

# Learning and Thinking: A Behavioral Treatise on Abuse and Antisocial Behavior in Young Criminal Offenders

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## Abstract

Social learning theory provides a useful conceptual framework for understanding abuse and the teaching and learning of antisocial or criminal behavior in young offenders. This article examines social learning theory and the quality of parent-child relationships from the perspective of behavioral analysis, and provides a rationale for a comprehensive behavioral treatment approach for young offenders and their parents. A theoretical model has been developed to provide the social context to examine how abuse and neglect, inconsistent or erratic parenting practices, family structure, and abusive disciplinary methods, can be integrated to predict juvenile delinquency. The purpose of this model is to examine the major environmental determinants that impact the quality of parent-child relationships and associated antisocial behavior in children, and the relevant but implicit behavioral principles operating in the home. Questions are raised which suggest that typical or mainstream juvenile detention programs compete with the acquisition of new functional skills, and provide an environment for learned dysfunctional habits that are then reinforced and maintained in treatment programs that continue to model or promote criminal behavior. Conclusions are reached that learning and reinforcement history have a greater impact on the quality of parent-child relationships than family structure, and provide a theoretical rationale for analyzing and developing effective interventions for a problem of social importance.

Keywords: Abuse, social learning theory, criminal behavior, antisocial behavior

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## INTRODUCTION

Research studies focusing on the causes of juvenile delinquency have proposed that the structure of the family and the quality of parent-child relationships have important implications for the development of antisocial behavior in children, and may affect adult criminal behavior across the life course (Ganem & Agnew, 2007). These studies have primarily examined the major environmental predictors of juvenile crime: family, school, and peer variables, from the perspective of social control theory or social learning theory (Giordano et al., 2002). The central premise of social learning theory is that parents and other significant individuals in the environment serve as important models and play the major role in teaching children antisocial or criminal behavior. This article examines social learning theory as a theoretical context for understanding the effect that abuse and related experiences have on the quality of parent-child relationships from the perspective of behavioral analysis.

While the incidence of juvenile delinquency remains relatively small in the general population (Poulin, Levitt, Young & Pappanfort, 1980), recent data indicates a growing trend in violent crimes committed by youth in the United States (Agnew, 2005; Fagan, 2005; Spillane-Grieco, 2000). For example, arrests of juveniles (under 18 years of age) for murder rose 3.4 percent in 2006 compared with 2005 arrest data; for robbery, arrests of juveniles increased 18.9 percent over the same 2-year period (United States Department of Justice, 2006). In addition to increased arrest for juveniles, placement in secure facilities has also been on the rise. This increase trend suggests the need to reexamine the causes of juvenile delinquency, and to identify those contextual variables and other systemic factors that impact family relationships and affect young offenders across the life span. This effort is especially important given the enormous cost of violence to society and the quality of life of those touched by crime.

Researchers focusing on the causes of juvenile delinquency have argued that any effort to

explore the relationship between parenthood and crime should focus on the nature of the quality of a parent-child relationship, rather than the simple presence or absence of parents. This is of particular importance in predicting the causes of juvenile delinquency, especially in intact-families who have a delinquent child, and in which children have been abused or neglected as part of their early experiences. Research on abused and neglected children has consistently commented that a disproportionate number of delinquent youth, particularly those charged with violent offences, were severely abused in childhood and throughout adolescence (Lewis, Mallouh, Webb, 1997). Not surprisingly, researchers investigating violent adult criminals report longstanding histories of severe abuse in childhood. Recent national statistics, for example, finds that 14.4% of all men in prison in the United States were abused as children and 36.7% of all women in prison were abused as children (US Department of Health and Human Services, *Child Maltreatment 2006*). Research investigating abuse and subsequent antisocial, aggressive acts has linked these factors to the quality of parent-child relationships throughout childhood and adolescence (Agnew, 2005; Farrington, 2002).

This paper examines the association of childhood abuse and subsequent antisocial behavior from a multidimensional complex of systemic and family contextual factors. (For a discussion and overview of this model applied to abused children placed in foster and adoptive families see Prather, 2007.) This multidimensional complex builds on Akers' original social learning model of criminality (Akers, 1985; 1998) and provides the social context to identify and examine multiple environmental variables that affect parent-child relationships and impact young offenders, and provides a rationale for a behavioral treatment approach for delinquent youth and their parents. The theoretical rationale underlying this behavioral treatment approach assumes that aggressive acts or antisocial behaviors develop from the antecedent and postcedent events and conditions associated with the aggressive act, and evolve into learned habits that are then reinforced and maintained in environments in which parent-child interaction patterns continue to model or promote criminal behavior. For example, in the covert pathway of antisocial development, minor behavior in the family (e.g., verbal intimidation) leads to bullying, and, finally, to serious aggression-type delinquency. While a number of covert and overt antecedent events and conditions are associated with criminal behavior, as are a number of concurrent and postcedent events and conditions, for the purpose of this paper "interlocking and concurrent contingencies" refer to the critical pathways of antisocial behavior over the course of learning history that affect parent-child relationships and impact young offenders. Thus, in this multidimensional model, the origin of these aggressive acts embodies a long-term developmental and learning process that takes place over many years, and includes both systemic and family contextual variables that may influence a youth's entry into juvenile delinquency. Akers' theory of criminality would predict that parents, who model crime, differentially reinforce crime, and teach beliefs favorable to crime are more likely to associate with other criminals and less likely to report healthy parent-child relationships. The important role of family members and how they model, affect or respond to the child's aggression is seen as the primary force that shapes abused children over time.

This paper extends Akers' model of criminality and draws on previous research and empirical findings related to abuse and neglect in the family, and predicts that all of these environmental influences (antecedent and postcedent events) will have significant additive effects in the development of poor or weak parent-child relationships, and may affect the likelihood of antisocial or criminal behavior in young adults. Three primary factors in the family have been highlighted as being of importance in determining later behavior: family contextual factors, interfamilial or systemic factors, and family perceptual factors. This modification of the original social learning framework was designed to account for those additional environmental influences that families may encounter as a result of their efforts to cope with child-rearing and

the exigencies of their daily lives. These additional variables include: (a) the contextual factors which may reduce the family's ability to adjust, and may contribute to a loss of family resilience and flexibility; (b) the interfamilial processes or systemic factors that families engage in that may disrupt or interfere with learning and facilitate criminal behavior in the family; (c) the family perceptual factors which includes the parents' and child's perception or definition of the parent-child relationship; and (d) the outcome of these family efforts.

Most research studies in criminality that describe a youth's entry into juvenile delinquency have focused on the family, school, or peer variables, and are limited to a social learning perspective rather than a developmental or multidimensional model. Therefore, increased knowledge regarding the combined effects of learning, family contextual variables and the role of interfamilial processes on the developmental trajectory leading to antisocial or criminal behavior in young offender is important. Accurately identifying the different family contextual and other systemic pathways will help inform both practice and policy pertaining to these youth. Questions are raised which suggest that typical or mainstream juvenile detention programs compete with the acquisition of new functional skills, and provide an environment for learned dysfunctional habits that are then reinforced and maintained in treatment programs grounded in response prevention (isolation) and inhibition (punishment). Conclusions are reached that multiples levels of influence (peers, school, television, movies, and internet) from the child's ecological framework and reinforcement history have a greater impact on the quality of parent-child relationships than family structure, and provide a theoretical rationale for analyzing and developing effective interventions to a problem of social importance.

### Theoretical Model

In the case of abused and neglected children, most physically abused children do not become violent delinquents (Lewis, Mallouh, Webb, 1997). However, few studies, if any, have systematically examined the association between abuse and other theoretical environmental factors and subsequent antisocial, aggressive acts in young criminal offenders. The present article therefore develops a theoretical model or framework to provide the social context to examine how abuse and neglect, family structure, inconsistent or erratic parenting practices, and abusive disciplinary methods, can be integrated to predict poor or weak parent-child relationships that may lead to antisocial or criminal behavior in children and adults (See Figure 1). This model is an approach to childhood abuse that recognizes the complex etiological roots of juvenile delinquency, and the potential importance of social learning theory and other complex adaptations or behaviors that evolve into learned habits that are then reinforced by family, school and peers. While school, peer, and other contextual variables (strangers) interact with or perhaps mediate the family/parental factors, the authors have chosen not to include them in the proposed model in order to make it a less complex model and to concentrate the theoretical discussion and literature review on the family context and relationship variables. The model to be analyzed here is designed to clarify and describe the effect of abuse and neglect and other interfamilial processes on the quality of the relationship between parents and their children. Abuse and neglect and the reciprocal relationship between abusive disciplinary methods and inconsistent or erratic parenting practices, are hypothesized to lower the quality of parent-child relationships and to increase the likelihood of juvenile delinquency.

This paper predicts that all of these factors including non-intact family structure (contextual variable), will have significant additive effects in the development of poor or weak parent-child relationships, and may affect the likelihood of antisocial or criminal behavior in young adults. More specifically, this model (figure 1) was used to test the prediction based on previous research and empirical findings that abuse and neglect and family structure affect

inconsistent parenting practices and abusive disciplinary methods, as well as to investigate the reciprocal impact of inconsistent parenting practices on abusive disciplinary methods and how they both influenced parent-child relationships and eventually criminal behavior in young offenders. This organizing framework extends and redefines the social learning theory concept of interaction based on triadic reciprocity (Bandura, 2004).

In this model (figure 1), three variables serve as a useful conceptual framework for describing the multidimensional complex of systemic and family contextual factors that affect parent-child relationships and impact young offenders. The initial variable, or **A** factor, includes those contextual events or circumstances that surround or impact the environment and that disrupt the ecological balance of the system and cause the child or youth to make adjustments. Contextual factors include a wide range of deleterious and often pernicious conditions (such as physical and emotional child abuse, neglect, and child maltreatment), or the effects of persistent deprivation or impoverishment that bring long-term demands (such as disruption in family structure, employment or health) on the family. The second variable, factor **B**, is comprised of those interfamilial processes or systemic variables, internal and external, as well as overt and covert, that interfere with pro-social learning and facilitate criminal behavior in the family. The **B** factor is determined, in part, by parenting styles or variables predictive of moral or conscience development, as well as the parents' own psychiatric or childrearing histories. The authors have summarized the **B** factor as "competence-incompetence of family processes." The way the entire family defines the parent-child relationship is the third factor, or **C**, in the model, and accounts, in part, for the emergence or prevention of antisocial behavior. For example, if a family values the parent-child relationship and sees its members as competent and worthy of genuine love and mutual respect (approach behavior), a criminal history will be lessened or prevented; if a family does not value the relationship and sees its members as incompetent and not worthy of genuine love and mutual respect (withdrawal behavior), a criminal history will occur or be more severe. These three factors taken together: (a) the context that surrounds or impacts the familial environment, (b) the interfamilial processes inherent in the family, and (c) the family's definition or meaning of the parent-child relationship, all influence the probability and severity of the outcome (the **X** factor) experienced by families. In effect, the conceptual framework for this multidimensional model builds on Hill's (1949; 1958) ABCX model of family stress, and includes the process, as well as the outcome of the family's adaptive (competence) and/or maladaptive (incompetence) behaviors over time.

Because of existing problem behavior in families in which children have been abused, often through neglect or harsh physical means, an alternative model is proposed to facilitate a critical examination of social learning theory and work in criminal behavior from a behavioral analysis perspective. The purpose of this model is to provide a context to examine the effect of abuse and neglect on social interaction or parent-child relationships, and the relevant but implicit behavioral principles operating in the family (See Figure 2). This theoretical model (figure 2) is grounded in the notion that because contingencies of reinforcement and modeling are paramount in most problem behavior, an understanding of learning theory and the application of behavior analysis to problem behavior in families as part of an early familial intervention program may be more effective in reducing juvenile delinquency than traditional or mainstream juvenile detention programs. This type of early familial intervention program is especially crucial for families in which children have been abused, given that social interaction is necessary for behavior to be reinforced, and that many of the reinforcers associated with problem behavior are mediated by others in a person's environment (Derby, Wacker, Sasso, Steege, Northup, Cigrand, & Asmus, 1992; Iwata, Pace, Dorsey, Zarcone, Vollmer, Smith, Rodger, Lerman, Shore, Mazaleski, Goh, Cowdery, Kalsher, McCosh, Willis, 1994). This model (figure 2) provides the social context to examine the role of family members and the reciprocal relationship between the many

interlocking and concurrent contingencies (antecedent and postcedent events) that are consistently correlated or associated with criminal behavior.

In this model (figure 2), three behavioral or operant measures were integrated in order to provide a more thorough understanding of abuse and neglect and the multiple environmental contingencies that affect parent-child relationships and impact young offenders. The integration of these three measures more adequately explains relevant environmental variables that, taken as a whole, provide greater understanding of the family's social interaction than any one approach used alone. The framework for this model focused on the developmental and learning history associated with abuse and neglect and family structure on the following variables: **A** (reinforcement and punishment) - interacts with **B** - (the discriminative stimuli-differential reinforcement link) - and with **C** (differential association, as a controlling condition) to create **X** (juvenile delinquency). More specifically, this model (figure 2) was used to test the prediction based on the literature review and empirical findings that the mediating influence of reinforcement and punishment (historical relations) affect discriminative stimuli and differential reinforcement, as well as to investigate the reciprocal and reverse impact of differential associations on the discriminative stimuli - differential reinforcement link, and how these different operant forms of behavior eventually impact young offenders. Not unlike figure 1, the conceptual framework for this alternative model includes the functional operant relations or process operating within the family, as well as the outcome of the family's social interaction or behavior maintained by contingencies of reinforcement over time. See Figures in appendix.

### Family Contextual Factors

Research studies focusing on the causes of juvenile delinquency have proposed that the quality of parent-child relationships have important implications for the development of antisocial behavior in children (Ganem & Agnew, 2007). Given the central importance and strong correlation between childhood abuse and associated behavior in young criminal offenders, the authors of this paper have expanded on that perspective and developed a model to clarify and describe the family's systemic and ecological framework that affect the quality of the relationship between parents and their children. The operational measures of this framework are derived from the literature review and empirical findings and provide the theoretical underpinning from which to develop and support the paper's two models, and, when considered together, are intended to explain the multiple levels of influence that predict poor or weak parent-child relationships and lead to antisocial or criminal behavior in children and adults. Given the implicit role of learning or reinforcement history in behavioral causation, the following sections describe the multiple contextual and family systemic variables that operate in families in which children have been abused or neglected as part of their early experiences, and provide the theoretical rationale underlying the acquisition of antisocial or criminal behavior in young adults.

#### *Abused and Neglected Children*

During Federal fiscal year 2006, an estimated 905,000 children were determined to be victims of abuse or neglect in the United States (U.S. Department of Health & Human Services, Children's Bureau, 2006). As in prior years, neglect was the most common form of child maltreatment in 2006, perhaps due to the fact that it is easier to substantiate, with more than 60 percent (64.1%) of victims suffering neglect, as compared with more than 15 percent (16.0%) of the victims suffering physical abuse. Surprisingly, according to Zigler and Hall (1997), the problem of child maltreatment and the systematic study of child abuse and neglect began in the relatively recent past, yet child neglect has received less specific research attention (Zuravin, 1999) than other forms of maltreatment. As one might suspect, the study of these phenomena, whether considering abuse or neglect, or the overarching problem of child maltreatment, suggests

the need to conceptualize neglect separately from other forms of behavior. The seriousness of this definitional problem can not be underestimated given the importance of establishing a uniform response class for the systematic study of child abuse and neglect. While there is no single agreed-upon definition, for the purpose of this paper the term “neglect” is generally used when children do not receive adequate physical and/or emotional care (McDaniel & Dillenburger, 2007). Although many of the proposed definitions of child abuse in the literature fall along a continuum of caregiver child relationships, for the purpose of this paper “child abuse” refers to non-accidental physical and psychological injury to a child under the age of 18 as a result of acts perpetrated by a parent or caretaker (Burgess & Conger, 1978).

While the rate and number of children who were victims of child abuse or neglect is lower for FFY 2006 than it was five years ago (2001), recent retrospective studies indicate that children who experience child abuse and neglect are 59% more likely to be arrested as a juvenile, 28% more likely to be arrested as an adult, and 30% more likely to commit violent crime (U.S. Department of Health & Human Services, 2006). This is especially important to understanding abuse and the teaching and learning of antisocial or criminal behavior in young offenders, given that evidence indicates that abuse alone does not typically lead to violent criminality (Lewis, Mallouh, Webb, 1997), and reinforces the idea that either abuse differs qualitatively and that something peculiar about certain kinds of abuse promote violence, or, as this paper predicts, other systemic or interfamilial processes may interact with abuse and together contribute to the acquisition of antisocial behavior that is then reinforced and maintained in environments in which parent-child interaction patterns continue to model or promote criminal behavior. Not surprisingly, the question of whether or not abuse differs qualitatively and specific kinds of abuse are associated with specific kinds of violent delinquents remains unanswered. While studies of abused children have consistently pointed to the pernicious effects of abuse on aggressive behavior (Agnew, 2005; Farrington, 2002; Fagan, 2005; Lewis, Shanok, Pincus, & Glasser, 1979; Reidy, 1977), Kent’s (1976) classic work was the first to demonstrate that abused children were not only more aggressive and disobedient, but the findings suggested “that one of the sequelae of physical assault on children is an increase in problems in managing their own aggression.”

Recent studies of violent juveniles, especially those who commit murder, support earlier findings and indicate that a childhood history of severe abuse and of witnessing family violence have been linked with adult violent criminality (Lewis et al., 1997). Moreover, many delinquent youth, especially those who are most violent, come from families who are not only abusive and practice abusive disciplinary methods, but also include an association of early victimization and subsequent aggressive behavior (Stratton, 1985). While there have been few studies that have examined or explored the long-term consequences of such victimization, recent works that have investigated the relationship between adolescence physical abuse and criminal offending reveals that while victimization increases the prevalence of offending for victims of varying backgrounds, the frequency of offending is moderated by family income, area of residence, and family structure (Fagan, 2005). The latter is especially importance to this paper’s models, given the moderating affects of family structure and the relationship between income and area of residence, on the frequency of offending, and the overarching impact of inconsistent parenting practices on abusive disciplinary methods, and how they each influenced parent-child relationships and eventually criminal behavior in young offenders.

Other family contextual factors associated with parents of delinquent youth, particularly violent youth, include a history of interparental violence and an underlying psychiatric disorder that makes parents of delinquents inadequate to the tasks of child-rearing, and significantly more likely to exhibit inconsistent or erratic parenting practices. This is critical to treatment and the paper's model (figure 1), and suggests a possible link between violent criminality and the

combined effects on children of violence between their parents, as well as violence expressed toward the children and by the children. While research in social learning theory predicts that learning occurs through interaction and the process of observing directly or indirectly the impact of interparental violence (Akers, 1998; Bao, Whitbeck, & Hoyt, 2000), little research has been directed toward understanding the concomitant effects of abuse interspersed with neglect, and the effects of children witnessing extreme acts or threats of violence directed toward themselves, parents, stepparents, relatives and acquaintances. While Akers' theory of criminality has a specific causal logic that requires measuring the concepts and longitudinal data that is beyond the scope of this paper, research clearly indicates that a history of abuse and neglect is but one important contextual factor associated with juvenile delinquency and subsequent adult violent criminality in the future.

### *Family Structure*

While there has been much research and speculation on the impact of parent-child relationships on juvenile delinquency, studies about fathers or mothers, or whether one or both parents are present, are scarce. As such, research in the last decade has focused not on the structure of the family and whether or not both natural parents are present, but on family, school, and peer variables as the major environmental predictors of juvenile crime. This shortage of research on the impact of family structure on juvenile delinquency has hindered the development of effective treatments, given the central importance of parents in the teaching of healthy or unhealthy behavior. This finding is not surprising, given the lack of research into the nature of the quality of parent-child relationships among young offenders, and suggest the need to conceptualize family structure as a contextual variable separate from interfamilial or systemic relationship variables on the basis of whether or not one or both biological or adoptive parents are present in the life of the child and whose role is to provide the daily, continuous care required for a child's physical, social, cognitive and emotional development. This is especially important since child neglect has received less specific research attention (Zuravin, 1999) than other forms of maltreatment, and retrospective studies indicate that much higher percentages of delinquents, including those delinquents accused of violent crimes, were previously abused, neglected or both (Lewis, Mallouh, Webb, 1997). For the purpose of analysis and treatment in this paper, non-intact or single-parent family structure includes either one biological or adoptive parent who alone plays the role of parent residing with the child (Dufour, Lavergne, Larrivee, & Trocme, 2008). A two-parent family is considered to be intact if it consists of two biological or adoptive parents who live with the child. Situations of substantiated abuse and neglect include failure to supervise leading to physical harm or sexual abuse, a permissive or supportive attitude toward criminal behavior (Dufour, Lavergne, Larrivee, & Trocme, 2008), and the absence of adequate social punishers for violence or other criminal activity including exposure to illegal drugs, delinquent peers or violent media.

While research indicates that more than one-third (41.2 %) of child maltreatment fatalities were associated with neglect alone (US Department of Health and Human Services, Child Maltreatment 2006), recent findings regarding parental situations and neglect vary greatly according to gender and family structure, and indicate that surprisingly high percentages of children were previously neglected (Dufour, Lavergne, Larrivee, & Trocme, 2008). Of single female-headed families, almost 50% seem particularly vulnerable in situations of substantiated neglect (Dufour, Lavergne, Larrivee, & Trocme, 2008). While there has been little research on the impact of family structure on juvenile delinquency, this evidence is consistent with earlier findings regarding the incidence of abused children who eventually become delinquent. This suggests that family structure has less of an impact on the likelihood of predicting juvenile delinquency and more of an impact on predicting the likelihood of abuse, neglect, or both. This

situation, according to Lewis et al. (1997), is analogous to the epidemiology of many diseases. For example, few people who engage in unprotected sex contract HIV; however, high percentages of people with HIV have a history of practicing unprotected sex.

While the notion that intact family structure per se might directly predict the absence of juvenile delinquency is of interest, current research indicates that the “structure of the family (i.e., whether or not both natural parents are present) is much less important in explaining delinquency than is the nature of the relationship between parent and child” (Ganem & Agnew, 2007, pg. 633). In fact, recent research indicates that family factors most strongly associated with juvenile delinquency are those interfamilial or systemic processes which include weak bonds or attachment impairments between parents and children (Agnew, 2005; Farrington, 2002), often mediated through poor or erratic parenting practices, and involving parents who employ harsh or coercive methods of discipline. This is particularly important in families in which children have been abused and neglected, since the social learning process links the development of criminal behavior from involvement with others (systemic variables), and the mediating influence of rewards, reinforcers and punishers (Iwata & Worsdell, 2005). These findings suggest that any effort to explore the relationship between abuse and neglect and juvenile delinquency should focus not on the structure of the family per se, but on the nature of the relationship between parents and their children, and any additional environmental or systemic factors that may interact with abuse and contribute to the acquisition of antisocial behavior.

### Interfamilial Systemic Factors

This paper examines the association of childhood abuse and neglect and subsequent antisocial behavior from a multidimensional complex of systemic and family contextual factors. The purpose of this section is to examine those systemic or interfamilial processes in families in which children have been abused and neglected, and whether or not research evidence has established a link to juvenile delinquency. At the outset some caveats are in order. Although there is a need to understand the root causes of juvenile delinquency, most of the relevant research and speculation has to do with efforts to predict the impact of family, school, and peer variables on juvenile crime rather than efforts to uncover the interfamilial processes inherent in families of juvenile delinquents. Therefore, the discussion that follows, and the underlying theoretical principles, applies in large measure to all violence and crime. Additionally, focus will be placed mainly on detailed results and empirical findings of research studies, and less on theory. The reason for this is that the literature on social learning theory and correlates of criminal behavior has burgeoned in the past two decades, and findings are generally well supported.

#### *Abusive Disciplinary Methods*

Little is known about the antecedents of child maltreatment and many of the familial processes that may differentiate abusive parenting practices from non-abusive parenting practices. Moreover, existing evidence for links between parenting styles and prosocial behaviors is quite limited, especially among adolescents (Carlo, Fabes, Laible, & Kupanoff, 1999), and some scholars have suggested that parenting practices focused on the role of disciplinary practices in transgressive contexts (Hoffman, 1983), rather than parenting styles, may better predict behavioral outcomes. This is an important finding, given that the parents’ own childrearing histories and subsequent parenting plays an important role in teaching and learning of abusive behavior, and is consistent with Akers’ theory, since research in social learning theory predicts that learning occurs through interaction, and that aggressive or violent behaviors of abused or neglected children are learned through observing and modeling the parents’ behavior (Akers, 1998; Bao, Whitbeck, & Hoyt, 2000).

Additionally, research studies focusing on mediating the long-term sequela of abuse have argued that a history of pathogenic care can interfere with healthy development in children, given that feeling safe is our most primary social need (Howe, Branson, Hinnings, & Schofield, 1999; Schneider, Tardif & Atkinson, 2001). For example, approximately 80 % of young adults who had been abused met the diagnostic criteria for at least 1 psychiatric disorder at the age of 21 (including depression, anxiety, eating disorders, and post traumatic stress disorder) (US Department of Health and Human Services, 2006). This suggests the need to gain a better understanding of the relationship between parents' and children's attitudes and behavior associated with different childrearing practices that may interfere with the child's mental health and lead to violence and juvenile delinquency (Farrington, 1996; Haapasalo, 2001). Within this area of research, three main areas have been identified as being of importance in determining later behavior: parental affection or warm parent-child relationships, disciplinary methods, and consistency. Researchers in the past examining risk factors for violence, especially among adolescents, found that a lack of parental affection and support was one of the major risk factors associated with youth violence (Saner & Ellickson, 1996). More recent studies investigating the affects of parenting practices on problem behavior report similar findings, and indicate that harsh and neglectful parent-child interaction patterns, coupled with an aloof or hostile or authoritarian parenting style, generally lead to antisocial and aggressive outcomes (Loeber & Farrington, 1998; Loeber, Farrington, Stouthamer-Loeber, & Van Kammen, 1998; Patterson, 1995; Maccoby & Martin, 1983). Patterson (1986) has also noted that lax discipline, whereby parents impose no constraints on their children's behavior, is associated with juvenile delinquency. Hawkins, Herrenkohl, Farrington, Brewer, Catalano, and Harachi (1998) in their review of predictors of violence, particularly among violent juvenile offenders, reported a number of familial factors to be significantly correlated with youth violence. These include: father criminality (Baker & Mednick, 1984; Farrington, 1989; Maguin, Hawjubs, Catalano, Hill, Abbott & Herrenkohl, 1995; Moffitt, 1987); child maltreatment (Zingraff, Leiter, Myers, & Johnson, 1993) poor family management (Farrington, 1989; Maguin, et al., 1995); family and marital conflict and interparental violence (Farrington, 1989; Maguin et al., 1995); parental attitudes favorable to violence and crime (Maguin et al., 1995) and separation from home and leaving home early (Farrington, 1989). By contrast, several family systemic factors have emerged more often in association with non-aggressive patterns in children and adolescence. These include: accountability or limit-setting by parents, and parents' reports of consistency in their parenting practices. Trusty (1996), in a study examining student attitudes and family systemic factors, reports similar findings and found that parental involvement was positively correlated with positive student attitudes toward school and negatively correlated with problem behavior such as violence and aggression.

Hawkins' et al. (1998) comprehensive work on violence provides predictive evidence for a strong connection between abusive disciplinary practices in the home and problem behaviors leading to juvenile delinquency. This view is consistent with concepts central to Akers' theory, and supports the paper's hypothesized theoretical link between abusive interpersonal parenting practices on the quality of parent-child relationships (Agnew, 2005; Farrington, 2002) and the basic operant functional relations associated with criminal behavior (discussed later). This is especially important in families in which children have been abused, given that research indicates that "violent behaviors are learned in their most intimate social system, the family" (Spillane-Grieco, 2000), and indicates another dimension of child-rearing practices associated with being maltreated or abused as a child. These findings suggest that any effort to explore the relationship between abusive disciplinary methods and juvenile delinquency should focus not on the differential effects of various types of family violence on adolescent behavior, but on the nature or quality of the relationship between parents and their children, which posits a two-way causal mechanism in which abusive disciplinary methods affect inconsistent parenting practices and vice

versa, and the child's ecological framework that may interact with abuse. This ecological framework is especially important to treatment, and includes multiple levels of influence (peers, school, television, movies, and internet) that may be significant to the learning of violent and aggressive behaviors outside of the family. While an examination of this ecological framework is beyond the scope of this paper and not included in the theoretical model, research clearly supports the relations, and indicates that peers, community, culture, substance abuse, television, movies, music and the internet are important ecological factors associated with juvenile delinquency and subsequent adult violent criminality (Fraser, 1996; Lennings, 1996).

### *Inconsistent or Erratic Parenting Practices*

According to the principles of behavior analysis, perception and previous learning or reinforcement history guides children's behavior. For example, recent work on parenting in violent families highlights the association of inconsistent parenting practices with changes in the quality of parent-child relationships and poor behavior outcomes for children (Rossman & Rea, 2005; Patterson & Stouthamer-Loeber, 1984). In contrast, an inductive style has been shown to be a more effective form of discipline, with parents offering explanations of why behavior is wrong (Baumrind, 1993; Rothbaum & Weisz, 1994). Other researchers investigating the affects of inconsistent parenting practices on problem behavior report similar findings, and indicate that such children, often having experienced erratic or inconsistent parenting practices, are typically reported to exhibit severe academic and socio-emotional delays (Wodarski, Kurtz, Guadin, & Howling, 1990), and to have higher levels of trauma symptomatology (Lehmann, 1997; Rossman et al., 1997). Moreover, many of these same children have developmental or learning (reinforcement) histories characterized by familiar adults who ignored appropriate behavior and attended to inappropriate behavior, while at the same time inflicted pain (punishment), neglect, or, in a reverse sense, "gave in" to stop inappropriate behavior (positive reinforcement) (Golden, 2007). Several other learning or reinforcement histories have been linked with similar negative behavioral outcomes in children, and indicate another dimension of child-rearing practices associated with being maltreated or abused as a child. These include first, a lack of follow-through on the part of parents, which translates into parents setting up expectations and then not providing the negative consequences or rewards that were promised, and, second, when the content of the rules or messages the child receives are conflicting in nature (Rossman & Rea, 2005). Palmer and Hollin (2001) found perceived consistency of discipline to be negatively associated with self-reported delinquency. The problem for children who grow up having experienced inconsistent or erratic parenting practices is that many of them fail to learn accountability, and have no concern for parent approval or disapproval (Golden, 2007). Termini and Golden (2007) hypothesized that these same children also learn that adults are dispensable and cannot be trusted, which, for abused children, interferes with positive moral development (Golden, 2007), and leads to poor parent-child relations and possible criminal behavior (Agnew, 2005; Fagan, 2005; Farrington, 2002; Lewis, Mallouh, Webb, 1997; Kent, 1976).

In sum, these writers concur with the current authors regarding the association of inconsistent parenting practices with changes in the quality of parent-child relations and poor behavioral and emotional outcomes for children, with the majority indicating that victims of abuse and the concomitant affects of inconsistent parenting practices are significantly more likely than non-victims to become offenders. As such, recent research investigating family systemic factors and the combined affects of various types of inconsistencies in violent families suggests that parenting practices that contained clear and reasoned structure were most strongly associated with more positive child functioning. Likewise, parental inconsistency, defined in terms of conflictual parenting practices, was more positively associated with poorer child outcomes (Rossman & Rea, 2005).

## Family Perceptual Factors

In the proposed model (figure 1), different parenting practices and other systemic factors used for meeting the demands of child-rearing, (B factor), have become part of the family's capabilities for "defining" its members and preventing or contributing to juvenile delinquency. In effect, interfamilial processes include those parenting variables either predictive of moral and conscious development or parenting practices that are unclear and conflictual. In the proposed model, factor (B) consists of two elements: (1) aggressive disciplinary methods, and (2) inconsistent or erratic parenting practices. These two elements, along with abuse and neglect and family structure (A), are treated as discrete elements that directly or indirectly lead to perceived parent-child relationships, the C factor, in the model. Both of these variables, (B) and (C), interact to determine the outcome (the X factor) experienced by families as measured by the presence or absence of juvenile delinquency. The purpose of the following section is to examine the major systemic and family contextual factors in families in which children have been abused and neglected, and whether or not research evidence has established a link to perceived parent-child relationships in families who have a delinquent youth.

### *Parent-Child Relationships*

Authors of recent family studies on the impact of family relationships on juvenile delinquency have proposed that different parenting practices have important implications for the quality of parent-child relationships, with the majority of work indicating that family systemic factors most strongly associated with juvenile delinquency are those which include weak bonds or attachment impairments between parents and children (Agnew, 2005; Farrington, 2002), often exacerbated through poor or erratic parenting practices, and involve parents who employ harsh or coercive methods of discipline. As such, these children are not likely to perceive parents or caregivers as being a source of safety, and instead typically show an increase in aggressive and hyperactive behaviors, which Schofield & Beek, (2005) suggest disrupt healthy or secure attachment with their parents. This is of particular importance in families who have a delinquent youth or parent who has engaged in crime, and in which children have been abused or neglected as part of their early experiences. Research investigating the effect of abuse and neglect on the child's perceived quality of parent-child relationships, and the reciprocal effects of abusive disciplinary methods and inconsistent or erratic parenting practices, has linked these interfamilial factors to emotional and behavioral difficulties in these children, and posits a multidimensional causal mechanism in which the perceived quality of parent-child relationships affects deviant or criminal behavior. Not surprisingly, researchers investigating treatment interventions in regard to abuse and attachment related disorders, find that such children present as a diagnostic challenge (O'Connor & Zeanah, 2003), and are likely to "view" a parent as a source of terror and someone who must be controlled through manipulation and intimidation (Hughes, 2004). Descriptions of these children suggest they lack impulse control, a conscience and adequate moral development, and often present as superficially engaging or connected to others, emotionally aloof, and likely to engage in criminal or deviant activity (Dyer, 2004; O'Connor & Zeanah, 2003). Researchers investigating the affects of abuse and the reciprocal relation between violence or abusive disciplinary methods and inconsistent parenting practices on problem behavior report similar findings. They indicate that such children, often having experienced neglect associated with non-intact family structure, are typically more likely than non-victims to become offenders (Brezina, 1998; Thornberry et al., 2001; Widom & Maxfield, 2001), to be arrested at earlier ages (Widom & Maxfield, 2001), to have higher levels of trauma symptomatology (Lehmann, 1997; Rossman et al., 1997), and report poor or weak parent child relationships (Ganem & Agnew, 2007).

Researchers investigating a history of child maltreatment and family support concluded

that parent-child relationships problems influence children's expectations which are not easily modified and ultimately create strains on relationships with their parents (Howe, Brandon, Hinnings, & Schofield, 1999). The major challenges reported in parenting maltreated children include their profound lack of trust (Schofield & Beek, 2005) and a distorted sense of security, often reflected in the children's poor interpersonal relationship across the life span. Such children, who exhibit many of the same emotional and behavior problems associated with abused or neglected foster or adoptive children, tend to control others and are described as suspicious and highly adaptable, all in an effort to control or manipulate people viewed as sources of fear rather than sources of love or security (Schofield & Beek, 2005). Such children have learned to adapt to a distorted and abusive or inconsistent parent or caregiver by becoming cautiously self-reliant (Schofield & Beek, 2005) and are often described as glib, manipulative and disingenuous as they move through childhood and adolescence. In adulthood, these children often grow up shallow or emotionally aloof and have difficulty forming close relationships, demonstrate a lack of resilience, and often display severe antisocial behavior (Howe, 1998).

### Hypotheses

The issue of juvenile delinquency and its causes and the resulting negative effects is a continuing concern for families and society. One area that research has shown to be important in the development of delinquency is that of the family and the quality of parent-child relationships. Within this paper, three primary factors in the family have been highlighted as being of importance in determining later behavior: family contextual factors, interfamilial or systemic factors, and family perceptual factors. We hypothesized that all three of these factors will have significant additive effects in the development of poor or weak parent-child relationships, and may affect the likelihood of antisocial or criminal behavior in young adults over time. We expected the contextual variable link – between child abuse and neglect, and the over arching problem of child maltreatment (Widom, & Maxfield, 2001; Widom, 1989), to be especially strong with juvenile delinquency and subsequent adult violent criminality (Egeland, Yates, Appleyard, & van Dulman, 2002). Recent national statistics, for example, reveals that nearly 80 (79.9%) percent of perpetrators reported to have maltreated children in 2006 were parents, and another 6.7 percent were other relatives of the victim (U.S. Department of Health & Human Services, 2006). Although the relationship between neglect and delinquency is stronger than the relationship between direct physical abuse and delinquency, recent research on delinquent youth charged with violent offences has consistently found that a disproportionate number of delinquent youth, as well as violent adult offenders (Agnew, 2005; Farrington, 2002), were severely abused in childhood and throughout adolescence (Fagan, 2005; Lewis, Mallouh, Webb, 1997). As such, one of the more clearly delineated predictors for juvenile delinquency and future violent criminality is abuse or neglect in the family.

The nature of the research and empirical findings that we have reviewed also allowed the examination of competing hypotheses about the relationship between contextual factors and systemic factors, and how they both influenced perceived parent-child relationships and eventually criminal behavior in young offenders. This hypothesis was tested by examining the moderating influence of two different parent-child interaction styles, and how these patterns influence perceptual factors and later behavior. Although these different interaction patterns are viewed as discrete elements, we hypothesized that all of these factors may disrupt the development of parent-child attachments and increase the likelihood of later delinquency. This hypothesis finds good support in research and empirical findings on different childrearing styles, and the negative effects of inconsistent and erratic rules or discipline that is aggressive, harsh, and delivered in an authoritarian style (Farrington, 1996; Haapasalo, 2001; Loeber & Farrington, 1998; Loeber, Farrington, Stouthamer-Loeber, & Van Kammen, 1998; Maccoby & Martin, 1983;

Patterson, 1986; 1995). The results of these studies clearly indicate a strong relationship between aggressive or authoritarian parents and later antisocial or criminal behavior. Additionally, a lack of consistency and parental warmth or supervision of children has also been associated with an increased likelihood of later delinquency (Farrington & Loeber, 1998; Jang & Smith, 1997; Palmer & Hollin, 2001; Pettit, Laird, Dodge, Bates, & Criss, 2001). In the proposed model, these different forms of parental childrearing styles, along with abuse and neglect and family structure, interact and become part of the family's capabilities for "defining" its members. While abuse and neglect and family structure are treated as discrete contextual elements that determine perceived parent-child relationships, both of these elements interact with different forms of child-rearing styles or systemic factors and either prevent or contribute to juvenile delinquency.

Although these three factors converge on the same finding that family contextual factors and systemic factors have strong associations with each other, and directly or indirectly impact family perceptual factors, family structure as a discrete element does not predict delinquency. For example, research indicates that family structure as a contextual factor is more predictive of neglect than of delinquency. This is of particular importance in the proposed model (figure 1), since research indicates that the nature of the relationship between parent and child is much more important in predicting juvenile delinquency than the structure of the family or whether or not both natural parents are present (Ganem & Agnew, 2007). Since this model is grounded in specific constructs derived from social learning theory, the picture is further complicated by the question of whether some abused children, independent of the cumulative or additive effect of all three factors, model the actions of their abusers and become delinquent offenders themselves over time. While these questions come together as a potential explanation on the same finding that aggression and abuse have strong associations with each other, longitudinal data and cross-sectional comparisons are needed to examine the behavioral changes in the relationship between childhood abuse and aggression more directly. While this is beyond the scope of this paper, the specific causal logic is consistent with concepts central to Akers' theory, and the basic operant functional relations associated with criminal behavior (figure 2). The purpose of the following section is to examine the major concepts central to Akers' social learning theory of criminality, and whether or not research evidence has established a link between the three family factors (contextual, systemic and perceptual) and the basis operant functional relations associated with crimes committed by youth.

### Social Learning Theory and Research

Social learning theory (Bandura and Walters, 1963; Bandura, 1973, 1977; Conger, 1976, 1980; Akers, Krohn, Lanza-Kaduce, & Radosevich, 1979; Akers, 1985; Krohn, Massey, Skinner, 1987) has been used to explain conforming, appropriate behaviors as well as problem behaviors among adolescents literally from its inception in the 1960s. This theory posits that patterns of behavior are learned through interaction with various reinforcing or socializing agents, and through these interactions, rewarded behaviors (direct contact) are adopted, reinforced behaviors (modeling or indirect contact) are maintained and punished behaviors are extinguished. Social learning theory, then, "favors a conception of interaction based on triadic reciprocity, and suggests that behavior, cognitive and other personal factors, and environmental influences all operate as interlocking determinants that affect each other bidirectionally" (Bandura, 2004, pg. 27; Bandura, 1977a, 1982b). This view of human behavior is particularly important in families in which children have been abused and neglected, since the social learning process links the development of criminal behavior from involvement with others (family contextual factors and other interfamilial processes), and the mediating influence of rewards, reinforcements and punishments (Iwata & Worsdell, 2005). As such, Akers' version of social learning theory is important to this paper and establishes the theoretical link between the paper's hypotheses and the

operant functional relations associated with the family and later behavior.

Akers' (1985; 1998) theory, which builds on several others (Bandura, 1986; Skinner, 1953; Sutherland & Cressey, 1974), is also especially attractive for policy-makers because it provides a useful behavioral rationale that should be able to explain any form of criminal behavior (Higgins, Fell, & Wilson, 2007). Given the central importance of abuse and subsequent antisocial, aggressive acts in young criminal offenders, this paper draws on several important constructs instrumental to Akers' theory, and grounded in either general misbehavior or youth-gang behavior. The operational measures of these constructs are derived from instrumental conditioning, and, when considered together within the context of the family, are intended to explain the behavioral process by which children learn to be delinquent (Figure 2). These constructs, which include differential reinforcement, discriminative stimuli, differential association, and imitation, provide the theoretical underpinning from which to develop and support the paper's hypotheses. In addition, these constructs are intended to link the major family contextual and systemic factors with poor parent-child relationships, and subsequent juvenile delinquency. Thus, the proposed hypotheses regarding the relations were based on theory.

### *Differential Reinforcement and Punishment*

Akers's theory contends that the principles underlying the process of instrumental or operant conditioning detail the how, what and where by which one learns to be delinquent, and involve both reinforcement and punishment (Akers, 1985, 1998; Winfree, Thomas, & Bernat, (1998). In the case of reinforcement, the basic operant functional relation includes the following: When a type of behavior, such as conforming or deviant behavior, is followed by reinforcement either by receiving something valued (positive reinforcement) or by avoiding something aversive (negative reinforcement), there will be an increase in the future frequency of that type of behavior. For example, if an abused child observes violence directed toward a parent or other sibling, and runs away to avoid the abuse (negative reinforcement) and commits a violent offense, this may be enough of a reward to adopt a criminal lifestyle, especially if the child received immediate reinforcement in the form of money, praise or elevated stature among other delinquent peers (Akers, 1998; Bao, Whitbeck, & Hoyt, 2000; Whitbeck, & Hoyt, 1999). In terms of punishment, the operant functional relations can be stated much like that involving reinforcement. In a particular stimulus (parent-child interactions) response situation, some behaviors, either appropriate or inappropriate, when followed immediately by certain stimulus (unpleasant) changes, show a decreased future frequency of occurrence, especially in stimulus situations that are the same or similar. For example, children who are abused are often punished by their parents and by their peers for appropriate behavior (i.e. "Don't be a cry baby!" "What are you - a sissy?") The importance or relevance of the stimulus situation to the decreased response frequency caused by punishment is the same for reinforcement. In fact, reinforcement and punishment cannot be adequately understood without reference to the various operant functional relations occurring at the time the increase or decrease in response frequency is expected to occur. This is critical to the acquisition of healthy or unhealthy behavior, especially in families with abused children, and involves the following three operant functional relations: the behavior or response-consequence delay; the stimulus situation discussed above; and the strength of the relevant motivating operation (MO) at the time the increase or decrease in response frequency is expected to occur (Michael, 2004). In the case of response-reinforcement delay, the concern centers on the immediacy of the reinforcement, and whether or not a type of behavior, such as conforming or delinquent behavior, is followed immediately by reinforcement or delayed. Research indicates that in a given stimulus response (child-delinquent peer) situation, when a behavior is followed by immediate as opposed to delayed reinforcement, the more likely there will be an increase in the future frequency of that type of behavior (Michael, 2004). In a similar, but more complicated

sense, motivating operations (MO), are environmental (family factors and peers) variables or events that alter the current reinforcing effectiveness (evocative or abative) of some behavior or event, and, at the same time, alter the momentary frequency of all behavior that has been reinforced by those behaviors or events. For example, an abused child who attends school but commits various violent offenses, and receives immediate monetary rewards and associated praise from delinquent school peers, may no longer attend school, prepare homework or work part time in the afternoon because the reinforcement for all of these behaviors is delayed. Thus, motivating operations alter the reinforcing effectiveness of multiple or various types of behavior by being paired or associated in time by the same stimulus that is altered in reinforcing effectiveness by that MO. As with reinforcement, when a type of behavior is followed immediately in a stimulus (child-peer interaction) situation by reinforcement, there will be an increase in the future frequency of that type of behavior in the same or similar stimulus conditions. This increased frequency will only be seen when the MO relevant to the reinforcement that was used is again in effect (Michael, 2004). The principle of differential reinforcement captures the essence of the contiguous and reciprocal influences of the various functional relations depicted in figure 2, and illustrates the multiple interlocking and concurrent contingencies by which abused and neglected children who encounter parenting practices inconsistent with moral and conscience development learn to be delinquent. Given two or more forms of behavior, such as regularly attending school or joining a gang, the most highly valued form is the one retained and repeated. Akers (1985, pg. 47), cited in Winfree, et al., (1998), observes that when two forms of behavior are similar the learning is “most dramatic and effective when the alternatives are incompatible and one is rewarded while the other is unrewarded.”

#### *Internalized Definitions or Discriminative Stimuli*

Akers assigns the offender's motivations, which represent a large part of what is learned through conditioning, as internalized definitions, or, in a behavioral or operant sense, discriminative stimuli. This construct represents a powerful independent variable or stimulus condition capable of modulating (increasing or decreasing) the frequency of a large amounts of behavior because of a historical relation between the presence or absence of the stimulus and the differential availability of an effective reinforcer given that type of behavior. As with differential reinforcement, discriminative stimuli alter the frequency of certain types of behaviors, such that questionable (antisocial) behavior becomes acceptable because the response or behavior has been followed by reinforcement relevant to some particular MO which was in effect at that time. Given the central importance of abuse and subsequent antisocial, aggressive acts in young criminal offenders, this is especially important in families in which children have been abused or exposed to delinquent models including parents and involves clearly delineated operant functional relationships. With a discriminative stimulus present, a particular type of behavior, either questionable or acceptable, must have been followed by reinforcement relevant to some particular MO which was in effect at the time (Michael, 2004). For example, a child with a history of severe abuse and of witnessing family violence, and who breaks the law or commits a violent act in the presence of other valued but delinquent peers (discriminative stimulus), and then receives immediate gratification either from avoiding detection (negative reinforcement) or from peer group recognition (positive reinforcement), may have received enough of a reward to commit similar offenses, provided the presence of some familiar or other similar stimulus condition (discriminative stimulus) is in effect in the future.

#### *Differential Association*

According to Akers, differential association represents another important construct instrumental to social learning theory, and is grounded in general delinquency and work in adult

criminality. This construct, which may or may not depend on learning history, focuses on the extent to which individuals associate with others who model attitudes consistent with criminal behavior or are involved in crime. For example, an abused child whose parents model criminal behavior, or adopt attitudes or beliefs consistent with violence, is likely to associate with other abused youths who are involved with crime, or express beliefs and attitudes that reflect criminal activity (Akers, 1998). These associations represent interpersonal contacts, which translate into behavior via discriminative stimuli and differential reinforcement, and provide sources of both reinforcement and punishment. Winfree et. al. (1998, pg. 541) suggests that “differential associations that occur most often, in the greatest number, and enjoy the greatest probability of reinforcement tend to guide the individual in his or her behavior.” This is especially true for children who are abused and exposed to parents or other delinquent peers who model criminal behaviors, and in the model (figure 2) represent the causal sequences of a child’s experiences and perceptions that guide behavior. Recent research indicates that most problem behaviors including juvenile delinquency are learned as a result of an individual’s experiences with his or her environment (contextual and systemic factors) and are maintained by contingencies of reinforcement (Iwata & Worsdell, 2005). While specific reinforcers for problem behavior vary widely, this view is consistent with Bandura’s concept of “triadic reciprocity,” and suggests a theoretical link between childhood experiences and theoretical or environmental family factors, and the various positive and negative contingencies of reinforcement that maintain criminal behavior. This link between a child’s experiences and problem behavior is critical, given that recent research (Greer, Dudek-Singer, & Gautreaux, 2006) has consistently supported a distinction between behavior change that is attributed to direct contact by the individual with the two fundamental contingencies of reinforcement (positive and negative) (Iwata and Worsdell 2005), and behavior change that results from indirect contact that is attributed to observation or modeling (Catania, 1998). While such learning processes (i.e., contingencies of reinforcement, modeling, and imitation) may have different forms, for the purpose of this paper, we recognize this distinction in social learning, and have included modeling not as a discrete element, but as a controlling condition associated with differential association in our model (figure 2). Therefore, we speculate that differential associations (direct and indirect interaction with others) help the abused youth via discriminative stimuli and differential reinforcement to learn conforming or deviant behavior through observing and modeling the parents' behavior.

### *Imitation or Observational Learning*

As such, Akers agrees with this logic and agrees that learning also takes place through observation or modeling, also referred to as imitation. In the case of imitation or modeling, the basic functional relation includes the following: when an agent, whether socializing or reinforcing, observes the activities and messages of others or from the media, and adopts or learns new behavior, the process is called “imitation.” Although there is still debate on the exact definition of imitation (Byrne and Whiten 1988; Tomasello 1990), most researchers agree that imitation is similar or analogous to modeling but distinctly different from copying and mimicking. Research in animal learning suggest that mimicking is merely involved in recording and reproducing observed actions, while imitation or modeling needs some sort of abstraction and understanding of observations (Arbib 2000; Breazeal and Scassellati 2000). Since children and youth learn and assimilate knowledge through interaction with their parents and others, the authors agree with this distinction and consider conception and abstraction as an important component of observational learning and as an effective means for transferring knowledge into behavior from parent to child via the discriminative stimuli and differential reinforcement link in our model.

In the case of children who have been abused and exposed to delinquent models,

including a parent or friend who has engaged in crime, research supports a strong association with subsequent antisocial, aggressive acts in young criminal offenders. This is consistent with figure 2 in the proposed model, especially since research in social learning theory predicts that learning occurs through interaction and that aggressive or violent behaviors of abused or neglected children are learned through observing and modeling the parents' behavior (Akers, 1998; Bao, Whitbeck, & Hoyt, 2000).

### Summary and Corollary Hypothesis

Past research testing the predictive efficacy of social learning theory has generally focused on adolescents and the use of alcohol and drugs (Akers, 1985; 1992), as well as other causal links between concepts central to the theory and work in criminality (Akers 1985, 1994). To date, the literature supports Akers' theoretical assumptions regarding the importance of punishers, reinforcers, and differential associations, and indicates that the activities and messages from others serve as either direct models or reinforcement of behavior (Akers, 1998; Higgins & Makin, 2004; Skinner & Fream, 1997; Warr, 2002). While a range of individuals may associate with others who engage in crime, or model beliefs favorable to crime, data have consistently demonstrated that friends are important models from whom youth learn delinquent behavior, and friends' approval of that behavior reinforces the delinquency (Akers, 1998; Bao, Whitbeck, & Hoyt, 2000; Warr, 2002; Whitbeck, & Hoyt, 1999). For instance, in research on gang association, social learning theory reveals the pernicious effects of association with delinquent peers, and the impact or exposure of violent media on sub-cultural symbols and attire among young offenders (Klein, 1997; Yoder 2003). We speculate that this might vary by gender, family structure or intelligence and may interact or be moderated in multiple other ways, as we hypothesized that all these environmental factors will have significant additive effect in the development of poor or weak parent-child relationships, and ultimately increase the likelihood of juvenile delinquency. To what extent this picture is further complicated by the operant measures inherent in the question of whether some abused children model the actions of their abusers, and under what set of contingencies or conditions this might occur, are important questions for future research. Although this is beyond the scope of this paper, and we have chosen not to include peers or delinquent friends in either of the proposed models, research supports the established link, as a potential social learning explanation for the strong association of childhood abuse and antisocial behavior in young criminal offenders (Fraser, 1996; Lennings, 1996).

In our model (figure 2), for example, we expected our analyses to demonstrate strong associations or paths from the effects of both developmental and learning history (historical relation) to each other and behavior (conforming or deviant), and from the reciprocal interaction of discriminative stimuli and differential reinforcement. Using the literature review and empirical findings, we examined the impact of abuse and neglect on the emergence of the discriminative stimuli – differential reinforcement link, and the moderating influence of family structure (reinforcement history) on the relevant controlling conditions and models in the environment. We speculate that these different forms of learning converge on differential associations, as a controlling condition, along with the reciprocal effects of differential associations on the "discriminative stimuli - differential reinforcement link." While the research reviewed does not examine the emergence of the differential association - juvenile delinquency link over time, we expected differential associations vis-a-vis this link to be especially strong and emerge as dominant in regulating and controlling later behavior. Thus, we agree with Akers' that differential associations, which have both direct and multidimensional causal effects on conforming or deviant behavior, are "under the influence of those groups with which one is in differential association and which control sources and patterns of reinforcement, provide discriminative stimuli, and expose one to behavioral models" (Akers 1985:47). Although these different operant

relations have strong associations with each other, we viewed these different forms of learning not as discrete elements but as interlocking and concurrent contingencies, all of which are consistently correlated or associated with later behavior (conforming or deviant). Thus, we expected and found our analyses to demonstrate multiple paths from both abuse and neglect and family structure to each other and delinquency, and, as depicted in figure 2, from the perception - stimulus response link - between discriminative stimuli and differential reinforcement, and to converge on differential associations, and later behavior. More specifically, the analysis translated into behavior showed children who experienced abuse, and in particular neglect, often having experienced neglect with non-intact family structure, are typically more likely to have experienced parents who employed either harsh or erratic methods of discipline, and to perceive their parents to be cold and less protecting, and were more likelihood to engage in serious aggressive-type delinquency, than non-victims who perceived parental emotional warmth and consistency of discipline inside the family.

### Toward a Behavioral Approach to Treatment

According to Albert Bandura (1969), the father of modern cognitive social learning theory, “the process of behavior change involves substituting new controlling conditions or stimulus patterns for those that have regulated a person’s behavior.” This view of human behavior is especially important to achieving positive changes among juvenile delinquents and their parents, and is grounded in the notion that the character or topography of an abused child’s behavior (aggressive acts) is controlled, and that overcoming abuse and changing criminal behavior is subject to the same lawful inevitability as other behavior. Implicit in this view of behavior change, though somewhat subtle, is a focus on perception (causal antecedents to overt behavior) and the multiple behavioral and environmental contingencies that regulate delinquent behavior and operate in the family (figure 2).

Drawing on figure 2 and Wolpe’s seminal work regarding causation in human behavior, the theoretical rationale underlying a behavioral approach to treatment assumes that delinquent behavior develops from the conditioning of motor and verbal responses to complex integrations of stimuli (discriminative stimuli - differential reinforcement link vis-a-vis differential associations) that evolve into learned habits that are then reinforced or maintained in the family (Taylor, 1962; Wolpe, 1978). An example drawing on a relatively minor form of relational aggressive behavior is used to make the distinction between the conditioning of motor and verbal responses that develops from the antecedent and postcedent events and conditions associated with aggressive behavior. Once a subtle but covert insinuating message of harm (i.e., “you messed with the wrong person”) transitions to fear (autonomic behaviors), and leads to withdrawal, and finally, to serious aggression (motor behaviors), the covert antecedent event (thinking behaviors) may no longer be indicative of the originating contingency, but instead may be a necessary postcedent event designed to meet a contingency requirement maintained in the family. The key variables in this framework remain the behaviors (aggressive acts) themselves, along with the critical pathways between covert and overt antecedent and postcedent events and conditions associated with those behaviors in the family. To the extent that perception and previous learning governs delinquent behavior, the relearning of pro-social behavior requires young offenders to shift attention and compete with those motor and autonomic reactions associated with the discriminative stimuli - differential reinforcement link, and the concomitant relevant controlling conditions (differential associations) in the familial environment.

### *In-home Treatments*

While diversion programs designed to reduce juvenile justice involvement (i.e. courts, probation and detention) have increasingly become one of the most utilized alternatives to out-of-

community placement or secure detention of delinquent youth, research investigating the importance of community influence on placement and recidivism indicates that treatment programs providing direct (or “in house”) care significantly reduced rates of secure placement among young juvenile delinquents (Hamilton, Sullivan, Veysey, & Grillo, 2007). In addition, more recent studies investigating the efficacy of in home parent-training programs with adolescents and juvenile offenders report similar findings and suggest that parent training is one of the most effective means of preventing delinquency (Mulford & Redding, 2007). As such, we have decided to focus on in home behavioral treatment, especially when used in conjunction with other carefully selected diversion programs for young offenders' who may be better served in the community. In the case of working with young previously abused or neglected offenders and their parents, the major challenge in treatment, is that the way young criminal offenders react to others, including parents or delinquent friends, varies according to how the individual perceives them. Given that evidence indicates that abuse alone does not typically lead to juvenile delinquency, the primary goal of treatment is to engage targeted families early and model and teach parents and young offenders new learning patterns (stimulus-response) that reinforce healthy emotional regulation and responsiveness. Since our model (in home parent-training) is grounded in specific constructs derived from social learning theory, treatment approaches and interventions supporting the use of parent training were designed to compete with earlier controlling conditions (differential associations and models) primarily associated with neglect, often in conjunction with non-intact family structure, and parents who employed either harsh or coercive or erratic methods of discipline. This behavioral process of unlearning and eventually overcoming cognitions (thinking behaviors), actions (motor behaviors) and emotions (autonomic behaviors) associated with past perceptions and experiences is central to the question of whether or not mainstream juvenile detention programs foster the acquisition of new functional skills. This is especially important since recent research into the incarceration experience for adolescent males indicates that while placement in a maximum secure facility placed detainees into a state of readiness for positive change, the environment failed to provide them with the necessary skills to effect and sustain this change over time (Ashkar, Kenny, & Kenny, 2008). Behavioral and emotional descriptions of these detainees' experiences were characterized by a prison culture of bullying, substance use, and discord or antagonism with youth workers; inadequate service provision; and a sense of loss through reduced autonomy and self-sufficiency. These experiences gave rise to a range of negative feelings and emotions and promoted antisocial behavior, which in conjunction with a lack of deterrence, and insufficient rehabilitative programming, likely contributed to the high rates of recidivism (Ashkar, Kenny, & Kenny, 2008).

### *Behavioral Strategies*

As such, we argue that behavioral strategies for modifying young offenders' behavior should take into consideration the role of parent-child (stimulus-response) relations and perception (discriminative stimuli and MOs) and the consistent use of positive and negative reinforcements for the behaviors that conform to reasonable expectations as causal mechanisms for producing changes in outcomes. Rules, models, and structural conditions are also relevant. However, the key to success, given that our analysis suggests that differential associations (direct and indirect interaction with others), which have both direct and multidimensional causal effects on conforming or deviant behavior, is changing the quality of the relationship between the parents and child, through the implementation of five distinct but interdependent tasks for parents: (a) promoting pro-social behavior (model), (b) rule establishment and consistent enforcement of behavioral contingencies, (c) identification of causal antecedents (discriminative stimuli and MOs) linked with aggressive behavior, (d) substituting new controlling conditions (differential associations) or stimulus-patterns for aggressive behavior (e) and reinforcement and punishment of competing behaviors. The theoretical framework supporting the use of these tasks views the

improvement of the quality of the relationship between the parents and child to be of paramount importance. Thus, the authors have expanded on the role of parenting as a causal mechanism for producing changes in young offenders through an emphasis on the relevant operant functional relations (controlling conditions) that operate in the family. Drawing on Hamilton's et al. work and social learning theory, the in-house parent-training model, in conjunction with selected diversion programs, is based on the idea that young offenders who value the quality of parent-child relationships and perceive other members as competent and worthy of genuine love and mutual respect are less likely to engage in delinquent acts, and more likelihood to differentially associate with non-offenders outside the family. The potential contribution of each step in changing later behavior is critical, and based on the intra-familial context and behavioral dynamics of violence in young offenders. Beyond these essential steps, there is a core set of components that are included in the treatment program: screening and assessment. Screening prospective young offenders' provides program participants the ability to identify youth who are appropriate for in-home treatment, in conjunction with diversion, while assessments can help to identify the critical links in the interlocking behavioral contingencies that shape and maintain family contextual and systemic factors, which can be linked to the appropriate in-home community-based treatment.

### Summary

While there is still much to learn, the analysis suggests that the major challenge in treatment for young offenders', especially among those who have been abused or neglected as part of their early experiences, is the failure among policy-makers to recognize and consider the important links in the interlocking behavioral contingencies that shape and maintain abuse and subsequent antisocial behavior in the family. This knowledge gap or oversight represents a major shortcoming in politically mandated policies that govern young criminal offenders, and suggest the need to reconsider current prevention and inhibition practices and policy approaches related to youth at risk for, and exposed to, abuse and violence in the family. While most physically abused children do not become violent delinquents (Lewis, Mallouh, Webb, 1997), modifying or changing the roots of abuse, particularly among families who have a delinquent or parent who has engaged in crime, begins with promoting public awareness and improving detection and assessment strategies among targeted families. Since individual differences in children are determined by previous learning, targeting vulnerable families for the provision of evidence-based interventions, given economic and legislative constraints, is critical and requires local mental health services and other key systems to interface with public health, foster care, and the juvenile justice system. Given the above prevalence data and research findings, the brief analysis elaborated here can provide some level of guidance for achieving positive changes in families, and suggests critical directions for further study. However, the key to success begins with challenging policy-makers to abandon traditional juvenile detention programs, and to adopt a new scientifically based philosophy that recognizes the role of family contextual and systemic factors as part of the presenting problem. This new approach is based on the assumption that a child's behavior problems are considered to occur within the context of a reciprocal parent-child interaction that takes place within a larger family and community system. (For a discussion and overview of the behavioral approach to treatment applied to abused children placed in foster and adoptive families see Prather, 2007.) While identifying or developing strategies for modifying political mandates or changing motivational factors, such as verbal processes and cultural perceptions, are beyond the scope of this paper, conducting a functional analysis that identifies the environmental determinants of problem behavior (i.e., functional characteristics) among children who have been abused is critical to the success of reducing the rate of juvenile delinquency in the future. This call for a new evidence-based philosophy, which transcends legislative constraints, rests not on ignoring the causal sequences between learning and criminal

behavior, but on accepting the fact that “research has shown that the most effective way to reduce problem behavior is to strengthen desirable behavior through positive reinforcement rather than trying to weaken undesirable behavior using aversive or negative (punishment) processes” (Bijou, 1988). Front-end programs such as universal Pre-Kindergarten, whose mission is to ensure that all children are intellectually, emotionally, physically and socially ready to enter school, is a major step in the right direction and can have lasting consequences for children, not the least of which is to model and teach healthy behavior incompatible with crime.

### Conclusion

This paper draws on several bodies of research and the leading crime theory to argue that the impact of abuse and neglect on family relationships has important implications for the quality of parent-child relationships, with the lower the quality of parent-child relationships the higher the likelihood of juvenile delinquency. One overarching finding most strongly associated with juvenile delinquency is that differential associations (direct and indirect interaction with others) emerged as dominant in regulating and controlling later behavior. While early experiences associated with abuse and neglect do not cause pathology in a linear way (Stroufe, Carson, Levy, & Egeland, 1999), the resulting negative effects are subject to the same lawful inevitabilities as other behavior, and behavior problems or aggressive acts must be evaluated and treated within the context of the reciprocal parent-child interaction that takes place within a family. The antithesis of this view involves an emphasis on response prevention and punishment, and the causal relevance of violence is viewed not in terms of perception or experiences, but rather as an evitable outcome associated with poverty, race, or ethnicity. This paper has explored the roots of abuse and subsequent violent behavior from the perspective of social learning theory and the relevant operant functional relations that operate in the family, and has argued not for more prisons or stronger or longer sentences, but rather a more critical examination of the policies and laws that govern rehabilitation and treatment of young criminal offenders.

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**Appendix Next Page!**

Appendix

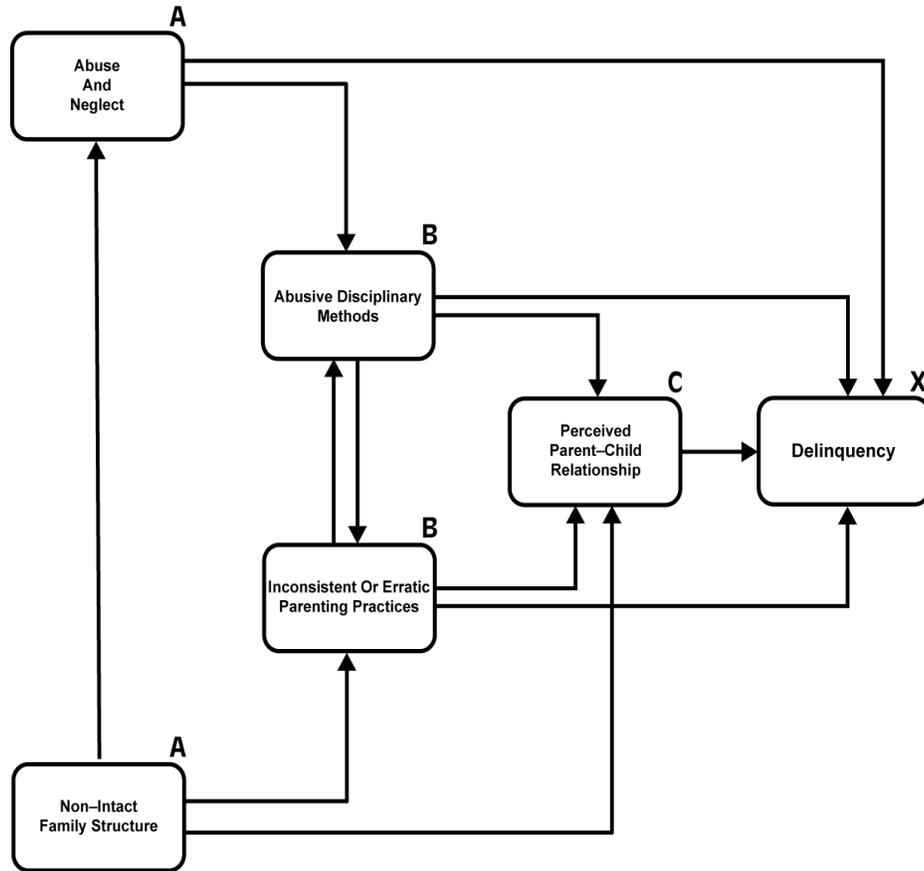


Figure 1: Theoretical Family Path Model Predicting Delinquency

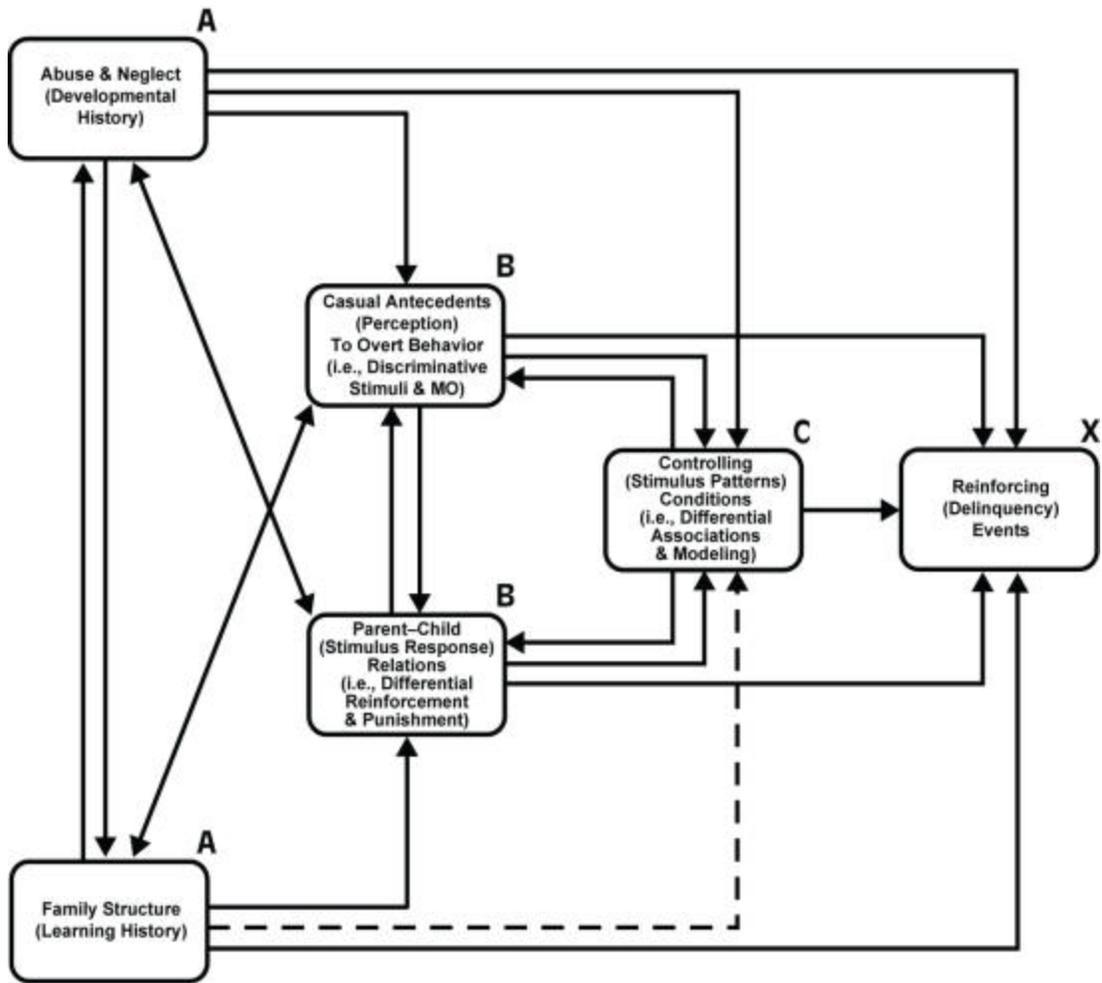


Figure 2: Theoretical Behavior Path Model Predicting Delinquency