' cognitive processing around the use of aggression. Evaluating incarcerated adolescent boys from a social-information processing

perspective, they found that victims of severe violence were more approving of violent social responses. The researchers also found that those witnessing severe violence attributed favorable outcomes for the use of violence. The authors noted that severity and modality of violence exposure mediated the influence of youths' social information processing. They further stated that impaired social information processing may serve an important mediating function between exposure to violence and aggressive behavior.

The maladaptive social-information processing of aggressive youth creates a direct pathway for antisocial behavior and aggression. It may also lead to antisocial behavior indirectly, through the resulting social rejection by non-aggressive peers, the underdevelopment of appropriate social skills (Dodge, 1980; Laird, Jordan, Dodge, Pettit, & Bates, 2001, Dodge & Pettit, 2003) or the growing association with similarly aggressive or delinquent peers. The development of social-information processing biases, therefore, may be the first step on the pathway toward delinquency for many youth. This pathway is described by dynamic systems theorists as a self-organizing process where negative behaviors become increasingly resistant to change over time (Granic & Patterson, 2006).

The Dynamic Systems (DS) model of antisocial development is based on behavioral, systems, and coercion theory research in describing pathways of antisocial development (Granic & Patterson, 2006). The dynamic systems theory provides a means of explaining the spontaneous organization of complex, adaptive systems (Granic & Lamey, 2002; Gardner, Burr, & Wiedower, 2006). Building on Coercion Theory, the dynamic systems theory describes a process where parents and children

mutually condition each other into a pattern of interacting that develops antisocial characteristics, such as aggression and behavior problems (Granic & Patterson, 2006). Coercion Theory is commonly described as conditioning that begins with a parental demand for compliance, followed by the child's resistance to comply, which often looks like complaints or arguing, or, in other ways, constitutes refusal. To avoid this negative interaction, parents capitulate, giving in to the child's refusal. In this coercive interaction, children are reinforced for using coercive strategies to avoid compliance by winning the argument. Parents are negatively reinforced (the aversive stimuli of fighting is removed) by giving in to the child. This coercive interchange is common among aggressive youth and is thought to become a common interaction style. The dynamic systems model explains this interchange as a fundamental behavioral process by which aggression develops and stabilizes over development (Granic & Patterson, 2006).

According to Granic & Patterson (2006), Dynamic systems (DS) approach addresses gaps in the coercion theory. First, DS explains the connection between real-time processes and developmental processes. Second, DS principles address the occurrence of both early on-set and adolescent on-set trajectories. Finally, DS principles address stability and change of these patterns. The DS model considers all possible interactions processed between mother and child as the "state space" (Granic & Patterson, 2006). This state space is composed of many "attractors," which are patterns of interaction or stable states that emerge through coupling or cooperativity. Behavior moving toward these states can be described as self-organization. Granic and Patterson describe attractors as "valleys on a dynamic landscape. The deeper the

attractor, the more likely it is for behavior to fall into it and remain there, and the more resistant it is to small changes in the environment" (Granic & Patterson, 2006). According to Granic & Patterson (2006), dynamic systems are said to "self-organize" through the interplay of positive and negative feedback. Positive feedback is defined as interactions among system elements that increase the likelihood of novel behavior, whereby new patterns, or ways of interacting are developed. Negative feedback, on the other hand, reinforces established attractors, strengthening an existing pattern of responding and minimizing potential for variations in interacting. Therefore attractors are created through the negative feedback system. This self-organizing system becomes more complex through the interaction of positive and negative feedback processes. Positive feedback stimulates reorganizations in response to environmental changes, and these new organizations are maintained through self-stabilizing properties of negative feedback. "Phase Transitions" or junctures of reorganization occur when small fluctuations, also known as "perturbations," occur at points of increased sensitivity. These disproportionately affect the interactions of multiple system elements, leading to the emergence of new attractors. Therapeutic interventions can be seen as induced phase transitions (Granic and Patterson, 2006).

Granic and Patterson (2006) stated that "Over developmental time, attractors represent recurrent patterns that eventually stabilize and become increasingly predictable" (pp. 3). For instance: parent-child interaction patterns develop over multiple real-time interactions on multiple occasions. These patterns repeat hundreds of times, becoming more specified and stable with each interaction, thus decreasing the likelihood of variation from the pattern or attractor. Thus the real-time interaction

of parent and child is increasingly predetermined by previous interactions that stabilize the behavioral trajectory of the dyadic system and moving it from an undifferentiated state to an increasingly predictable one. This restrictive process of repeated patterns is known as cascading constraints. The more times a pattern of behaviors occurs the more likely they will occur again in the future. Granic and Patterson use the following example: A particular parent-child relationship may be characterized by two attractors, a playful interaction and a hostile-withdraw interaction in which the parent berates the child who ignores the parent. They explain that "as the mutual playfulness decreases with the child's aging, existing patterns of withdraw constrain the interactions that emerge. A repertoire of distance and disengagement may characterize the adolescent period, leading eventually to complete estrangement and alienation in adulthood..." thus, "the degrees of freedom along the dyadic trajectory are pruned by developing habits" (Granic & Patterson, 2006, pp. 6).

Hollenstein and Lewis (2006) tested the dynamic system model using 55 mother-daughter pairs in positive and negative discussions. Moment-to-moment coding was utilized in observation to measure emotional valence and flexibility. The authors found that interpersonal flexibility was highest in positive conversations, became lower as negativity in the conversation peaked, then returned to near baseline as the conversation shifted back to positive. This sequence suggests that interpersonal flexibility declined as negative emotion increased (Hollenstein & Lewis, 2006). The researchers identified participants as low or high stress dyads for comparison. Researchers found that dyads experiencing higher stress demonstrated less

interpersonal flexibility in positive conversation and expressed less negativity when discussing topics of conflict. This finding may indicate that negative emotion was repressed in relationships with higher stress or may indicate that less flexible or expressive individuals are more prone to stress. The self-organization process occurs in all social interactions and develops strong attractors, reducing the likelihood of new behavior. This process influences both family and peer relations alike.

Peer and social context. Although it is also thought of as a socio-cultural factor, a youth's social context shapes him or her psychologically. The impact of peer relationships on developmental pathways of delinquent and non-delinquent youth is not a new concept. Authors Vygotsky and Sullivan (1953), for example, wrote about the power of youth relationships decades ago. Since that time, meta-analyses of studies on antisocial behavior in youth have described association with negative peers as one of the top dynamic predictors of delinquent behavior (Cottle, Lee, & Heilbrun (2001). Current literature on dynamic systems has found that the mutual impact of peer relations is characterized by reinforcement for particular conversation topics (Dishion, Nelson, Winter, & Bullock, 2004). Dishion et al. found the negative influence of delinquent peers is characterized by increased verbal reinforcement for deviant topics and decreased reinforcement for non-deviant or normative talk when compared to non-delinquent peers. For example, a group of delinquent youth may applaud each other for shoplifting, winning a fight, or being non-compliant at school, where non-delinquent youth may applaud each others successes in sports or academics. Reinforcement may not always be so obvious however, and may be constituted by eye contact laughing or heightened engagement in particularly

conversation topics. From a DS perspective, these youth become stuck in deviancy reinforcing relational pattern that leads to seeking out of other deviant peers. The self-organized relational pattern becomes more solidified as it is further utilized, thus becoming more resistant to change. Dishion et al., in a manner similar to Coie, Dodge, Terry & Wright (1991) describe these youth as experiencing "arrested socialization" (Dishion et al., 2004). Corroborating this notion, Zelli, Dodge, Laird, and Lochman (1999) found that aggressive youth were more likely to expect favorable results for the use of aggression. They found that stronger beliefs in the acceptability of aggression resulted in more deviant processing and aggression that occurred one and two years out, respectively. This research illustrates the socially constructed nature of juvenile deviancy and the role of peer groups in developing pathways of delinquency.

Dishion et al. (2004) found that antisocial males were more disorganized in their friendship interactions, although disorganization did not predict future delinquent acts and tended to improve over the course of adolescence. Some delinquent youth were not disorganized in their friendship interactions. The authors found that more organized interaction combined, with high levels of deviant talk among friends, was associated with a higher prognosis of continuing antisocial behavior into adulthood. As delinquent males matured, their friendships were found to be shorter in duration than those of their non-delinquent same-aged peers. Delinquent males tended to spend more time with their friends as they aged, which was opposite of non-delinquent males.

Child maltreatment. Although child maltreatment is not a factor in this research, variables utilized in the current study are affected by maltreatment. For

example, youth with a history of maltreatment are more likely to engage in delinquent behavior and are more likely to experience other predictors of delinquency, such as conduct problems, family dysfunction, and non-severe pathology (Jaffee, Caspi, Moffitt, & Taylor, 2004). Child maltreatment is generally defined as intentional or unintentional actions that place children in actual or potential harm physically, sexually or psychologically (Glaser, 2000). Child maltreatment is discussed in the literature in terms of four main types of abuse: physical, sexual, emotional/psychological, and neglect. Different types of abuse coexist (Glaser, 2000), so isolating the effects of a single type of abuse is difficult for researchers. The terms "maltreatment" and "abuse" are used interchangeably in this study to refer to incidents and general effects of the four types of abuse, even though research has identified differing effects for each type of abuse.

According to OJJDP (2006) statistics, child victimization and maltreatment is linked to problem behaviors. Those who survive child abuse experience more emotional, social, behavioral, and cognitive difficulties that can create long-term problems for adult and child victims. Consequences of child abuse may lead to criminal acts and to the transmission of abuse from generation to generation (Myers et al., 2002).

The highest rates of abuse per capita found by OJJDP researchers were among Pacifica Islanders and Native American children. They found that the rate of maltreatment victimization was inversely related to age, with the youngest children experiencing the highest rate. The majority of maltreatment perpetrators were parents (80%). Female perpetrators tended to be younger than males with half of all female

perpetrators were under the age of 31. Male victims less than one year old had the highest rate of fatality in 2003. Of the total victims who died as a result of maltreatment 44 percent were infants less than one year of age. These children most often died from neglect.

Child maltreatment is also associated with poverty, lower education, higher incidence of mental illness, greater exposure to violence, and increased engagement in illegal behavior. (McCabe, Lucchini, Hough, Yeh, & Hazen, 2005). In studying the relationship between exposure to violence and conduct problems, McCabe et al. (2005) reported that exposure to community violence and child maltreatment predicted conduct disorder two years later. They also found that exposure to community violence, even when history of child maltreatment was controlled for, was associated with conduct disorder and externalizing behaviors, such as aggression and violence.

In a study of female sexual abuse victims, Siegel & Williams (2003) suggested that child sexual abuse, physical abuse, and neglect, were each correlated with specific types of criminal offenses. Siegal and Williams found that sexually abused girls were more likely to become runaways than non-victimized girls and that the victim-offender relationship was significantly associated with running away. According to this study, 13 percent of those victimized by a stranger were arrested for running away, while none of the 63 girls victimized by family members were arrested for running away. Siegal and Williams also found that larger percentages of sexual abuse victims, than non-victims, were arrested for property offenses, prostitution, and violent offenses. Victims were more likely to have drug charges as adults (7.8% of their sample), although not as adolescents.

Analyzing data according to the race of the victim, Siegel and Williams (2003) observed that inner city African American women who were sexually victimized had higher rates of arrest for violent offenses than women of other races. The arrest rates of African American women was comparable to white males. Based on these results Siegal and Williams suggested that child maltreatment and delinquency are products of the same family environment.

The connection between abuse and antisocial acts is not limited to females. Hernandez, Lodico, and DiClemente (1993) explored the association of child sexual abuse and risk-taking among males, and found main effects for both race and types of abuse. Almost 3000 African American and Caucasian adolescent males were studied; of that number 412 had been sexually or physically abused. The authors found that physical abuse, extra-familial sexual abuse, and incest were more frequently experienced by black males than white males. African American males were also more likely than Caucasians to engage in the risk-taking behaviors of illegal substance abuse, suicide attempts, forced sex, running away, and violent acts. Racial effects decreased when abuse history was controlled for. Caucasian males were more likely than African American males to drink and drive and to drink before having sex. These effects were maintained even after controlling for abuse. These results indicate that physical and sexual abuse is an important moderator of risk-taking behavior in both African American and Caucasian adolescent males. Hernandez et al. (1993) also found that having been abused physically or sexually was significantly associated with forcing someone else to have sex against their will. Of African American males abused outside their home, 45% forced someone to have sex, while 63% of those

sexually abused by a family member engaged in forced sex. Among white males 30% of those sexually abused by a non-family member forced another person to have sex, in contrast to a rate of 26% among those abused by a family member.

Biological and psychological interaction. The effects of child maltreatment, which are both physiological and psychological, are typically described in terms of the stress response associated with maltreatment as opposed to PTSD symptoms (Glaser, 2002). As Glaser explained, trauma and abuse are not synonymous. She cites studies that distinguish such symptoms and outcomes based on the differing neurological effects.

The impact of long-term stress in response to maltreatment is thought to be one of the primary mediators of the damaging neurocognitive effects of abuse. Glasser's (2002) research identifies three avenues by which the individual is impacted by the long-term effects of abuse. These include homeostatic regulation, memory and attachment.

Homeostasis is the term used to describe the body's attempt to maintain chemical and biological equilibrium. According to Lovallo (2005), complex systems of physiological controls operate in a hierarchical fashion, from intrinsic organ regulation through brainstem, hypothalamus, limbic, and behavioral mechanisms that correspond with the perceived significance of the event experienced. Threats to the system may be physical or psychological such as threats of harm to the body, fear, anger, and other emotional reactions that trigger increased sympathetic nervous response. For instance, exercise is a stress to the body, however, due to of positive emotional interpretation of the event, the body responds with increased cardiovascular

and catecholamine release but withholds the release of cortisol. The release of cortisol is associated with negative emotional reactions, such as fear, and is accompanied by bodily fight or flight responses. The psychological reactions to threatening events are evaluated by higher cortical regions of the brain. The evaluation of events, as Lovallo (2005) explained, occurs through two stages. The primary evaluation is the process by which the brain recognizes danger, while the secondary evaluation involves formulating a method of coping.

The homeostatic process is designed to compensate for disequilibrium triggered by short-term bouts of stress. Over longer periods of stress, such as prolonged abuse, intense family discord, or exposure to violence, however, these processes have deleterious effects on the body. The effects of long-term stress from abuse, which may be permanent, can lead to behavioral health conditions such as Posttraumatic Stress Disorder. Long-term stress may shape an individual's perspective on future events. Because of the intricate connection among the limbic system, frontal lobes, and the stress response, prior experience of stress may lead to increased reactivity to subsequently experienced stress. Prolonged stress is associated with amygdaloid sensitization and loss of hippocampal volume, which has a negative impact on cognitive processing, emotional regulation, cortisol regulation, memory consolidation, and general health (Lovallo, 2005). The prolonged release of cortisol, from long-term emotional distress is also associated with weakening of the immune system, which leaves the body more susceptible to disease (Lovallo, 2005). Psychological and/or physical stress are interrelated and are associated with behavioral health risks, including drug abuse, obesity, smoking, hostility, and poor social support

networks. Many of these behaviors are associated with or constitute antisocial behaviors.

Mind and body continually work to maintain homeostasis, even while being influenced by ongoing internal and external events. Homeostatic regulation is not isolated from past experience and relational influences.

Memory, an essential component of human experience, begins when the brain responds to experience by the establishing of neuronal connections. As these connections fire simultaneously, they become associated with one another, this makes them more likely to fire concurrently in future events. Siegal (1999) contended that "memory forms the foundation for implicit reality (behavioral responses, emotional reactions, perceptual categorizations, schemata, and possibly body memory), explicit recollection of facts (semantic memory), and realization of the self across time (episodic memory). Implicit memory, as Siegal describes it, is present from the beginning of life, prior to the formation of the hippocampus, which allows the development of explicit memory.

For juvenile delinquents, memories of maltreatment or violence exposure may serve many functions in relation to delinquent behavior. First, young people's recollection of past events and the responsiveness of their caregiver enable them to form attachments, inability to form attachments has shown to be related to antisocial acts. Second, memory enables social learning, the ability to learn from past experiences affects one's expectations and internal evaluations of a given experience. These memories play an active role in socialization and in other behavioral processes that trigger physiological reactions and influence emotional regulation and decision

making. Third, memory allows the recollection of past successes. The ability to recall experiences and relationships permits cognitive shifts, the formation of new life stories, and the experience of corrective relationships that facilitate emotional healing.

Long-term stress associated with chronic maltreatment, witnessing of violence in bad neighborhoods, marital discord, and conflicted family environments stimulates prolonged cortisol release. Cortisol degrades hippocampal functioning, which is associated with memory consolidation. Youth are primed for negative outcomes by this decreased ability to store new memories and by the repetitive firing of neural pathways connecting negative emotions, relational problems, and maladaptive behaviors.

Attachment plays a significant role in the multilevel interaction between individuals and their environment. Experiences, especially those in early years of life, shape the functioning of the mind in cognitive, emotional, and relational ways that enable one to deal with later adversity (Siegal, 1999). Secure attachment with a caregiver is associated with overall well-being and adjustment in both childhood and adulthood. Early attachment results from parental attunement to the needs of the child that fosters collaborative communication. This communication aligns the experience of caregiver and child, fostering emotional understanding and healthy, secure attachment (Cashdon, 1988). If the caregiver is not attuned to the needs of the child, an insecure attachment may result, which is associated with underdevelopment of the orbital frontal region and corticolimbic circuitry associated with self-regulation (Schore, 2003, as cited in Cappas, Andres-Hyman, & Davidson, 2005; Cozolino, 2006). This may leave the individual more prone to pathology, disorganized thinking,

and with insufficient ability to manage emotion, attention, and impulses (Siegal, 1999). Each of these tendencies is associated with increased acts of antisocial behavior.

The affective and cognitive development of children exposed to prolonged stress or maltreatment is impacted by increased levels of cortisol, a stress hormone in the blood. Nachmias et al. (1996, as cited in Glaser, 2000), demonstrated in their study that securely attached infants showed no elevation in blood cortisol levels when presented with a fearful situation in their mothers' presence. Insecurely attached infants, however, showed significant elevations of cortisol that were further increased by insensitive pressure from their mothers to approach the stimulus. Elevated cortisol levels are associated with decreased numbers of hippocampal cells; these cells are needed for memory consolidation and are associated with alterations in mood and other changes within the nervous system. Differing responses to fearful stimuli and the corresponding parental responses demonstrated the infant's dependency on attachment figures for external regulatory function, as well as the importance of infant-caregiver attachment during development (Nachmias et al., 1996, as cited in Glaser, 2000).

In linking attachment to delinquent or antisocial acts, several studies explore associations with perceived parental support and other indicators of caregiver-child attachment. Davalos, Chavez, and Guardiola (2005) studied the relationship between perceived parental school support and family communication on delinquent behaviors in Latino and non-Latino adolescents. They found that adolescents' perception of parental support and communication was related to the likelihood of engaging in delinquent or antisocial behaviors and the likelihood of conviction on related criminal

charges. When looking at the correlation of delinquency with perceived parental school support, Davalos et al. (2005) found that every one-point drop in perceived parental school support was associated with an increase in delinquent acts, specifically in theft and vandalism, and an increase in criminal conviction. Their study implies that neglected children may have higher rates of criminal activity. Davalos et al (2005) also emphasized that children's interpretation of parental school support may vary from the perspectives of their parents.

In a similar study linking relationships with antisocial acts, Goldstein, Davis-Kean, and Eccles (2005) found that adolescents' negative perceptions of their family relationships predicted negative peer association and later juvenile delinquency. This implies that family relationships may predict future problems relationally and behaviorally, a notion with serious implications for victims of long-term maltreatment. In another related study, Katsiyannis, Zhang, Barrett, and Flaska, (2004) analyzed four categories of variables to examine their relative contribution to recidivism: alcohol abuse, depression, level of parent attachment, and personality traits. These researchers included 299 incarcerated adolescent males between the ages of 12 and 18 in their study. Among their findings, Katsiyannis et al. (2004) reported that recidivists showed a lower need for approval and support, consistent with a dismissive attachment style associated with offenders in some studies (Allen, Hauser, Eickholt, Bell, & O'Conner, 1994, as cited in Katsiyannis, et al., 2004).

In summary, attachment theorists would argue that poor caregiver-child relationships early in a child's life prevent the development of emotional regulation, inhibition, and cognitive organization associated with securely attached individuals.

The failure to develop these neurological functions seems to increase one's likelihood of committing delinquent acts.

Socio-cultural Factors Associated with Delinquency

Socio-cultural factors are thought to play a role in the pathways of youth development by the opportunities and experiences one is presented with, as well as by social construction of values, worldview, and self-concept. Flannery (1999) purported that the shift from the industrial state to the postindustrial state, with an accompanying switch in focus to knowledge, continuous information processing, and the necessity to keep up, has created three work-related groupings in society. These groups include knowledge workers (researchers and pioneers); support services workers (for example, banking, transportation, and communication); and the permanent underclass, (individuals without the education and skills to function in either of the first two groups). Flannery describes the negative impact of current culture on today's youth using the term "anomie," which he defined as the current trend in society toward the decreasing regulatory functioning of social norms. He stated that due to major shifts in societal values youth feel adrift, out of touch with a larger integrated community, and no longer closely linked to others in basic social rituals. Flannery purported that this shift has led to a shift in values, from hard work, honesty, and similar other-focused values to self-focused values such as the primacy of self, personal entitlement, material gain, power as defining success, and instant gratification. Flannery relates this to youth's growing sense of feeling out of control and hopeless, with a chaotic experience of society.

Poverty. According to OJJDP (2006), juvenile poverty is associated with crime and in 2002 more children under the age of five lived in poverty than any other age group. In total, 12% of all persons, including one out of six juveniles, lived in poverty in 2002. When these figures are broken out by ethnicity, African Americans and Hispanics were three times as likely to live in poverty as non-Hispanic White juveniles. Almost one-third of African American juveniles lived in poverty, and one-fifth under the age of five lived in extreme poverty, which is defined as living on less than half the income designated as the poverty threshold. These statistics vary from state to state; more than one in four juveniles in Washington DC, Arkansas, Louisiana, Mississippi, and West Virginia lived in poverty in 2002. Of children living in poverty, 88% lived in families where at least one parent worked. Of children living in two-parent households, 97% had at least one working parent and 62% had two working parents. Children living in single-parent families were more likely to be living in poverty, with 19% of children in single-father households and 35% of children living in single-mother households were found to be in poverty. By comparison, only 8% of children living in two-parent families lived in poverty, while 52% of all children living in poverty resided in single-mother families

Family Structure. Certain characteristics of family structure have been identified as risk factors for juvenile delinquency. McCurley and Snyder (as cited in OJJDP 2006) found that youth between the ages of 12 and 17 who resided with both biological parents were, less likely than youth in other families contexts to report a variety of problem behaviors, such as running away from home, sexual activity, major theft, assault, and arrest, even after controlling for race, ethnicity or neighborhood

conditions. Further, juveniles living with both biological parents reported lower life-time prevalence of law breaking. Seventeen year-old adolescents living with both biological parents, rather than in other family structures, reported less use of marijuana (30%), hard drugs (9%), drug selling (13%), running away (13%), vandalism (34%), theft of something worth more than $50 (19%), and assault with intent to harm (20%) (OJJDP, 2006). In light of the fact that White, non-Hispanic youth are more likely to live with two biological parents than Hispanic or African American youth, differences in delinquent behavior may reflect family structure rather than racial or ethnic differences.

In terms of family environment, Cummings, Davies, and Campbell (2000) stated that parental warmth, attunement, and support, in addition to the use of inductive parenting techniques, serve a protective role. These factors act in a protective role by fostering children's development of insight, empathy, and social awareness, which are associated with healthy adaptation and increased ability to regulate emotion and inhibit impulses. Other researchers found that adolescents' perception of parental support and communication was inversely related to both negative peer affiliation (Goldstein, Davis-Kean, & Eccles 2005) and to the likelihood that adolescents will engage in delinquent or antisocial behaviors such as theft or vandalism (Davalos, et al., 2005). Parental provision of autonomy was associated with development of self-regulation, behavioral adjustment, and school competence, while familial structure and control were associated with rule compliance and differentiation of control at school (Grolnick & Ryan, 1989). Since the interaction effects of deviant peer association with reduced parental supervision appears to predict the continuance

of antisocial behavior into adulthood (Dishion et al., 2004), it appears that families provide an insulating effect, protecting youth from developing peer groups independent of adult socialization (Sameroff & Suomi, 1996, as cited in Dishion et al., 2004). Conversely, harsh discipline and a history of child maltreatment serve as risk factors for youth, increasing their likelihood of engaging in antisocial behaviors (Weis, Dodge, Bates, & Pettit, 1992; Bassarath, 2001, as cited in Zingraff et al., 1993) and childhood aggression (Weis et al., 1992).

Education. Academic failure was found to predict law-breaking behavior in juveniles, as well as higher rates of unemployment and poverty when the juveniles mature to adulthood (OJJDP, 2006). In the young adult population in 2000, the school dropout rate was 10.9% overall; this breaks down to 12% for males, and 9.9% for females. The rate of dropout in the population was highest for Hispanics at 27.8%, and lowest for Asians at 3.8%. Broken down further, the dropout rate was highest for Hispanics born outside the United States (44.2%), followed by those born in the United States (15.2%). Juveniles from low income families had the highest dropout rates. "If, as research has found, educational failure leads to unemployment (or underemployment), and if educational failure and unemployment are related to law violating behavior, then patterns of educational failure over time and within specific groups may help explain patterns of delinquent behavior" (OJJDP, 2006, pp.).

Resilience to Adversity

The picture of juvenile delinquency is incomplete without exploring interpersonal and psychological factors inversely related to antisocial behavior. These factors are known as protective factors and are thought of as the building blocks of

resiliency (Prescott, 2005). Resilience or protective factors are seen not as reducing risk, but as separate factors enhancing youths' ability to adapt despite risk. Hauser, Vieyra, Jacobson, and Wertreib (1985, as cited in Rak, & Patterson, 1996) defined resilience as "the capacity of those who are exposed to identifiable risk factors to overcome those risks and avoid negative outcomes such as delinquency and behavior problems, psychological maladjustment, academic difficulties and physical complications" (pp. 74). Resiliency is seen as a complex interaction of dynamic and multilayered forces within an individual's family, social groups, community, society and world (Waller, 2001, as cited in Prescott, 2005). In postmodern literature, antisocial behavior may at times be seen as resilience, in that it enables the adolescent to feel personal strength and agency and thus allows continued growth in the face of adversity (Ungar, 2004, as cited in Prescott, 2005). Seeing antisocial behavior in youth as a sign of resilience (White, 1995, as cited in Prescott, 2005) allows therapist to work with youth on an individual level while they still reside in antisocial social systems.

Rak and Patterson (1996) reviewed several meta-analyses and identified common protective factors found in resilient youth. Evaluating family dynamics, they found that the age of the opposite sex parent is associated with greater resilience. Their research suggested that younger mothers are associated with more resilient sons and older fathers with more resilient daughters. In addition, having four or fewer children in the family with births spaced two or more years apart was associated with resilience. Greater resilience was also seen among children, who received focused nurturing in the first year of life; who experienced little prolonged separation from the

primary caretaker; who had several alternative caretakers, such as siblings, grandparents, aunts and uncles who filled the caregiver role when needed; and whose support system included relatives and child confidants with similar belief systems.

Environmental factors play a protective function for many youth. These factors may include the presence of extra-familial role models and ability to accept help from others. Among minority children, those who were taught to not accept rejection in society and to seek help from others, even when they don't feel welcomed, showed greater resilience. Rutter (1986, as cited in Rak & Patterson, 1996) proposed the Buffering Hypothesis, which states "the availability of social support modifies the impact of stressors, thus leading to less damaging results" (pp. 369).

Finally, individual characteristics contribute to resilience. Temperaments that attracts others, that facilitates the building of close bonds in the early years of life, or that disposes one toward acts of helpfulness during middle childhood and adolescence were associated with resilience in the face of adversity and more positive outcomes (Werner, 1984, as cited in Rak & Patterson, 1996). Rak and Patterson reported more favorable outcomes despite the presence of risk among children who take active approaches to problem solving, who have an optimistic view of experiences in the midst of difficulty, an ability to maintain a meaningful perspective on life, an ability to be alert and autonomous, a tendency to seek new experiences, and a proactive perspective on life. These researchers also reported that self-concept provides protection from risk. Youth were found to adapt more successfully when they had a healthy understanding of themselves, healthy self-separation from family members during chronic stressors, and an ability to find peace during struggles. Citing findings

similar to those that led to Flannery's (1999) notion of "mastery," Rak and Patterson (1996) reported that youth who enhance themselves through the building of competence and who learn to protect themselves in the face of stress are more adaptive in the face of adversity.

Research on resiliency suggests the efficacy of a strength-based approach to treatment, as defined by the incorporation of protective factors to build resilience (Prescott, 2005). Treatment often focuses on deficiencies, with the goal of reducing symptoms or changing "unacceptable" aspects of clients. Prescott (2005) stated that developing treatment goals based on youths' needs and risk may create resistance and defiance, thus impeding motivation for internal, positive change. Luther, Cicchetti, and Becker (2004) found four factors promoting resilience: first, connections with positive, competent adults; development of cognitive and affective self-regulation; positive beliefs about oneself; and motivation to act effectively. Prescott (2005) stated that treatment of youth engaging in illegal sexual behavior should be focused on acceptance of the person, not the behavior, in order to help these youth develop a sense positive identity, self-efficacy, and feelings of inclusiveness. Prescott (2005) further describes resilience in adolescents as a safety net and an ally to treatment providers.

Treatment and Prevention Programs

Initiatives to reduce the re-offense rates of juvenile offenders include an array of treatment protocols, some of which were reviewed for this study. Many of the programs utilize a multi-system approach, addressing family, community, and other social systems that play a role in the lives of delinquent youth. These programs focus

on topics such as improving academic performance and attendance, peer relationships, social skills, anger management, family functioning, and recreational activities.

Outcome studies and evaluations of delinquency rehabilitation and diversion programs have demonstrated the effectiveness of various programs, have provided insight into mediating factors of treatment, and have recognized numerous predictors of juvenile recidivism. Several of these program evaluations served as models for the current study. Programs with empirical support for effectively addressing juvenile delinquency include the wraparound services model (Bickman et al., 2003), the Coping Power Program (Carney & Buttell, 2003; Lochman & Wells, 2002, 2004), Multidimensional Treatment Foster Care (Chamberlain & Reid, 1998), and Multisystemic Therapy (Curtis, Ronan, & Borduin, 2004) all of which were reviewed for the current evaluation of Oklahoma's First-Time Offender Program (FTOP), and are described briefly in the following.

Wraparound Services Model. The wraparound service model offers a wider array of services to participants than are offered by diversion program such as the FTOP. "The wraparound services model is a comprehensive approach to treatment designed to divert youth from more serious court involvement, and reduce recidivism among those with prior adjudications wraparound services have been defined as a 'strengths based' ideology of services that is based on individualized, needs driven planning and services" (Carney & Buttell, 2003, pp.552).

The wraparound services model is more individualized than the FTOP. This model views families, peers, schools, and neighborhoods as ecological and social contributors to delinquency, whose role necessitates comprehensive, individualized

services (Carney & Buttell, 2003). The model is not a specific program, but a more general approach to prevention and treatment than conventional counseling, diversion programs, or substance abuse treatment a juvenile might typically receive (Carney & Buttell, 2003).

Wraparound services have potential shortcomings. For example, the effectiveness of wraparound services, as compared to conventional interventions, remains undetermined. Carney & Buttell (2003) reported no significant reduction in recidivism which they defined as subsequent criminal offenses. In an extension of Carney and Buttell's findings, Bickman et al. (2003) reported improvements from both wraparound services and conventional services in participant life functioning, life satisfaction, symptoms, or sentinel events. They found no significant differences in outcome between the interventions, even though the cost of wraparound services was considerably more.

Although research reported by Carney and Buttell (2003) demonstrated no significant differences in recidivism between conventional and wraparound services these researchers developed a predictive model to assist the court system in identifying youth at high risk for re-offense. Their sample for program evaluation consisted of 307 juveniles aged 17 and under who were referred to court or had charges filed against them for delinquent offenses. The study took place over three years. Carney and Buttell (2003) utilized a pretest/posttest control group design, with random assignment to conditions. Their results indicated that youth receiving wraparound services missed less school, ran away from home less often, were less assaultive, and were less likely

to be picked up by police. Youth receiving conventional treatment were more likely to have jobs. Recidivism rates for the two types of services did not differ significantly.

Coping Power Program. The Coping Power Program is a multi-component prevention and intervention program designed for aggressive children. It is based on the social-cognitive model and addresses parenting processes and children's social cognitive processes (Lochman & Wells, 2004). The model is founded on evidence-based notions that children who engage in aggressive behaviors frequently have cognitive distortions, predict more favorable outcomes of aggressive acts, and interpret social events as being more hostile and personally directed than non-aggressive children experiencing similar circumstances. These beliefs affect how children perceive and react to social events (Zelli & Dodge, 1999), which can lead to peer rejection and further acts of aggression (Coie, Dodge, Terry, & Wright, 1991).

The Coping Power Program consists of two components, one for parents and one for children. The child component focuses on behavioral and personal goals-setting; awareness of feelings and associated physical arousal; use of coping self-statements, distraction techniques and relaxation methods to be used when provoked and angry; organizational and study skills; perspective taking and attribution retraining; social problem-solving skills development; and use of refusal skills to deal with peer pressure and neighborhood-based problems (Lochman & Wells, 2004).

The parent component includes learning to identify pro-social behavioral targets in their children, rewarding appropriate behavior, giving effective instruction, establishing rules, using effective consequences, establishing ongoing communication, and helping their children implement the skills they learned in the program.

Lochman and Wells (2004) used three outcome measures in their study of the Coping Power Program. The measures included parent-reported substance use, teacher-reported behavior, and self-reported delinquency. The researchers found reduced self-reported covert delinquency, such as vandalism, lower parent-reported substance use, and improved teacher-rated behavior during the following year. This study corroborated a previous study of the Coping Power Program by Lochman and Wells' (2002). The earlier research asserted the utility of the contextual social-cognitive model, demonstrating its effect on delinquency, substance use, and school behavior through its focus on child and parent factors that mediate later juvenile delinquency in high risk boys.

Multidimensional Treatment Foster Care. Multidimensional Treatment Foster Care (MTFC), is a family-focused approach that targets family, peer, individual, and school factors associated with antisocial or delinquent behaviors (Eddy, Whaley, & Chamberlain, 2004). During the course of MTFC, youth are placed in the home of foster parents trained in behavioral parenting. The child attends regular therapy to work on individual issues, and the biological parents see a separate therapist for behavioral parent training (Eddy, Whaley, & Chamberlain, (2004).

In an outcome study with foster children, Chamberlain & Reid (1998) compared MTFC and traditional group home care (GC). The average participant was a 14-year-old male, who had been removed from his home by authorities and had committed at least four felonies. Data was gathered from the official criminal referral database in the Organ Youth Authority and from the Elliott Behavior Checklist for self-reported delinquency. Criminal activity spanning one year prior to treatment to

one year following conclusion of treatment were of focus. The results demonstrated that boys who participated in MTFC had more positive outcomes than those in traditional treatment. They had fewer subsequent criminal referrals and were more likely to return home than those in group care treatment. MTFC participants also ran away from home less often, completed the program more frequently, committed fewer criminal and violent acts, and were less often placed in detention or training schools. Of the GC sample, 64% did not complete treatment.

A more recent study elaborated on the findings of Chamberlain and Reid (1998), demonstrating reduced rates of rearrest and self-reports for violent offenses (Eddy et al., 2004). In comparison to 24% of adolescents in group home care (GC), which constituted the control group, only 5% of violent offenders receiving MTFC had two or more referrals for violent acts. The authors assert that in combination with research on MST, their results support prior research in affirming that violent offenders benefit from structured, problem focused, multimodal treatment.

Multisystemic Therapy. Multisystemic Therapy (MST) is a systems-focused treatment that targets many of the same factors as MTFC. Much of the literature on the treatment of juvenile delinquency involved MST. These articles are of great significance to the current study because they provide several examples of outcome measures and moderator variables that are likely to impact the participants and effectiveness of the First-Time Offender Program.

Multisystemic Therapy assumes the social-ecological model of human development, conceptualizing ongoing behavior problems as resulting from problematic transactions within a child's social and ecological system. This system

may include a child's family, peers, school, and community factors identified as contributing to the child's delinquency (Curtis, Ronan, & Borduin, 2004). This system is considered an integral part of individualized treatment in MST. During treatment, the youth and his or her family receive counseling in their home and in community settings. Common interventions include cognitive-behavioral therapy, behavioral parent training, strategic family therapy, and case management services (Eddy et al., 2004).

In a meta-analysis assessing more than 708 participants in seven primary and four secondary studies, Curtis, Ronan, and Borduin (2004) established that, on average, 70% of youth treated with MST had better outcomes than those treated with alternative programs. The effectiveness of MST in treating antisocial behaviors specifically improved family relations, aggression towards peers, and involvement with negative peers, as well as reducing rates of criminal offenses. The studies reviewed used samples ranging in size from 16 to 176 participants, with70% being male. Diverse ethnic origins were represented, including 54% African Americans, 45% Caucasians, .7% Hispanic Americans, and .5% Asian Americans. Curtis et al. (2004) reviewed studies comparing MST to several alternative forms of treatment. A total of 23 assessment measures were utilized by the studies, with an average of 6.4 per study. These measures included juvenile and adult rearrest data, self-report and parent-report inventories, and a number of empirically supported measures.

In an analysis using data from two studies, Huey, Henggler, Brondino, and Pickrel (2000) found that therapist adherence to the MST protocol was associated with improvement in family relations, which were associated with decreased rearrests. To

assess the influence of MST, the authors used several measures, including the Family Assessment Measure (FAM-III), the Monitoring Index, the Revised Behavior Problem Checklist, Self-report Delinquency Scale (SRD), and the Family Adaptability and Cohesion Evaluation Scale (FACES-III).

In another study Henggler, Melton, Brondino, Scherer, and Hanley (1997) evaluated outcomes by using the Global Severity Index, the Revised Problem Behavior Checklist, the Self-Report Delinquency Scale, the Family Adaptability and Cohesion Evaluation Scales, the Monitoring Index, and the Missouri Peer Relations Inventory. Henggler et al. (1997) found a 26% reduction in rearrests and a 47% reduction in incarceration following treatment of adolescents with MST. These studies are among many that demonstrate the efficacy of Multisystemic Therapy. Although MST has been proven beneficial for participants, not all organizations have the resources available to implement such treatment.

Family-Based Treatment. Sells (1998) presented a family-based treatment program for "tough adolescents" based on process and outcome research. His model integrates structural and strategic family therapy approaches as the foundation of a 15-step treatment program. The underlying assumption of this model is that, once family and environmental problems are addressed, adolescent behavior problems will disintegrate. He states adolescent behavior problems should be conceptualized and resolved by the parents. According to the model formulated by Sells (1998), youth with chronic behavior problems essentially run the household. Parents must learn to effectively set and enforce limits and consequences in order to reestablish the appropriate hierarchy and provide a family atmosphere for cohesion and healthy

development. The dysfunctional hierarchy existing in struggling families is maintained by "hard" and "soft" sides, in which a balance of limits and nurturing provide a safe and healthy family environment (Sells, 1998).

In outcome studies that include measures of parental attitudes toward parenting, Sells (1998) found a significant drop in negative parental attitudes toward teens at posttest. On average, parents had "extremely negative" attitudes toward their teen on pretreatment measures. According to post-treatment measures, a significant drop in negative attitudes had occurred, suggesting a decrease in extreme parental stress, which could lead to abusive parenting strategies (Sells, 1998). Process studies indicated that changes in confrontation patterns and nurturance positively influenced parent-child interactions (Sells, 1998).

Sells found that family-based treatment clarified roles and hierarchy within the family, supporting the notion that it was effective at putting the parents in charge and assisting them in maintaining their position. Family-based treatment was also effective in helping parents and teens neutralize problematic behavior, improve tender and nurturing interactions, and increase concern for one another's welfare, essentially bringing nurturance back into the family. Results from the Family Assessment Scale indicated improvements in family communication, particularly a decrease in negative confrontations. Participating parents reported satisfaction with the treatment because it was clear-cut and provided specific tools and strategies. They also found it beneficial to have counselors available 24 hours a day. Teens liked the program because it provided methods of communication, clear rules and consequences, and opportunities to build trust.

First-Time Offender Program. The First-Time Offender Program (FTOP) was developed by the Oklahoma Association of Youth Services (OAYS) with funds appropriated in 1994 by legislation (Oklahoma Association of Youth Services, 2000). The diversion program was designed to rehabilitate juvenile misdemeanor offenders in order to keep them from entering the district court system, which was overburdened with chronic, serious offenders (Couch, 1997).

The Oklahoma Juvenile Reform Act, signed on June 3, 1994 mandated a diversion program for first time offenders as defined by the following:

> "Alternative diversion programs for first-time offenders means a program for juveniles who have been identified by law enforcement personnel, the district attorney or the court as having committed acts which are not serious enough to warrant adjudication through juvenile court process, but which do indicate a need for intervention to prevent further development toward juvenile delinquency" (10 O.S., Sect. 7303-4.6).

Funds allocated for the FTOP were given to community-based youth services agencies for implementation (Oklahoma Association of Youth Services, 2000). The Oklahoma Association of Youth Services consists of 41 non-profit community agencies covering all 77 Oklahoma counties. The FTOP curriculum and program certification standards were generated by OAYS which also provided statewide training for participating agencies (Couch, 1997). In 2003, more than $2 million was appropriated for the First-time Offender Programs statewide (Office of Juvenile Affairs, 2003).

The FTOP curriculum is designed for youth ages 10 to 17. The adolescents attend each session, and caregivers are required accompany them on the first and fourth sessions, though some agencies require caregiver attendance at each class. The 12-hour class can be completed in any configuration of sessions deemed appropriate by the providing agency, although OAYS recommended weekly sessions lasting two hours each. The original curriculum was updated in 2002 to include lessons on communication skills, anger control, value awareness, cultural sensitivity, and other skill training. Participants are required to attend all sessions in order to receive a certification of completion. Agencies have the discretion to divide participants by age for classes, and OAYS recommends they do so to provide more developmentally appropriate delivery of content. No more than two hours of class time may be excused, and all missed material must be made up outside of scheduled session time. Youth and caregiver participants are asked to evaluate their experience in the program upon completion.

The Current Study

The current study will evaluate the effectiveness of the First-time Offender Program at reducing dynamic risk factors predictive of re-offense and increasing dynamic protective factors associated with resiliency. Risk factors evaluated include non-severe pathology and behavior problems. The Protective factors evaluated include aspects of family relationships.

Non-severe pathology was identified by Cottle et al. (2001) in their meta-analysis of recidivism studies as a significant predictor of re-offense. Non-severe pathology includes diagnosable conditions identified in the literature as being

associated with the likelihood of committing criminal acts. A diagnosable condition may lead to delinquency indirectly, through, for example, association with negative peers. Diagnosable conditions may also increase risk factors associated with crime and mental health issues, such as child maltreatment or reflect a family history of mental illness. For instance, Becker and McCloskey (2002) found that ADHD symptoms predict conduct problems, which in turn predict non-violent delinquency in youth. Behavior problems have also been shown to predict juvenile delinquency (Cottle, Lee, and Heilbrun, 2001). Behaviors such as non-compliance with parental demands, defiance of school personnel, opposition to authorities, lying, stealing and other common problematic behaviors are seen as symptoms of a larger pattern of behavioral issues, potentially leading to delinquent behavior.

Protective factors are thought to build resilience that goes beyond reduction of criminal offenses by making adolescents better able to handle adversity throughout life. Consistent with the biopsychosocial model of treatment, this study evaluated protective factors associated with family relationships that specifically included family cohesion, expressiveness, and conflict.

Family relationships, a component of the overall family environment, are associated with delinquency both directly and indirectly. Studies have shown that youth with behavior problems and conduct disorders tend to be associated with disengaged families, demonstrating less expressiveness and cohesion as well as higher rates of conflict (Moos & Moos, 2002). Studies have found that parental academic support was associated with a decrease in delinquent behaviors (Davalos et al., 2005) and that the emotional climate of families is related to youth internalizing symptoms

and emotional regulation (Stocker, Richmond, & Rhoades, 2007). Improvements in these elements of family functioning resulting from participation in FTOP may indicate an increase in resiliency, by way of improved family relations.

The goal of the FTO Program is "to decrease continued risk for juvenile delinquency in pre-delinquent youth or first-time offenders" (Crossroads, 2004, pp. 9). Prior to this research, studies of the FTO Program have looked at overall re-offense rates of participants rather than the program's impact on specific factors influencing rates of re-offense. By analyzing the presence and change of risk and protective factors associated with participation, this study could yield beneficial information about the processes at work and the impact of participation on the long-term outcome of participants.

This evaluation is designed to provide a broad look at whether the FTO Program impacts the targeted factors (non-severe pathology, behavior problems, and family relationships). The resulting data could speak to the effectiveness of the FTO program. Other goals of the study include providing recommendations to enhance the program and providing direction for further research. Thus, the primary research questions are: First, does participation in the FTO program positively impact student reports of family relationships. Second, does participation in the program lead to caregiver reports of their student's mental health symptomotology (non-severe pathology) and behavior? Third, does the treatment affect participants equally in terms of gender and ethnic diversity? Fourth, does family cohesion, expression, and conflict predict levels of non-severe pathology and behavior problems in youth participants?

Results from the study identify suggestions for improving the program, obstacles confronted during evaluation, and direction for future evaluations of the First-time Offender Program.

CHAPTER 3

Method

The goal of this study was to assess the impact of the First-time Offender Program on factors associated with re-offense in delinquent youth participants. The variables assessed included domains of family relationships, non-severe pathology, and behavior problems. The Target Outcome Table in Appendix A identifies the targeted variables and the measures used to assess them. The assessment administration schedule is outlined in Appendix B.

Three measures were administered to participants in the study. The first measure was a demographic questionnaire, which was devised to obtain additional information on factors associated with juvenile delinquency. The youth and parent forms of the questionnaire are reproduced in Appendices C and D, respectively. The remaining four measures include pre-treatment and post-treatment measures, selected based on their applicability, reliability, and validity in measuring the targeted variables. The assessments were grouped into different packets for participating caregivers and youth, since different variables were targeted with each population.

Procedures

A pre and post-test design was utilized for this study. The evaluation took place in four stages. The first stage involved the recruitment of participants. The second and third stages consisted of pre-testing and post-testing, respectively. Stage five entailed the scoring and analysis of data.

Setting. The study took place at local youth and family clinics that operate on a sliding scale fee system and use legislative funds to provide services to county

residents. All assessment and classes of the FTO program took place at the offices of the agencies providing services. Four agencies were approached to participate in the study; three of whom agreed and were trained in recruitment and data collection procedures. Unfortunately, only two agencies were able to successfully recruit participants for the study. Both agencies were located in metropolitan areas and served rural, metropolitan, and suburban clients county-wide.

Recruitment. Recruitment for the study took place during the intake process for participants of the FTO program. Following intake procedures, personnel explained the study to potential participant families using the provided recruitment script (Appendix E). Consent was obtained for caregiver participation, and caregiver permission and youth assent was obtained for youth participation (Appendices L - N). Recruiters were took special care when informing caregivers and adolescents of their right not to participate in the study and to assure their understanding that participation was separate from the adolescents' court-ordered requirements. After gaining consent, the respective assessment packets were administered to youth and caregivers following intake and again after the last FTO class.

Participants. Most participants were court-ordered youth who ranged in age from 12 to 17, and their caregivers. Participants referred to the program were either first-time offenders or those who have committed multiple minor offenses. Common crimes of participants in the program included shoplifting, vandalism and truancy, as well as other offenses of similar severity.

The sample consisted of 34 youth and 34 caregivers, both of whom completed pre and post-testing. Youth ranged in age from 12 to 18-years. The mean age was

14.88 and the median was 15 years-of-age. Youth participants consisted of 19 males and 14 females (Appendices F & G). Twenty-three participating youth identified as Caucasian, five identified as Native American, two identified as African American, and three identified as Asian, Hispanic or Biracial. In total, there were 10 minority youth participants (29.4%) in the study (Appendices F & G). One participant chose not to complete the demographic form so his or her demographic data was not reported.

Data Collection. During intake and after the last class, participants were given the opportunity to ask questions about the material and purpose of the study. They were reminded of the voluntary nature of participation, and the recruiter emphasized that participation was separate from their court-ordered requirements to attend the class. During the data collection periods, participants were given one of two packets of assessment material, either the caregiver or youth packet. Caregivers and youth were separated to complete the assessments, and instructions for the measures were explained to each group of participants by the class facilitators. To ensure that data would not be accessible to court personnel and to preserve anonymity and confidentiality, all information gathered in the study was coded and kept separate from client charts at each agency. In addition, participant consent forms, which also included the packet codes, were stored in a location separate from the assessment packets. Both were stored in locking filing cabinets to assure confidentiality.

Measures. The testing time for participants was approximately 15-20 minutes. Two assessment packets were used, one for caregivers and the other for youth. The caregiver packet included the demographic questionnaire and the Child Behavior

Checklist, which assesses non-severe pathology and behavior problems. The youth packet included the demographic questionnaire and three subscales of the Family Environment Scale to assess family cohesion, expressiveness, and conflict.

Demographic Questionnaire. The demographic questionnaires (Appendices C and D) were created by this evaluator to explore additional variables predictive of reoffense (Cottle, Lee, & Heilbrun, 2001) that were not measured by the selected tests. The questionnaires asked general questions such as ethnicity, education, and gender, as well as questions to assess the presence of known correlates with delinquency, such as academic performance, a past diagnosis of learning disorders or Attention Deficit Hyperactivity Disorder, and drug and alcohol use.

Child Behavior Checklist (CBCL). The CBCL is a measure of non-severe pathology and conduct problems (Achenbach & Rescorla, 2001). The instrument includes caregiver, teacher, and self-report versions to identify present competencies, adaptive functioning, and problems. It consists of 118 items that describe behavioral and emotional problems. The caregiver form was used for the purpose of this study. The measure, which takes 15 to 20-minutes to complete, requires individuals to select one of three responses labeled from zero to two as follows: (0) "not true" (1) "somewhat or sometimes true" and (2) "very or often true." For example, questions 22 and 42 asks parents to rate the degree to which the child is "Disobedient at home" and "Would rather be alone than with others," respectively. The CBCL scoring profile provides T-scores and percentiles for Total, Externalizing and Internalizing problems, as well as six DSM oriented scales and eight syndrome scales. The scales are based on factor analysis ratings of 4,994 clinically referred children and 1,753 non-clinical

children. The CBCL has demonstrated criterion and content validity ($p < .01$), overall test-retest reliability (.95; $p < .001$), and internal consistency ranging from .55 to .97 (Achenbach & Rescorla, 2001).

Family Environment Scale (FES). The FES assesses family members' perceptions of their social environment (Moos & Moos, 2002). The scale utilizes ten subscales to assess three dimensions of family functioning: Relationship, Personal Growth, and System Maintenance (Moos & Moos, 2002). All items are forced choice, with true or false response options and the subscales offer continuous data. In this study, only the Relationship subscale was used. These subscales consist of a 27-item index measuring family cohesion, conflict, and expressiveness that Moos and Moos call the Family Relationships Index (Appendix H). The scoring profile utilized standard scores, where scores between 30 and70 represent the normal range of family functioning. Sample items from the cohesion and expression scales respectively include such statements as: "family members really help and support me" and "family members often keep their feelings to themselves." Moos and Moos (2002) report high internal consistency (Expressiveness = .69; Conflict = .75; Cohesion = .78) and good construct validity for this index. The scale is written at a sixth grade reading level.

CHAPTER 4

Results

In the current study, data was analyzed with inferential and descriptive statistics. Pre- and post-test scores were compared using paired samples t-tests to measure changes in target variables due to treatment. First, it was hypothesized that youth participants would report improvements in the targeted protective factor of family relationships, which was assessed by the separate constructs of family cohesion, family expressiveness, and family conflict. Second, it was hypothesized that caregiver participants would report a decrease in symptoms related to non-severe pathology and behavior problems in the participating youth. Third, it was hypothesized that the effects of treatment would cut across lines of gender and ethnicity, resulting in equal treatment effects for a diverse population of families. Fourth, it was hypothesized that family cohesion, expression, and conflict would predict levels of non-severe pathology and behavior problems in youth participants. For a breakdown of demographic data obtained from participants, refer to appendix I.

Data collection for this study yielded a total of 15 families who completed both pre and post-testing. Due to the low number of participants, the pilot study sample of 19 participants was combined with this sample. A total of 34 completed data sets were analyzed for this study. Due to the small sample size, the following results should be interpreted cautiously and as indicators of potential trends to evaluate in future studies of the First-time Offender Program. The Statistical Package for Social Sciences (SPSS) was utilized for all statistical analysis and alpha was set at .05.

Paired Samples T-test

The first hypothesis, that youth participants would report improvements in aspects of family relationships, was not supported. Family relationship was broken down into three categories, cohesion, expression, and conflict. Pre and post-test measures of youth reported family cohesion yielded a mean difference of -1.1034, which was not a significant change (t = -.440; sig. = 0.663). Pre and post-test measures of youth reported Family Expression yielded a mean difference of -2.276, which was also not significant (t = -1.063; sig.= 0.297). Similarly, pre and post-test measures of youth reported Family Conflict yielded a mean difference of 0.3448, and was not significant (t = .150; sig. = 0.882). See appendix J.

The second hypothesis, that adult participants would report a decrease in symptoms related to non-severe pathology (Total Problems) and behavior problems (Externalizing Problems) in their participating youth, was supported. Pre and post-test measures yielded a mean difference of 2.688 (t = 2.493; sig. 0.018) for Externalizing symptoms, such as oppositional behavior and conduct problems. A mean difference of 2.625 (t = 2.330; sig. = 0.027) was found for Total Problems, or the more general term "non-severe pathology." Both were statistically significant. When breaking down the subcategories of symptomology measured at pre and post-testing, conduct problems showed the largest treatment effect, with a mean difference of 2.250 (t = 2.702; sig. = 0.011). See appendix K.

The third hypothesis, that treatment would affect all youth equally despite gender and ethnic diversity, was not supported. It was observed that, when broken out separately, minority participants did not show significant changes in Externalizing

(behavior/conduct) problems (t = 1.695; sig. = .134) or Total problems (non-severe pathology) (t = 0.616, sig. = 0.557). This finding indicates that the program may be more effective for Caucasian than minority participants, though further study is needed to examine this more fully. See appendix K.

When looking at differences between males and females, it was found that females showed a larger effect on Internalizing Problems, with a mean difference of 4.000 (t = 2.636; Sig. = 0.023), on Externalizing Problems, with mean difference of 6.000 (t = 2.805; Sig. = 0.017), and on Total Problems, with a mean difference of 4.417 (t = 1.925; Sig. = 0.08) than males, though the difference on Total Problems was not significant. Males on the other hand, demonstrated a mean difference of 0.000 on Internalizing Problems (t = 0.000; Sig. = 1.00), a mean difference of 0.632 on Externalizing Problems (t = 0.637; Sig. = .532) and a mean difference of 1.105 on Total Problems (t = 0.988; Sig. 0.336). These results indicate that the program may be more effective for females, though a larger sample size is needed to make that determination with certainty. See appendix K.

The fourth hypothesis, that cohesion, expression, and conflict would be associated with levels of behavior problems was further analyzed using simultaneous multiple regression with an alpha level of .05. The analysis revealed that aspects of family relationships (Cohesion, Expression, and Conflict) acounted for 17.6% (Adjusted R Square = 0.176) of the variance in Total Problems (non-severe pathology) at pre-testing, indicating that a significant relationship (F = 3.140; sig. 0.042) existed between family relationships and parent report of youth non-severe pathology at the onset of treatment. Partial correlations revealed that the model's effect was primarly

due to the Cohesion (Partial Correlation = -.143) and Expressiveness (Partial Correlation = -.128) variables, when each of the variables were analyzed separately. The effect size found was small, using Cohen's definition (R Square = .259; Adjusted R Square = .176), likely due to the small sample size. In addition, when broken out separately, Family Cohesion significantly predicted youth's scores on Total Problems (non-severe pathology), as reported by caregivers at pre-testing. An inverse relationship was found between Family Cohesion and Total Problems (F = 9.370; sig. = 0.005) at pre-testing. The group of youth participants reported a mean Family Cohesion Score of 36.226, a Family Expression mean of 38.516, and a Family Conflict mean of 53.742, all falling in the normal range of family functioning.

In summary, these results point toward the First-time Offender Program's effectiveness at reducing conduct problems and non-severe pathology in youth, however, the program did not yield significant improvements in family relations. It was also found that the program may be more effective for Caucasian and female participants than minority or male participants. Finally, the family cohesion component of family relationships was negatively associated with parent reported pathology and behavior problems in youth. Though the small sample size limits the generalizability of these findings and subjects the results to Type I error, these trends suggest questions that could be addressed by future studies of the program.

CHAPTER 5

Discussion

This study was a program evaluation research project with the purpose of evaluating the effectiveness of a First-time Offender Program as it is used in local, non-profit youth and family counseling agencies across a southwestern state. The second goal of the study was to offer suggestions to improve the program, and provide direction for further evaluation. This study's incorporation of biopsychosocial concepts of risk and protective factors offer a unique approach to evaluating the problem of juvenile delinquency. This approach could shed light on specific variables impacted by the program that result in decreased rates of recidivism and increased positive long-term outcomes for participants.

Before discussing implications of the results of this evaluation, it should be noted that one of the major difficulties faced when evaluating the FTO Program occurred during the data collection process, which did not go as planned and resulted in a much smaller sample size and measured fewer variables than originally intended. The results therefore are tentative in nature and provide trends to be evaluated by future research. Overall, the results indicated that the program was more effective at reducing the risk factors measured (behavior problems and non-severe pathology) than increasing the protective factors measured (family relationships).

The first hypothesis, that youth participants would report improvements in the three domains of family relationships, cohesion, expression, and conflict was unsupported. This hypothesis was developed primarily out of the curriculum emphasis on problem solving and communication and because youth were required to attend and

interact with a family member throughout the class. Prior research has identified these factors and similar factors, such as youth perceived family support and attachment to parents, as increasing risk for delinquent behaviors when not satisfactorily present (Davalos, Chavez, & Guardiola, 2005; Goldstein, Davis-Kean, & Eccles, 2005; Stocker, Richmond, & Rhoades, 2007). A large body of research supports the need for familial support and structure (Rak & Patterson, 1996; Moos & Moos, 2002) as well as parental attunement and positive parent-child relations (Cozolino, 2006; Siegal, 1999) to assist in developing resilience and preventing negative outcomes for youth, like life-course persistent antisocial behavior. This suggests that a program focused on addressing risk factors for juvenile delinquency should consider interventions designed to improve family functioning. The FTO Program was not successful in improving family relations as measured in this study, which may reflect the program's focus on building youth's skills generally rather than focusing specifically on parent-child communication or parent-focused strategies to help parents develop a stronger attachment with their child and improve their ability to effectively set limits, such as with Parent-Child Interaction Therapy (Bell & Eyberg, 2002). Based on these findings, the addition of parent-focused curriculum to enhance parenting skills could prove beneficial to families.

The second hypothesis stated that caregivers would report changes in youth behavior problems and non-severe pathology from pre- to post-testing. The study found at least partial evidence of this hypothesis, in that caregivers reported fewer behavior problems and fewer total problems (both emotional and behavioral) at post-

test than at pre-test for the group of participants as a whole. This finding was tentative however, due to the limited sample size.

The third hypothesis, that treatment effects would not be limited by ethnic diversity or gender was not supported. It was found that female and Caucasian participants displayed significant changes from pre- to post-testing, while minority and male participants did not. The reasons behind these differences in treatment effect are unknown, though one might suspect ethnic difference between participants and facilitators could have played a role. It may have been that different risk factors were at play for different groups of individuals, such as the effects of poverty, association with negative peers, or other factors not measured here. The difference in gender response to the program could reflect the classroom, highly verbal, lecture-style method of content delivery in the program. This style of delivery may be more effective with females than males. In addition, the communication, problem-solving, and emotion focused content of the class may fit better with female social norms than with males, thus explaining the significant change for females and lack of change for males. Despite the underlying reasons, these findings illuminate a trend worthy of evaluation in future studies.

The fourth hypothesis, that lower levels of family relational functioning would predict higher parent-report of youth non-severe pathology and behavior problems was supported. Analysis using multiple regression revealed that aspects of family relationships, specifically family cohesion, significantly predicted youths' scores on parent-reported conduct problems and non-severe pathology. This finding supports previous research (Cottle, Lee, & Heilbrun, 2001) and attests to the importance of

addressing family relationships in treatment for juvenile delinquency. The relationship between family relations, behavior problems and non-severe pathology is a well-established trend in the research literature, though more data is needed to make a causal statement. Based on this study, it was still unclear as to whether family relationships led to behavior problems and non-severe pathology, or whether poor family relationships were a side effect of pathology and juvenile behavior problems.

Overall, these findings suggest that there is statistical evidence of the program's effectiveness at reducing non-severe pathology and conduct problems in youth, but they do not support the program's effectiveness at improving youth-reported family relationships. By reducing the risk factors of non-severe pathology and conduct problems, the program did however reduce juveniles' risk for continued delinquency. Prior research linking conduct/behavior problems and non-severe pathology to future criminal behavior (Cottle, Lee, & Heilbrun, 2001) suggest this is likely a benefit to participants and a strength of the FTO Program.

Program Recommendations

Based on this evaluation and the juvenile delinquency literature, some specific recommendations can be made. First, implementing educational topics based on evidence-based research, such as those used in the Coping Power Program, Multidimensional Foster Care, and Multisystemic Therapy, could yield significant improvements for the program. Second, the literature on parenting and family structure supports the incorporation of parent-focused curriculum objectives to enhance parents' abilities to both connect with and set limits for their (Sells, 1998; Brinkmeyer & Eyberg, 2003). Third, in-light of MST studies that found therapists

adherence to treatment protocol was associated with improved family functioning and reduced rearrest, its recommended that the FTO Program make improvements in the consistency of curriculum implementation across agencies. This might include the presentation of material, the number and duration of sessions, and the number of facilitators in each session. Fourth, measures of curriculum retention should be built into the program, like, section quizzes, as well as measures of participant engagement and group cohesion, since each may impact treatment efficacy. Fifth, measure of behavioral and emotional functioning should be incorporated into the intake process to screen for clinically significant problems in youth who may need more intensive treatment and therefore may not benefit as much from the FTO Program. Implementing these recommendations could serve not only to increase the effectiveness of the program, but could also make it more amenable to future evaluations.

Research Recommendations

The results from this study suggest that future evaluators should ask the following questions: First, is the program more effective for Caucasian and female participants, as suggested here? Wilson, Lipsey, and Soydan (2003) looked at 305 studies of mainstream Juvenile Delinquency Programs and found that as a whole, they were equally as effective for minority delinquents as with Caucasian delinquents. If in-fact the FTO Program is less effective with minority populations, this could significant legal and ethical implications, which would necessitate improvements to the program. Second, does participating in the program produce larger effects than a waitlist control or treatment-as-usual? Third, considering that the time frame for participation varies

from 2-weeks to 2-months at different agencies, does the length of participation affect participant outcomes? Fourth, do the effects of treatment generalize over time? Fifth, since various agencies have different requirements for caregiver attendance, what impact does caregiver attendance have on treatment effects? These questions and those of the current study are important in assessing whether the FTOP can be considered an effective treatment program for preventing further juvenile delinquency.

The theoretical application of the biopsychosocial approach to program evaluation utilized in this study offers a number of points applicable to other program evaluations in the study of child psychology. The operationalization and measurement of risk and protective factors allows for the study of complex interactions of variable that may build resilience and reduce risk for negative outcomes. Measuring these factors, in contrast to measuring reoffense alone or other symptomatic variables, provides a more holistic measure of effectiveness. In addition, approaching program evaluation from the biopsychosocial perspective requires researchers to incorporate interdisciplinary constructs that play a role in the lives of children rather than using a reductionistic approach to isolate individual variables at work. Though not part of the current study, the biopsychosocial approach can easily encompass process-outcome or implementation research, since it recognizes the interaction of variables in ones life, such as client-therapist relationship, biological conditions, parent-child relationships, self-efficacy and other variables that likely interact with the components of any program, whether measured or not.

Many difficulties were faced when performing this study, which resulted in a number of limitations. These difficulties, which will be discussed in detail below, led

to a sample size that limited the options for statistical analysis and generalizability of the results. For instance, using pre- and post-testing without follow-up data or a comparison group limited the researcher's ability to assert causality of treatment effects. The study was not able to confidently assert that the FTO Program is responsible for the changes observed in participants from pre- to post-testing. The observed effects could have come from participation in any treatment or may simply reflect the change in parental perspective over time. For instance, parents are likely to be more aware of their child's misbehavior after their child's first arrest. Then, at post-test they may more accurately reflect their child's average behavior. Another possibility for the changes observed, included regression toward the mean; where a youth's behavior that led to arrest was a behavior anomaly or outlier, but parental awareness of the behavior increased and elevated their report of child problems. At post-test, parents might have reflected on the youth's average behavioral range, thus giving the impression that youth's behavior improved when in fact it had only momentarily deviated from its mean. For this reason, future research should control for these factors by utilizing a control group.

These limitations are significant and many of them reflect the perils of program evaluation research as well as research on controlled populations such as juvenile delinquents. This study was confronted with several obstacles from onset to completion. The first obstacle confronted in the study was the use of a controlled population, being both juveniles and court ordered to participant in the First-time Offender Program. Utilization of court-ordered youth as research subjects raised concerns about consent and confidentiality and required that certain safeguards be put

in place to protect participants. With regard to consent, the major concern was ensuring that youth and caregivers were able to give their informed assent and consent to participate in the study without feeling pressured or mandated to participate as if the court had also ordered their participation in the study. To address this concern, a recruitment script (Appendix E) was utilized to assure that recruiters took special care when informing caregivers and adolescents of their right not to participate in the study and to assure their understanding that participation was separate from the adolescents' court-ordered requirements. Regarding confidentiality, the major concern was that court personnel would have access to the information gathered for participation in the study, since this information could potentially incriminate youth or their families. To ensure that data would not be accessible to court personnel and to preserve anonymity and confidentiality, all information gathered in the study was coded, kept separate from client charts at each agency, and stored behind lock and key

The second obstacle confronted in this research was the voluntary nature of recruitment and participation. The study was endorsed by the legislatively-appointed department responsible for overseeing the program statewide. This endorsement assisted in acquiring participation among agencies, but the voluntary nature of the agency's participation subjected the study to recruiter motivation, which seemed to wane over the course of the study. This made recruiter buy-in an essential goal of the evaluator, however, one agency backed out of the study completely and another agency recruited minimally and forgot to give post-tests to an entire class of participants. The most productive agency recruited about half of the potential families to participate in the study. Ultimately, this led to a significantly smaller sample size

than originally planned. Despite many efforts by this experimenter to establish a collaborative relationship with the participating agencies, they still lacked sufficient motivation to ensure better results regarding data collection. Methods employed to facilitate data collection through the agencies included: meeting and explaining the study to agency directors and the CEO of the organization responsible for overseeing the program's implementation; in-person training at each agency by this evaluator; soliciting recruiter input to improve success rates; phone and email consultation biweekly; reducing the assessment packet to include only 15-minutes of testing; the use of incentives for participation; and offering to provide agency-wide training on the development and treatment of juvenile delinquency. It seems however, that other factors were working against the goals of this study. The agencies appeared to experience difficulty in maintaining buy-in, participants often skipped the final class, and recruiters struggled to volunteer their time and effort in addition to ongoing job obligations.

The third major obstacle included the differing length of classes offered by each agency involved in the evaluation. The various class lengths consisted of 2-week, 1-month, and 2-months durations depending on the agency. This made it difficult to derive equal or even comparable numbers of participants from each site simultaneously. The variation in class size was also a variable that may have impacted the treatment effect and required a sample size large enough to covary out the effects. The sample size acquired here was not sufficient for that task.

A fourth obstacle confronted by this evaluation included political and ethical issues. From the beginning of the study, agency supervisors expressed concern about

this evaluator's ability to compare the effectiveness of the agencies to one another. In addition, on an administrative level, large sums of money were appropriated to the First-time Offender Program every year. The idea of evaluating the effectiveness of this program proved threatening to some and resulted in sarcastic statements like, "the results will be good, right?" To gain buy-in, agencies were assured that a previous study looked at overall reduction in reoffense, while this evaluation examined specifically the effect of treatment on certain risk factors for reoffense. This attempt to assuage doubt about the evaluation process seemed to help initially, but a lack of commitment to the endeavor from agency personnel continued to affect progress. Overall, the study was daunting, and additional support from a team of researchers as well as state legislators might facilitate an evaluator's ability to assess the FTO Program's effectiveness on participants.

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Appendix A

Table 1

Target Outcome Table

Target Outcome	Criteria/Standard	Data Source	Measure	Decision Criteria
Family Functioning	Level family functioning as defined by conflict, cohesion, expression, control	Participating caregivers and youth	Family Environment Scale	1 standard deviation below mean indicates problem area
Non-severe Pathology	Externalizing, Internalizing, DSM oriented ratings of behaviors	Caregiver report of adolescent behavior	Child Behavior Checklist	Clinical Range
Behavior Problems	Problem behaviors: opposition, rule breaking, etc.	Caregiver report of adolescent behavior	Child Behavior Checklist	Clinical Range

Appendix B

Table 2

Test Administration Schedule

Adolescent Measures				
Pre-treatment		Treatment		Post-Treatment
• Demographic Questionnaire • Family Environment Scale				• Family Environment Scale
Caregiver Measures				
Pre-treatment		Treatment		Post-Treatment
• Demographic Questionnaire • Child Behavior Checklist				• Child Behavior Checklist

Appendix C

DEMOGRAPHIC AND ADDITIONAL INFORMATION
(Youth Form)

Please answer each of the following questions by selecting the appropriate box or responding to the question.

1. Age:_____
2. Gender: ☐ Male ☐ Female
3. Ethnicity:

   ☐ African American ☐ Asian American ☐ Caucasian

   ☐ Native American ☐ Hispanic American ☐ Biracial ☐ Other
4. Are you attending this class because of legal reasons?

   ☐ Yes ☐ No **IF YES**, what crime(s) were you referred to this class for?

   _____
5. Prior to this incident, have you ever been in trouble with the law? ☐ Yes

   ☐ No
6. Current level of education completed:

   ☐ 7-9 Grades ☐ High school ☐ Two year college/vocational school

   ☐ 4 year college ☐ Graduate school
7. Have you ever been arrested? ☐ Yes ☐ No

   a. If yes, how old were you at the time of your first arrest? _____

   b. If yes, how many days have you spent in jail? ☐ 0-1 ☐ 1-5 ☐ Less than a Month ☐ Less than a year ☐ More than a year
8. Are you involved in extracurricular activities (such as: religious groups, scouting, sports teams, theatre, cheer leading, band, volunteering, etc)? ☐ Yes ☐ No
9. What are your grades in school? Mostly:

☐ F's ☐ D's - F's ☐ C's - D's ☐ B's - C's ☐ A's - B's ☐ A's

10. Are you routinely involved in spiritual activities? ☐ Yes ☐ No

13. Do you have a hobby or hobbies? ☐ Yes ☐ No

    a. If so, please list? _____

11. Have you ever been diagnosed with a learning disorder? ☐ Yes ☐ No

12. Have you ever been diagnosed with ADD/ADHD? ☐ Yes ☐ No

12. Have you ever been or are you currently in special education or resource classes in school?

☐ Yes ☐ No

14. Have you witnessed or been a victim of domestic violence (violence between romantic partners)? ☐ Yes ☐ No

15. In the past two months have used alcohol or illegal drugs? ☐ Yes ☐ No

IF YES, how many times? 1 2 – 5 6–10 more than 10

16. Rate your current relationship with your caregivers or guardians (if caregiver/guardian(s) are deceased, please rate your relationship with them prior to their death)

Mom: (Very Bad) 1 2 3 4 5 (Very Good) No relationship

Dad: (Very Bad) 1 2 3 4 5 (Very Good) No relationship

17. Have your parents/caregivers divorced? ☐ Yes ☐ No

18. How many children (individuals under 18-years) are currently living in your home? ☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 5+

Appendix D

DEMOGRAPHIC AND ADDITIONAL INFORMATION
(Caregiver Form)

Please answer each of the following questions by selecting the appropriate box or responding to the question.

1. Age:_____

2. Gender: ☐ Male ☐ Female

3. Ethnicity: ☐ African American ☐ Asian American ☐ Caucasian
   ☐ Native American ☐ Hispanic American ☐ Biracial ☐ Other

4. Current level of education completed:
   ☐ 7-9 Grades ☐ High school ☐ Two year college/vocational school
   ☐ 4 year college ☐ Graduate school

5. Have you ever been arrested? ☐ Yes ☐ No
   a. If yes, how old were you at the time of your first arrest? _____
   b. If yes, how many days have you spent in jail? ☐ 0-1 ☐ 1-5
      ☐ Less than a Month ☐ Less than a year ☐ More than a year

6. Are you involved in any community activities (such as: religious groups, special interest groups, volunteer organizations, PTA, etc)? ☐ Yes ☐ No

7. Are you routinely involved in spiritual activities? ☐ Yes ☐ No

8. Are you currently a single parent/caregiver? ☐ Yes ☐ No

9. What is the yearly income supporting your family? ☐ 20,000 or less ☐ 21-35,000 ☐ 36-55,000 ☐ 56-76,000 ☐ 76,000+ ☐ Unknown

10. Rate the degree to which you believe the participating child's peers influence him or her negatively. (Very Pos.) -- 1-- 2 -- 3 -- 4 -- 5 -- 6 -- 7 -- (Very Neg.)

Appendix E

Evaluation of the First-time Offender Program
Recruitment Script

You are being asked to volunteer for a research study to measure the effectiveness of the First-time Offender program. This study is being conducted at three youth and family service agencies in Oklahoma. You were selected as a possible participant because you (or your child) were referred to the First-time Offender Program. Please consider participating in the study and ask any questions that you may have as I explain the study.

The goal of the First-time Offender program is to reduce the risk of future criminal offenses in participating youth. To assess the impact of the program on you or your child, you will be asked to take a short series of questionnaires on two occasions, prior to starting the class and at the end of the last class. The questionnaires will take approximately 15 to 35 minutes to complete.

So, what are we measuring exactly? In this study we are measuring the degree to which the First-time Offender program affects the following: family relationships, behavior or emotional problems, and self-efficacy (or one's beliefs about his or her own abilities), as they are all related to juvenile re-arrest.

So how does this help you and your family? It helps because participants are needed to develop a more solid understanding of juvenile crime and treatment. This research could potentially contribute to the planning of new treatment programs and updating of already existing programs like this one. With better treatment programs our communities can see a reduction in overall crime rates and more youth who leave their delinquent behavior in the past and grow up to be law-abiding citizens.

In addition, for your participation in our study, you will be rewarded with an opportunity to win a $50 gift certificate to Wal-Mart.

Thank you for your time!

Appendix F

Table 3

Participant Gender Statistics

Gender	Frequency	Percent
Female	14	41.17
Male	19	55.88
Missing	1	2.9
Total	34	100

Table 4

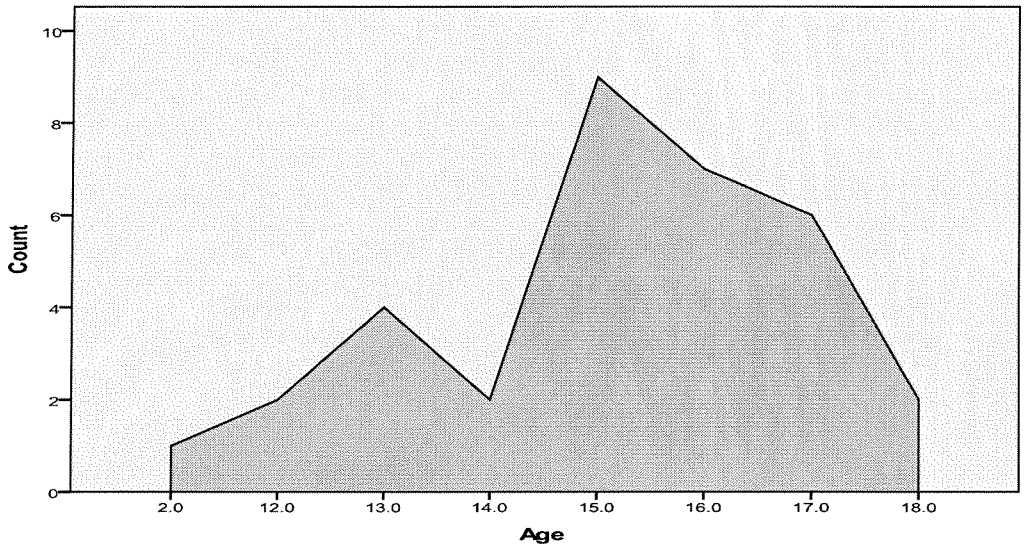
Participant Ethnicity Statistics

Ethnicity	Frequency	Percent
African American	2	5.8
Asian American	1	2.9
Caucasian	23	67.65
Native American	5	14.7
Hispanic American	1	2.9
Biracial	1	2.9
Missing	1	2.9
Total	34	100

Appendix G

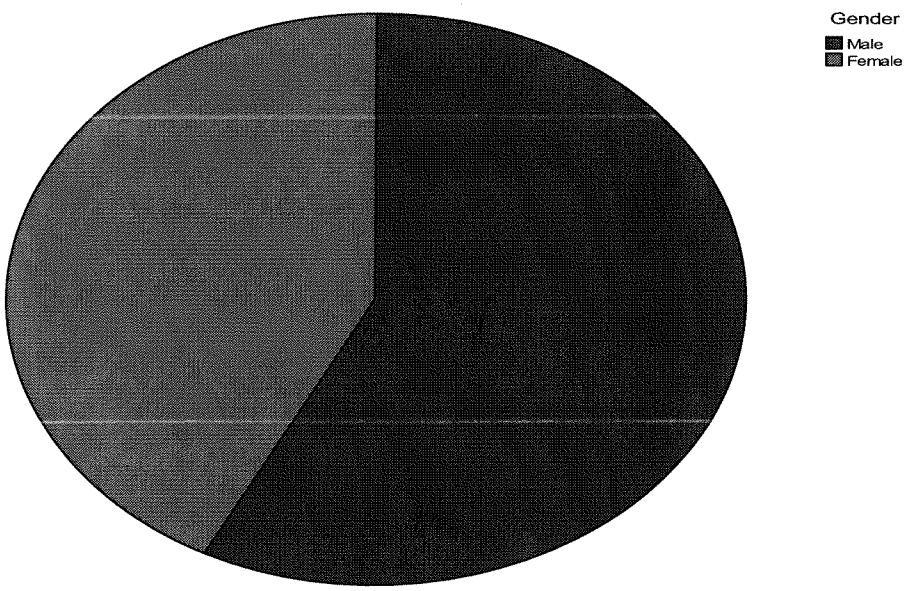
Graph 1

Participant Age Distribution



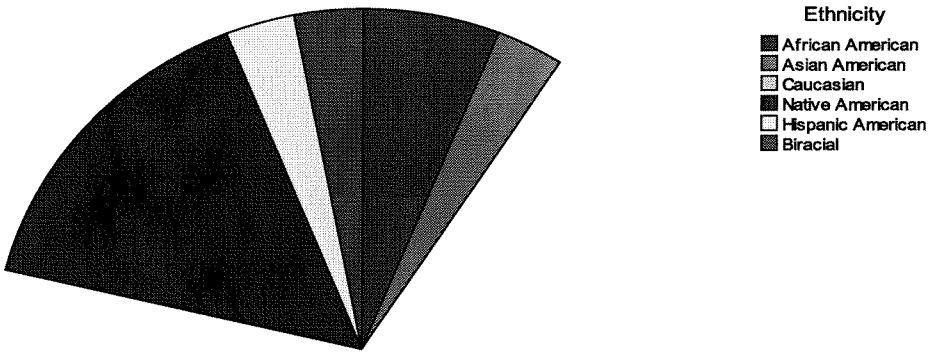
Graph 2

Participant Gender Distribution



Graph 3

Participant Ethnicity Distribution



Appendix H

Family Environment Scale
(Family Relationships Index)

1. Family members really help and support one another.
   True False
2. We often seem to be killing time at home.
   True False
3. We put a lot of energy into what we do at home.
   True False
4. There is a feeling of togetherness in our family.
   True False
5. We rarely volunteer when something has to be done at home.
   True False
6. Family members really back each other up.
   True False
7. There is very little group spirit in our family.
   True False
8. We really get along well with each other.
   True False
9. There is plenty of time and attention for everyone in our family.
   True False
10. Family members often keep their feelings to themselves.
    True False
11. We say anything we want to around home.
    True False
12. It's hard to "blow off steam" at home without upsetting somebody.
    True False
13. We tell each other about our personal problems.
    True False
14. If we feel like doing something on the spur of the moment we often just pick up and go.
    True False
15. Someone usually gets upset if you complain in our family.
    True False
16. Money and paying bills is openly talked about in our family.
    True False
17. We are usually careful about what we say to each other.
    True False
18. There are a lot of spontaneous discussions in our family.
    True False
19. We fight a lot in our family.
    True False
20. Family members rarely become openly angry.

True False

21. Family members sometimes get so angry they throw things.
True False

22. Family members hardly ever lose their tempers.
True False

23. Family members often criticize each other.
True False

24. Family members sometimes hit each other.
True False

25. When there's a disagreement in our family, we try hard to smooth things over and keep the peace.
True False

26. Family members often try to one-up or out-do each other.
True False

27. In our family, we believe you don't ever get anywhere by raising your voice.
True False

Appendix I

Demographic and Additional Information

Variable	Frequency	Percentage
Grade:		
7 - 9	24	72%
9 - 12	9	27%
Arrest Record:	14	44%
Age at First Arrest		
13	3	21%
14	1	7%
15	5	36%
16	3	21%
17	2	14%
Involvement in Extracurricular Activity	7	50%
Grades in School		
D - F	1	3%
C - D	13	39%
B - C	14	42%
A - B	4	12%
All A's	1	3%
Religious Participation	10	30%
Identified Having Leisure Time Hobbies	26	83%
Prior Learning Disorder Diagnosis	7	21%
Prior ADHD Diagnosis	6	18%
Receives Special Education in School	6	18%
Witnessed Domestic Violence	10	30%
History of Illegal Drug/Alcohol Use	11	30%
Biological Parents Divorced	14	42%

Appendix J

Family Relational Functioning Scores

Variable	Pre-Test Mean	Post-Test Mean	Mean Difference	T-Scores
Family Cohesion	36.79	37.90	-1.1034	-0.440
Family Expression	37.52	39.79	-2.276	-1.063
Family Conflict	53.35	53.00	0.3448	0.150

Appendix K

Total, Internalizing, and Externalizing Problems Scores

Variable	Pre-Test Means			Post-Test Means			Mean Differences		
	Females	Males	Minority	Females	Males	Minority	Females	Males	Minority
Total Problems	62.167	53.263	55.625	57.750	52.158	54.750	4.417	1.105	.8750
External Problems	64.750	56.526	58.125	58.750	55.895	56.125	6.000	0.632	2.000
Internal Problems	59.667	49.421	50.750	55.667	49.421	49.500	4.000	.000	1.250
	Group Total			Group Total			Group Total		
Total Problems	56.500			53.875			2.625		
External Problems	59.281			56.594			2.688		
Internal Problems	53.281			51.250			2.031		

Appendix L

Informed Consent Form

University of Oklahoma
Institutional Review Board
Informed Consent to Participate in a Research Study

PROJECT TITLE:	**The First-Time Offender Program for Juvenile Delinquents: A Biopsychosocial Approach to Assessing Outcomes**
PRINCIPAL INVESTIGATOR:	**Adam H. Benton, MS, LPC**
CONTACT INFORMATION:	**University of Oklahoma Counseling Psychology Clinic (405) 325-2914; (405) 973-8395**

You are being asked to volunteer for a research study. Your participation is not required by the First-Time Offender Program or the court. This study is being conducted at three Youth and Family Service agencies. You were selected as a possible participant because your child was referred to participate in the First-Time Offender Program. Please read this form and ask any questions that you may have before agreeing to take part in this study.

Purpose of the Research Study
This study is a program evaluation. We are evaluating the First-time Offender program by determining whether participants are less likely to re-offend after attending this program. In order to do this, we are assessing four important factors, thought to predict repeated criminal offenses. These factors are (1) family relationships, (2) behavioral and emotional problems, (3) self-efficacy, and (4) actual re-offense rates. By studying these factors and comparing our results with other programs around the country, better treatment programs can be developed and juvenile crime reduced.

Number of Participants
About 100 youth and their caregivers across the state will take part in this study.

Procedures
By agreeing to participate in this study, parents will be asked to complete a curriculum quiz and two assessments, one aimed at measuring family relationships and another to measure your child's behavior and emotional functioning. A demographic page is included in the initial administration that asks questions about other factors, such as your education level and personal beliefs, since they may be related as well.

In this study you will be asked to complete the above assessments before the first class and after the last class of the program, so that we can compare your answers to determine the impact of participating in the class. In addition to pre- and post-testing, your consent will also allow the investigator, with assistance from the Oklahoma Association of Youth Services, to check your child's arrest record in about six months after completing the course. This will be done on a one-time basis and only re-arrest data will be obtained. This information is important because it speaks to the effectiveness of the program.

Length of Participation

If you agree to participate, you will be administered an assessment packet today and on the last day of class. The assessments should take between 15 and 35 minutes. This time is worked into the curriculum schedule so you will not be missing any material by participating in the study. The duration of the study is six months after the post-tests, when students' reoffense rate will be obtained.

This Study has the following Risks and Benefits
As with most research studies, certain risks apply. For this study there are two main risks that you should consider. First, participants may consider some of the question personal, like questions about your history and relationships. Though only you and the investigator will know your answers, the questions could bring up troubling emotions; should this occur, a debriefing or counseling session will be made available for you at this agency. The second risk is that someone other than the investigator may view your records. Three steps are being taken to protect your confidential information and account for this risk. First, your name will not be required on any questionnaires. Second, your records will be stored in a secure file cabinet, and third, your records will be kept separate from any court or counseling records to ensure they are not used by court personnel or counselors who may be required to report to the court.

How will my participation help? The results of this study could allow improvements to the First-time Offender program. These improvements may not only help families and adolescents, but could contribute to improving the safety of all Oklahomans by reducing rates of juvenile crime. From a larger perspective, studies such as this contribute to the understanding of human behavior and mental health treatment nation-wide.

Voluntary Nature of the Study
Participation in this study is voluntary. Your decision whether or not to participate will not result in penalty or loss of benefits to which you are otherwise entitled. If you decide to participate, you have the right to withdraw from the study at any time. *This research study is not in any way affiliated with the juvenile court system or the First-time Offender program. Your responses are confidential and will not be reported to anyone.*

Confidentiality
The records of this study will be kept confidential. In published reports, there will be no information included that will make it possible to identify the research participants. In order to maintain your confidentiality, the data collected will be stored at the Youth and Family Service agency in a secure file cabinet that is separate from court and counseling records until the completion of testing, at which time the principle investigator will collect and analyze the results. After the completion of the study all assessments and consent forms will be kept under lock and key, in a secure location under the care of the principle investigator. *The information will not be part of your records at the Youth and Family Service agency or with the juvenile courts system.*

Compensation
For completing pre- and post-testing, your family will be entered in a raffle to win a $50 gift card to Wal-Mart.

Contacts and Questions
The researcher (Adam Benton) conducting this study can be contacted by email at Abenton42@ou.edu or by phone (405) 973-8395. You are encouraged to contact the researcher if you have any questions. The research supervisor Terry Pace, PhD, may be contacted at the University of Oklahoma Counseling Psychology Clinic by email at tpace@ou.edu or by phone (405) 325-2914.

If you have any concerns or questions about your rights as a research participant, you may contact the University of Oklahoma – Norman Campus Institutional Review Board (OU-NC IRB) at 405.325.8110 or irb@ou.edu.

You will be given a copy of this information to keep for your records. If you are not given a copy of this consent form, please request one.

STATEMENT OF CONSENT

I have read the above information. I have asked questions and have received satisfactory answers. I consent to participate in the study.

☐ Check this box if you consent for your child's arrest record to be reviewed on Oklahoma's Juvenile Online Tracking System (JOLTS). With your consent, your child's record will be reviewed on a one-time basis. Only his/her re-arrest record will be obtained. This information will be very helpful in determining the impact of the program on youth re-offense rates.

_____

Print Name

_____ _____

Signature Date

Appendix M

Caregiver Permission For Child Participation in Study

University of Oklahoma Institutional Review Board Caregiver Permission Form for Child Participation in a Research Study

PROJECT TITLE:	**The First-Time Offender Program for Juvenile Delinquents: A Biopsychosocial Approach to Assessing Outcomes**
PRINCIPAL INVESTIGATOR:	**Adam H. Benton, MS, LPC**
CONTACT INFORMATION:	**University of Oklahoma Counseling Psychology Clinic (405) 325-2914; (405) 973-8395**

You are being asked to give permission for you child to volunteer for a research study. Participation is not part of the First-time Offender program or required by the court. This study is being conducted at three Youth and Family Service agencies. Your child was selected as a possible participant because he/she was referred to participate in the First-Time Offender Program. Please read this form and ask any questions that you may have before allowing his/her participation in this study.

Purpose of the Research Study
This study is a program evaluation. We are evaluating the First-time Offender program by determining whether participants are less likely to re-offend after attending this program. In order to do this, we are assessing four important factors, thought to predict repeated criminal offenses. These factors are (1) family relationships, (2) behavioral and emotional problems, (3) self-efficacy, and (4) actual re-offense rates. By studying these factors and comparing our results with other programs around the country, better treatment programs can be developed and juvenile crime reduced.

Number of Participants
About 100 youth and their caregivers across the state will take part in this study.

Procedures
If you agree to allow your child to participate in this study, he/she will be asked to complete a curriculum quiz and two assessments aimed at measuring (1) family relationships and (2) self-efficacy. He/she will also be asked to complete a demographic page that includes questions about a variety of topics, such as spiritual beliefs, academic performance, and prior criminal offenses.

Your child will be asked to complete the above assessments today and after the last class of the program, so that we can compare his/her answers and assess the change. In addition to pre- and post-testing, your consent will also allow the investigator, with assistance from the Oklahoma Association of Youth Services, to check your child's arrest record in about six months after completing the course. This will be done on a one-time basis and only re-arrest data will be obtained. This information is important because it speaks to the effectiveness of the program.

Length of Participation

If you give permission for your child to participate, he/she will be administered an assessment packet today and on the last day of class. The assessments should take between 15 and 35 minutes to complete. This time is worked into the curriculum schedule so he/she will not be missing any material by participating in the study. The duration of the study is six months after the post-tests, when students' reoffense rate will be obtained.

This Study has the Following Risks and Benefits
As with most research studies, certain risks apply. For this study there are two main risks that you should consider. First, participants may consider some of the questions personal, like questions about your child's history and relationships. Though only your child and the investigator will know his/her answers, the questions could bring up troubling emotions; should this occur, a debriefing or counseling session will be made available for him/her at this agency. The second risk is that someone other than the investigator may view your child's records. Three steps are being taken to protect his/her confidential information and account for this risk. First, his/her name will not be required on any questionnaires. Second, his/her records will be stored in a secure file cabinet, and third, all records will be kept separate from any court or counseling records to assure they are not used by court personnel or counselors who may be required to report to the court.

How will my child's participation help? The results of this study could allow improvements to the First-time Offender program. These improvements may not only help families and adolescents, but could contribute to improving the safety of all Oklahomans by reducing rates of juvenile crime. From a larger perspective, studies such as this contribute to the understanding of human behavior and mental health treatment nation-wide.

Voluntary Nature of the Study

Participation in this study is voluntary. Your decision to allow or not allow your child to participate will not result in penalty or loss of benefits to you or your child. If you decide to allow his/her participation, then he/she has the right to withdraw from the study at any time. *This research study is not in any way affiliated with the juvenile court system or the First Offender program records.*

Confidentiality

The records of this study will be kept confidential. In published reports, there will be no information included that will make it possible to identify the research participants. In order to maintain your child's confidentiality, the data collected will be stored at the Youth and Family Service agency in a secure file cabinet that is separate from court and counseling records until the completion of testing, at which time the principle investigator will collect and analyze the results. After the completion of the study all assessments and consent forms will be kept under lock and key, in a secure location under the care of the principle investigator. *The information will not be part of your records at the Youth and Family Service agency or with the juvenile courts system.*

Compensation
For completing pre and post-testing, your family will be entered in a raffle to win a $50 gift card to Wal-Mart.

Contacts and Questions
The researcher (Adam Benton) conducting this study can be contacted by email at Abenton42@ou.edu or by phone (405) 973-8395. You are encouraged to contact the researcher if you have any questions. The research supervisor Terry Pace, PhD, may be contacted at the University of Oklahoma Counseling Psychology Clinic by email at tpace@ou.edu or by phone (405) 325-2914.

If you have any concerns or questions about your rights as a research participant, you may contact the University of Oklahoma – Norman Campus Institutional Review Board (OU-NC IRB) at 405.325.8110 or irb@ou.edu.

You will be given a copy of this information to keep for your records. If you are not given a copy of this consent form, please request one.

STATEMENT OF CONSENT

I have read the above information. I have asked questions and have received satisfactory answers. I consent to participate in the study.

☐ Check this box if you consent for your child's arrest record to be reviewed on Oklahoma's Juvenile Online Tracking System (JOLTS). With your consent, your child's record will be reviewed on a one-time basis. Only his/her re-arrest record will be obtained. This information will be very helpful in determining the impact of the program on youth re-offense rates.

_____

Print Name

_____ _____

Signature Date

Appendix N

Informed Assent

University of Oklahoma
Institutional Review Board
Informed Assent to Participate in a Research Study

PROJECT TITLE:	**The First-Time Offender Program for Juvenile Delinquents: A Biopsychosocial Approach to Assessing Outcomes**
PRINCIPAL INVESTIGATOR:	**Adam H. Benton, MS, LPC**
CONTACT INFORMATION:	**University of Oklahoma Counseling Psychology Clinic (405) 325-2914; (405) 973-8395**

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Purpose of the Research Study
This study is a program evaluation. We are evaluating the First-time Offender program by determining whether participants are less likely to re-offend after attending this program. In order to do this, we are assessing four important factors, thought to predict repeated criminal offenses. These factors are (1) family relationships, (2) behavioral and emotional problems, (3) self-efficacy, and (4) actual re-offense rates. By studying these factors and comparing our results with other programs around the country, better treatment programs can be developed and juvenile crime reduced.

Number of Participants
About 100 youth and their caregivers across the state will take part in this study.

Procedures
By agreeing to participate in this study, you will be asked to complete a curriculum quiz and two assessments, one aimed at measuring family relationships and the other measures self-efficacy or beliefs about you own abilities. A demographic page is included in the pre-test packet that asks questions about other factors, such as your education level, spiritual beliefs, and other information as well.

In this study you will be asked to complete the above assessments today and after the last class of the program, so that we can compare your answers from each testing period, in order to assess change. In addition to pre- and post-testing, your consent will also allow the investigator, with assistance from the Oklahoma Association of Youth Services, to check your arrest record in about six months after completing the course. This will be done on a one-time basis and only re-arrest data will be obtained. This information is important because it speaks to the effectiveness of the program.

Length of Participation
If you agree to participate, you will be administered an assessment packet today and on the last day of class. The assessments should take between 15 and 35 minutes. This time is worked into the curriculum schedule so you will not be missing any class material by participating in the study. The duration of the study is six months after the post-tests, when students' reoffense rate will be obtained.

This Study has the Following Risks and Benefits
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How will my participation help? The results of this study could allow improvements to the First-time Offender program. These improvements may not only help families and adolescents, but could contribute to improving the safety of all Oklahomans by reducing rates of juvenile crime. From a larger perspective, studies such as this contribute to the understanding of human behavior and mental health treatment nation-wide.

Voluntary Nature of the Study
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Confidentiality
The records of this study will be kept confidential. In published reports, there will be no information included that will make it possible to identify the research participants. In order to maintain your confidentiality, the data collected will be stored at the Youth and Family Service agency in a secure file cabinet that is separate from court and counseling records until the completion of testing, at which time the principle investigator will collect and analyze the results. After the completion of the study all assessments and consent forms will be kept under lock and key, in a secure location under the care of the principle investigator. *The information will not be part of your records at the Youth and Family Service agency or with the juvenile courts system.*

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STATEMENT OF CONSENT

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☐ Check this box if you consent for your arrest record to be reviewed on Oklahoma's Juvenile Online Tracking System (JOLTS). With your consent, your record will be reviewed on a one-time basis. Only re-arrest data will be obtained. This information will be very helpful in determining the impact of the program on youth re-offense rates.

_____

Print Name

_____ _____

Signature Date