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Looking across the generations: an intergenerational examination of problem behaviors among American Indian adolescents

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Looking across the generations: An intergenerational examination of problem behaviors among American Indian adolescents

by

Brent David Hales

A dissertation submitted to the graduate faculty
in partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY

Major: Rural Sociology

Major Professor: Les B. Whitbeck

Iowa State University

Ames, Iowa

2000

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Graduate College
Iowa State University

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Brent David Hales

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Major Professor

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For the Major Program

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For the Graduate College
DEDICATION

This dissertation is dedicated to the many instructors, leaders, mentors, family members and friends that have encouraged my academic career. First, I must thank my Ph.D. committee members for their support and guidance throughout this process. Next, I must thank the faculty, staff, and students at Brigham Young University, Middle Tennessee State University, and Iowa State University for their open acceptance and assistance throughout my tenures at the universities. Special appreciation is appropriate for my major professor, Dr. Les Whitbeck who served as a mentor and guide in this and in other efforts. Additional expressions of appreciation are due to the other project members of the Three Villages Project, specifically Dr. Jerry Stubben and Dr. Dan Hoyt for providing support to me while I worked with the project. To the other researchers and staff members at the Institute for Social and Behavioral Research, I thank you as well for making my stay a pleasant and invigorating one.

Without the support of my parents, siblings, in-laws, and other relatives, I would not have achieved such an effort. I dedicate this to them and thank them for their love and support. I thank my wife Candy, my children Zachary, Matthew, and Gabriella for staying by me as we moved across the country in search of my dreams. They make my life complete and without them, this means nothing. I love you always.

Finally, I must thank the families of the Three Villages Project for their willingness to participate in this project. To the youth of the project, I pray that they will find paths of success and happiness as they grow. To the parents, I pray that they will guide these youth in ways of spirituality, tradition, and peace.
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ABSTRACT

The purpose of this study is to examine the intergenerational transmission of problem behavior among American Indian youth in a family context. The models used in the study replicate in part, intergenerational models of Caspi and Elder (1988), Elder, Caspi, and Downey (1986) and Whitbeck et al. (1992b). The effects of intergenerational parenting, parental antisocial behavior, the presence of a male paternal figure, both mother’s and target’s age, and target’s gender on the target’s problem behavior are examined. Support is observed for the intergenerational transmission of parenting practices and problem behaviors. Having and male paternal figure present in the household, mother’s age, and target’s age are also found to impact the target’s problem behaviors.
CHAPTER ONE: INTRODUCTION

Family interaction is continuous over the life course and binds together families through shared experiences and consequences (Elder, Caspi, & Downey, 1986). Children do not develop in a vacuum. Their development is shaped in relation to their family development and is a reflection of familial values, norms, and practices. As individuals develop, their emotional and psychological growth, their values and norms, their life expectations, and their total development are shaped by and through their interactions with family members. Just as their development is affected and shaped by the family processes, they too affect the development of the family, therefore, the relationship is dynamic and reciprocal. With this “...focus on individual and family change, life-course analysis combines these elements in an open-system of family development” (Elder, Caspi, & Downey, 1986:297). Family interaction, communication, and development affect the trajectories or life patterns that individuals take (Elder et al., 1993). These trajectories can be socially adaptive or destructive. Regardless of their direction, they are fluid, malleable, and change as new avenues for development evolve. This development and socialization takes place throughout the life-course (Featherman & Lerner, 1985) and involves complex patterns of interactions that contribute to psychosocial development.

The purpose of this study is to examine the intergenerational transmission of problem behavior among American Indian youth in a family context. The models used in the study replicate, in part, intergenerational models of Caspi & Elder (1988), Elder, Caspi, and Downey (1986) and Whitbeck et al. (1992b). In so doing, the contributions of intergenerational parenting, parental antisocial behavior, the presence of a male paternal
figure, age, and gender of the target child are examined. In order to undertake such a project, it is necessary to examine existing empirical literature to determine the extent of theoretical and applied research in these areas. Much of the literature in these areas focuses on European American children. As a result, much of the information presented initially will focus on contemporary writings on antisocial and conduct disordered behaviors from a European American perspective. After addressing this literature, an assessment of some of the writings dealing with Native American families, family processes, and adolescents will be assessed to determine if such literature supports the application of both historically white theoretical and methodological modes of research to Native American populations.

Research of this nature is fundamental to understand the process of intergenerational transmission among American Indian families. As noted above, a dearth of culturally relevant literature on American Indian familial interactions exists and limits the practical application of family-based intervention programs aimed at reducing adolescent problem behaviors. Likewise, such research increases the ability of the tribes in question to address these concerns from within, thus increasing the likelihood for contextual and cultural appropriateness.

Chapter one begins with an assessment of writings overviewing developmental theories and specifically life-course theory. Next, I focus on defining problem behaviors, specifically the measurements of antisocial behavior. The next section focuses on predicting problem behavior, problem behavior syndrome, antisocial behavior and other emotional/behavioral problems. American Indian demographics and mental health research with American Indian youth are also discussed. The concept of intergenerational transmission is discussed in relation to the role of parenting, the effects of peers, socioeconomic status,
gender, and age on the persistence and/or desistance of antisocial behavior. Finally models and hypotheses are discussed.

Chapter two discusses the sample, measures, and methods used in this study. Chapter three examines the results of this study. Chapter four provides discussion of the findings, limitations of this research, suggestions for future research, and conclusions that incorporate implications of life-course persistent antisocial behaviors.
CHAPTER TWO: LITERATURE REVIEW

Overview of Developmental Theories

Mannheim (1952), argued that individuals' lives could only be understood in historical context. Lives must be understood in the socio-cultural life-world in which they develop. Human development is affected by historical, social, cultural, and environmental factors that shape expectations and interactions with others and surrounding institutions. These same forces shape the life-paths that people take. Individual development does not end at the onset of late adolescence or adulthood; rather individual development is a lifelong, multidimensional process (Featherman and Lerner, 1985). To address the challenges of understanding the nature of the human experience, it may be helpful to examine these life-paths through a developmental perspective.

Developmental perspectives argue that changes in social behavior are related to age in an orderly way (Thornberry, 1997). While most theories examine the structural environment that shape social change, they often pay little attention to developmental issues. They fail to take into consideration important concepts such as time, causal structures, precursors and consequences of behavior, and a systematic pattern of change. Unlike non-developmental perspectives, developmental perspectives attempt to account for when, why, and how social changes take place (Elder, 1974).

Ecological Theory

Bronfenbrenner (1979), by bringing together ideas from ecological theory and field theory (Lewin, 1935), argues that children develop in the context of family-type relationships (Klein & White, 1996). Development is a combination of biological heritage, environmental
impacts, and socialization. Bronfrenbrenner (1979) proposed that individual traits interact with environmental factors. He noted that the desired developmental outcome is reached when the ontological development and the environmental socialization coincide. The ecological perspective posits four levels of interactional influence. First, the microsystem or the family environment is made up of biological and socialization forces that directly influence childhood development. Second is the mesosystem where formal institutions such as school and church provide avenues for social and cultural development. The third level is the exosystem. In this level, children's indirect contact through parental work passes on core values and ideals to the children. Finally, the macrosystem makes up the larger overarching system of government and economic organization. The ecological perspective attempts to provide a multifaceted, multilevel approach to developmental analysis. Bronfrenbrenner (1989) later attempted to refine his theory by adding two areas to his theory. First, he applies ecological theory throughout the life-course, not just in childhood development. Second, he added the concept of the chronosystem that incorporates time as the developmental history of the individual and its effect on development (Klein and White, 1996). While ecological theory has merits, several criticisms also are apparent. Due to the broadness of the perspective, some have questioned whether it is a viable perspective at all. Second, also because of its broadness, it is difficult to assess cause and effect using this theory. Finally, ecological theory has yet to incorporate contextuality into the theory (Belsky, 1995).

Family Life-Cycle Perspective

The family life-cycle perspective attempts to explain family change over time (Klein & White, 1996). It proposes that individuals progress though identifiable steps or stages of
normal development through interaction with the environment and social institutions. It refers to the developmental sequence of stages over the life-course from birth, adolescence, the birth of children, their departure from home, and their own childbearing experiences (Elder, 1992; O’Rand, et al., 1991). As with any developmental model that focuses on normalcy, the family life-cycle perspective is based and defined according to middle class ideologies. Therefore, anyone that falls outside the norms of the stages are labeled deviant or lacking normal development. This perspective is not empirically based and therefore is difficult to test empirically (Elder, 1996). Rodgers and White (1993) similarly argue that the perspective is largely deterministic and unusable in its current theoretical state.

Life-Span Perspective

Like the life-cycle perspective, the life-span perspective also focuses on development. It attempts to define a “...concept of development and aging across the life-span that places greater weight on cultural influences and learned experiences or skills in patterns of aging” (Elder, 1996:8). The propositions of the life-span framework are:

1. Life-span development results from life-long adaptive process. Some processes are cumulative and continuous; others are discontinuous and innovative, showing little connections to prior events or processes.
2. Ontogenetic development is local, specific, and time-bound; it is never fully adaptive. There is no pure advance or loss in development.
3. Age-graded influences are most important in the dependency years, childhood/adolescence and old age, whereas history-graded and non-normative influences are most consequential across the early and middle years of adulthood.
4. Changes occur in relation of positive and negative events, gains and losses, with the likelihood of expected losses increasing. Biological resources decline over the life-span, whereas cultural resources may increase, as in the cultivation of wisdom.
5. Life-span development entails “selection,” “optimization,” and “compensation.” These mechanisms seek to maximize gains and minimize losses or declines. Selective optimization with compensation represents a “life-span model of psychological management that describes how individuals can deal with the dual-faced nature of human aging and the ubiquitous, age-related shift toward a less positive balance of gains and losses (Baltes, 1993: 590).
Like life-cycle, the life-span perspective has significant shortcomings. Elder (1996) notes that the concepts of life-span development generally fail to apprehend the social structure as a constitutive force in development. The social structure and its institutions not only affect the nature of development, they define in terms of the organisms relationship to its environment.

Life-span and life-cycle perspectives are inextricably tied to life-course through their historical and contextual development. The life-span and the life-cycle perspectives have enriched the body of knowledge about development and aging across the life-course. They have also given attention to the role of social, cultural, and historical forces in the developmental process. While their shortcomings have been previously noted, the life-course perspective has attempted to overcome those shortcomings and build upon their strengths.

Life-Course Theory

The life-course perspective is succinctly a concept or theoretical perspective “...that refers to the age graded life patterns embedded in social institutions subject to historical change” (Elder et al., 1993: 4). According to Elder (1996),

...human development as life-course theory represents a process of organism-environment transactions over time, in which the organism plays an active role in shaping its own development. The developing individual is viewed as a dynamic whole, not as separate strands, facets, or domains, such as emotion, cognition, and motivation. The course of development is embedded in a dynamic system of social interchanges and interdependencies across and within levels. As noted by Bronfenbrenner (1996), this dynamic in life-course theory is illustrated well by the interlocking lives and developmental trajectories of family members who are influenced differentially by their changing world. Lastly, life-processes (Bronfenbrenner & Ceci. 1994) and child development (33).

The life-course perspective developed in conjunction and as a result of the coming together of several schools of thought, attempting to create a more accurate picture of the developmental, psychological, and social changes that humans, as social creatures experience
throughout their lives (Elder, 1996). The purpose of the life course perspective is to describe and order the sequence of events and transitions that individuals undergo as they age. It allows researchers to study transitions in historical and social contexts. It is concerned with time, context, process, and the inter-weaving of age-graded trajectories that affect the pathways of family, career etc. (Elder, 1994). Unlike the life-span or life-cycle perspectives, life-course does not see development as concrete and unchanging (Elder, 1996; Moffit, 1993). Rather, it focuses on the events, their historical development, and future impact on life-trajectories. Context is important. Life-course theory leaves the option of multiple outcomes or multiple trajectories. Trajectories and transitions are not orderly or irreversible, nor is the object of life-course to predict the timing of transitions, rather it is used to describe life-change (Rindfuss et al., 1987). Life-course pays attention to social time instead of normative transitions. “The perspective is temporal and contextual in that it locates people and family members in history through birth years and in the life course through the social meanings of age” (Elder, Model, & Parke, 1993: 14). According to Elder (1998), life-course addresses issues that cannot be satisfactorily addressed by other available theories. It recognizes “...that individual lives are influenced by their ever-changing, historical context, that the study of human lives calls for new ways of thinking about their pattern and dynamic, and that concepts of human development should apply to processes across the life span. Life-course theory has evolved since the 1960s through programmatic efforts to address such issues” (1).

Sherrod and Brim (1986) describe life-course as having four components. First, development in neither unidirectional nor single end-state oriented in process or outcome. Second, development and the potential for change are present throughout life, and experiences
during certain periods of life (childhood) are not more important than others. Developments in different domains may follow differing trajectories and principles. Third, development varies among persons and may reflect bio-social processes of differentiation (gender and social class). Inter-individual differences may be a result of variability in the developmental processes. Finally, development is determined by multiple factors from different domains that may be interrelated, and is not determined by one domain alone (biology versus environment).

Life-course is concerned with the timing of transitions, be they early or late (Elder, 1994). Life course provides for consideration of the intersection of life and historical time (Elder, 1974) through what Elder and O’Rand (1995) note as two main concepts for life course theory, namely transition and trajectory. Life-course “…patterns are defined by trajectories that extend across much of the life course, such as family and work; and by short-term changes or transitions, such as leaving home for school, getting a full-time job, and marrying. Family transitions invariably place the life course in a broader matrix of kinship relationships, one that extends beyond the boundaries of the immediate family to in-laws and grandparents” (Elder, Modell, & Park, 1993: 3). Transitions are “…events or short-term changes within these trajectories that can deflect the trajectory’s arc or growth curve” (Thornberry, 1997: 4). Transitions take place as a result of the relation of the course of social change and everyday life. These transitions are tied to timelines of adjustment to new trajectories. There is a demographically-dense period between the ages of 17 to 30 years old, in which a number of life transitions take place such as leaving home, transition into adulthood, college, getting a job, possible cohabitation, marriage, and introduction into parenthood take place (Rindfuss et al., 1987). Transitions or turning points produce
substantial change in the direction of lives. They tend to be salient events but may not be recognized as "turning points" when they occur. They often involve a particular role or relationship and past contextual influences shape current interpretations of the particular events. Transitions or turning points do not necessarily result in changes in trajectories but may carry with them the acquisition of new meanings for those trajectories (Clausen, 1993).

Age and its social meanings provide structure for the life course in terms of age norms and sanctions, social timetables for the occurrence and order of events, generalized age grades, and age hierarchies in organizational settings. Age provides a normative arena for understanding the appropriate timing for life transitions such as marriage, childbearing etc. (Elder, 1992). Thornberry (1997) found that when transitions come early, it is possible that potential trajectories may be affected. Off-age transitions "...decrease the chances of success in the trajectory and often have adverse consequences for other behavioral trajectories" (5).

Elder (1974) discussed the relevance of time in the transitions from one trajectory to another. In *Children of the Great Depression*, Elder noted the impacts of the Great Depression on adults and children in a number of areas. First, children were affected through family economy with their taking on additional work and responsibility. In what Elder describes as a cohort effect, younger children were particularly affected due to their reliance on their parents for greater amounts of time throughout this period. Second, families were affected by widespread severe economic conditions (a period effect) that caused great upheaval in family processes culminating in familial disorganization. Families became more matriarchal as the fathers left the household to look for work, thus leaving the mother as the primary nurturer and disciplinarian. Children were also forced to leave their families of origin
to obtain means of sustenance. The general upheaval of families had lasting implications on personal, familial, and social identities not only to the children of the depression era, but also with successive generations. "The depression experience of these Americans has much to do with transitions and their personal significance, from the initial loss of family income and well-being as the economy plummeted downward to the survival adjustments of families and events continuing misfortune" (Elder, Modell, & Parke, 1993: 25). Successive studies have also found that transitions such as economic hardship affect family dysfunction, intergenerational relations, and helping behaviors (Voydanoff, 1990; Conger & Elder, 1994).

Multiple life changes at one point in time are characteristic for late adolescence and early adulthood. During the period of adolescence, children with no previous criminal histories begin to exhibit the highest prevalence of illegal behavior of any age grouping. Youth begin to exhibit behaviors of increasing antisocial severity as they age (Conger & Simons, 1997; Siegel, 2000). Contemporary research demonstrates that the timing of the onset of deviant behavior is key to understanding the life-course persistence of criminal activity (Moffit, 1993). With this information in hand, it is helpful to define problem behavior by defining a measurement of antisocial behavior.
Life-Course Approaches to Problem Behaviors

Defining Problem Behaviors: Antisocial Behavior

The basic definition of antisocial behaviors is a "...pervasive pattern of disregard for, and violation of, the rights of others that begins in childhood or early adolescence and continues into adulthood" (DSM-IV, 1994:645-6). This pattern of behavior across the life-course has also been referred to as psychopathy, sociopathy, or dyssocial personality disorder. As such, people with antisocial personality disorder fail to conform to the social norms or lawful behavior. They are likely to fail to consider others wants or needs, they have a present orientation, their decision making process is focused on the moment, they may be aggressive or irritable, they may engage in risky practices, and a host of other negative characteristics.

When referring to antisocial behavior in this research, it should be noted that it is not a reference to the DSM-IV diagnosis, rather a measure of antisocial type problem behaviors. Antisocial behavior is not uncommon across the life-course. While most people who behave antisocially do so temporarily and situationally, some partake in stable and persistent patterns. What makes these people different? While temporary, situational antisocial behavior is common among male and female adolescents, persistent antisocial behavior is fairly rare and mostly found in males (Moffit, 1997). Loeber and Hay (1997), found that antisocial behavior occurs across the life-course and that many of the signs of persistent antisocial behavior are present at early ages. They note that one manifestation, aggression, has been observed as early as infancy and may carry over through childhood, adolescence, and into adulthood (Izard et al., 1995; Pepler & Craig, 1995; Cairns & Cairns, 1994; Caplan et al., 1991; Fagot & Kavanagh, 1990).
Many of the characteristics of antisocial behaviors in adults are carried over from childhood displays of conduct problems. The persistence of such problem behaviors is key for understanding the “onset” of antisocial behavior. Many children with high levels of conduct problems desist from such behaviors by adolescence while others who had not initiated such behavior in childhood, do so in adolescence (Fergusson, et al., 1996; Moffitt, et al, 1996; Tremblay et al., 1996; Cairns & Cairns, 1992). What happens to those that do persist? It is likely that they will be at some point characterized if not diagnosed with antisocial personality disorder. The likelihood of continuity of antisocial behavior is greatly enhanced so much so that “…adult antisocial behavior virtually requires childhood antisocial behavior” (Robins, 1978:611).

**Predicting Problem Behaviors**

In many early and late onset comparisons of antisocial behavior, early initiation has been defined by the first arrest or court conviction (Farrington et al., 1990). However, contemporary research demonstrates that increases in childhood problem behavior begin long before initial contact and labeling by the criminal justice system. Sharp increases in antisocial behavior from ages 7 to 17 mirror a steep decline of antisocial behavior between ages 17 and 30 (Moffitt, 1997) however a number of adolescents and young adults continue problem behaviors across the life course. “The stability of antisocial behavior across the life course is considered to be a consequence of deviant behavior at early stages of development undermining role relationships that serve as important social controls during later stages. Individuals show persistent involvement in antisocial behavior to the extent that their deviant actions have an attenuating effect on the social and institutional bonds linking them to society
Several studies demonstrate that the development of antisocial behavior and its persistence across the life-course are related to the presence of early conduct problems (Halperin et al., 1995; Weiss et al., 1985; Loeber et al., 1993).

Life-course persistent offenders are a small group of persons that engage in "...antisocial behavior of one sort or another at every stage of life; they make up the childhood and adulthood tails of the age-crime curve, and participate during adolescence too" (Moffit, 1997:13).

Regardless of their age, fewer than 10 percent of males warrant an official antisocial designation. For example, about 5 percent of preschool boys are considered 'very difficult to manage' (McGee, Partridge, Williams, and Silva, 1991). The prevalence of Conduct Disorder among elementary-school-aged boys has been found to be between 4 percent and 9 percent in several countries (Costello, 1989). About 6 percent of boys are first arrested by police as preteens (Moffit & Silva, 1988a; Wolfgang et al., 1972); such early arrest is important because it is the best predictor of long-term recidivistic offending. The rate of conviction for a violent offense in young adult males is between 3 percent and 6 percent (Moffit, Mednick, and Gabrielli, 1989) and about 4 percent of male adolescents self-report sustained careers of serious violence (three or more violent offenses per year for five years; Elliot, Huizinga, & Morse, 1986). Finally, the prevalence of adult men with antisocial personality disorder is estimated at about 4 percent to 5 percent (Robins, 1985) (Moffit, 1997:13).

Larger portions of adolescents engage in adolescent-limited antisocial behaviors. These people generally have a brief tenure of delinquent participation and while their delinquency may be serious, gradually such behaviors decline in frequency and severity. It is possible that peaks in adolescent delinquency may be more related to a temporary increase in the number of people involved in antisocial behaviors rather than a temporary acceleration in the offense rates of individuals (Farrington, 1983).

Life-course persistent offenders' antisocial behavior later in life may be a mirror of behaviors fostered at home, in school, and in other social environments. Elder and Caspi (1986) argue that "...individuals tend to maximize congruent patterns of interpersonal
behavior by selecting and interacting with people whose behavior requires minimum change from previous interpersonal situations (Carson, 1969; Swann, 1983). Once established, interpersonal styles tend to become self-perpetuating. In this manner, ways of controlling impulses can generalize over time to characterize relations with other people and life attitudes” (Elder and Caspi, 1986:296). This in turn provides support for the life course continuity perspective wherein the persistence of conduct-disordered and antisocial behaviors that are present early in life, place the youth in a trajectory for life-long deviance (Farrington et al., 1990).

Caspi, Elder, and Bem (1987), examined the persistence of antisocial behavior from childhood, to adolescence, to adulthood from the Berkley Guidance Study. They traced the lives of 8-10 year olds over a 30-year period. The persistence of attitudes and behaviors was found for both boys and girls across the study period. Maladaptive child behavioral patterns such as temper tantrums and problem behaviors predicted maladaptive patterns of behavior in adults. Such continuity is attributed to the progressive accumulation of maladaptive behaviors and their consequences (cumulative continuity) (Caspi et al., 1989) and by the reciprocal interaction with others based on that behavior that encouraged the facilitation of like behaviors across the life-course (interactional continuity) (Caspi et al., 1989).

Some research indicates that childhood misconduct serves as a funnel for future delinquency (Moffit, 1993; Conger & Simons, 1997).

50%-70% of youths who are arrested for delinquent acts during childhood or adolescence are arrested in adulthood (Loeber, 1982, 1990, 1991; Mc Cord, 1979; Osborn & West, 1978)...Zoccolillo, Pickles, Quinton, and Rutter (1992) found that 40% of boys and 35% of girls who met criteria for conduct disorder in childhood later met criteria for antisocial personality disorder (APD) in adulthood...The results of previous studies may underestimate the stability of CD, as youths who engage in the greatest number of antisocial behaviors
appear to have the greatest risk for persistent antisocial behavior (Loeber 1982, Robins.

Therefore, children who display antisocial tendencies at an early age are likely to experience
developmental and adjustment problems (Patterson et al., 1989; Kazdin, 1987; Walker et al.,
1987; Wilson & Herrnstein, 1985).

Impacts of Community/Environment

A number of factors have the potential to affect the likelihood of developing antisocial
behavior. It is likely that the neighborhoods that children grow up in affect the development.
Lahey et al. (1999), found that an “…inverse relation of family income and parental education
with antisocial behavior have been found in many population-based studies (Lahey, Miller,
Gordon, & Riley, in press)” (676). Children from low-income neighborhoods are at greater
risk for encountering violence firsthand. For children of higher income neighborhoods, the
presence of affluent neighbors, socioeconomic status, and other social forces affect the
likelihood that children will have higher IQ’s, have teen-births, and leave school (Brooks-
Gunn et al., 1993; Lahey et al., 1999; Elliott et al., 1996; Harnish, et al.’ 1995; Burisk &
Grasmick, 1993). Other research indicates that children who grow up in families of low-
socioeconomic status are more likely to have emotional and behavioral problems and exhibit
greater levels of delinquency (Gaoni et al., 1998; Simons et al., 2000; Sampson, 1997;
Sampson & Lauritsen, 1994). Additionally, the persistence of problem behaviors is most
likely to be associated with children and adolescents when they are boys, from families of
lower socioeconomic status, from an African American heritage (Lahey et al., 1995).
Children of lower income neighborhoods are more likely to be exposed to deviant peers.
Impacts of Deviant Peers

Deviant peers have significant impacts on the likelihood for persistent problem behaviors and antisocial behavior across the life-course (Keenan, et al., 1995; Cairns, & Cairns, 1994; Thornberry et al., 1993 Cairns et al., 1988). Antisocial kids attract other antisocial kids. They learn and develop antisocial skills and attitudes from one another that may lead to further severity of their antisocial tendencies (Conger & Simons, 1997). Simons et al., (1991, 1996) found that the presence of deviant peers contribute to adolescents' beliefs and actions regarding delinquent behavior. "Peers play an influential role in behavioral change in adolescence, with individuals showing late onset of conduct problems having high rates of affiliation with delinquent peers but those showing remission of problem behaviors in adolescence having relatively low rates of such affiliations" (Fergusson, et al., 1995:533).

Similarly, Thronberry et al. (1994) found that adolescents' association with delinquent peers leads to increases in delinquency through the reinforcement of the peer network. This delinquency leads to the greater probability of associations with delinquent peers. Finally, delinquent beliefs adopted from deviant peer groups translate into effects on peers and behavior, which tend in turn to "harden" the formation of delinquent beliefs contributing to the downward cycle of deviance. These associations with deviant peers have also been found to perpetuate the continuance of conduct-disordered and antisocial behavior from adolescence to adulthood (Loeber & Hay, 1997; Lynam, 1996; Windle, 1990).

Impact of Gender

Gender is also a significant predictor of persisting conduct problems and antisocial behavior into adulthood (Moffit, 1997; Webster-Stratton, 1996; Farrington et al., 1990; Caspi
et al., 1989). Kratzer and Hodgins (1997) found that males were more likely than females to persist in conduct problems over the life-course. They found that 76 percent of the males verses 30 females of the females in their sample that were identified as children with childhood conduct problems, had either a criminal record, a mental disorder, or both by age 30. In a similar study, Quinton et al. (1993), followed children identified with problem behaviors until age 21. Of females identified with conduct problems, 35 percent were diagnosed with internalizing disorders as adults and none with antisocial behavior. On the other hand, of the males identified with conduct problems as children, 10 percent were diagnosed with internalizing disorders as adults and 35 percent were diagnosed with APD. Some of the differences between the persistence of antisocial behavior in males and females may be due to the nature of the criteria for diagnoses of conduct disorder and APD.

**Impact of Socioeconomic Status**

Socioeconomic Status (SES) has also been found to affect adolescent antisocial behavior (Lahey et al., 1999). An inverse relationship between socioeconomic status and psychosocial challenges such as antisocial behavior has been addressed in several studies (Harnish et al., 1995; Elder & Caspi, 1988a). Hao (1995) found that long duration & late timing of poverty negatively affect both the home environment & child developmental outcomes. Socioeconomic status, driven by education and experiential background has been found to be one the best predictors for physical and psychological well being (Reynolds & Ross, 1998). As Lahey et al (1999) point out, the effects of income and SES may be accounted for by reduced parental monitoring at lower levels of SES. Elder et al. (1995), found that in particular, parental economic pressure reduced parental monitoring, warmth, and
positive interaction with their children, and at the same increased rejection, harsh parenting, and the number of negative interactions. It may be effective if attention is turned to parents and their affect on the development and persistence of problem behavior and antisocial behavior.

**Parental Influence**

Parents influence their children's personality, values, beliefs, attitudes, and behavior in many ways. Tapscott (1996) examined a number of studies that consistently found links between delinquency in children and deviant behavior in their parents. While it has shown that these links exist, it has for the most part, failed to describe the process through which the transmission takes place. Three common models are used to explain this. “First, genetic predispositions have been proposed as underlying, at least in part, this intergenerational link to antisocial behavior (Jarey & Stewart, 1985). Second, this link may be mediated through dysfunctional parenting practices, with antisocial parents being less able to provide appropriate child-rearing experiences for the children (Patterson & Capaldi, 1991). Third, it is possible that antisocial parents can model inappropriate behavior which is learned by their children through an observational learning process (Bandura & Walters, 1963)” (Tapscott et al., 1996:230). Modeling of antisocial behavior is frequently cited but the least studied of the three causal models. This section will focus on the relationship between parents and children in three areas: (1) biological or genetic transference, (2) intergeneration transmission, and (3) social learning.
**Biological or Genetic Influence**

As previously stated, many factors influence the development of antisocial behavior. The contributions of genetic inheritance are potentially some of the most fruitful linkages for understanding the development and persistence of antisocial and conduct-disordered behaviors across the life-course (Rutter et al., 1998; Farrington, et al., 1996; Rowe and Farrington, 1997). A number have studies have examined the role of genetics and report finding genetic links for the transmission of antisocial behavior from parent to child. Mason and Frick (1994) conducted a meta-analysis of 12 twin and three adoption studies published between 1975 and 1991 that provided 21 estimates of the inheritability of antisocial behavior. Approximately half of the variance in measures of antisocial behavior was attributable to heredity. There were stronger genetic effects for severe manifestations of antisocial behavior. Cadoret et al. (1995) examined the lives of adoptees and found that both environment and genetics affect the likelihood of developing antisocial personality disorder (Crowe, 1974).

O'Connor and his colleagues (1998a, 1998b) found that nearly half of the observed variability in antisocial behavior were attributed to genetic factors. They found that “…data from twin, adoption, and family studies document that a range of psychopathological symptoms and syndromes in young people can be attributed, in part, to genetic causes (Rutter et al., 1990; Todd, Neuman, Geller, Fox, & Hickok, 1993)” (O'Connor et al., 1998b:324). They also note that individuals with genetic dispositions appear to choose experiences or environments that are related to those dispositions. These findings are consistent with the interactional continuity argument (Caspi et al., 1989). O'Connor et al (1998b) do note that the effects of a shared environment may overshadow genetic effects particularly in early
adolescence (Simonoff et al., 1994) but that there remains evidence for a genetic link between antisocial behavior and genetics (Edelbrock et al., 1995; Plomin et al., 1990; Silberg et al., 1994). Rutter et al. (1998) describe the possible interplay between genetics and nurturing. They found that it is possible that an interaction of genetic heritage and a nurturing environment, or lack of one directly affects the likelihood that a child may display a latent trait for antisocial behavior (Bohman, 1996). This is because “... genetic analyses attribute these effects to the genes in spite of the fact that their influence on antisocial behavior is contingent upon environmental risks, insofar as the genetic influences operate in this indirect way. It is necessary to recognize the role of genes in influencing individual differences in environmental risk exposure, but equally the role of the environment in these indirect genetic effects provides a further warning against assumptions of determinism” (Rutter et al., 1998:134). It is likely that the interplay between genetic heritage, environment, and parental transmission play significant roles in the development and persistence of antisocial behavior (Plomin, 1994; Plomin & Bergeman, 1991).

**Intergenerational Transmission**

One of the basic functions of families is to try to provide successive generations with security and survival strategies to facilitate the progression of family lineage (Fry, 1995). This is accomplished by providing adequate resources, networks, and opportunities necessary. Families are “...embedded in a network of social ties and institutional relationships which operate in a synergistic fashion to influence the development of children and youth. Not surprisingly, many familiar family characteristics emerge as desirable, such as warmth, responsiveness, the encouragement of responsibility, and the granting of autonomy” (Elder &
Conger, 2000:xiv). Intergenerational transmission is the process of passing opportunities, identities, values, norms, and beliefs from generation to generation (Bengston et al., 1995). A number of studies have examined the intergenerational transmission of wealth and opportunity (Reynolds & Ross, 1998; Corcoran & Adams, 1997; Hao, 1995; Oliver et al., 1995; Rodgers, 1995; Block & Buisson, 1993; Grabb & Waugh, 1987) and found that wealth or poverty can be passed down from generation to generation with either enabling or debilitating effects.

Elder (1974) examined intergenerational transmission among children of the great depression. He found that the economic hardship was extremely traumatic for the children of the era. As a result, the cohort developed a collective identity and set of values, norms, and beliefs in addition to a socioeconomic status that were then passed down to successive generations. Successive studies by Elder and his colleagues (1985, 1986, 1988, 1992, 1993, 1994, 1996) and others (see. Conger & Simmons, 1997; Conger et al., 1994; Conger et al., 1992; Rubin, 1994; Simons et al., 1990) have found that economic distress significantly impacts the lives and stability of families. As economic pressures build, the more likely the family is to suffer structurally, socially, and emotionally. "The impact of drastic income loss on children is mediated by a number of family adaptations, including the shift toward more labor-intensive households and altered relationships" (Elder et al., 1985:361). These shifts adversely affect the marital relationship through the negativity of fathers that then in turn, increase negative marital interactions. These interactions then increase irritable parenting, increasing the likelihood for adolescent aggression (Skinner et al., 1992). Income loss may also take parents from the home in search of better or more employment and increase the taxing loads parents face. However, positive parent/child relationships can mediate the effects
of economic pressures (Ge et al., 1992). For example, Giarrusso et al. (1990) found that mothers’ self-esteem predicted their children’s adult reports of self-esteem regardless of their socioeconomic status as adults.

Patterson (1982) provides an example of these dynamic familial interaction processes. In his study, he proposes that parental dissatisfaction with employment or economic crises increase parental irritability. This in turn affects parental problem solving abilities that may lead to an increase in negative parent-child interactions, increasing the likelihood for adolescent antisocial behavior. This negative behavior further undermines parenting efforts whereby parent-child interactions are further challenged, thus accentuating the possibility of sustained adolescent antisocial behavior. Laub and Sampson (1993) corroborate the findings of Elder (1986) and found that occupational success and supportive marital relationships contributed to positive outcomes in the parent-child relationship.

Parent/child interactions are potentially the most likely to produce either conforming or deviating behavior. Parents that facilitate the development of pro-social attitudes, values, and practices are more likely to have children that conform to these pro-social ideals. However, parents who fail to instill pro-social identities are more likely to have antisocial children that remain so over the life-course (Patterson et al., 1992; Moffitt, 1995). Parents can exacerbate antisocial behaviors in the children because many parents are unable to provide an environment that will ameliorate antisocial behavior. “Problem children are likely to have problem parents” (Moffit, 1997:18). Rutter et al. (1983) found that children with multiple problems were nearly always associated with severe problems in the maternal family of origin (Caspi & Elder, 1988).
Parents of antisocial children often lack necessary psychological and physical resources to cope constructively with a difficult child. Whereas parents and children are similar to each other on temperament and personality (Plomin, et al., 1990), "...children whose hyperactivity and angry out-bursts might be curbed by firm discipline will tend to have parents who are inconsistent disciplinarians; the parents are impatient and irritable too...If both poor parenting and child risk characteristics combine to lay the foundation for persistent antisocial behavior, then we would expect to find that interaction effects between parent and child measures significantly predict later serious antisocial outcomes" (Moffit, 1997:19). “Higher levels of antisocial behavior in the parent predict greater continuity between childhood and adult antisocial behavior (Robins, 1966; Robins & Radcliff, 1979)” (Lahey et al., 1995:84). Elder et al. (1986) similarly found support for the notion that parents with problem behavior pass along those behaviors to their children. Whether it is through overt socialization to deviant norms or passive indifference, parental oppositional behaviors are key factors in boys’ continuance of problem behavior and antisocial behavior across the life course (Loeber et al., 1995). They may also fail to define their children’s behavior as something that should be discouraged (Lahey et al., 1999). Thus, if nothing else, by omission, they are facilitating the transmission of antisocial attitudes and behaviors (Gottfredson & Hirschi, 1990; West & Farrington, 1973).

It is likely that interactional transmissions are conditioned by both historical context and possibly the relative experience of two parents’ own intergenerational transmission from their respective parent(s) (Bengston et al., 1995). Therefore, it is helpful to examine more than one generation for stability of these behaviors across multiple generations (Rutter, 1998,
Chassin et al., 1998). Elder and Caspi (1986), examined “...interdependence across four generations with the objective of testing the proposition that unstable personalities (explosive, volatile) and unstable family relations (marital, parent-child tensions) represent mutually reinforcing dynamics across the life span, and persist from one generation to the next through a process of intergenerational transmission” (295). The authors found considerable support for intergenerational transmission in general and specifically in regards to unstable personalities and family relations. It may be helpful to now examine the roles that parenting practices play in the facilitation of intergenerational continuity and antisocial behavior.

**Parenting**

Various parenting styles have been found to facilitate or inhibit the development of antisocial behavior. Lahey et al., 1999, Patterson (1982), Loeber (1991), and others found that “...parenting is an important factor because it plays a key role in the developmental transformation of predisposition into antisocial behavior. Cognitively and temperamentally disposed children are unlikely to develop antisocial behavior if they are raised in adaptive social environments (Reid & Patterson, 1989)” (Lahey et al., 1999:675). Parenting that is attuned to children's capabilities and developmental tasks promote emotional security, behavioral independence, and intellectual achievement (Belsky, 1984). Parents who raise their children in environments that encourage civility and monitor them are less likely to have children that develop antisocial traits (Loeber, 1982). Further, Belsky (1984) concluded that “…parental use of induction or reasoning, consistent discipline, and expression of warmth have been found to relate positively to self-esteem, internalized controls, prosocial orientation,
and intellectual achievement during the school-age years (e.g., Coopersmith, 1967; Hoffman, 1970; McCall, Applebaum, & Hagarty, 1973)" (Belsky, 1984:85).

Parents who provide high levels of positive parenting (i.e., warmth, positive interactions) are more likely to have children with internal locus of control, active coping styles, and greater levels of interpersonal trust (Mondell & Tyler, 1981). Stouthamer-Loeber (1993) argues that greater parental monitoring encourages adolescents' facilitation of pro-social ideals and reduces the likelihood of adolescents developing antisocial behavior (Dishion & McMahon, 1998; Farrington, 1995; Dishion et al., 1991).

It is likely that parental well-being affects their ability to parent which then undermines child functioning. Belsky (1984) assessed empirical linkages between parental psychological well-being and parental function. He found among other things that parental psychosis affects parents' ability to assess and meet the needs of their children, that this in turn affects the child's functioning abilities, and that levels of paternal involvement in a parent's childhood and low levels of paternal involvement, "...forecast high levels of involvement in the care of one's own children...Fathers who are warm, nurturant, and involved probably rear sons who identify with and model them, whereas noninvolved fathers, who in all likelihood generate a weak identification and a low probability of being modeled, perhaps stimulate a compensatory process that later prompts sons to parent in a manner expressly opposite that of their own fathers." (Belsky, 1984:86). Sears et al. (1957) found that mothers that had high esteem for fathers also had high esteem and positive interactions with their children.

Negative parenting practices encourage the development of antisocial behavior in children (Simons et al., 2000; Lynam, 1996). Antisocial parents are more likely than
conforming parents to use dysfunctional parenting practices. They are less able to provide positive parenting and mentoring skills and rely on negative parenting practices as their parenting methods (Patterson & Capaldi, 1991). Corporal punishment (DeKlyen et al., 1998; Straus et al., 1997; Muller et al., 1995; Stouthamer-Loeber, 1993; Dodge et al., 1990; Lefkowitz, 1978), harsh and inconsistent discipline (Leadbeater, 1996; Lahey et al., 1984; Patterson, 1982), aggression (MacEwen, 1994; McCord, 1988), and rejecting behaviors encourage the development of antisocial behaviors in children. More lax parenting styles may also promote the development of antisocial behavior in children; however, this is more likely to happen in late childhood and adolescence than in early childhood (Reid & Patterson, 1989).

Negative parenting has been linked to deviant behavior, including the early initiation of sexual relations among adolescent girls. Whitbeck et al. (1992a) found that poor relationships with parents increased the likelihood of early sexual activity through depressed affect among female adolescents. In another study, Whitbeck and his colleagues (1993), found that girls with more emotionally distant parents were more likely to report depression. That also increased the likelihood of having greater sexually permissive attitudes and having sexually active friends.

Conger and Simons (1997) posit that there is a cyclical downward spiral associated with reciprocal parent-child interactions wherein adolescent antisocial behavior has adverse effects on parental disciplinary practices. As the youths become more delinquent and oppositional, parental effectiveness severely declines and their ability to negate the adolescent's antisocial behavior is limited, thus increasing the likelihood for further adolescent deviance.
Numerous studies have clearly demonstrated that parents increase the probability of having an antisocial child when they: (1) fail to adequately supervise their children; (2) do not provide appropriate discipline for misconduct; (3) treat their children in a neglecting or hostile fashion; and (4) fail to positively attend or reinforce conventional activities or socially desirable behavior (Conger et al., 1992, 1993, 1994; Patterson et al., 1992; Simons et al., 1994a; Simons et al., 1994b). The current perspective suggests that family interactions involve reciprocal influences in parent and child behaviors that affect both the probability of child misconduct and also disruptions in effective childrearing practices (Lyton, 1990; Thornberry, Lizotte, Krohn, Farworth, and Jang, 1991; Vuchinich, Bank, and Patterson, 1992) (Conger & Simons, 1997:58).

It is likely that parental perceptions of their child as difficult are associated with destructive parenting (Simons et al., 1990). Belsky (1984) similarly found evidence exists that suggests adolescents with difficult temperament undermine parental functioning.

Ineffective parenting is related to the likelihood of developing conduct problems in children who demonstrate significant levels of callousness (e.g., lack of empathy, manipulativeness) and unemotionality (e.g., lack of guilt, emotional constrictedness) traits (Wootton et al., 1997; Cohen & Strayer, 1996). Elder, Caspi, and Downey (1986) found that paternal rejection increases the likelihood of child depressed affect from generation to generation. Such continuity across generations was similarly found by Whitbeck et al. (1992b). They found support for the intergenerational transmission of personality traits that are predicted by irritable, explosive behavior that increases the likelihood for strained parent-child relationships. These negative interactions then increase the likelihood of the next generation developing like personality traits and parenting styles (Whitbeck et al., 1992b).

Are there differential experiences for boys and girls? "Little is known about the parenting style for girls with conduct problems and the differential effects of maternal and paternal styles on girls and boys. Socialization studies of normative, non-risk samples have suggested that physical punishment is used more often on boys than girls, that girls are treated with less aggression and more warmth, and that fathers are more involved with sons than
daughters (Lytton & Romney, 1991)” (Webster-Stratton, 1996:541). Fagot (1985) discussed adolescents’ differential treatment by their parents on the basis of sex. She found that boys are generally rewarded for aggressive behavior while girls are socialized to be passive. Fathers play physically with boys more frequently than with girls thus reinforcing gender differences (Fagot & Hagan, 1991).

**Single-Mother Parenting**

Much of the previous literature has focused on the integral nature of parents in the socialization process. Elder (1974) noted that when fathers leave the household, shifts in family dynamics take place. In large part, greater levels of stress are placed on mothers to provide not only avenues of socialization and general well being, but also to find avenues of financial sustenance. Single parents are less likely than their married counterparts to have significant social and economic support, which then in turn affects their ability to function as a parent in several ways (Harvey et al., 1991).

Social support for parents’ efforts works in three ways. First, emotional support is derived from the love and interpersonal acceptance parents receive through explicit statements or as a result of considerate and caring actions. Second, instrumental assistance is rendered by the provision of information and advice, aid in routine activities, and aid in child-care. Finally, social expectations serve as a guide for parenting efforts. These support systems provide direct and indirect assistance to parents by providing assistance in specific tasks, or by providing information and emotional assistance to bolster their direct efforts (Belsky, 1984; Farrell & Case, 1992). Social networks provide contact with friends, neighbors, and relatives that while generally advantageous to the parents can bolster parenting efforts (Benson et al.,
1992; Harvey et al., 1991). Such contact provides viable support when the networks are a “good fit.” Crnic et al. (1983) found that “…intimate support (from spouse) proved to have the most general positive effects, although community and friendship support appeared valuable to maternal attitudes as well” (215). When those social support networks change, it can have severe consequences.

Conger and Simons (1997) found that children exposed to trauma at an early age are at risk when they experience stressful change such as the loss of a parent in the household. The emergence of problem behaviors has been found to coincide with role changes or major familial structure adjustments such as divorce, residential change, or a decline in family income. Low quality marital interactions and emotional relationship between spouses has a significant influence on the mothers’ negativity toward their sons that can contribute to the development of antisocial behavior (Olweus, 1980). Loeber and Hay (1997) found that aggressive children are often reared by single parents (Gagnon et al., 1995; Kupersmidt et al., 1995; Loeber et al., 1989). Rather than being a function of an innate inability to raise conforming, pro-social behavior, it is likely that these effects are due in large part to the lack of adequate support (Tremblay et al., 1997). Therefore, it may be beneficial to examine the role of a partner, in particular a male father figure.

**Presence of Father Figure**

The presence of a male figure, and specifically a paternal figure provides several benefits to the parenting role. First, the positive influence of quality communication provides a measure of support for parents. Second, parents who feel a high regard from their partner have a high sense of parental competence regardless of the child’s temperament. Third, the
quality of interaction between partners provides support for a process of transference from marital interaction, to parenting, to child development.

The availability of, and mothers' satisfaction with, spouse support turned out to be the most significant predictor of a mother's positive attitude toward parenting and of the affect she displayed in face-to-face interaction led Crnic et al. (1983) to express strong agreement with 'Belsky's (1981) notion that a positive marital relationship is a major support of competent parenting' (p. 215). Moreover, their discovery that empirical relations between all types of maternal social support and infant functioning became insignificant once mother's observed behavior was statistically controlled provided the basis for the conclusion that support exerts a primarily indirect effect on the child. Consistent with our own thinking, the hypothesis was also advanced by Crnic et al. that with age the possibility of direct influences probably increases (Belsky, 1984:90).

Fathers are more likely to engage in positive parenting practices (monitoring, warmth, and supportiveness) when they and their partner believe that such parenting practices are essential for adequate child development (Simons et al., 1990). Tapscott et al. (1996) examined the relationship between paternal antisocial behavior and child conduct problems and tested whether the degree of contact between father and child moderated the intergenerational link to antisocial behavior. The authors found a significant association between antisocial behaviors in fathers and a diagnosis of problem behavior in their children. "Offspring of antisocial fathers were as likely to have significant conduct problems, whether or not the father had ever been in the home and whether or not the father had maintained frequent contact with their offspring" (Tapscott et al., 1996:237). This is in contrast to McCord (1991) who said that the critical factor in intergenerational transmission was the presence of an antisocial father. When fathers with criminal records are around, for a period of no less than six months at a time, without absences prior to the child's 17th birthday, the lifetime prevalence of arrests for male offspring was nearly 50 percent greater that those with absent fathers.
Antisocial men and women have a tendency to find one another and marry. Patterson (1992) cited several studies that argue that “...because there are more antisocial males than females, the intermarriage matching is probably not balanced for the two sexes; that is, most antisocial women are married to antisocial men, but most antisocial men are not married to antisocial women because there are not enough to go around” (106). Therefore, it is plausible that the greatest risk for the intergenerational transmission of antisocial behaviors to successive generations is when both parents are antisocial.

As significant as antisocial fathers can be in passing along their antisocial tendencies to their children, the presence of a pro-social nurturing father has the potential to mediate stress of mothers and provide a second area of socialization for their children (Elder et al., 1995). As stated earlier, fathers provide avenues of socialization, they provide the mother with sources of support, and may provide stability for the family unit. Their personal parenting practices, coupled with a mother, provide their children with opportunities to thrive and have positive interaction. How do parents learn to parent? In large part, it is a reflection of their parents' parenting practices.

**Intergenerational Transmission of Parenting Practices**

A significant body of research demonstrates that the way that people are parented significantly impacts their own parenting styles. Putallaz et al. (1998) examined the intergenerational transmission of parenting practices and found continuity in the types of parenting and child rearing behavior that parents had experienced with their own parents. “Main (Main et al. 1985) and Ricks (1985) have documented significant relations between
mothers’ retrospective recollections of childhood attachments and their ability to serve as a secure base for their children” (Elder & Caspi, 1988b).

Negative parenting practices such as aggression in family of origin should be considered when trying to understand the intergenerational transmission of family aggression (MacEwen, 1994; McCord, 1988). Parent-child aggression in a mother’s families of origin increases the likelihood that she may behave aggressively toward her own children (Boyeb-Beaman, 1995; Cappell & Heiner, 1990). Wu (1998) similarly discussed the impact of families of origin on the adoption of parenting practices. Parents who engage in aggressive parenting are more likely to have children employ similar parenting practices. However, these results suggest that while intergenerational transmission of family violence, aggression, and negative parenting practices increase the likelihood of adopting these types of parenting practices in adulthood, these are not inevitable processes (Korbin et al., 1995). Several studies indicate that many children from high-risk homes develop pro-social skill, attitudes, and beliefs (Serbin et al., 1998; Hardy, 1997; Elder & Caspi, 1988b; Furstenburg et al., 1987; Rutter, 1987). Litty et al. (1996) found that children raised in abusive homes were no more likely than other children to abuse or use negative parenting practices on their own children when they perceived high social support.

Social Learning

Antisocial parents model inappropriate behavior to their children that is learned through observation in similar fashion to the acquisition of pro-social personality traits (Bandura & Walters, 1963). These behaviors are reinforced through mechanisms of classical conditioning, operant conditioning, and modeling and through the agencies of family and
cultural environments (Liebert & Liebert, 1998). Bandura and Walters (1963) contended that social learning is processual wherein the observer of behavior is changed as a result of those observation from a model. These models can both be living or symbolic and involve three stages. The first stage is exposure to the model, the second is acquisition of the modeling cues, and finally, the acceptance of the behaviors as one's own. It is through this imitation that behaviors are learned, reinforced, and accepted (Liebert & Liebert, 1998; Akers, 1994; Bandura, 1977). Sutherland (1947) similarly argued that deviant behavior is learned through interaction with significant others through communication. It includes behaviors, motives, drives, rationalizations, and attitudes (Akers, 1994). Like Sutherland, Akers, et al. (1979) also discussed the development of deviant behavior through social learning. He stated that,

The principal behavioral effects come from interaction in or under the influence of those groups with which one is in differential association and which control sources and patterns of reinforcement, provide normative definitions, and expose one to behavioral models... Deviant behavior can be expected to the extent that it has been differentially reinforced over alternative behavior (conforming or other deviant behavior) and is defined as desirable or justified when the individual is in a situation discriminative for the behavior. (Akers, 1985:57-58).

Like Bandura and Sutherland, Akers argued that all behaviors are learned through differential association, differential reinforcement, and imitation. Several studies have examined this process of developing antisocial traits.

Parents' negative traits have compelling effects on their children. Patterson (1992) found that aggressive and antisocial traits are passed from generation to generation through both biological and social learning means. Biological traits, overt or latent, have the potential to be brought out and developed through reinforcement and persistent modeling. These traits, when antisocial, are facilitated developmentally through similar means. Patterson also found that antisocial attitudes and behavior are correlated with parental modeling of similar
behaviors. Hirschi (1969, 1977) found adolescents’ attachment to parents leads to internalization of their parents’ societal norms, be they conformative or deviant. Avakame (1998) examined several parent-child interactions and found that fathers' violence is most likely to exert the direct social learning effect for the persistence of negative behaviors.

Caspi and Elder (1988), Elder, Caspi, and Downey (1986), and Whitbeck et al. (1992b) model the specific intergenerational transmissions of negative or psychosocial behaviors, in part, mediated through parenting practices. These studies provide templates for the models used in this study, therefore, it may be influential to take a closer look at the studies' methods, outcomes, and additions to the discourse on the process of intergenerational transmission.

**Caspi and Elder (1988)**

In order to examine the relationships between non-optimal parenting and instability in successive generations, the authors used a model similar to the models employed in this study. Non-optimal parenting was assessed over three generations to assess its effects on instability in the next generation, which then affected that generation's marital conflict and non-optimal parenting. Using retrospective reports, G1’s personal instability was used to predict their prospective reports of marital conflict and non-optimal parenting (Figure 1: Appendix A). Non-optimal parenting was then used to predict G2’s personal instability. G1’s personal instability was used to predict G2’s personal instability. Similar relationships were examined from G2 to G3 and from G3 to G4. Personal instability was found to be a significant predictor of non-optimal parenting for G1 and G2. Personal instability was also found to significantly predict marital conflict in G1, G2, and G3. Marital conflict was found to
significantly predict non-optimal parenting in G1, G2, and G3. Finally, non-optimal parenting was found to significantly predict instability across generations (G1 to G2, G2 to G3, and G3 to G4).

Elder, Caspi, and Downey (1986)

Elder, Caspi, and Downey (1986) similarly examined development and individual continuity across the life-course. Using structural equation modeling the authors examined the impact of both G2's income loss and parental instability across time, their effects on G2's punitive parenting, and ultimately the effects of their punitive parenting on problem behavior in G3. In the model, father's income loss in time 1 significantly increased parental instability in time two. Continuity in parental instability was observed from time one to time two. Parental instability had direct effects on increases in marital tension and punitive parenting. Marital tension was also a significant predictor of punitive parenting. Finally, G2's punitive parenting is a significant predictor of G3's problem behavior.

Similar results were found for mothers. While in fathers, income loss in time one did not have a direct effect on marital tension in time two; for mothers, such a relationship was found. No direct effect was found for income loss in time one and parental instability in mothers in time two. As with the fathers, mothers parental instability in time one was a significant predictor of parental instability in time two. Similarly, like the fathers, mothers' parental instability increased marital tension and punitive parenting. Marital tension also had a direct positive effect on punitive parenting. Unlike the fathers however, marital tension in mothers (G2) was found to have direct, significant effect on problem behavior in G3. Punitive parenting in G2 was also a significant predictor of G3's problem behavior.
In further analyses, the authors found statistical evidence for the continuity of behavior and attitudes across the life-course. Their analysis demonstrated that problem behavior in adolescence had a direct, significant effect on increasing the likelihood for adult psychopathology, marital problems, and instability.

Whitbeck et al. (1992b)

Whitbeck et al. (1992b) examine the intergenerational transmission of internalized depressed affect. Using structural equation modeling, the authors found that G1’s parental rejection significantly predicted increases in depressive affect in G2 parents and parental rejection in G2 mothers of their G3 children. The relationship between G1’s parental rejection and men’s depressed affect was significant while the former did not have a significant effect on G2’s men’s parental rejection. G2’s depressed affect significantly predicted G2’s parental rejection for women and men while no direct hereditary effect was observed between G2’s depressed affect and G3’s depressed affect for either women or men. Finally, G2’s parental rejection significantly predicted depressed affect in G3.

The results of this study provide support for the intergenerational transmission of depressed affect, mediated through parent-child interaction. Rejection by parents not only increases the likelihood of depression, but also facilitates the development of like parenting practices supporting the social learning model. The association between parental rejection and depressed affect was strongest for G2-G3. The authors posit that the strength of this relationship is possibly due to the use of multiple reporters in both constructs. Interestingly, a direct hereditary effect was not observed for depressed affect, thus adding support for the mediated intergenerational interpretation of their results.
Whitbeck and his colleagues note that their findings

...were similar to the model of the intergenerational transmission of problem behaviors tested by Elder and colleagues (Caspí & Elder, 1988; Elder et al., 1986), lending support to their life-course hypothesis for the intergenerational transmission of unstable family relationships. Elder and associates argued that unstable family relationships result in problem behaviors among offspring, such as temper outbursts, which they then carry into their own marital and parent-child relationships as adults (Whitbeck et al., 1992b:1043).

Conclusions Regarding Research to Date

Much of the literature regarding the life-course perspective, problem behaviors, and antisocial behavior has focused on the experience of white middle-class populations. The body of literature available that examines minority groups and specifically, American Indians is limited at best. What literature that is available on American Indians will be presented here. Much of the research presented will not bring forth new and/or differing standpoints concerning the development and use of theory. However, it is important that this literature be discussed to describe the validity or fit of the above-described areas for the development of an antisocial construct among American Indians.

American Indians Today

"The designator 'American Indian' refers to all North American native people, including Indians, Alaska Natives, Aleuts, Eskimos, and Metis, or mixed bloods" (LaFromboise & Graf Low, 1998:115). Like LaFromboise and Graf Low, the terms American Indian, Indian, and Native American are used interchangeably throughout this chapter to denote these varied peoples from distinctive and diverse tribes. There are more than 300 federally recognized tribes in the United States, each with its own culture, history, geography, and demography. The social and economic characteristics of the tribes vary considerably from reservation to reservation (Flemming et al., 1996)
In 1990, there were approximately 1,959,234 American Indian and Alaskan Natives in the United States. The population as a whole had a mean age of 26.2 years compared to the national average of 31.7 years. (Flemming et al., 1996). By November of 1999, according to the United States Census Bureau website, the estimated number of American Indians had risen to 2,422,000 (United States Census Bureau, 2000a), making up under one percent of the total U.S. population. Population growth for American Indians during the 1990's was just under two percent annually (United States Census Bureau, 2000b).

Social disorganization has been a constant in the last 300 years for many of the tribes characterized by frequent relocation, substandard living conditions, and chronic unemployment in both urban and reservation areas. These conditions have taken their toll on Indian people (LaFromboise & Graf Low, 1998). Many of the tribes have been characterized by rampant malnutrition, high alcoholism, high suicide rates, and environmental contamination of their lands. The socioeconomic status of Indian and Native populations lags all other races in the U.S. (Flemming et al., 1996; U. S. Department of Health and Human Services, Public Health Service, Indian Health Service, 1991).

Mortality rates for all reservation states in 1988 were considerably higher than for the U.S. population (Flemming et al., 1996). Similarly, Michalek et al. (1993) examined mortality rates among Indian youth and found that males had higher rates of mortality than for all cases combined, for accidental deaths, motor vehicle deaths, and suicide. Native Americans suffer from various disease and social malaise in greater numbers than European Americans. They suffer from more tuberculosis (400% greater), alcoholism (438% greater), accidents (131% greater), diabetes mellitus (155% greater), homicides (57%), and suicides (27% greater).
In the early 1980's most American Indians with tribal ties resided on reservations or in designated tribal areas such as settlements. However, according the 1990 census, only one-quarter (437,358) lived on 314 reservations and trust lands (Bureau of Census, 1993). The federal government recognizes tribes as semisovereign entities with their own governments, policies, etc. This is a legal status accorded no other group including Indians not living in these areas. Their participation in the labor market has been historically in the periphery sector due to their extreme isolation and the economic and geographical marginality of the land they inhabit. However, such isolation enables them, in some degree, to maintain a separate culture and identity. This isolation historically has provided some autonomy over what new practices will be adopted, checked the level of outside influence to be integrated into the lives of the reservation residents, and created a barrier with the external world (Scott, 1983).

Poverty is a social reality for a large segment of the Indian population. Approximately 51 percent of the American Indian families living on reservations fall well below the US poverty line and have an annual income one-third of the median income of white households (Bureau of Census, 1993). American Indian unemployment rates ranged from 20 to 70 percent with the highest rates concentrated in the Plains states (LaFromboise & Graf Low, 1998; U.S. Senate Select Committee on Indian Affairs, 1985).
American Indian Families

The Native American family is radically different from other families in their use of the extended kin network or "village-type quality" (Tooker, 1983). They may include several different households of both vertical and horizontal kinship ties. While single-parent families do exist, the inclusion of extended family by social-welfare professionals among others is limited due to structural constraints. However, the presence of that extended network may provide for a safety net for the children of single-parents. The Native American nuclear family and extended kin network comprise the primary social, political, and economic structural unit (Tooker, 1983). This family unit reflects bloodlines from both sides of the conjugal family and as such, the family is both flexible and strong. The intricate network of family provides a series of parental figures in the lives of children, much wider than those that operate in traditional European American families. As such, child rearing is likely to be much different in Native American families than in European American families. Children are encouraged to take upon themselves a group mentality wherein they should consider their status as part of a family, a kin-network, a tribe, and part of the land itself. Individuality is submerged in these collective institutions.

Herring notes that Coles (1977) similarly described Native American child rearing practices. Parents teach their children "...specific psychological, philosophical, and religious views of life's meaning, purpose, rhythms, and momentum. The self-conceived task of many American Native parents is to teach their children a conscious appreciation of the ethical, aesthetic, and psychological differences between their view of the world and the Anglo view—in the hope that those American Native children will not only stand fast by their own
beliefs, but someday, somehow, be in a position to help Anglos change their own beliefs, or at
the very least, begin to appreciate them explicitly” (Herring, 1989: 6).

Rosenthal (1974) argued that the contemporary Indian family as a social unit remains
essentially the same as in past eras. In the past, the father was frequently absent from home
on hunting expeditions in many tribes whereas today, the father is absent for employment
purposes. Grandparents are likely to function as surrogate parents for the children while
parents were busy with economic and domestic ventures off of the reservations.

Rosenthal also argued that due to the boarding schools and forced assimilation in
erlier generations, children of that era, or today’s elders, missed out on opportunities for
interaction with their parents, with their extended kin network, with their community, and
with their culture. As a result, their ability to effectively socialize their own children was
hampered. These children are today’s parents. These parents may have missed out on critical
interaction and social development that aid in adult skills and effective parenting strategies.
What former skills remain are less effective (Skead, 1999).

Historically in Indian societies, children were viewed as beloved gifts that were raised
as their culture dictates. Developmentally, children were celebrated for their achievements
but little pressure was put on the timing of those events. Children in these societies were
seldom physically punished, instead receiving disapproving words from adults or were ignored
all together (Rosenthal, 1974).

In some tribes in the upper Midwest, rewards and punishments played a part in the
training of the children, though no great emphasis was laid on them. Every attempt was made
to encourage children to mind and did so by speaking to them as occasion arose or by
teaching them to do so at formal times of instruction. Rewards such as praise were usually not given to children although they might occasionally receive maple sugar, a toy carved out of wood, or a doll of grass for work well done. Parents did not ridicule their children for failures, nor did they scold too much because such treatment made the children worse not better. Corporal punishment was used sparingly and only in the most severe cases but never with young children (Hilger, 1992).

Due to the community as family framework of the family, when children acted out, information about the act was often shared to other family members. As a result, restitution often meant approaching each family for apology. “Similarly, when a youth is worthy of praise for a significant accomplishment, one of the family members might share this information with others in the community through a person known as the ‘camp crier.’ One role of the ‘camp crier’ is to convey good news about members of the community while maintaining each family’s humility” (LaFromboise & Graf Low, 1998:122).

Autonomy is highly valued in many Indian societies. As a result, parenting practices mirror such attitudes. At early ages, children are allowed freedom of choice and to experience the natural consequence of their choices. While such behaviors appear from the outside to have been labeled as negligent or overly permissive by social service providers, such parenting practices have long-standing cultural and historical roots in the societies (LaFromboise & Graf Low, 1998).

Strauss (1993) examined family strengths of Native American families. He found that most discussion in contemporary scholarly literature focuses on shattered families that have been destroyed by alcoholism, adoption, drugs, poverty and racism. Some writings are
coming out, particularly in recent introductory texts in family studies that discuss family strengths. Key concepts in these discussions include "...healthy communications, affirmation, respect, trust, spiritual wellness, tradition, and ritual. Many of these concepts, such as spirituality and family history, may be particularly salient to Indian families" (315). However, there are certain values, beliefs, and behaviors with respect to individual tribes, age, geographic location, and gender differences that greatly hinder the generalization of contemporary writings on "The American Family" to Indian families. "...Unique family customs, proverbs and stories, celebrations, foods, and religious ceremonies" (316) make such generalizations unnecessary and futile.

This lack of generalizability has theoretical implications. Strauss (1993) notes an assessment by Dilworth-Anderson et. al. (1993) that found that family theories must restructure "...assumptions and values to reflect ethnic reality...create new ways of thinking about ethnic minority families to enhance culturally relevant conceptual frameworks on the family...and reframe existing theoretical perspectives and ideologies to explain and predict family phenomena among these families" (Dillworth-Anderson et. al., 1993 as cited by Strauss, 1993: 316).

Strauss (1993) and Dilworth-Anderson (1993) posit that the life-course perspective may be the most effective theoretical model for understanding minority families. Due to its focus on extended family kin groups, it provides a frame of reference to examine the traditional and non-traditional family systems of American Indians. American Indian families rely significantly more than non-Indian families on a widespread extended family network. The influence that the extended kin network has on the individual family is far-reaching.
Relational bonding, balance, harmony, generosity, sharing, and respect are important aspects of Indian family dynamics.

**Antisocial Behavior in American Indians**

McShane (1988) argued that among other areas, there is a considerable lack of research devoted to American Indian youth that examine conduct disorders/delinquency, drug and alcohol use, suicide, depression etc. Similarly, LaFromboise and Graf Low (1996) report that little research has focused systematically on the psychological development of Indian children and adolescents. They did find some studies that have estimated the prevalence of psychological disorders among them. These studies found significant psychosis among a sizable proportion of American Indians (Berlin, 1982). Juvenile psychopathology amongst American Indian adolescents mirrors that of white adolescents. Depression is reportedly extremely common among Indians (Hodge and Kipnis, 1996; Vega & Rumbaut, 1991; Manson et. al., 1990; Beals et. al., 1991). When comparing the American Indian adolescents in their sample to two other studies on similar non-Indian groups of adolescents, Beals et al (1997) found that the American Indian adolescents had higher rates of defiant disorder, problem behaviors, and depressive disorders. Unfortunately, although this psychopathology may be on the rise, children, who make up nearly one-third of the Indian population, receive only about ten percent of the mental health care administered to that total Indian population (LaFromboise & Graf Low, 1996; McShane and Plas. 1982; Neligh. 1985).

"American Indian youths experience more mental health problems than their peers in the general population (Blum et al., 1992; U. S. Congress, Office of Technology Assessment, 1990)" (Beals et al., 1997:1253). However, a simple focus of Native American problematic
behavior is ahistorical at best and akin to victim blaming at its worst. Psychopathologies and psychiatric disorders are present in all cultures. Problem behaviors such as adolescent substance use, risky sexual behavior, and antisocial behavior are best understood as socially defined, that is, behavior that departs from social and legal norms, is negatively sanctioned by systems of authority, and tends to elicit mild to major forms of social control. Such behavior is learned in intimate relationships (Mitchell & O’Neil, 1998).

American Indian youth, like other youths, learn deviant behaviors from and are rewarded by their peers. Beauvais (1992) found that Indian adolescents, with non-conventional peers are more likely to initiate and sustain deviant behaviors due to those associations.

Berlin (1987) examined the dislocation of Native American tribes and the effects that lost history, culture, and identity have had on their psychological, economic, and social life trajectories. He noted economic conditions that precipitate the likelihood that youth will have problems getting a job, thus affecting their psycho-social stability. Also noted was the fact that their “parents have been torn between old child-rearing practices, which have developmental purposes based on old traditions, and the new ways of living and satisfying daily needs that often conflict with tradition” (300). Some of these conflicts are empowering their children to succeed when they know that there is little opportunity for personal success. Another was downplaying the cultural tenet that it is bad to stand out from others in any way by openly acknowledging the tribe’s needs.

As Elder (1974) found, many American Indian families are affected by chronic economic stress. Many of the conditions described in Elder’s study are a common for these
families. Because of the economic conditions that have and still exist on many reservations, some parents find themselves forced to leave their homes in search of opportunities in urban areas. Their children are often left in the care of older familial and non-familial homes. Thus, potential socialization opportunities between parent and child are lost due to structural forces quite beyond their control. The children, left in the care of their elders, may or may not receive aid and encouragement for succeeding in school. "The necessary parental facilitation of learning and mastery and modeling ways in which one might integrate the Anglo world with one's own traditions usually do not occur" (Berlin, 1987:300-301). Elders have little use for school and see it as destructive to traditional modes of life. As a result, the children left in their care "...find there is no one to support their eagerness to learn or their special talents, and their cognitive development goes unnurtured" (Berlin, 1987:301). As a method of overcoming lack of academic success, youth, like their parents, turn to urban areas for potential avenues of success. There they learn the harsh realities that social and structural inequalities exist that limit their potential. In accordance with intergenerational transmission, the adolescents often repeat the generational experience of discrimination, unemployment, poverty, anger, depression, and alcoholism.

Berlin also argues that to the degree that many infants and young children are very poorly nurtured, their attachment to a dependable loving adult in the Native American community is decreased. Thus, the child's ability to trust and to relate to adults with confidence does not develop, resulting in developmental delays that cost them educational and social opportunities. They become more likely to develop anger, hostility, depression, and
isolation and encourage the youngster to learn not to trust others or to make sustaining relationships.

Such socialization has the potential to create life-long scars. Failure to trust others and find little gratification in learning coupled with the inability to relate to peers and to learn to enjoy play with others encourages adolescent psychopathology.

Flemming et al. (1996) notes that there is not sufficient literature to decipher the incidence and prevalence of behavioral problems and psychopathology among Indian adolescents. However, many studies have pointed towards the possibility of psychopathology amongst Indian youth. Many of these studies tend to focus on one aspect of delinquency rather than diagnosable conduct disorder, antisocial personality disorder, or other psychopathologies per se. The frequency of movement of Indian youth from white to Indian culture and the necessity to conform to changing standards lead to confusion and disorganization of the children's personality (Krush et al., 1966).

There is a great need for further research an American Indian adolescent deviance and psychopathology. Measures of antisocial behavior may be effective tools for understanding these behaviors with this group. However, simply using measures from other studies with white populations may prove to be non-culturally relevant and methodologically unsound. A more effective way of conducting research with diverse populations is to develop the measures from within the group, using culturally relevant terms, behaviors, and ideologies. By doing so, potential cultural and social barriers may be bridged (Strauss, 1993).
Hypotheses

This study examines the intergenerational transmission of parenting and antisocial behavior across three generations (Figure 2; Appendix A). Two hundred twelve American Indian families make up the sample population. The sample, measures, and methods used in the study will be discussed in greater detail in the following chapter. In short, this study examines the transmission of parenting practices across the generations and how those negative parenting practices affect the next generations' antisocial behavior. Generational continuity is expected for both parenting and antisocial behavior.

As outlined in the review of literature, in large part, the techniques parents use to parent are largely learned from their parents (Elder, Caspi, & Downey, 1986; Whitbeck et al., 1992b; Putallaz et al., 1998; Serbin et al., 1998; Wu, 1998; Hardy, 1997; Boye-Beaman, 1995; Korbin et al., 1995; Cappell & Heiner, 1990; Elder & Caspi, 1988b; Furstenburg et al., 1987; Rutter, 1987; Main et al., 1985; Ricks, 1985). Negative parenting practices in family of origin carry over into the next generation (Boye-Beaman, 1995; MacEwen, 1994; Cappell & Heiner, 1990; McCord, 1988) from G1 to G2 (γ21). Mother's age significantly reduces reports of her negative parenting practices (γ24). This may be a function of her growth or development as a parent, that older parents use more positive, pro-social parenting styles, or that parents of antisocial adolescents disengage from the parenting process all together (Conger & Simons, 1997; Thornberry, 1997; Thornberry et al., 1994; Thornberry et al., 1993; Vuchinich, Bank, and Patterson, 1992; Thornberry, Lizotte, Krohn, Farworth, and Jang, 1991; Lytton, 1990). Similarly, target's age increases the likelihood of her use of negative parenting (γ22), in part, due to the reciprocal nature of the parenting process between parents and
antisocial adolescents (Conger & Simons, 1997). Mother’s antisocial behavior increases ($\beta_{21}$) the likelihood that she will use negative parenting practices (Elder, Caspi, & Downey, 1986; Whitbeck et al., 1992b).

Reports of antisocial behavior in both parents and adolescents are affected in several ways. First, (G2) mother’s age decreases the magnitude of her antisocial behavior ($\gamma_{14}$) due to an aging out effect (Sutherland, 2000; Moffit, 1997; Thornberry, 1997; Halperin et al., 1995; Laub & Sampson, 1993; Loeber et al., 1993; Wolfgang, Thornberry, & Figlio, 1987; Weiss et al., 1985; Farrington, 1983). Similarly, the target adolescent’s age affects their reports of antisocial behavior ($\gamma_{32}$). Whereas, a large proportion of these adolescents are just reaching the age wherein they are likely to begin to have significant antisocial behavior, the target’s age will increase the reports of antisocial behavior (Simons et al., 2000; Halperin et al., 1995; Loeber et al., 1993; Farrington et al., 1990; Loeber, Stouthamer-Loeber, Van Kammen, & Farrington, 1989; Weiss et al., 1985; Wolfgang, Figlio, & Selin 1972). Negative parenting also increases the likelihood of adolescent antisocial behavior (Simons et al., 2000; DeKlyen et al., 1998; Straus et al., 1997; Leadbeater, 1996; Lynam, 1996; Muller et al., 1995; Stouthamer-Loeber, 1993; Patterson & Capaldi, 1991; Dodge et al., 1990; Lahey et al., 1984; Patterson, 1982; Lefkowitz, 1978) from both G1 to G2 ($\gamma_{13}$), and from G2 to G3 ($\beta_{32}$). A direct antisocial heredity effect from G2 to G3 ($\beta_{31}$) predicts antisocial behavior in G3 (Rutter et al., 1998; Rowe and Farrington, 1997; Farrington, Barnes, & Lambert, 1996; Mason & Frick, 1994; Pollock et al., 1983)

Having a male in the household decreases ($\gamma_{22}$) the probability that mothers will report antisocial behaviors (Loeber & Hay, 1997; Gagnon et al., 1995; Kupersmidt et al., 1995;
Benson et al., 1992; Farrell & Case, 1992; Harvey et al., 1991; Loeber et al., 1989; Belsky, 1984; Crnic et al., 1983; Olweus, 1980). Having a male in the household decreases mothers’ negative parenting (γ_a) by providing a measure of social support (Tapscott et al., 1996; Elder et al., 1995; Patterson, 1992; McCord, 1991; Simons et al., 1990; Robins and Earls, 1986; Belsky, 1984). Having a male in the household indirectly affects targets’ antisocial behavior through mother’s negative parenting and her antisocial behavior (Elder et al., 1995).
CHAPTER THREE: METHODS

The Sample

The Three Villages survey is a baseline study for an ongoing prevention project funded by the National Institute on Drug Abuse (DA10049). The sample for this analysis consisted of 212 5th to 8th grade target children who lived on three rural American Indian reservations in the upper Midwest. Other family members (202 mothers, 112 fathers, and 82 other siblings) were also surveyed as part of the project. For future reference, these reservations will be referred to as the North, West, and East reservations. All of the respondents shared the same culture, traditional language, and basic geographic regions. The reservations were of approximately the same size population, but differed in terms of economic development and geographical isolation.

The project was initiated by one of the reservations with the subsequent reservations added at their requests to participate in the project. The research effort involved a partnership between the communities and the invited researchers. All of the on reservation staff hired were tribal members and all of the interviewers were tribal members (or in a few cases the spouses of tribal members).

Each of the reservations established an advisory board of tribal members to supervise the project, hire staff, provide advice, and approve each step of the research process. The members of the advisory boards took an active role in the development of the project by undertaking activities that included but were not limited to active involvement in questionnaire development. Prior to going into the field, the tribal governments on each reservation approved each question of the questionnaires used in the study.
The elders were consulted through focus groups, individual interviews and as members of tribal advisory boards regarding the best way to work with their people. This resulted in valuable advice particularly about respectfully engaging the people in the work. On advice of the elders, a staff person who offered tobacco and asked for their help with this project visited each family. A gift of wild rice was left regardless of their decision about participating. This recruitment process resulted in an 85% response rate across all three reservations for the survey data utilized in this study (Stubben et al., 2000).

The Target Adolescents

The target adolescents consisted of 115 males and 97 females and ranged in age from 10-15 years with a mean age of 12.12. The adolescents were nearly equally distributed from fifth to eight grade (49 – 5th, 53 – 6th, 55 – 7th, & 43 – 8th grades).

The Parents

As stated earlier, 202 mothers and 112 fathers were also interviewed in this study. The parents ranged in age from 18 to 71 with a mean age of 39.6. Approximately 54 percent of the families were dual-parent households (married or cohabiting) and 46 percent were single-parent households. Seventy-one percent of the parents (62 percent of the fathers and 76 percent of the mothers) are members of one of the three bands studied. Twelve percent of the parents (14 percent of the fathers and 10 percent of the mothers) were members of another band within the same tribe. Sixteen percent of the parents (21 percent of the fathers and 13 percent of the mothers) were not members of any of the bands of the tribe.

Seventy percent of the families lived on the reservations while the other 30 percent lived near the reservations. The mean income of the families was $22,658. Twenty-three
percent of the parents had not graduated from high school. Thirty-three percent of the parents had graduated from high school or had completed a GED. Thirty-four percent of the parents had completed at least some college or vocational school, eight percent had graduated from college, and two percent had obtained an advanced degree. Sixty-five percent of the parents were employed at least part-time, 19 percent were unemployed, and 15 percent were either disabled, retired, or a homemaker.

**The Measures**

This study utilizes several scales and one multivariate construct to assess the likelihood of the target adolescents reporting antisocial behaviors. A list of the variables and the accompanying questions are provided in Table 1: Appendix B. *Target’s age, mother’s age,* and *male present in the household* are used as exogenous control variables in the study and were recorded at the point of contact. Male present in the household is a dummy coded variable (0,1). Negative parenting is used in two variables in the study. *Grandmother’s Negative Parenting* (G1) is mother’s (G2) retrospective report of how she was parented. The measure is a six-item composite scale of G1’s hostility and rejecting behaviors. Some of the variables were reverse coded to insure directional uniformity. Due to different response categories, the measures were standardized/centered for construct validity. Please see Table 1: Appendix B for response category reference. The hostility scale has a reliability of 0.713 and the rejection scale has a reliability of 0.751. The total measure was then computed by combining the centered hostility and rejection scales and dividing by two. The two scales are correlated at 0.485. The factor analysis indicates that the combined negative parenting scale
holds together extremely well and loads on a single factor. These findings lend credibility to
the measures used in the analyses.

Retrospective reports are a viable tool for reconstructing perceptions of past events,
experiences, and relationships in research. Giarrusso and her colleagues (1995) have used
retrospective reports to examine intergenerational stake. Intergenerational stake posits that,
"because parents' investment in children is greater than children's investment in parents,
parents will feel closer to their children than their children will feel to them, across the family
life course" (Giarrusso et al., 1995: 255). This study found support for intergenerational
stake and demonstrates that retrospective perceptions of relationships are largely accurate
measures of actual relationship closeness. Adult children were found to more accurately
report the closeness of those relationships than their parents. Similar studies of parental
intergenerational reporting (Rueter et al., 1998; Whitbeck et al., 1992; Cicchetti & Rizley,
1981) and personal past experience (Elder, 1996; Elder, Caspi, Downey, 1992; Elder & Caspi,
1988; Elder, 1974) are consistent with these findings suggesting support for this data
collection tool.

The use of retrospective reports has been questioned by Brewin et al. (1993) among
others for several reasons. According to Brewin and his colleagues, the validity of
retrospective reports should be called into questions for three main reasons. First, there are
normative limitations in memory wherein memories from childhood should be deemed
imperfect and unreliable. Second, general memory deficits are associated with
psychopathology. Clinical states such as anxiety, abuse, and depression may have a
deleterious effect on all memories, regardless of content. Finally, the memory process is
mood-congruent. Clinical states such as depression are believed to introduce specific retrieval biases, making it more likely that respondents will remember more negative than positive memories. However, the use of retrospective parenting data has been shown to be an effective tool in examining past intergenerational relationships.

_Mother's Negative Parenting_ (G2) is a multivariate construct consisting of two reports of G2's parenting efforts. _Mother's Report_, is a six-item self-report measure of her hostile and rejecting parenting practices. Mother's report of her rejecting behaviors has a Chronbach's alpha of 0.523 while the reliability for her reports of her hostile behaviors is 0.565. The total Chronbach's alpha for the six measures is 0.618. A minimum of four responses from the six items was required for inclusion into the analyses. Some of the measures were also reverse coded for consistency and they were then centered for scaling purposes. Factor analysis demonstrates that the scale loads onto a single factor providing support for its use as a scale. Again, these finding suggest that this is an acceptable measure of _Mother's Negative Parenting_ and viable for use in the analyses. _Target's Report_, is a similar measure to the _Mother's Report_ and adds a confirming voice to the nature of _Mother's Negative Parenting_ practices. _The Target's Report_, is a constructed in the same manner as the _Mother's Report_. It is a six-item measure of their mother's hostile and rejecting parenting practices. Target's report of their mother's rejecting behaviors has a Chronbach's alpha of 0.356 while the reliability for target's reports of her hostile behaviors is 0.504. The Chronbach's alpha for the six measures is 0.461. A minimum of four responses was required for inclusion into the analyses. Some of the measures were also reverse coded for
consistency. Due to different response categories between the scales, the measures were 
standardized/centered for construct validity. Please see Table 1: Appendix B for response 
category reference. The measure also loads onto a single factor suggesting that it is also a 
viable measure. The multivariate construct of *Mother’s Negative Parenting* loads on two 
factors suggesting the viability of using *Mother’s Report* and *Target’s Report* as measures for 
the latent construct. The overall Chronbach’s alpha for the multivariate construct is 0.444.

*Mother’s Antisocial Behavior* is a two-item construct that examined the respondent’s 
self-reported behavior since her 15th birthday. The measure showed internal consistency with 
an overall Chronbach’s alpha of 0.601 suggesting that it is a useful measure for inclusion into 
the analyses. *Target’s Antisocial Behavior* is also a two-item construct assessing the 
tendencies of the target adolescent to partake in deviant behaviors. The overall Chronbach’s 
alpha is 0.828 suggesting that it is a useful measure for inclusion into the analyses.

**The Analysis**

Imputation measures are routinely used for a number of reasons in data analysis. 
Whether to account for missing data due to systematic error or from random chance, 
imputation measures provide a tool for using a larger portion of the data that would otherwise 
be lost in the data analysis due to list-wise deletion. Methods of imputation are based on three 
mechanisms. The first is ignorability. If data are missing but has no effect on the overall 
outcome of the model, it can be ignored. It must be decided whether the data are Missing at 
Random (MAR) or Missing Completely at Random (MCAR) (Vargas-Chanes, 2000).

\footnote{For analysis purposes, the alpha of this coefficient is too low for this construct to be viable on its own. As a result, it will be necessary to address this value before further publication.}
Missing at Random (MAR) implies that the non-response is conditional to the observed variable rather than the missing value(s) (Rubin, 1987). In other words, the data are missing in response to the observed variable itself and that the mechanism that encourages the non-response is available to the research and not a mechanism of that not observed. An example of this is missing data in sensitive areas such as sexuality or substance abuse where response to the question or series of questions is limited in a particular subset of respondents such as young females.

Missing Completely at Random (MCAR) exists when the missing data are missing for no particular reason. Unlike the MAR, MCAR is not related to systematically observed or missing data. Rather, MCAR is a condition that results from sheer random chance rather than as a response or lack thereof to a particular question, response category, or stimulus. However, if the missing data are not ignorable, thus affecting the model stability, then measures must be taken to account for this problem (Vargas-Chanes, 2000; Schafer, 1997).

This analysis examines three methods of analysis to determine the most effective counter for missing data. The first is simple list-wise deletion of missing data. By extracting the cases with missing data, it is possible to examine models without the use of estimation procedures. This is questionable because those cases lost may be at polar ends of the measure(s) in question. As a result, by simply throwing out sections of data, it is possible to lose important variability in the data set.

The next method of countering missing data is the use of full information, maximum likelihood (FIML). FIML is used in context of structural equation models (Arbuckle, 1996) and uses vectors of means of all possible subsets of variables and covariance matrices. Next,
where missing data is observed, the covariance matrices are used to estimate the approximate value of the missing data, based on the full information available from the complete data.

Other imputation procedures use a regression approach (Muthén et al., 1987), however, the number potential patterns for imputation is limited. FIML allows for as many possible patterns of data to be incorporated into the analyses (Vargas-Chanes, 2000).

There are several drawbacks to this type of analysis. First, process only affects the data in the statistical program used. Secondly, the estimates are not available using other data analysis packages. FIML is currently used in AMOS 4.0 (Arbuckle, 1999) and in M-PLUS (Muthén, 1998) statistical packages but not effective in LISREL. Finally, the estimates can only be used when statistical normality is assumed.

The final method of countering missing data employed in this study is the use of an expectation-maximization (EM) algorithm (Dempster et al., 1997). This method consists of two steps wherein the missing data are replaced with estimated values and estimated model parameters called the expectation step (E-step). The next step is the maximization step (M-step) wherein the E-step is repeated over and over to reach the best possible estimation for the missing data or essentially until the convergence criteria are satisfied. These steps provide mutually beneficial information for the model. The missing data provide model parameter estimates while providing estimates for the missing data, thus providing a greater possibility of accounting for missing data. Unlike FIML, EM-algorithm uses covariates that may improve the imputed values and because EM-algorithm is used in the set-up of the data, it is possible to use the estimates in a variety of programs. Also, EM-algorithm and list-wise deletion are the
only methods of accounting for missing data that can be used with more mainstream structural
equation modeling packages than AMOS 4.0, such as LISREL (Vargas-Chanes, 2000).

The effectiveness of the methods are examined using structural equation modeling to
examine the overall stability of the model and goodness of fit based on the use of the
procedures (Chi-square, probability level, and Steiger and Lind's (1980) root mean square
error of approximation (RMSEA)). Due to FIML's limited usefulness outside of AMOS,
structural equation models are used to examine the usefulness of EM-algorithm, FIML, and
list-wise deletion techniques. Regardless of the imputation method utilized, the three methods
represent viable alternatives for missing data imputation. Results of the analyses are
presented in the following chapter.

Several analyses are conducted in this study. First, inter-item correlations are used to
examine the relationships between the variables. Next, using a step-in method of linear
regression, a series of analyses are run to assess the variables' impacts on the models. The
first model uses regression to predict Mother's Antisocial Behavior (G2). Mother's Age and
Grandmother's Negative Parenting are the independent variables used in the model. These
variables are added in two steps. Mother's Age is included in step one and Grandmother's
Negative Parenting is added in step two. Model two similarly uses regression to predict
Mother's Target's Reports of Mother's Negative Parenting (G2). Included in the model, as
exogenous, independent variables are Mother's Age, Target's Age in step one and
Grandmother's Negative Parenting in step two. Two endogenous, independent variables in
the model are Mother's Antisocial Behavior and Male Present in the Household comprising
the third step in the model.
A final model using regression is used to predict adolescent antisocial behavior. The exogenous, independent variables remain consistent with previous model, with two exceptions. *Mother's Age* is not included in the model and is replaced by the *Target's Gender*. *Mother's Age* is not correlated with *Target Antisocial Behavior*, nor does it increase the overall fit of the model. The endogenous, independent variables are also similar, with one exception. In addition to the existing variables, *Mother’s Target’s Report of Mother’s Negative Parenting* is also used to predict adolescent antisocial behavior. *Target’s Gender* and *Target’s Age* are included in step one of the model. Step two brings in *Grandmother’s Negative Parenting,* and having a *Male Present in the Household*. Step three adds in mother’s and target’s report of *Mother’s Negative Parenting.*

Several interactions are also run to determine if the variables have independent effects from one another. Interactions between *Target’s Gender* and *Target’s Age,* between *Mother’s Age* and *Mother’s Antisocial Behavior,* and between *Male Present in the Household* and *Mother’s Antisocial Behavior* were used in various steps in the model. None were predictive nor did they improve the overall fit of the models and so they were no longer used.

Finally, structural equation modeling (SEM) is used to determine the overall validity and strength of the variables in the model in predicting *Target Antisocial Behavior* (Figure 3; Appendix A). One model is used in this analysis. *Male Present in the Household,* *Target’s Age,* *Grandmother’s Negative Parenting,* and *Mother’s Age* are the exogenous independent variables in the model. As was discussed in the hypotheses section of the previous chapter, having a *Male Present in the Household* is used to predict *Mother’s Negative Parenting* and
Mother's Antisocial Behavior. Target's Age is used to predict Mother's Negative Parenting and Target's Antisocial Behavior. Grandmother's Negative Parenting is used to predict Mother's Negative Parenting and Mother's Antisocial Behavior. Mother's Age is also used to predict Mother's Negative Parenting and Mother's Antisocial Behavior.

The model includes two endogenous, independent variables. Mother's Antisocial Behavior is used to predict Mother's Negative Parenting and Target's Antisocial Behavior. Finally, Mother's Negative Parenting is used to predict Target's Antisocial Behavior.

\(^2\) Fathers' Negative Parenting was not included in the analyses due to the small number of fathers in the sample. Inclusion of the fathers would have reduced the number of cases available for the analyses to the point that the effectiveness and validity of the analyses would have been compromised.
CHAPTER FOUR: RESULTS

Missing Data Imputation

In order to account for missing data in the analyses, three methods of handling missing data are presented with accompanying analyses. Results are provided in Table 2: Appendix B. Similar results are observed for the three methods in the models' respective chi-square and root mean square error of approximation (RMSEA). RMSEA low values equal to or less than 0.05 indicate a good fit of the overall model. High values of between 0.05 and 0.08 also indicate a good fit while those over 0.10 indicate a bad fit (Vargas-Chanes, 2000; Steiger & Lind, 1980). All of the models indicate acceptable findings of high and low values for RMSEA, chi-square, and probability levels. In order to gain the most complete set of data available, it seems plausible that the list-wise deletion method is the least effective counter for the missing data. Based on the necessity of running the models in LISREL in order to determine the indirect effects of the analytic model, it is not possible to use FIML as a method for accounting for missing data. Therefore, by process of elimination, these analyses will employ the EM-algorithm method of imputation for missing values.

The Correlations

In Table 3: Appendix B, variable correlations demonstrate that several variables are significantly associated with Target's Antisocial Behavior. As adolescents age, they are significantly more likely to participate in antisocial behavior. Mother's Antisocial Behavior is significantly associated with Target's Antisocial Behavior indicating a positive relationship between successive generations and antisocial behavior. Finally, a significant, positive
relationship exists between Mother's Negative Parenting and Target's Antisocial Behavior suggesting that negative parenting increases adolescent problem behavior.

Several other interesting correlations are observed in Table 3: Appendix B. Target's Age is significantly associated with Mother's Negative Parenting resulting in greater propensity for reporting negative parenting by the target child and mother when the target is older. Similar to the relationships between mothers and adolescents, significant, positive relationships are observed between Grandmother's Negative Parenting and Mother's Antisocial Behavior; and with Grandmother's Negative Parenting and Mother's Negative Parenting. As was found in the relationships between the mothers and the target adolescents, the latter finding suggests support for intergenerational continuity. Mother's Antisocial Behavior is negatively and significantly associated with having a Male Present in the Household.

The Regression Models

The regression models indicate significant relationships between the variables. Model one contains two steps to the analysis (Table 4: Appendix B). In step one, Mother's Age significantly predicts Mother's Antisocial Behavior with a beta coefficient of -0.187, a standard error of 0.003, and a t-value of -2.524, significant when p < 0.01. These results indicate that as mother's age, their reports of antisocial behavior decrease. The R² for this step of the model is 0.035 and the adjusted R² is 0.030. In step two, both Mother's and Grandmother's Negative Parenting are included in the model. Mother's Age remains predictive of Mother's Antisocial Behavior with a beta coefficient of -0.182, a standard error of 0.002, and a t-value of -2.510, significant when p < 0.01. Grandmother's Negative
Parenting is also predictive of Mother's Antisocial Behavior with a beta coefficient of 0.177, a standard error of 0.026, and a t-value of 2.400, significant when p < 0.01. This finding indicates that Grandmother's (G1) use of negative parenting increases the likelihood of mother (G2) reporting antisocial behavior. The $R^2$ for the second step is 0.066 and the adjusted $R^2$ is 0.057.

The second set of regression analyses examines what predicts Mother's Target's Report of Mother's Negative Parenting (Table 5: Appendix B). Again using the step-in method, Mother's Age and Target's Age make up the first step. Mother's Age significantly predicts Mother's Negative Parenting with a beta coefficient of −0.143, a standard error of 0.005, and a t-value of −1.947, significant at $p > 0.05$. This result indicates that as mothers age, they are less likely to employ negative parenting techniques. Target's Age also significantly predicts Mother's Negative Parenting with a beta coefficient of 0.152, a standard error of 0.031, and a t-value of 2.155, significant at $p > 0.05$. As targets age, their mother's are significantly more likely to use negative parenting techniques. The $R^2$ for this step is 0.037 and the adjusted $R^2$ is 0.027.

In the second step of the model, Grandmother's Negative Parenting is added to Mother's Age and Target's Age in the analysis. Mother's Age remains significant with a beta coefficient of −0.138, a standard error of 0.005, and a t-value of −1.999, significant at $p > 0.05$. Target's Age also remains a significant predictor of Mother's Negative Parenting with a beta coefficient of 0.168, a standard error of 0.031, and a t-value of 2.513, significant at $p > 0.05$. Grandmother's Negative Parenting is a significant predictor of Mother's Negative Parenting with a beta coefficient of 0.248, a standard error of 0.049, and a t-
value of 4.078, significant at $p > 0.01$. This analysis suggests that increases in *Grandmother's Negative Parenting* are associated with increases in their daughter's parenting. The $R^2$ for step two is 0.098 and the adjusted $R^2$ is 0.084.

The final step in this model adds in *Mother's Antisocial Behavior* and having a *Male Present in the Household* into the analysis. *Mother's Age* remains significant with a beta coefficient of $-0.148$, a standard error of $0.005$, and a $t$-value of $-2.053$, significant at $p > 0.05$. *Target's Age* also remains significant with a beta coefficient of $0.166$, a standard error of $0.030$, and a $t$-value of $2.517$, significant at $p > 0.05$. *Grandmother's Negative Parenting* also remains significant predictor of *Mother's Negative Parenting* with a beta coefficient of $0.244$, a standard error of $0.050$, and a $t$-value of $3.912$, significant at $p > 0.01$. Neither *Mother's Antisocial Behavior* or a *Male Present in the Household* is effective predictors of *Mother's Negative Parenting*. That said however, having a *Male Present in the Household* approaches significance in this analysis. The $R^2$ for the total model is 0.115 and the adjusted $R^2$ is 0.092.

The final model of the regression analyses is used to predict the *Target's Antisocial Behavior* (Table 6; Appendix B). The model uses three additive steps for the analyses. In step one, *Target's Gender* is not an effective predictor of their antisocial behavior. However, *Target's Age* is an effective predictor of their antisocial behavior with a beta coefficient of $0.299$, a standard error of $0.339$, and a $t$-value of $4.625$, significant at $p < 0.01$. The $R^2$ for the first step in the model is 0.090 and the adjusted $R^2$ is 0.081.

The second step also employs *Target’s Gender*, *Target’s Age* and additionally includes *Grandmother’s Negative Parenting*, *Mother’s Antisocial Behavior*, and having a *Male*
Present in the Household to predict Target Antisocial Behavior. Target’s Gender remains an ineffective predictor of their antisocial behavior. Again, Target’s Age is an effective predictor of their antisocial behavior with a beta coefficient of 0.306, a standard error of 0.333, and a t-value of 4.857, significant at p < 0.01. Grandmother’s Negative Parenting and having a Male Present in the Household are not effective predictors of Target’s Antisocial Behavior. Mother’s Antisocial Behavior significantly predicts Target’s Antisocial Behavior with a beta coefficient of 0.160, a standard error of 1.476, and a t-value of 2.378, when p < 0.05. This finding suggests that as Mother’s Antisocial Behavior increases, so does the likelihood for Target’s Antisocial Behavior to increase. The R² for the first step in the model is 0.141 and the adjusted R² is 0.119.

The final step in the model adds in Mother’s Target’s Report of Mother’s Negative Parenting into the analysis. Target’s Gender, Grandmother’s Negative Parenting, and having a Male Present in the Household remain non-significant predictors of adolescent antisocial behavior with the addition of Mother’s Negative Parenting into the model. Target’s Age is an effective predictor of their antisocial behavior with a beta coefficient of 0.280, a standard error of 0.332, and a t-value of 4.526, significant at p < 0.01. Mother’s Antisocial Behavior also remains a significant predictor of Target’s Antisocial Behavior with a beta coefficient of 0.151, a standard error of 1.458, and a t-value of 2.257, when p < 0.05. Finally, Mother’s Target’s Report of Mother’s Negative Parenting is a significant predictor of Target’s Antisocial Behavior with a beta coefficient of 0.173, a standard error of 0.772, and a t-value of 1.969, when p < 0.05. The R² for the total model is 0.168 and the adjusted R² is 0.143.
Structural Equation Modeling

Based on the results from the regression analyses, analysis using structural equation modeling (SEM) is employed to determine the contribution of the variables to the model and the overall goodness of fit of the model. Results from the analysis are consistent with those of the regression analyses (Figure 3: Appendix A) upholding nearly all of the hypotheses for this analysis. The analysis is described from exogenous independent variables impacts on the endogenous variables, both independent (Male Present in the Household, Target's Age, Grandmother's Negative Parenting, & Mother's Age) and dependent (Mother's Antisocial Behavior & Mother's Negative Parenting). The endogenous independent variables effects on the successive endogenous independent variables are then discussed, followed by the effects of those variables on the dependent endogenous variable (Target's Antisocial Behavior). The decomposition of effects on the dependent variable is provided in Table 7: Appendix B.

Direct Effects

As was hypothesized, having a Male Present in the Household significantly reduces the likelihood that mothers will use negative parenting techniques ($\gamma_{21} = -0.21^*$). Having a Male Present in the Household also significantly reduces the likelihood of Mother’s Antisocial Behavior ($\gamma_{11} = -0.25^*$). Target’s Age is a significant predictor of Mother’s Negative Parenting ($\gamma_{22} = 0.31^*$). These findings indicate that as the adolescent ages, his/her mother is more likely to employ negative parenting techniques. Target’s Age also has a significant, direct effect on Target’s Antisocial Behavior ($\gamma_{32} = 0.30^*$) indicating that as the adolescent ages, they are more likely to demonstrate antisocial behaviors. Grandmother’s Negative Parenting is also found to be a significant predictor of Mother’s Negative Parenting.
Grandmother's Negative Parenting is a significant predictor of Mother's Antisocial Behavior ($\gamma_{13} = 0.20^*$), indicating that negative parenting in G1 significantly increases the likelihood for antisocial behavior in G2. Mother's Age has a significant negative effect on Mother's Negative Parenting ($\gamma_{24} = -0.26^*$). This demonstrates older mothers, for possibly a wide range of reasons, decrease or use less negative parenting techniques than their younger counterparts. Mother's Age is also a significant, negative predictor of Mother's Antisocial Behavior ($\gamma_{14} = -0.26^*$).

Mother's Antisocial Behavior is not a significant predictor of her negative parenting ($\beta_{21} = 0.04$). The measure is a significant predictor of the Target's Antisocial Behavior ($\beta_{31} = 0.23^*$), indicating a direct generational effect as hypothesized. Finally, as was hypothesized, Mother's Negative Parenting significantly increases the likelihood of Target's Antisocial Behavior ($\beta_{32} = 0.30^*$). The Chi-square for the SEM model is 20.20 with 22 degrees of freedom and a probability level of 0.57, indicating that the model as a whole is a good fit for the data and provides an accurate description of some of the relationships between the model variables. RMSEA = 0.00 with a low value of 0.00 and a high value of 0.05 indicating that the model is a good fit for the data. Finally, the Goodness of Fit Index = 0.98 also indicating a good fit to the data.

Separate models for males and females were run with no significant changes. Interactions for Target's Gender and Target's Age were computed and included as independent variables in the regression analyses. No significant changes were observed in the results of the analyses. Therefore, these interactions were not included in the final analyses.
No significant, direct, effects for paths between *Male Present in the Household, Grandmother's Negative Parenting, or Mother's Age* to *Target's Antisocial Behavior* were observed in analyses run containing these paths nor did the paths inclusion into the analytical model significantly contribute to the stability of the overall model.

**Indirect Effects**

Several significant indirect effects are observed from the exogenous independent variables to *Target's Antisocial Behavior*. First, having a *Male Present in the Household* is significantly, indirectly associated with *Target's Antisocial Behavior* (-0.12*). The relative strength of the indirect paths is equal. This relationship is examined by multiplying the coefficients from the model analyses. The relative contributions of the indirect effects are observed in Table 7: Appendix B.

Second, *Grandmother's Negative Parenting* is significantly, indirectly associated with *Target's Antisocial Behavior* (0.17*). In this instance, the indirect path through *Mother's Negative Parenting* (0.12) is stronger than the path through *Mother's Antisocial Behavior* (0.05).

Finally, *Mother's Age* is also significantly, indirectly associated with *Target's Antisocial Behavior* (-0.14*). The path through *Mother's Negative Parenting* (0.08) is once again stronger than the path through *Mother's Antisocial Behavior* (-0.06).

*Target's Age* is marginally, indirectly associated with *Target's Antisocial Behavior* (0.09*) through *Mother's Negative Parenting*. In this instance, there is a direct effect between *Target's Age* and *Target's Antisocial Behavior* and an indirect effect.
CHAPTER FIVE: DISCUSSION/CONCLUSIONS

Discussion of Results

The purpose of this study was to replicate similar intergenerational studies conducted by Caspi and Elder (1988), Elder, Caspi, and Downey (1986), and Whitbeck et al. (1992b). This effort was partially successful in replicating their results with American Indian families. The intricate nature of the impacts of external forces on problem behaviors was demonstrated by the analyses, particularly by the SEM analytic model wherein a number of factors were found to affect its development. Having a male present in the household decreases the likelihood that mothers' report antisocial behavior. It remains unclear whether this finding was a mechanism of self-selection on the part of the mothers, a measure of social support, or a measure of conformity to social norms (Elder et al., 1995; Belsky, 1984; Crnic et al., 1983). All three were likely arguments that were supported by current literature in this area (Loeber & Hay, 1997; Gagnon et al., 1995; Kupersmidt et al., 1995; Benson et al., 1992; Farrell & Case, 1992; Harvey et al., 1991; Loeber et al., 1989; Olweus, 1980).

Mother's age was significantly related to her reports of her antisocial behavior. Younger mothers have significantly higher reports of antisocial behavior than their older counterparts. Consistent with the hypothesis for the study and current literature on adult antisocial behavior, it is likely that this relationship was due to a process of aging out of deviance and antisocial behavior (Sutherland, 2000; Moffit, 1997; Halperin et al., 1995; Laub & Sampson, 1993; Loeber et al., 1993; Wolfgang, Thornberry, & Figlio, 1987; Weiss et al., 1985; Farrington, 1983). Conforming behavior develops over the life-course as individuals
find a personal stake in internalizing conformative social norms (Thornberry, 1997; Elder et al., 1995).

Having a male present in the household significantly impacts the mothers' parenting in the study. As hypothesized, the presence of a male reduces the likelihood that mothers will use negative parenting practices. This relationship has been discussed in the literature as a measure of social support in the child rearing process (Tapscott et al., 1996; Elder et al., 1995; Patterson, 1992; McCord, 1991; Simons et al., 1990; Robins and Earls, 1986; Belsky, 1984). Common among these studies were themes of the benefits of dual-parenthood such as emotional support, instrumental assistance in the forms of information and advice, aid in routine activities, and aid in child-care, and the reinforcement of social expectations that serve as guides for parenting efforts.

Having a male present also has an indirect effect on target's antisocial behavior through mother's antisocial behavior and her negative parenting. Such a relationship was explained by social support mother's receive (Belsky, 1984; Crnic et al., 1983), intergenerational transmission of problem behaviors (Tapscott et al., 1996; Simons et al., 1990), and/or a multiplicative effect of having antisocial mothers and fathers (Patterson, 1992; Robins and Earls, 1986).

As adolescents age, they were more likely to impact their mothers' negative parenting practices (Conger & Simons, 1997). The older the age of the adolescents, the more likely their mothers were to use negative parenting practices such as anger (MacEwen, 1994; McCord, 1988), hostility (Leadbeater, 1996; Lahey et al., 1984; Patterson, 1982), and rejection (Patterson & Capaldi, 1991; Caspi et al., 1989). It is likely that this relationship was
in part due to the reciprocal relationship between adolescent development and parents’ ability to effectively facilitate pro-social development, thus leading to an increase in negative parenting practices (Thornberry et al., 1991).

The intergenerational transmission of parenting practices was observed in the analyses. As hypothesized, grandmothers’ negative parenting practices increase the likelihood that the mothers use negative parenting practices with their own children. Similar findings were observed by Elder & Caspi, (1988b), Putallaz et al. (1998), Wu (1998), Boye-Beaman, (1995), Cappell & Heiner (1990), and others. They report that hostile, angry, rejecting, and/or aggressive parent-child interactions increase the likelihood that their children will take similar paths when they too become parents. The measures of negative parenting used in this study have similar components of rejection and hostility and demonstrate generational conformity, similar to their findings.

Mothers’ age impacts the likelihood that they use negative parenting practices while raising their children. As the mothers age, they were less likely to use negative parenting practices. This relationship was possibly due to mothers’ growth or development as a parent as they age, that older mothers use more positive, pro-social parenting styles, and/or that parents of antisocial adolescents disengage from the parenting process all together (Conger & Simons, 1997; Thornberry, 1997; Thornberry et al., 1994; Thornberry et al., 1993; Vuchinich, Bank, and Patterson, 1992; Thornberry, Lizotte, Krohn, Farworth, and Jang, 1991; Lytton, 1990).

Mother’s age also has an indirect effect on the targets’ antisocial behavior through mother’s antisocial behavior and/or her negative parenting. As noted earlier, older mothers
were less likely to use negative parenting techniques and were less likely to report antisocial behaviors. True to intergenerational transmission (Elder et al., 1995), the impacts of mothers' negative parenting and antisocial behavior on their children have the potential to greatly influence their development. As such, it is not difficult to understand the contribution of mothers' age to their children's development of problem behaviors.

As was hypothesized, the target's age increases his/her reports of antisocial behavior. This finding is also consistent with the developmental literature dealing with problem behaviors and age (Simons et al., 2000; Halperin et al., 1995; Loeber et al., 1993; Farrington et al., 1990; Loeber, Stouthamer-Loeber, Van Kammen, & Farrington, 1989; Weiss et al., 1985; Wolfgang, Figlio, & Selin 1972). This relationship is explained in terms of associations with deviant peers (Conger & Simons, 1997; Simons et al., 1996; Keenan, Loeber, & Zhang, 1995; Cairns, & Cairns, 1994; Thornberry et al., 1993 Cairns et al., 1988), exposure to environmental conditions (Simons et al., 2000; Lahey et al., 1999; Gaoni et al., 1998; Sampson, 1997; Sampson & Lauritsen, 1994), initial contact with the criminal justice system (Farrington et al., 1990; Loeber et al., 1989; Wolfgang, Figlio, & Selin 1972), and the learning of problem behaviors from other intimates (Tapscott et al., 1996; Patterson & Capaldi, 1991; Bandura & Walters, 1963).

Targets' age also indirectly affects their reports of antisocial behavior through their mother's negative parenting. It is likely that such effects, both direct and indirect underscore the importance of life-course transition timing. The development of problem behavior is associated with pulling away from parents that use harsh and inconsistent discipline and rejecting behaviors (Lahey et al., 1999; Loeber, 1991; Reid & Patterson, 1989; Patterson,
As earlier stated, as adolescents grow older, their parents were more likely to use negative parenting techniques, therefore, it is plausible that this indirect association is due to the combination of the adolescents' aging and their parents' negative parenting. It is also important to note that of all of the variables in the analyses, it appears that the target's age has the greatest total effect on the likelihood that he/she will develop problem behaviors.

Unlike Caspi and Elder (1988) and others (Whitbeck et al., 1992b, Elder, Caspi, & Bem, 1986), mother's antisocial behavior was not related to mother's negative parenting in this sample. Regardless of the iterations used in the analyses, no significant support was sustained. There are several possible reasons for the non-significant finding with this data. The first possible explanation is measurement. The instrument used may not effectively measure negative parenting or mother's antisocial behavior with Native American families. The measurements used were adapted from studies of predominantly European American families. It is possible that the adoption of these measures fails to capture a critical link between problem behaviors and parenting.

Second, these processes may simply work differently with Native American families. According to Manson et al. (1990), psychopathologies may be over represented in Native American communities due to an acceptance of traditional definitions of antisocial behaviors as normative behaviors.

Third, such a finding may be related to Native American families having a more diffuse rather than focused monitoring system for their children. The interview protocol may have been in effect asking the wrong people about adolescent interactions and discipline. It may be that there were other people that were more involved with the adolescents than their mothers.
According to Tooker (1983), the extended family makes up a significant force of socialization, protection, and subsistence in Native American families. The intricate family network provides a series of parental figures in the lives of children, much wider than those that operate in traditional European American families. As such, child rearing is likely to be much different in Native American families than in European American families.

Many tribes still engage in a traditional system of collective interdependence, with family members responsible not only to one another but also to the clan and tribe to which they belong... When problems arise among Indian youth, they become the problems of the community as well. The family, kin and friends join together to observe the youth's behavior, draw the youth out of isolation, and integrate that person back into the activities of the group (LaFromboise & Graf Low, 1998:120-121).

In the sample, forty-one percent of the mothers reported that the target child had not lived with them for a period of one month or longer at some point in the child's life. While the children were not with the mothers for a variety of reasons (i.e. went to live with the father as part of visitation or joint custody, financial reasons, entering treatment for drugs or alcohol, due to being in jail, social services, or foster care), often the cause was that the child was sent to live with other relatives such as a grandparent or other close relative. Of those that had lived outside the home, most children went somewhere else to live two to three times over their life-course. Therefore, it is plausible that mother's antisocial behavior was not linked to her negative parenting because of her relative presence in the life of her child.

Finally, this finding may be real. For this sample, it is possible that there was no direct relationship between mother’s antisocial behavior and her eventual negative parenting or lack thereof. Such a finding indicates that within this sample, modeling of behaviors may be more important than how adolescents are parented behaviorally. As it stands, there is a considerable lack of research devoted to American Indian youth that examine problem
behaviors/delinquency, drug and alcohol use, suicide, depression etc. (McShane, 1988). Similar overtures can be made concerning American Indian adults and how these affect adolescent rates.

Consistent with the findings of Caspi and Elder (1988) a generational link was observed from mother's reports of her antisocial behavior and targets reports of antisocial behavior. Consistent with social learning (Liebert & Liebert, 1998; Akers, 1994; Bandura, 1977; Bandura & Walters, 1963), intergenerational transmission (Elder & Conger, 2000; Bengston, 1995; Moffit, 1995; Patterson et al., 1992; Elder, 1974), and/or the genetic arguments (O'Connor et al., 1998a, 1998b; Rutter et al., 1998; Rutter et al., 1990; Todd et al., 1993) increases in mother's antisocial behavior significantly increase the likelihood of target's antisocial behavior. It is likely that this relationship was due to a combination of the forces, thus supporting arguments by Plomin (1994) and Plomin and Bergeman (1991) to this end.

Consistency was also observed between the analyses findings and those of Caspi and Elder (1988) in the impacts of negative parenting on problem behaviors in adolescents. This was observed between two generations. First, grandmothers' negative parenting increases the likelihood that mothers report antisocial behaviors (G1 to G2). Similarly, mothers' negative parenting increases the likelihood that the targets report antisocial behaviors (G2 to G3). These findings were consistent with both the hypotheses in this study and contemporary literature in this area (Simons et al., 2000; Lynam, 1996). No significant direct paths were observed from mother's retrospective reports of grandmother's negative parenting to target's
antisocial behavior although significant indirect effects were observed in the analyses through mother’s negative parenting and through mother’s antisocial behavior.

To provide a further test of this finding, in the sample, 36 grandmothers were identified from a larger sample of family identified mentors that were interviewed as part of the baseline study. As part of the interview, the mentors were asked the parenting questions about their contact with the target adolescents in the study. In order to determine if a direct relationship exists between grandmother’s negative parenting and adolescent’s antisocial behavior, correlations and regression analysis were used. No SEM analyses were run due to the small number of cases. No significant relationship was found between the variables in the analyses. This may be in large part to the small number of cases available for inclusion in the analysis. Interpretation of the results might prove difficult given the context of the study whereas the analytic model used in the study examines the intergenerational transmission from proximate generations. Therefore, this analysis does not provide further contribution to the overall study.

It is likely that such finding were functions of several processes, possibly happening simultaneously. Many Native American parents use parenting styles that encourage autonomy, self-governance, and learning by experience (Skead, 1999; LaFromboise & Graf Low, 1998; Rosenthal, 1974). To the dominant society, such parenting may be seen as negligent or over permissive. Lax parenting styles may promote the development of antisocial behavior in European American children (Reid & Patterson, 1989), however, more research must be undertaken to definitively assess the contributions of lax parenting styles to the development of antisocial behavior in Native American children and adolescents. One of
the greatest difficulties of undertaking this study was the dearth of empirical literature on Native American families.

Another factor to be considered when discussing the relationship between negative parenting and the development of antisocial behavior is that as Simons et al. (2000) notes, it is possible that there is a cyclical process at work wherein one encourages the other's development. As parents use negative parenting techniques, adolescents may become more antisocial thereby encouraging their parents to use even harsher negative techniques thus facilitating more antisocial behavior.

Finally, it is possible that the link between negative parenting and the development of antisocial behavior may be a function of external forces not examined in this study. While this argument can be made for all of the relationships examined in the study, these variables might suffer from the greatest impacts of external forces not included in the analyses. For example, measures of deviant peers, historical grief, underemployment, the historicity of poverty, and discrimination were not included in the study. It is possible that these variables may have considerable impact on the outcomes of negative parenting and the development of antisocial behavior. Needless to say, there is considerable work yet to be done.

Social learning theory (Bandura & Walters, 1963) and life-course theory (Elder, 1974) were supported by the results of the study. Intergenerational continuity (Caspi et al., 1989) was observed from parent to child in both parenting styles (G1 to G2) and problem behaviors (G2 to G3). This continuity was attributed in part to the intergenerational transmission of attitudes, beliefs, and practices that encourage the facilitation of parenting styles and problem behaviors. Through their interaction with parents and other significant others, children and
adolescents learn and often later adopt such practices and ideals (Whitbeck et al., 1992b; Caspi & Elder, 1988; Elder, Caspi & Downey, 1986; Hirschi, 1969, 1977).

Support for life-course theory can be drawn from the timing of life-events and their impacts on overall stability across the life-course (Elder et al., 1995). Older parents were less likely to report antisocial behaviors thus indicating their acceptance of traditional adult roles and desistance of problem behaviors. Target adolescents were more likely to report problem behaviors as they age indicating greater autonomy and the questioning of traditional culture and ideals.

This study has been successful to a great degree in replicating the findings of Elder and Caspi (1988). Consistent with their findings, the impacts of intergenerational transmission were found within the analyses. Non-optimal or negative parenting was found to affect personal instability or problem behaviors in succeeding generations. Generational continuity was also found in personal instability or problem behaviors from one generation to the next. No direct link was found between personal instability or problem behaviors and non-optimal or negative parenting in the analyses. However, the theories the analyses supported can be utilized for studying European American families.

**Limitations**

This study is beset by limitations of generationalization. First, the sample was highly specific culturally, socially, and economically. Second, the sample being Native American, forces generalizations to focus not only to be limited to their specific tribe but also to their particular tribal band. To do otherwise would be faulty at best and poor science at its worst (Strauss, 1993). Third, the data used in these analyses represent only a cross-section in time
for the families involved. A more effective method if the data were available, would be to follow these adolescents in a longitudinal panel study. The study is in fact a multiwave study, however, at the time of analysis, only one wave was available for analysis purposes. Fourth, the exclusion of the effects of father’s negative parenting on adolescent antisocial behavior limits the generalizability of the results. This may be a vital area for future research with American Indian families. Finally, this study focuses on a small subset of the larger population of the three reservations. While the study was designed to examine the lives of American Indian families in context, it may not be truly representative of the reservation population as a whole. However, these limitations aside, the findings of this study provides a poignant look into the development of problem behaviors among these youth.

**Conclusions**

Child rearing is a difficult, complex process that is subject to a number of intervening variables as this study has discussed. The impacts of parents on their children’s socialization and development are second to none. Parents have the ability to significantly impact children’s perceptions of what is real and right (Fagot & Kavanaugh, 1990; Elder & Caspi, 1986). As such, they are a powerful influence on the children’s conforming or deviant life-trajectories (Fergusson et al., 1995; Loeber, 1982). Similarly, the life course perspective posits that the environmental, social, historical, and psychological factors impact the likelihood that adolescents will participate in problems behaviors (Simons et al., 2000; Conger & Simons, 1997, Moffit, 1997; Elder et al., 1986). This study and others found that pro-social caregivers are likely to have pro-social adolescents while antisocial parents are likely to have antisocial adolescents (Belsky, 1995; Redi & Patterson, 1989; Patterson, 1982).
Individuals that provide role models for adolescents are likely to have significant impacts on their behaviors (Bandura & Walters, 1963). In American Indian families, it is very likely that these mentoring dimensions are addressed by parents, extended family members, significant family mentors such as tribal elders, and peers (LaFramboise & Graf Low, 1998; Berlin, 1987). With this information, it is possible to make recommendations for action to stem the tide of problem behavior development.

First, the results of the analyses demonstrate that while problem behaviors arise as youths get older, negative parenting techniques exacerbate the development of these behaviors. Therefore, it is critical that positive parent-child interaction take place. Pro-social, positive parenting may not stave off the development of problem behaviors totally but may encourage the facilitation of adolescent limited rather than life-course persistent offending (Simons et al., 2000; Laub & Sampson, 1993; Patterson, 1992; Farrington et al., 1990). Providing positive parenting resources such as classes or material from trusted sources (i.e. tribal elders) might prove to be a catalyst in the development of more positive parenting styles (Dalla & Gamble, 1998; John, 1998).

Second, the presence of pro-social role models is essential for the development of pro-social attitudes, values, and practices. These behaviors are reinforced through consistent modeling of family and cultural environments (Liebert & Liebert, 1998; Akers, 1994, 1985). Building an environment for adolescents that encourages them to develop positive life skills, perceptions, and activities will lessen the likelihood that they will participate in problem behaviors (Patterson, 1992). Interaction with positive role models such as tribal elders or
others with social trust in addition to facilitating pro-social activities for adolescents will encourage the acceptance of pro-social attitudes, values, and beliefs (John, 1998).

Third, the presence of a father figure in the home significantly impacts the overall stability of the home and therefore the likelihood of adolescent antisocial behavior. Having a male present reduces parental stress by providing an avenue of social and economic support to the mother (Belsky, 1984). When such support is present, mothers are less likely to use negative parenting techniques and to be antisocial themselves. Fathers that engage in positive parenting practices (monitoring, warmth, and supportiveness) also provide the adolescents with positive role models, familial and financial resources, and guidance (Sandefur & Leibler, 1996; Simons et al., 1990). The presence of a pro-social father figure in the home has the possibility of increasing the stability of the home (Lahey, et al., 1988; Belsky, 1984) and therefore should be encouraged by the tribes.

Finally, considerable longitudinal research needs to be conducted that examines the development of problem behaviors across the life-course of American Indian youth. Without such research, it will be difficult at best to come to any specific conclusions as to what contributes to its development among American Indian adolescents. It is important that the tribes facilitate culturally relevant, tribally based research in order to better understand the nature of their familial structure, familial stability, and successful adolescent transitions into adulthood.

While a search for generalizations across American Indian cultures may be futile, research examining these diverse cultures provides a basic understanding of the development of problem behaviors that may be cross-cultural. The underlying theories of social learning
and life-course perspectives are supported by the analyses therefore their inclusion in future research may prove beneficial. With this knowledge in hand, it may be possible to examine problem behaviors in context and find continuities in methods of problem behavior intervention.
APPENDIX A

DISSERTATION FIGURES
Figure 1. Caspi & Elder (1988)

Pre-1900s (Retrospective)  1930s (Prospective)  1960-70s

- Personal instability (G1)
  - Marital conflict (G1)
    - Non-optimal parenting (G1)

- Personal instability (G2)
  - Marital conflict (G2)
    - Non-optimal parenting (G2)

- Difficult child (G3)
  - Marital conflict (G3)
    - Non-optimal parenting (G3)

- Personal instability (G4)
Figure 2: Model Predicting Target's Antisocial Behavior
Figure 3  Model Predicting Target's Antisocial Behavior

Chi-Square=20.2
DF=22
Probability Level=0.57
RMSEA=0.00, Low Value=0.00, High Value=0.05
Goodness of Fit Index = 0.98
APPENDIX B

DISSERTATION TABLES
Table 1  Questions used in scaling measures

Mother’s (G2) Retrospective Report of Her Mother’s (G1) Negative Parenting
- How often did your mother get angry at you? (always, often, sometimes, seldom, never)
- How often did your mother get into a quarrel or argument with you? (always, often, sometimes, seldom, never)
- She really trusted me. Do you... (strongly agree, agree, disagree, strongly disagree) – reverse coded
- She found fault with me even when I didn’t deserve it. (strongly agree, agree, disagree, strongly disagree)
- She really cared for me. (strongly agree, agree, disagree, strongly disagree) – reverse coded.
- She often blamed me for her problems. (strongly agree, agree, disagree, strongly disagree)

Mother’s Antisocial Behavior (These questions are about the mother’s behavior since her 15th birthday)
- Since age 15, have you been in a physical fight? (yes, no)
- Since age 15, have you been the driver in an auto accident where someone was seriously hurt or a car was not driveable? (yes, no)
- Since age 15, have you often driven when you were high or drowsy on alcohol or drugs? (yes, no)
- Since age 15, have you ever been arrested? (yes, no)
- Were you arrested in the last 12 months? (yes, no)

Mother’s Self-Report of Her Negative Parenting
- How often do you get angry at (CHILD)? (always, often, sometimes, seldom, never)
- How often do you get into a quarrel or argument with (CHILD)? (always, often, sometimes, seldom, never)
- I really trusted (CHILD). Do you... (strongly agree, agree, disagree, strongly disagree) – reverse coded
- I find fault with (CHILD) even when he/she doesn’t deserve it. (strongly agree, agree, disagree, strongly disagree)
- I really care for (CHILD). (strongly agree, agree, disagree, strongly disagree) – reverse coded.
- I often blame (CHILD) for my problems. (strongly agree, agree, disagree, strongly disagree)

Target’s Report of Mother’s Negative Parenting
- How often does your mom get angry at you? (always, sometimes, never)
- How often does your mom get into a quarrel or argument with you? (always, sometimes, never)
- My mom really trusts me. Do you... (agree, disagree) – reverse coded
- My mom finds fault with me even when I don’t deserve it. (agree, disagree).
- My mom really cares for me. (agree, disagree) – reverse coded
- My mom often blames me for her problems. (agree, disagree)

Target’s Antisocial Behavior
- If someone hits me first, I let him/her have it.
- When someone makes a rule I don’t like, I want to break it
- When I get mad, I say nasty things
- If someone annoys me, I tell him/her what I think of him/her
- When someone is bossy, I do the opposite of what he/she asks.
- If I have to use physical violence to defend my rights, I will
## 2. Comparison of Imputation Model Results

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**p < 0.01 (2-tailed).
*p < 0.05 (2-tailed).
Table 4. Regression Models Predicting Mother’s Antisocial Behavior

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**P < 0.01 (2-tailed).**
Table 5. Regression Models Predicting Mother's/Target's report of Mother's Negative Parenting

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**$p < 0.01$ (2-tailed).  
* $p < 0.05$ (2-tailed).
Table 6. Regression Models Predicting Adolescent Antisocial Behavior

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**$p < 0.01$ (2-tailed).

* $p < 0.05$ (2-tailed).
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REFERENCES


DSM-IV. Antisocial Personality Disorder


