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Familial influences on adolescent delinquent behavior: An integrated model

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FAMILIAL INFLUENCES ON ADOLESCENT DELINQUENT BEHAVIOR: AN INTEGRATED MODEL

by

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Since the turn of the century, the domain of juvenile delinquency, defined as antisocial or criminal behavior by children or adolescents (Morris, 1980), has been an important area of study. The purpose of the current study was to examine how family relationships were related to self-reported delinquent behavior among adolescents by testing a path model among a sample of adolescents in 6th through 8th grade. Variables in the specified model included family cohesion, family adaptability, family satisfaction, self-esteem, coercive interpersonal style, moral judgment, involvement with deviant peers, and delinquent behavior.

Subjects were 619 adolescents in grades six, seven, and eight from the 29 classrooms of Reidsville Middle School in Reidsville, North Carolina. Demographic information and measures of the study variables were obtained from the subjects.

Results suggested that a model could be specified to predict delinquent behavior. The "best-fit" model for males included Family Cohesion, Coercive Interpersonal Style, and Deviant Peer Involvement as predictor variables to account for 45% of the variance in Delinquent Behavior. The "best-fit" model for females included Family Cohesion and Deviant Peer Involvement to account for 33% of the variance in Delinquent Behavior.

APPROVAL PAGE

This dissertation has been approved by the following committee of the Faculty of the Graduate School at The University of North Carolina at Greensboro.

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CHAPTER I

FAMILIAL INFLUENCES ON DELINQUENT BEHAVIOR: AN INTEGRATED MODEL

Since the turn of the century, the domain of juvenile delinquency, defined as antisocial or criminal behavior by children or adolescents (Morris, 1980), has been an important area of study. Without knowledge of the nature, extent, and causes of delinquent behavior, it would be difficult to successfully intervene with adolescents who are engaging in delinquent behavior. Also, an understanding of delinquent behavior as well as its relationship to adult criminality is essential for evaluating programs designed to rehabilitate known delinquents and to prevent future delinquency (Siegel & Senna, 1988). The current study, which is concerned with adolescents in the developmental period commonly referred to as early adolescence (ages 12 to 14), examined delinquent behavior regardless of adjudication in juvenile court or involvement in the juvenile justice system.

The effect of family relationships on the behavior of children also is a well-established research issue (Loeber & Dishion, 1983). Child behavior depends in large part on the social, intellectual, and emotional development that is nurtured within family relationships (Sprinthall & Collins,

1988). Siegel and Senna (1988) contended that delinquent behavior is influenced by a variety of family attributes, including level of discipline and supervision, warmth and supportiveness of the parent-child relationship, level of intrafamily conflict, parental criminality, family size and birth order, and child abuse and neglect. Therefore, in the current study, the effect of family functioning on delinquent behavior, rather than the effect of parental behavior which has been used frequently in previous studies, was examined by measuring family adaptability and cohesion. An adolescent's satisfaction with the level of cohesion and adaptability in the family was posited to affect delinquent behavior. Other factors examined included involvement with deviant peers and how individual variables, such as self-esteem, and developmental variables, such as moral judgment, mediated other relationships in the model.

Adolescent Problem Behavior: The Significance of the Problem

The increase in incidence of delinquent offenses, as measured by official statistics, is alarming. In the 10-year period from 1980 to 1990, for example, juvenile arrests in North Carolina increased 26% (CGA Consulting Services, 1992). The incidence of specific juvenile offenses in North Carolina during this same period rose even more dramatically. Within the adolescent population, the number of murders was up 127%, robbery was up 61%, aggravated assaults were up 106%, embezzlement increased 218%, weapons

possessions were up 160%, sex offenses other than rape or prostitution increased 93%, manufacturing or sale of opium or cocaine was up 2300%, possession of opium or cocaine was up 935%, and disobeying liquor laws increased 126% (CGA Consulting Services, 1992). The extent to which these increases reflected changes in adolescent behavior or changes in arrest trends that were not reflective of changes in adolescent behavior is unclear. Further study is needed to examine the incidence of delinquent behavior rather than arrests and adjudication. Data on self-reports of delinquent behavior suggest that official statistics may account for as little as 2% of actual juvenile delinquent acts (Dunford & Elliott, 1982, 1984). In addressing the startling increase in delinquent behavior, it appears that more effective prevention and intervention services are needed. To achieve this, counselors and counselor educators need additional information that is more clearly indicative of adolescent behavior.

Purpose of Study

The purpose of the current study was to examine how family relationships were related to self-reported delinquent behavior among adolescents by testing a path model among a sample of adolescents in 6th through 8th grade. The model held that family functioning directly influences the incidence of delinquent behavior during adolescence. Testing of the proposed model also examined

other predictor variables (adolescent self-esteem, interpersonal style, moral judgment, involvement with deviant peers) that were hypothesized to mediate the relationship between family functioning and adolescent delinquent behavior.

The primary goal of this study was to determine the amount of variance in delinquent behavior that could be accounted for by the independent measures (family cohesion, family adaptability, family satisfaction, adolescent self-esteem, coercive interpersonal style, adolescent moral judgment, and involvement with deviant peers) and examine how the specified model fits the data. A majority of multivariate research in this area has been conducted by sociologists and criminologists; academic disciplines tend to focus on specific phenomena (Short, 1985). Each theory accounts for enough variance in delinquent behavior to avoid its rejection but not enough to drive prevention or treatment programs (Elliott, 1985). Because efforts at integrating theories of delinquent behavior have had generally positive results (Elliott, 1985), the current study is an exploratory effort to integrate individual (self-esteem) and developmental variables (moral judgment) into a social systems framework. Cashwell and Pasley (1993) suggested that intrapersonal functioning was important in understanding the incidence of deviant behavior. Understanding the nature of these relationships will provide

counseling practitioners and educators with valuable information for prevention and intervention services.

A secondary purpose of this study was to examine how the proposed model fits the data for subgroups within the sample. Gender was included in the model to examine differences between male and female subjects.

An additional purpose of the proposed study was to examine the co-occurrence of delinquency and substance abuse. Donovan and Jessor (1985) demonstrated that involvement in any one problem behavior (i.e., delinquency, substance abuse, early sexual involvement, and school failure) is predictive of one or more of the other problem behaviors. According to Zaslow and Takanishi (1993), a methodological flaw in current research on adolescents is that studies do not typically measure enough health-compromising behaviors to allow for an assessment of co-occurrence among them. The current study examined the correlation between self-reported delinquent behaviors and self-reported substance abuse.

Need for the Study

Previous research on correlates of family relationships and delinquent behavior has been limited; researchers often have relied primarily on parent report (Gove & Crutchfield, 1982). Sagatun (1991) surveyed parents and minors and concluded that each group attributes responsibility for delinquent behavior differently. Similarly, Gecas and

Schwalbe (1986) found little association between parents' reports of their own behavior and children's perceptions of this behavior. Sagatun (1991) stressed a need for studies of the perceptions of different groups, including minors themselves.

A second limitation of research in this area involves sampling bias. For example, the frequently utilized convenience samples of college students and the use of clinical samples calls into question external validity. Research studies using college student samples also are limited since they typically employ ex post facto designs (i.e., reports of delinquent behavior as an adolescent). Interpreting the results of ex post facto studies is problematic because chance may lead the researcher to draw erroneous conclusions (Heppner, Kivlighan, & Wampold, 1992). And, as Zaslow and Takanishi (1993) asserted, research with representative rather than clinical samples of adolescents is needed.

A third limitation of existing research has been the lack of emphasis on the role of adolescent development in understanding delinquent behavior. Many studies have focused on familial relationships (Gove & Crutchfield, 1982; Johnson, 1987; Johnson & Pandina, 1991; McCord, 1991a; Patterson & Stouthamer-Loeber, 1984; Rankin, 1983; Rankin & Wells, 1990; Rosen, 1986; Van Voorhis, Cullen, Mathers, & Garner, 1988) and peer relationships (Agnew, 1991;

Brownfield & Thompson, 1991; Gardner & Shoemaker, 1989; Giordano, Cernkovich, & Pugh, 1986; Roff, 1992; Snyder, Dishion, & Patterson, 1986) without considering how individual factors (e.g., self-esteem) and developmental factors (e.g., moral judgment) may serve to mediate these relationships. There is a paucity of research comparing the relative predictive power of family variables in combination with developmental variables (Gabor, 1986). Developmental tasks are often researched as outcome variables (Brown & Mann, 1990; Dubow, Huesmann, & Eron, 1987; Frank, Pirsch, & Wright, 1990; Richards, Gitelson, Peterson, & Hurtig, 1991) without considering the role development plays in influencing delinquent behaviors. Levitt, Selman, and Richmond (1991) called for research to incorporate analyses of basic developmental capacities into studies of adolescents' delinquent behavior. One such task is moral judgment.

A number of studies have examined incarcerated or clinical populations of adolescents (Brand, Crous, & Hanekom, 1990; Dunham & Alpert, 1987; Himes-Chapman & Hansen, 1983; Thompson & Dodder, 1986; and Walsh & Beyer, 1987). However, the validity of official delinquency data has been problematic due to administrative and procedural errors, variations in interpretation of criminal definitions, and police bias in arrest decision-making (Siegel & Senna, 1988). Also, official statistics as a

measure of delinquent behavior essentially ignores individuals who engage in delinquent behavior but are undetected by law enforcement. Further, factors that explain delinquent behavior are theoretically confounded with factors responsible for official processing and adjudication (Hood & Sparks, 1970). Johnson (1979) questioned whether the major difference between delinquent and control groups of adolescents in studies is that the former got caught while the latter did not.

A valuable source of information on the delinquent behavior of adolescents who have had formal contact with the juvenile justice system and those who have avoided official notice of their delinquent behavior is self-report studies of delinquency . Self-report measures of delinquent behavior allow for the study of delinquent behaviors prior to official actions and shift the focus from legal-judicial response to the behaviors of concern (Tolan & Lorion, 1988). The benefit of using self-report information on delinquent behavior is evidenced in the following statement by Weiner (1970):

> The perpetrator of a delinquent act may be brought before a court and either adjudged delinquent or not, he (sic) may come to the attention of some agency (police, clinic, school) that responds in a nonadjudicating manner, he (sic) may be detected by persons that do not refer him (sic) to any agency, or he (sic) may go completely undetected (p. 289).

The assumption of self-report studies is that guaranteed anonymity allows subjects to describe their activities honestly. Yet, despite the support for self-reports, they tend to exclude data on the most serious chronic offenses (Cernkovich, Giordano, & Pugh, 1985). Empirical research indicates a sizeable gap between official measures of delinquency and behavior reflected in self-reports (Dunford & Elliott, 1982, 1984). However, research on delinquent behavior continues to utilize self-reports as a standard method of data collection (Siegel & Senna, 1988). Tolan and Lorion (1988) suggested that official records be used when legal status is the construct of interest and that self-report studies be used when delinquent behavior is of concern.

It is also important to utilize adolescent self-reports on other variables in the model. Because parents and minors may have different perspectives (Sagatun, 1991), research is needed to systematically examine adolescents' perspectives on family functioning. Richards, Gitelson, Peterson, and Hurtig (1991) contended that the child's report of parental behavior may be the only one that is related to the child's self-esteem; only small relationships have been established between parent reports and child self-esteem (Buri, 1989; Demo, Small, & Savin-Williams, 1987). Parents have been shown to overestimate desirable characteristics of their families (Callan & Noller, 1986; Olson, McCubbin, Barnes,

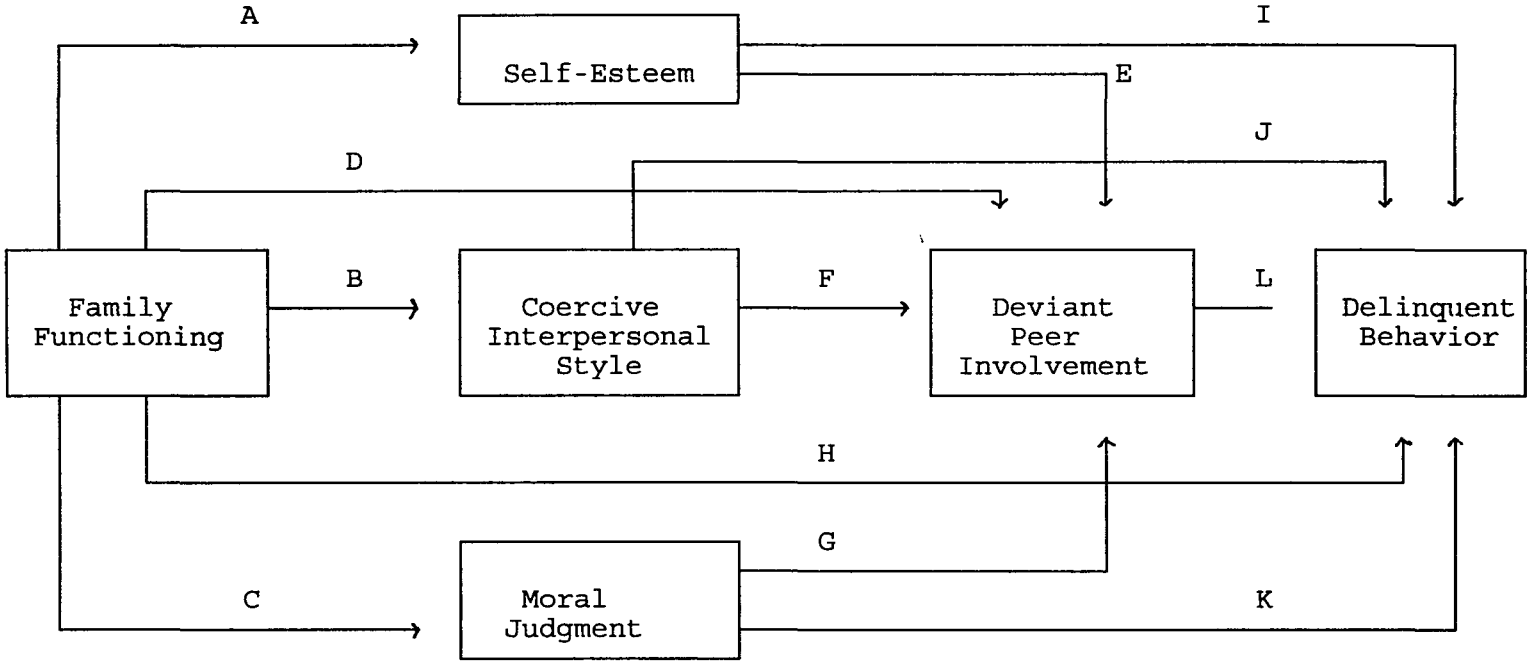
Larsen, Muxen, & Wilson, 1983). Zaslow and Takanishi (1993) called for "collecting descriptive and qualitative data that reflect adolescents' organization of their own experiences...failure to take such a step may lead to a flawed understanding of normal development; it also may limit the effectiveness of interventions" (p. 190). In the current study, using adolescent self-report, where appropriate, contributed to the existing body of literature on family functioning and delinquent behavior among adolescents.

Parker and Asher (1987) reviewed the literature on peer relations and personal adjustment and concluded that "the optimal risk study...is one based on a school sample and yielding follow-up data" (p. 362). The current study met both of these criteria. The sample was drawn from a middle school. Data collected for the current study are the first wave of a planned three-year longitudinal study that will allow for a cross-lagged correlational study to be conducted on this model.

Explanation of Model

Figure 1 depicts the model to be empirically tested. The model posited that family functioning directly influences three characteristics of the adolescent: self-esteem (Path A), interpersonal style (Path B), and moral judgment (Path C). Family functioning also was held to have a direct effect on deviant peer involvement (Path D) and an

Figure 1. Hypothesized Path Model of Family Influences on Delinquent Behavior



indirect effect on deviant peer involvement mediated by self-esteem (Path E), interpersonal style (Path F), and moral judgment (Path G). Family functioning was further believed to have a direct effect on delinquent behavior (Path H). Finally, the model held that self-esteem (Path I), coercive interpersonal style (Path J), moral judgment (Path K), and deviant peer involvement (Path L) would have direct effects on delinquent behavior.

Definition of Terms

The proposed study included a number of variables. It would be helpful at this point to operationally define each of the variables used in the study.

Adolescent Delinquent Behavior

Adolescent delinquent behavior included antisocial, criminal, and status offense behavior by adolescents. For the purpose of this study, these behaviors included serious crimes (e.g., breaking and entering, grand theft, using a weapon in a fight, resisting arrest, forgery, arson, rape), other delinquent acts (e.g., vandalism, knowingly buying stolen property, petty theft), drug offenses (e.g., use/distribution of drugs), and school and family offenses (e.g., runaway, expulsion from school, threatening/hitting an adult) as measured by the Self-Report Delinquency Measure (SRDM; Hindelang, Hirschi, & Weis, 1981).

Family Functioning

In the proposed study, family functioning included family cohesion, family adaptability, and satisfaction with the levels of cohesion and adaptability within the family. Family cohesion was "The emotional bonding that family members have toward one another" (Olson, McCubbin, Barnes, Larsen, Muxen, & Wilson, 1992, p. 1) as measured by the Family Adaptability and Cohesion Evaluation Scales II (FACES II; Olson et al., 1992). Specific concepts used to measure cohesion included emotional bonding, boundaries, coalition, time, space, friends, decision-making, interests, and recreation (Olson et al., 1992).

Family adaptability was used to refer to "The ability of a marital or family system to change its power structure, role relationships, and relationship rules in response to situational and developmental stress" (Olson et al., 1992, p. 1) as measured by FACES II. Specific concepts used to diagnose and measure the adaptability dimension included family power (assertiveness, control, discipline), negotiation style, role relationships, and relationship rules (Olson et al., 1992).

Self-Esteem

Self-esteem referred to a positive or negative attitude toward the self as measured by the Rosenberg Self-Esteem Scale (Rosenberg, 1965). A high self-esteem indicated that one respects and considers him/herself worthy; a low self-

esteem implied self-rejection, self-dissatisfaction, and self-contempt (Rosenberg, 1965). Self-esteem is one dimension of a person's self-concept (Rosenberg & Kaplan, 1982), self-concept referring to the "totality of the individual's thoughts and feelings having reference to himself (sic) as an object" (Rosenberg, 1979).

Coercive Interpersonal Style

Coercive interpersonal style was an interpersonal style, as measured by teacher report, that was characterized as irritable, noncompliant, aggressive, threatening, and antisocial (Patterson, 1986; Simons, Whitbeck, Conger, & Conger, 1991).

Moral Judgment

Moral judgment referred to the "Intellectual or reasoning ability to evaluate the 'goodness' or 'rightness' of a course of action in a hypothetical situation (Muuss, 1988, p. 206) as measured by the Defining Issues Test of Moral Judgment (Rest, 1979).

Deviant Peer Involvement

Deviant peer involvement referred to inclusion in a peer group that commits deviant acts such as skipping school, using alcohol, vandalizing property, shoplifting, and using or selling drugs (Simons et al., 1991), as measured by a modified version of the SRDM (Hindelang et al., 1981).

Research Questions

The proposed study examined the following research questions:

Within the context of the specified model:

1. What is the direct effect of family functioning (cohesion, adaptability, and satisfaction) on the incidence of self-reported delinquent behavior?
2. What is the direct effect of family functioning (cohesion, adaptability, and satisfaction) on adolescent self-esteem, interpersonal style, moral judgment, and deviant peer involvement?
3. What is the indirect effect of family functioning (cohesion, adaptability, and satisfaction) on deviant peer involvement when mediated by self-esteem, coercive interpersonal style, and moral judgment?
4. What is the indirect effect of family functioning (cohesion, adaptability, and satisfaction) on delinquent behavior when mediated by self-esteem, interpersonal style, moral judgment, and deviant peer involvement?
5. What are the direct effects of self-esteem, moral judgment, and coercive interpersonal style on deviant peer involvement?
6. What are the direct effects of self-esteem, coercive interpersonal style, moral judgment, and deviant peer involvement on delinquent behavior?

7. What are the indirect effects of self-esteem, moral judgment, and coercive interpersonal style on delinquent behavior when mediated by deviant peer involvement?

Organization of the Study

The organization of this dissertation includes a review of the current literature, the methodology of the study, the results, and discussion of these results. For clarity, Chapter Two, the review of related literature, is organized by the variables to be studied in the model. In this way, relevant previous research on the relationships between variables included in the current model can be readily reviewed. Chapter Three provides the methodology of the current study, including participants, instruments used to measure the desired constructs, procedures for conducting the study, and statistical analyses that were used. Chapter Four includes the results of the study. Finally, Chapter Five provides a discussion of these results.

CHAPTER II

REVIEW OF RELATED LITERATURE

Family Functioning

Family functioning refers to the quality of interactions within a family system where system members are interdependent. Families with adolescents are often characterized as having high stress levels and discrepancies in how parents and adolescents perceive the family (Olson, McCubbin, Barnes, Larsen, Muxen, & Wilson, 1983). One conceptualization of family functioning is the Circumplex Model and the Family Adaptability and Cohesion Evaluation Scales (FACES) (Olson, Sprenkle, & Russell, 1979). The authors developed a cluster of concepts from family theory and family therapy literature to establish three central dimensions of family behavior. Family cohesion and family adaptability form two of these three dimensions (communication being the third) (Olson et al., 1992).

Family cohesion is defined as the emotional bonding that family members have toward one another. Some of the specific variables that are used to measure cohesion within the Circumplex Model are emotional bonding, boundaries, coalitions, time, space, friends, decision-making, and interests and recreation. Family adaptability refers to the ability of a family system to change its power structure, role relationships, and relationship rules in response to

situational and developmental stress. Specific variables used to measure adaptability within the Circumplex Model include family power (assertiveness, control, discipline), negotiation style, relationship roles, and relationship rules (Olson, 1988; Olson, Russell, & Sprenkle, 1983). The original theory (Olson et al., 1979) hypothesized that both adaptability and cohesion were curvilinear constructs, with optimal functioning in the middle of the continuum for each construct. The cohesion dimension could be measured on a continuum ranging from very low (disengaged) to very high (enmeshed) with measures of separated and connected between. The more central measures of family cohesion (separated and connected) were considered indicative of optimal family functioning. The adaptability dimension could be measured on a continuum ranging from very low (rigid) to very high (chaotic) with measures of structured and flexible between. Again, the more central measures (structured and flexible), were considered indicative of optimal family functioning.

"Balanced" families, then, were those families whose cohesion and adaptability scores on the FACES instrument fell in the center of the Circumplex Model. "Mid-range" families were those families whose scores on the FACES instrument fell somewhat higher or lower on one or both of the two constructs in the Circumplex Model. "Extreme" families, those whose scores on the FACES instrument fall farthest from the center (either higher and lower) on one or

both of the two constructs, were hypothesized to be the least functional to individual and family development (Olson et al., 1979).

Olson, Portner, and Bell (1982) modified the original FACES instrument into a 30-item instrument that correlated strongly with the original. Empirical data suggested that FACES II does not capture the highest categories of cohesion or adaptability, that is, "enmeshed" and "chaotic" families, and consequently is not curvilinear in nature (Barnes & Olson, 1985; Olson & Tiesel, 1991; Pratt & Hansen, 1987). Thus, FACES II is scored in a linear manner, with high scores on the cohesion and adaptability dimensions being reinterpreted as "very connected" and "very flexible", respectively. Using FACES II, then, these highest levels of cohesion and adaptability indicate optimal family functioning.

It also has been hypothesized (Olson et al., 1983; Olson & Wilson, 1982) that level of satisfaction with family cohesion and adaptability is more important than actual measures of cohesion and adaptability. Olson and Wilson (1982) developed the Family Satisfaction Scale to assess the satisfaction of individual family members with the level of cohesion and adaptability within their family system. Satisfaction with family cohesion and adaptability is also an important measure of family functioning.

Family Functioning and Adolescent Self-Esteem

Coopersmith (1967) first emphasized the influence of experiences and interactions with parents on the developing self-esteem. Greenberg, Siegel, and Leitch (1983) found that the quality of attachment to parents was a significantly more powerful predictor of self-esteem among adolescents than was quality of attachment to peers. Various researchers (Anderson & Hughes, 1989; Kawash, Kerr, & Clewes, 1985; Walker & Greene, 1986) have established correlations between self-esteem and the parent-child relationship, concluding that family factors such as parental warmth and acceptance (Demo et al., 1987; Gecas & Schwalbe, 1986; Harter, 1983; Holmbeck & Hill, 1986; Kawash et al, 1985; Litovsky & Dusek, 1985; Rosenberg & McCullough, 1981; Steinberg, 1990), communication (Demo, Small, & Savin-Williams, 1987; Walker & Greene, 1986), perceived parental fairness (Johnson, Shulman, & Collins, 1991; Joubert, 1991; Larzelere, Klein, Schumm, & Alibrando, 1989), cohesion and unity (Cooper, Holman, & Braithwaite, 1983; Himes-Chapman & Hansen, 1983), parental use of coercion (Openshaw, Thomas, & Rollins, 1984) and psychological autonomy or control (Buri, 1988; Buri, Louiselle, Misukanis, & Mueller, 1988; Demo et al., 1987; Joubert, 1991; Kawash et al, 1985; Litovsky & Dusek, 1985; Scott, Scott, & McCabe, 1991) are related to adolescent self-esteem. Loeb, Horst, and Horton (1980) tested various models of family interaction patterns and

concluded that directive parenting is associated with lowered self-esteem in children and that a supportive style of family interaction is associated with higher self-esteem in children. The study by Scott et al. (1991) was unique in that it was cross-cultural. Results indicated a general uniformity across cultures in the magnitude of the correlation between self-esteem and family functioning.

Researchers also have conducted regression analyses to examine these relationships between family functioning and adolescent self-esteem. Kawash et al. (1985) used early adolescent report of parental acceptance, discipline, control, and the gender of the adolescent as predictor variables and accounted for 64% of the variance in a self-report measure of self-esteem. Brand et al. (1990) accounted for 51% of the variance in emotional development among 55 institutionalized adolescents with a measure of parental inconsistency as the sole predictor variable. Holmbeck and Hill (1986) accounted for as much as 35% of the variance in early adolescent's self-esteem with measures of parental acceptance. Eskilson, Wiley, Muehlbauer, and Dodder (1986) used measures of perceived adequacy of friends and perceived ability to meet parental goals to explain 24% of the variance in a self-report measure of self-esteem.

There has been shown to be a developmental factor in the importance of parent-child relationships on adolescent self-esteem. Isberg, Hauser, Jacobson, Powers, Noam, Weiss-

Perry, and Follansbee (1989) measured self-esteem and ego development among subjects at various ages of the adolescent phase and concluded that subjects with lower levels of ego development had higher correlations between self-esteem and parents' valuing of them. The adolescent who has developed stronger ego strength seemed to evaluate self less dependent of parental comments. However, Walker and Greene (1986) measured parent communication and peer relations. They found no interaction between the age of the adolescent and parent communication or peer relations. These results suggested that the effects of parent and peer variables in predicting self-esteem did not vary by age.

One previous study (Kawash & Kozeluk, 1990) examined the relationship between self-esteem in early adolescence as a function of family position within the Circumplex Model of Family Systems. The Circumplex Model represents the functioning of the family system on the dimensions of cohesion and adaptability (Olson et al., 1992). Results of the Kawash and Kozeluk (1990) study suggested that self-esteem in early adolescence is positively correlated with family cohesion while adolescent self-esteem and family adaptability were related in a curvilinear fashion. Kawash and Kozeluk (1990) concluded that the family cohesion dimension is an affective dimension that is analogous to the parental warmth factor in the parent-child literature and that the family adaptability dimension compares to the

extant literature on the communication of rules and limit setting.

Research on family relationships and adolescent self-esteem has produced mixed results. Various researchers (Amato, 1986; Barber & Thomas, 1986) have found daughters' and sons' self-esteem to be predicted by both maternal and paternal support. Others (Gecas & Schwalbe, 1986; Richards et al., 1991) concluded that cross-sex parent-child relations have the strongest influence on adolescent self-esteem. Several researchers (Demo et al., 1987; Gecas & Schwalbe, 1986; Holmbeck & Hill, 1986) have found the self-esteem of boys to be more strongly related to family relationships than the self-esteem of girls. Other results conflict with this, however. Buri et al. (1988) found that more than twice the variance (37%) in self-esteem could be predicted by parental characteristics of authoritarianism and authoritativeness for female adolescents than for male adolescents (16%), suggesting that the self-esteem of female adolescents may be more dependent on family relationships than is the case for male adolescents. Others (Openshaw et al., 1984; Walker & Greene, 1986) also have found parental influences on self-esteem to be stronger for female than for male adolescents. Thus, research on family functioning and adolescent self-esteem remains inconclusive. Anderson and Hughes (1989) cautioned that the research on parenting and self-esteem of children has provided little conclusive

evidence because of poorly developed instruments and extensive variability in research methodology. These authors concluded that more research is needed in the area with careful attention to the instruments selected for use.

Family Functioning and Moral Judgment

Research also has been conducted to examine the importance of the family to the development of moral judgment in adolescents. Zern (1991) surveyed adolescents ranging from junior high through college and concluded that adolescents believe that the major social institutions, including the family, should be used to guide them in their moral development. Killen (1990) demonstrated that children supported decisions by adults to ignore social order violations in certain moral judgments, highlighting the influential role of parents in this process.

There has been little research, however, on the influence of the family on the moral development of their children (Walker & Taylor, 1991). In the most comprehensive study to date, Walker and Taylor (1991) conducted a longitudinal study to examine relationships between parental moral development, parent-child interactions, and subsequent moral development. Their results indicated that parental discussion style and level of moral reasoning provided the best prediction of children's level of moral judgment over a 2-year longitudinal period. Specifically, a parental discussion style that was characterized by eliciting the

child's opinion, asking clarifying questions, paraphrasing, and checking for understanding was found to result in higher levels of moral judgment in children. Hoffman (1977, 1979) suggested that a combination of inductive discipline techniques, highlighting the harmful consequences of the child's behavior for others, a frequent expression of affection outside of the discipline incident, and modeling of moral judgments will influence the moral development of children. Wolff (1990) argued that early childhood experiences that shape conscience and moral conduct are important considerations in examining the relationship between morality and antisocial behavior. It appears, then, that experiences in the family are influential to the development of moral judgment. Previous studies have not examined the relationship between family cohesion, adaptability, or satisfaction and moral judgment of adolescents.

Family Functioning and Coercive Interpersonal Style

Family functioning also has been demonstrated to be an important influence on the interpersonal style of the adolescent. The family is influential in all of the adolescent's interpersonal behaviors as adolescents tend to replicate family patterns in peer relationships (Bell, Cornwell, & Bell, 1988). Patterson (1982, 1986), Olweus (1980), and Patterson and Bank (1989) highlighted the consequences of an irritable, coercive parenting style. The

socialization of child antisocial behavior within the family is the central tenet of coercion theory (Patterson, 1982, 1986; Patterson & Reid, 1984). Loeber and Dishion (1984) found that adolescent boys who fought at home and at school could be characterized as poorly monitored and disciplined by their parents. They also could be characterized as rejected by their parents. Patterson's (1986) model, supported by empirical testing, suggested that disrupted family management skills lead to the development of a coercive and antisocial interpersonal style by the adolescent. This interpersonal style is then carried into relationships with peers, placing the adolescent at risk for labeling and rejection by normal peers. The majority of children who are taught to be antisocial at home are rejected by normal peers (Patterson & Bank, 1989). This "labelling and rejection" phenomena has been supported by other studies (Coie & Kupersmidt, 1983; Dodge, 1983). Thus, the familial influences on interpersonal style in turn influence peer group involvement.

Family Functioning and Deviant Peer Involvement

Children exhibit a greater dependency upon parents during childhood, followed by a growing degree of dependence upon peers during early to middle adolescence (Sabatelli & Anderson, 1991). This transition to a peer social orientation, however, does not always involve a rejection of parental opinions and values (Henggeler & Borduin, 1990;

Sabatelli & Anderson, 1991). Parents and peers appear to make different but complementary contributions to adolescent socialization (Hunter, 1984). Family characteristics, particularly monitoring and discipline, appear to influence association with deviant peers throughout the adolescent period (Dishion, Patterson, Stoolmiller, & Skinner, 1991; Patterson & Dishion, 1985; Snyder et al., 1986). Sabatelli and Anderson (1991) reported that a context in which family and peer influences coexist to provide support for experimentation, intimacy, and the development of self-sufficiency appears to be optimal.

Dishion (1990) studied the association between boys' peer relations and family environment. Results indicated significant positive correlations between measures of family environment (discipline and monitoring) and peer relations indices. The results suggested a path of influence that begins with parental social dispositions, translates into parenting practices, and ends with child characteristics that determine success or failure within the peer group. "Parent supervision and involvement may serve as the key parenting behaviors that help adolescents maintain stable, prosocial, and successful friendships" (Dishion, 1990, p. 889).

Although Greenberg et al. (1983) found little association between the quality of parent and peer attachment, other studies have found stronger relationships.

Bell, Avery, Jenkins, Feld, and Schoenrock (1985) examined associations between family relationships and social competence, concluding that "close relationships with parents were associated with greater satisfaction in peer relationships, contraindicating a replacement of family bonds with peer bonds during adolescence" (p. 118). Armsden and Greenberg (1987) found a similar relationship between parent and peer attachment. Bell et al. (1988) obtained a significant correlation between the degree of connectedness that adolescent girls experienced in family relationships and the degree of connectedness experienced in peer relationships. Thus, the relationship between family functioning and quality of peer relations remains unclear.

More clear, however, is the relationship between family functioning and involvement with deviant peers. Adolescents who have less familial involvement are more susceptible to the influences of delinquent peers (Barnes & Farrell, 1992; Elliott, Huizinga, & Ageton, 1985). Results obtained by DiLalla, Mitchell, Arthur, and Pagliocca (1988) suggest that adolescents who live in a home that can be characterized as high in turmoil have more positive opinions of delinquent peers.

An important study was conducted by Bierman and Smoot (1991) to test a mediating model of the relationship between family characteristics and poor peer relations. Bierman and Smoot hypothesized that punitive and ineffective discipline

would be related to child conduct problems in the home and school which, in turn, would predict poor peer relations. This model is similar to others (Patterson, 1982; Patterson & Bank, 1989; Patterson & Stouthamer-Loeber, 1984; Simons et al., 1991) and to the model developed for the proposed study in that the interpersonal style of the child is viewed as mediating the relationship between family characteristics and peer relations. A path analysis provided support for the mediating model developed by Bierman and Smoot (1991). Patterson and Bank (1989) maintained that an interpersonal style characterized as coercive leads to a rejection by normal peers and subsequent involvement with a group of deviant peers. Elliott, Huizinga, and Ageton (1985) showed that members of this deviant group hold a general attitude that is anti-adult, anti-school, and anti-authority.

Family Functioning and Delinquent Behavior

The social-interactional perspective on delinquency posits that family members train their children to perform antisocial behaviors. This process occurs both through reinforcement and modeling of the antisocial behavior, and through a lack of training in prosocial skills (Patterson, 1982; Patterson & Bank, 1989; Snyder & Patterson, 1986; Stouthamer-Loeber & Loeber, 1988). Structural equation modeling research has generally supported the theory that disruptive parenting practices are causally related to child antisocial behavior (Patterson, DeBaryshe, & Ramsey, 1989;

Simons et al., 1991). While arguments for nonrecursive interactional models have been advanced (Thornberry, 1987, 1991), results of panel designs and longitudinal studies have suggested that causal priority is from family environment variables to adolescent problem behavior rather than from adolescent problem behavior to family environment variables (Simons, Robertson, & Downs, 1989; Thornberry, 1991).

The impact of family functioning (Borduin, Henggeler, & Pruitt, 1985; Borduin, Pruitt, & Henggeler, 1986; DiLalla et al., 1988; Gove & Crutchfield, 1982; Henggeler, Edwards, & Borduin, 1987; Koski, 1988; Patterson & Stouthamer-Loeber, 1984; Simons et al., 1989; Stouthamer-Loeber & Loeber, 1988; Tolan & Mitchell, 1989) and family structure (Farnworth, 1984; Rankin, 1983; Wells & Rankin, 1991) on delinquent choices among adolescents has been well documented. Previous reviews of the literature (Geismer & Wood, 1986; Loeber and Dishion, 1983; Stouthamer-Loeber & Loeber, 1988) have established a number of family variables useful in predicting delinquency. Family factors of poor supervision, lack of involvement by parents, inconsistent discipline, rejection by a parent, parental criminality and aggressiveness, marital problems, parental absence, and poor parental health have been demonstrated to influence delinquent choices.

Researchers also have examined the relationships

between family structure and delinquent behavior. Tygart (1991) examined self-reported delinquent behavior as a dependent variable with family size as the independent variable among a sample of 800 tenth-grade students. Results suggested that greater family size increased delinquency and that this effect was slightly greater for females than for males. One related hypothesis is that socio-economic status (SES) is related to delinquent behavior. However, studies have consistently shown that the relationship between SES and delinquent behavior is almost entirely mediated by parenting practices (Dishion, 1990; Larzelere & Patterson, 1990).

Wells and Rankin (1991) conducted a meta-analysis of the impact of "broken" homes on the incidence of delinquent behavior. They determined that inconsistent results from this research were due to methodological rather than substantive features. Use of official statistics to measure delinquent behavior resulted in a significantly higher correlation between broken homes and delinquency compared to self-report measures of delinquent behavior.

Other research has called into question the relative impact of family structure and family functioning on delinquent behavior. That is, do such factors as family size or "broken" versus intact homes affect incidence of delinquent behavior? Or might this be more a function of role strain on parents and subsequent decrease in the amount

and quality of parental supervision and support that is afforded the adolescent?

Few past studies have concurrently examined family functioning and family structure to predict delinquent behavior. Tygart (1990) studied the relationship between self-reported delinquency and parental status (intact, divorced, single, or stepparents). Results suggested that the strongest relationship was with the amount of time parents spent with their children (family functioning) rather than parental status (family structure). Similarly, Farnworth (1984) found family structure (broken homes) to be a poor predictor of self-reported delinquent behavior among poor black families. However, Rankin (1983) showed broken homes to be an important causal factor of delinquent behavior.

Two studies have compared the relative effects of family structure and family functioning on delinquent behavior with mixed results. Rosen (1986) found that a complex mix of family structure and family functioning variables were related to delinquent behavior, and that the relationships of these variables was different for white and African-American adolescents. Van Voorhis et al. (1988), on the other hand, found nonsignificant relationships between family structure and delinquency. Family functioning variables (supervision, enjoyment of the home, abuse of children, conflict, and affection), however, were all found

to be significantly related to self-reported delinquency. Results on the relative effects of family structure and family functioning remain mixed and inconclusive.

Other studies have examined the relationship between family functioning and the incidence of delinquent behavior. Beginning with the research of Glueck and Glueck (1950), family functioning variables such as communication (Campbell, 1987; Cernkovich & Giordano, 1987), discipline (Campbell, 1987; DiLalla et al., 1988; Lempers, Clark-Lempers, & Simons, 1989; Loeber & Dishion, 1983; McCord, 1991a; Patterson & Stouthamer-Loeber, 1984; Rankin & Wells, 1990; Snyder & Patterson, 1987), use of physical punishment (Glueck & Glueck, 1968; Gove & Crutchfield, 1982), parental personality (Borduin et al., 1985; Stewart, Copeland, & DeBlois, 1988) maltreatment (Bolton, Reich, & Guttries, 1977; Flowers, 1989; Paperny & Deisher, 1983), warmth (Borduin et al., 1986; Hurrelman, 1990; Johnson & Pandina, 1991), monitoring or supervision (Barnes & Farrell, 1992; Campbell, 1987; Cernkovich & Giordano, 1987; Gove & Crutchfield, 1982; Hill & Atkinson, 1988; Loeber & Dishion, 1983; McCord, 1991b; Patterson & Dishion, 1985; Patterson & Stouthamer-Loeber, 1984; Rankin & Wells, 1990; Rey & Plapp, 1990; Snyder & Patterson, 1987; Tolan, 1988a; Veneziano & Veneziano, 1992; Wells & Rankin, 1988), coercive or conflictual parenting style (Borduin et al., 1986; Cernkovich & Giordano, 1987; Henggeler et al., 1987; Koski,

1988; Lewis, Pincus, Lovely, Spitzer, & Moy, 1987; Loeber, Weissman, & Reid, 1983; McCord, 1988; Patterson, 1982, 1986; Tolan, 1987; Tolan, 1988b; Veneziano & Veneziano, 1992; Wahler & Dumas, 1987), hostility (Johnson & Pandina, 1991; Lewis et al., 1987), parental rejection (Rosenberg & McCullough, 1981; Simons et al., 1989), cohesion (Blaske, Borduin, Henggeler, & Mann, 1989; Campbell, 1987; Johnson, 1987; Tolan, 1987), and flexibility (Blaske et al., 1989) have been shown to be important in understanding the relationship between delinquent behavior and family functioning.

Researchers have studied the role of the family environment in predicting delinquent behavior (Patterson, Capaldi, & Bank, 1991; Siegel & Senna, 1988). Patterson and Stouthamer-Loeber (1984) examined the correlations between four family-management skills (monitoring, discipline, problem solving, and reinforcement) with two criterion measures of delinquency (police contacts and self-reported delinquency). Seventy-three families with a fourth grader, 76 families with a seventh grader and 57 families with a tenth grader in a metropolitan area completed the project. The project included data collection through the school, a 3-hour structured family interview, three home observations, several questionnaires, and six brief telephone interviews for both parents and the child. Results indicated that a significant negative correlation existed between the

familial variables of monitoring and discipline and both criterion measures. Median intercorrelations between familial variables gave modest support to the idea that parents who are unskilled in one area of family management tend to be somewhat unskilled in other areas of family management as well.

Studies using regression analyses to predict delinquent behavior with family functioning variables have provided mixed results. Campbell (1987) used a four-factor structure of caring and communication, discipline, pressure, and mother-daughter closeness to explain 31% of the variance in delinquent behavior (both self-reported and official) among a sample of adolescent girls. Controlling for other family factors, Simons et al. (1989) used a two-wave panel design and found parental rejection to be significantly related to delinquent behavior at both data collection points (beta = .28 and .31, respectively).

Larzelere and Patterson (1990) recently conducted one of the most successful efforts to predict delinquent behavior with family factors. Using only three predictors (socio-economic status, parental monitoring, and parental supervision), they accounted for 46% of the variance in delinquent behavior. Further, the socio-economic status variable only influenced delinquent behavior indirectly, mediated by the other variables in the model.

A number of studies have utilized the Family

Adaptability and Cohesion Evaluation Scales (FACES) to examine the relationships between family cohesion and adaptability and delinquent behavior among clinical populations of adolescents (Blaske et al., 1989; Maynard & Hultquist, 1988; McGaha & Fournier, 1987; Rodick, Henggeler, & Hanson, 1986; Smets & Hartup, 1988). McGaha and Fournier (1987) administered the 30-item FACES II instrument to 40 juveniles referred to juvenile court for intake and 50 of their parents. Results revealed significant differences between their sample and available national norms for FACES II. These adolescents, on whom juvenile petitions had been filed, were in family systems that were assessed as significantly less cohesive and more rigid than the available national norms. Further, those juveniles who were from extreme families tended to commit more violent crimes while balanced and mid-range families tended to commit minor crimes or status offenses. Blaske et al. (1989) obtained similar results. They found that the families of assaultive offenders were characteristically disengaged (low cohesion) and rigid (low adaptability). Rodick et al. (1986), however, found families of delinquents to be relatively chaotic (very high in adaptability). Bischof, Stith, and Wilson (1992) found that the families of sex offenders were characterized by greater family cohesion than the families of other delinquents but that these families were less cohesive than control families.

Smets and Hartup (1988) examined the relationships between family adaptability and cohesion and behavior problems, as measured by the Child Behavior Checklist, among a sample of children and adolescents referred for clinical services. Results suggested that extreme scores on cohesion or adaptability (or both) were related to increased behavior problems for children but not for adolescents. Smets and Hartup (1988) called for research to reexamine this age by Circumplex range effect in the systems/symptoms relationship to further the understanding of the developmental factors that may be implicated.

Maynard and Hultquist (1988) administered the 20-item FACES III instrument to 12 residents of a treatment facility for male adolescent delinquents and their family members. Results supported the notion that delinquent behavior is associated with family functioning. Only 25% of the mean family scores fell within the balanced range of the Circumplex Model. The authors concluded that the Circumplex Model serves as a valuable addition to assessment and treatment of delinquent youths and their families.

Other researchers have examined the utility of measuring family cohesion and adaptability and self-reported delinquent behavior among non-clinical samples. Tolan and Lorion (1988) found a significant correlation between delinquent behavior and low family cohesion. Tolan and Thomas (1988) administered FACES II and the Delinquency

Self-Report Measure (Hindelang et al., 1981) to 84 16- to 18-year-olds. Results indicated that adolescents who perceive their families as less supportive and connected engage in more antisocial and delinquent behavior. Respondents scoring in the mid-range and extreme range of family cohesion reported that they actually desired lower levels of connection, suggesting that delinquent and antisocial behavior may result from "a heightened desire to further emotionally separate oneself and not just a response to disengaged families" (p. 328). Tolan (1988a), using FACES II with a general high school sample, accounted for 25% of the variance in delinquent behavior using cohesion and adaptability as prediction variables.

Adolescent Self-Esteem

During adolescence, individuals have a tendency to be particularly concerned with the self. Rosenberg (1965) listed three reasons for the adolescent preoccupation with the self. First, adolescents face a myriad of decisions, including career and dating decisions. Second, adolescence is a period of unusual change. The physical and psychological changes that adolescents undergo force the individual to begin reevaluating the sense of self. Finally, adolescence is a period of unusual status ambiguity. Where there are no clear expectations about social responsibilities or privileges, concern with the self is heightened.

Adolescent Self-Esteem and Deviant Peer Involvement

Research on adolescent self-esteem and peer group involvement is complex and inconclusive at best. Many such studies have theorized a model where inclusion or rejection in certain peer groups influences the development of self-esteem and then examined the relationship of these variables with cross-sectional data (Brown & Lohr, 1987; Downs & Rose, 1991; Hoffman, Ushpiz, & Levy-Shiff, 1988; Lochman & Lampron, 1986; Walker & Greene, 1986).

Empirical evidence from other studies, however, does not support the theory that peer relations influence self-esteem in a unidirectional causal structure. Grunebaum and Solomon (1987) reviewed the literature and concluded that there is a reciprocal relationship between peer relations and self-esteem, such that the two exist within a feedback loop. A healthy self-esteem leads to more appropriate approaches and interactions with peers. Similarly, appropriate approaches and interactions with peers enhance self-esteem.

Other studies, using various research designs, have concluded that the predominant direction of causation between self-esteem and interpersonal behavior is from self-esteem to the interpersonal behavior. Kahle, Kulka, and Klingel (1980) conducted a cross-lagged panel design to test this and concluded that, over time, the primary direction of causation is from self-esteem to interpersonal problems.

Bohrnstedt and Felson (1983) used structural equation methods (LISREL) to test various causal models of self-esteem. Their results suggested that a model in which self-esteem affects perceptions of popularity fit the data better than models that posited the opposite or reciprocal effects. Hirsch and Dubois (1991) used longitudinal data to conclude that the relationship of peer social support to self-esteem appears more circumscribed than previously thought, depending on the rapidity of decline in self-esteem. Research on the relationship between self-esteem and deviant peer involvement remains inconclusive.

Adolescent Self-Esteem and Delinquent Behavior

Eskilson et al. (1986) argued that when adolescents' self-esteem is not supported by conventional groups, they will adopt high-risk behaviors, including delinquent acts. This is similar to the theories tested by Patterson (1982, 1986) and others (Simons et al., 1991); rejection by the conventional peer group increases the likelihood of involvement with deviant peers, which subsequently increases the likelihood of delinquent behavior.

There appears to be a reciprocal relationship between self-esteem and delinquent behavior although empirical results are mixed. A person with a lower self-esteem may be at higher risk for engaging in delinquent acts. However, because delinquent behavior by an adolescent is likely paired with inclusion into a group who share the

predilection toward such behavior, this behavior may actually increase self-esteem among these adolescents in some circumstances (Kaplan, 1978, 1982; Rosenberg, Schooler, & Schoenbach, 1989; Wells, 1989). Other researchers (McCarthy & Hoge, 1984), however, based on a three-wave panel design, concluded that delinquent behavior actually diminished self-esteem and that the effect of self-esteem on subsequent delinquent behavior was negligible. Rosenberg and Rosenberg (1978) used a cross-lagged panel correlation technique and concluded that self-esteem is the more powerful causal factor.

Clearly, then, the results regarding the relationships between adolescent self-esteem and delinquent behavior are mixed (Bursik & Baba, 1986; Evans, Levy, Sullenberger, & Vyas, 1991; Leung & Drasgow, 1986; Wells & Rankin, 1983). Bursik and Baba (1986) presented evidence that the deterrent effects of the severity of punishment and perceptions of the moral wrongness of an act were contingent on the self-esteem of the adolescent. Evans et al. (1991) showed that delinquents in correctional institutions had abnormally lower self-concepts than nondelinquents, including negative self-schema as individuals, members of society, and family members. This institutionalized group also perceived that they were held in low esteem by others. Results of a study by Eskilson et al. (1986) indicated that the self-esteem scores of students reporting vandalism was significantly

lower than the self-esteem scores of students not reporting vandalism. Kaplan, Martin, and Johnson (1986) found that the relationship between self-rejection and deviant behavior was mediated by a rejection by family, school, and friends. Similarly, Wells and Rankin (1983) found no substantial effect of self-esteem on subsequent delinquency when the effects of other causal variables (school, family, and social support) were partialled out. Additional research is needed to clarify the relationship between adolescent self-esteem and delinquent behavior.

Moral Judgment and Delinquent Behavior

There is an assumption that adolescents who engage in delinquent behavior possess a moral deficiency that obstructs their understanding of right and wrong and the rights and feelings of others (Henggeler, 1989). Based on the work of Piaget (1932) and elaborations by Kohlberg (1969), models have described delinquent behavior as an outcome of delayed development of logical reasoning processes (Henggeler, 1989). Kohlberg (1969) theorized six stages in the development of moral reasoning. Persons at stages one and two (preconventional) base their decisions of right and wrong largely on external contingencies. Persons in stages three and four (conventional) internalize familial and societal rules and expectations. Persons at stages five and six (postconventional) can appreciate that rules are subjective and open to change. Gibbs (1987) found that the

developmental understanding of delinquent behavior appears to be in the differences between stage two and stage three moral reasoning. Stage two persons are more likely to commit crimes because of egocentric and practical thinking whereas stage three persons are more sensitive to others.

Antisocial behavior seems to be a developmental trait that begins early in life and frequently continues into adolescence and adulthood (Patterson, DeBaryshe, & Ramsey, 1989). Tolan (1988b) examined commonly identified tasks of male adolescents for their relationship to delinquent behavior during adolescence. He concluded that a substantial portion of delinquent behavior is associated with struggles on developmental tasks. Delinquency is related to moral viewpoints that are relatively immature on a continuum of developing values emphasizing views of justice, fairness, and human rights (Binder, 1988). A number of studies have examined the relationship between moral judgment and delinquent behavior. Lee and Prentice (1988) found delinquent males and a matched nondelinquent comparison group to be significantly different in level of moral reasoning as measured by Kohlbergian moral dilemmas. Delinquent subjects collectively had lower levels of moral reasoning. Addad and Leslau (1990) found adult criminals to score higher on measures of immoral judgement than did a comparison group.

The Defining Issues Test (DIT) has been used to compare the moral judgment of delinquents and control subjects. McColgan (1975) found that the percentage of principled thinking was significantly lower for delinquents than for control subjects. Other researchers also have found that delinquent adolescents scored significantly lower on the DIT than control subjects and that older adolescents who engaged in delinquent behavior scored about the same or lower than younger control subjects, suggesting a delay in moral judgment among adolescents who engage in delinquent behavior (Hains & Miller, 1980; Hanson & Mullis, 1984). Jurkovic and Prentice (1974), however, found no significant differences between the level of moral judgment of delinquent and nondelinquent males.

Researchers also have examined the impact of moral development on delinquent behavior among school samples utilizing the DIT. Delorto and Cullen (1985) used the DIT and a self-report measure of delinquent behavior among a sample of 109 high school students. The measure of delinquent behavior was broken down into six subscales. Regression of the overall delinquency score as well as each of the six subscales on the measure of moral development resulted in no significant relationship. Conversely, Kalliopuska and Mustakallio (1986) found a statistically significant positive correlation between measures of moral judgment and behavior at school.

Jennings, Kilkenny, and Kohlberg (1983) suggested that the morally preconventional adolescent may be going through age-appropriate development in other areas, including identity, self-esteem, need for peer approval, and independence. Such an adolescent must navigate these developmental tasks without the "fairness-oriented constraint or positive guidance afforded by conventional moral reasoning" (p. 312). Such developmental challenges may partially explain the incidence of delinquent behavior. However, while a general developmental delay in moral reasoning among adolescents who engage in delinquent behavior is supported by the literature, many such adolescents are found at higher stages (Arbuthnot, Gordon, & Jurkovic, 1987). The role of moral judgment in influencing delinquent behavior remains debatable.

One of the controversies in research on moral development has been the charge of gender bias. Gilligan (1982) and others (Baumrind, 1986) have asserted that Kohlberg's theory of moral development is insensitive to gender differences in moral issues. Inclusion of contextual relativism into the moral reasoning process constitutes a regression from principled moral reasoning that is evidenced in many well-educated, intelligent, late adolescents (Muuss, 1988). Murphy and Gilligan (1980) and Gilligan (1982) have proposed that such moral reasoning is not a regression but a different and equally valid type of postconventional

morality (Muuss, 1988). Mature moral reasoning includes a sensitivity to multifarious human emotions and situations and personal experience of moral conflict, choice, and responsibility (Gilligan, 1982; Skrimshire, 1987).

While Kohlberg's (1976, 1981) theory of moral development may be gender biased, it is unclear how gender bias affects specific measures of moral judgment. Walker (1984, 1986) conducted box-score reviews and a meta-analysis of the available literature on moral development, concluding that gender differences in the moral development in research to date have been trivial and nonsignificant. Walker and deVries (1985) reviewed the literature with similar conclusions. In their study, 86% of the samples reviewed showed no significant gender difference in moral development. Female subjects had higher scores in 6% of the samples, whereas males had higher scores in 9% of the reviewed samples. Walker (1986), through his meta-analysis of the literature, concluded that gender explained only one twentieth of 1% of the variance in moral reasoning development. Research to date suggests that differences between males and females on the DIT are trivial, explaining less than one-half of one percent of the variance in moral judgment scores (Rest, 1986; Thoma, 1984). The DIT also has been found to have similar factor structure, internal consistency, and reliability cross-culturally, although the relationships between DIT scores and other variables have

been found to differ across cultures (Moon, 1986).

Coercive Interpersonal Style and Deviant Peer Involvement

Patterson (1982, 1986) developed a theoretical framework for understanding antisocial behavior that highlights the consequences of an irritable, coercive parenting style. This parenting style is not only ineffective in controlling the child's antisocial behavior but also has the effect of intensifying the child's aggressiveness. Patterson (1982, 1986) found that children who are raised in such an environment generalize this coercive interpersonal style to relationships with peers. This coercive interpersonal style may lead to a rejection by conventional peer groups (Hymel, Rubin, Rowden, & LeMare, 1990; Roff, 1992) and result in increased involvement with peers who share such an aggressive and coercive interpersonal style (Dishion et al., 1991). There is empirical evidence that antisocial characteristics in the home are often generalized into the school setting (Ramsey, Patterson, & Walker, 1990) and from one peer setting to another (Coie & Kupersmidt, 1983). Thus, deficits in social skills increase the likelihood of association with deviant peers (Patterson & Dishion, 1985). There is extensive evidence that social behavior determines whether a child has friends or not (Dodge, 1983; Grunebaum & Solomon, 1987). This rejection by conventional peers, and subsequent involvement with deviant peers, is a central component of

coercion theory (Patterson 1982, 1986). Experimental research on group formation suggests that aggressive behavior leads to rejection by the normal peer group rather than the reverse (Coie & Kupersmidt, 1983; Dodge, 1983; Patterson et al., 1989). Children who are rejected by conventional peers interact with their peers in an aggressive and unskilled manner (Hartup, 1983). Interactions then occur more frequently with children who also exhibit an aggressive interpersonal style (Putallaz & Gottman, 1981). Dishion et al. (1991), utilizing a longitudinal design, found peer rejection to be a significant predictor of involvement with antisocial peers at age 12. Simons et al. (1991) conducted a path analysis to test Patterson's theory. Empirical support for Patterson's theory was evident. Adolescents who were subjected to coercive parenting tended to develop a coercive interpersonal style. Huba and Bentler (1983) suggested that tendencies toward rebellious behavior appear to cause the adolescent to become more involved with a peer culture that further supports these behaviors. It also may be that peer groups are chosen that do not demand behaviors not existent or weak in the child (Dishion et al., 1991). The implications for such an aggressive interpersonal style may well extend beyond the adolescent years. Magnussen, Stattin, and Duner (1983) and Farrington (1991) found aggressiveness among adolescents to be predictive of

criminal activity into young adulthood.

Coercive Interpersonal Style and Delinquent Behavior

Simons et al. (1991) predicted that a coercive interpersonal style would influence delinquent behavior only when mediated by the influence of a delinquent peer group. Their results suggested, however, that the presence of a coercive interpersonal style had a direct effect on the probability of involvement in delinquency regardless of the type of peer associations. It appears that a coercive interpersonal style influences delinquent choices and behavior, peer group involvement notwithstanding. Some cross-sectional analyses (Kupersmidt & Coie, 1990; Kupersmidt & Patterson, 1991) and longitudinal designs (Roff, 1992; Roff & Wirt, 1984; Stattin & Magnusson, 1989) have shown aggression toward peers to be a significant predictor of delinquency. Adolescents who self-report higher levels of delinquent behavior have been shown to report higher levels of aggression in their friendships (Giordano et al., 1986; Patterson, Capaldi, & Bank, 1991).

Deviant Peer Involvement and Delinquent Behavior

Available research suggests that peers are influential in adolescent deviant behaviors (Brownfield & Thompson, 1991; Dishion, Patterson, Stoolmiller, & Skinner, 1991; East, 1989; Hartup, 1983; Hindelang et al., 1981). The peer environment may be influential as the primary socializing agent or as a situational facilitator (Gabor, 1986).

Conventionality of peers has been shown to be inversely related to delinquent behavior (Gardner & Shoemaker, 1989). Kupersmidt and Patterson (1991) found that a lack of acceptance by peers placed adolescents at higher risk. Results obtained by Blaske et al. (1989) suggest that delinquent behavior is linked with high bonding to delinquent peers. Levine and Singer (1988) concluded that the best predictor of high-risk behavior is a knowledge of the adolescent's involvement with a delinquent. Simonian, Tarnowski, and Gibbs (1991) found a measure of antisocial peer influence to be significantly correlated with antisocial behavior. Thus, peers may serve to positively or negatively influence the decision to engage in delinquent acts.

Other researchers have shown a developmental context to the importance of the peer group. O'Brien and Bierman (1988) found that the importance of peer reactions to feelings of social and personal worth increased during adolescence. Children who are rejected by their peer group during the early grade school years are at risk for enduring adjustment problems and at higher risk to engage in delinquent behavior (Parker & Asher, 1987). Brown, Lohr, McClenahan, and Eben (1986) examined adolescents at various stages of the adolescent period and found that peer pressure to commit antisocial behavior increased throughout the adolescent years and that gender differences regarding peer

pressure have declined in recent years. O'Brien and Bierman (1988) interviewed preadolescents and adolescents regarding the influence of their peer group. Older subjects were more likely to view peer evaluations as important to their feelings of personal worth and to view peer rejection as a sign of their unworthiness. Thus, involvement in a positive or negative peer group influences decisions about engaging in delinquent behaviors.

Antisocial behavior and rejection by a "normal" or conventional peer group are important precursors to deviant peer group membership (Patterson et al., 1989; Snyder et al., 1986). Empirical studies suggest that the peer group provides the social context for delinquent behavior (Agnew, 1991; Brownfield & Thompson, 1991; Gardner & Shoemaker, 1989; Hanson, Henggeler, Haefele, & Rodick, 1984; Henggeler, 1989; Huba & Bentler, 1983; Kercher, 1988; Levine & Singer, 1988). In a longitudinal study involving a nationally representative sample, Elliott et al. (1985) found involvement with deviant peers to be the only psychosocial variable linked to delinquent behavior. Their model accounted for as much as 58% of the variance in delinquent behavior. Simons et al. (1991) found a relationship between deviant peer involvement and delinquent behavior (beta = .29). Peers are believed to provide the adolescent with the attitudes, motivations, and rationalizations to support delinquent behavior and provide opportunities to engage in

specific delinquent acts (Patterson et al., 1989). Jennings et al. (1983) showed that group involvement and moral development are related such that delinquent groups tend to attract preconventional adolescents.

Summary

Although research to date has often provided inconclusive or mixed results, empirical evidence exists for the relationships posited in the proposed study. There is a need, however, for the integration of individual-level (self-esteem) and developmental variables (moral judgment) into a social systems (family functioning, deviant peer involvement) framework to predict delinquent behavior. The current study was an exploratory effort at such an integration.

CHAPTER III

METHODOLOGY

The current study represented an extension of the literature in that current theories of delinquent behavior were integrated. In testing the research hypotheses, a number of methodological issues were addressed. This chapter reports the research hypotheses, examines the method of sampling used in this study, the instruments used to measure relevant constructs, the procedures for data collection, and the statistical analyses that were used to examine the data.

Research Hypotheses

This study was conducted to address the following research hypotheses:

Within the context of the specified model:

1. Family functioning will have a direct effect on incidence of self-reported delinquent behavior.
2. Family functioning will have a direct effect on adolescent self-esteem, coercive interpersonal style, moral judgment, and deviant peer involvement.
3. Family functioning will have an indirect effect on deviant peer involvement mediated by self-esteem, coercive interpersonal style, and moral judgment.

4. Family functioning will have an indirect effect on delinquent behavior mediated by self-esteem, coercive interpersonal style, moral judgment, and deviant peer involvement.
5. Self-esteem, moral judgment, and coercive interpersonal style will have direct effects on deviant peer involvement.
6. Self-esteem, moral judgment, coercive interpersonal style, and deviant peer involvement will have direct effects on delinquent behavior.
7. Self-esteem, moral judgment, and coercive interpersonal style will have indirect effects on delinquent behavior mediated by deviant peer involvement.

Subjects

Subjects were 619 adolescents in grades six, seven, and eight obtained from the 29 classrooms of Reidsville Middle School in Reidsville, North Carolina. All of the classrooms in Reidsville Middle School participated in the current study. The total population studied consisted of 301 (48.6%) females and 318 (51.4%) males. The population was comprised of 301 (48.6%) white students, 241 (38.9%) African-American students, 4 (.6%) Indian students, 25 (4%) "Other" (most indicated that they were bi-racial), 6 (1%) "Unknown", and 42 (6.8%) did not specify.

The students were asked to provide information about their living arrangements. In the sample, 296 (47.8%)

subjects indicated that they lived with both parents, 61 (9.9%) with their mother and stepfather, 14 (2.3%) with their father and stepmother, 135 (21.8%) with mother only, 18 (2.9%) with father only, 38 (6.1%) with other relatives, 3 (.5%) in foster care, 8 (1.3%) "Other" living arrangements, and 46 (7.4%) did not specify.

Instrumentation

Measures of family cohesion, family adaptability, family satisfaction, adolescent self-esteem, coercive interpersonal style, moral judgment, deviant peer involvement, and delinquent behavior were used. The instruments assessing these variables are in Appendix A. The current study used adolescent self-report to gather all of the data except for the measure of coercive interpersonal style. This variable was measured by teacher report. The form used to gather data on coercive interpersonal style is in Appendix B.

Family Adaptability and Cohesion Evaluation Scale (FACES II)

FACES II (Olson et al., 1992) is a 30-item Likert format instrument measuring the dimensions of family cohesion and family adaptability. The scale contains 16 cohesion items and 14 adaptability items. Dimensions of cohesion include emotional bonding, family boundaries, coalitions, time space, friends, decision-making, and interests and recreation. Dimensions of adaptability include assertiveness, leadership, discipline, negotiations,

roles, and rules (Olson et al., 1992). Although earlier versions of FACES considered the measures to be curvilinear in nature, empirical evidence suggests that FACES II represents a linear model of family types. Concurrent validity of FACES II has been established through correlations with other family instruments. Hampson, Hulgus, and Beavers (1991) compared the Dallas Self-Report Family Inventory (SFI) with FACES II and found correlations of .93 (cohesion) and .79 (adaptability). Estimates of the internal consistency reliabilities as measured by Cronbach alphas are .87 (cohesion), .78 (adaptability), and .90 (total scale) for a sample of 2,543 adults (Olson et al., 1992). The reading level of FACES II was calculated, using Fry's Readability Graph (Fry, 1977), to be sixth-grade.

Family Satisfaction Scale (FSS)

The FSS (Olson et al., 1992) is a 14 item instrument to assess satisfaction with current levels of family cohesion and adaptability. Estimates of the internal consistency reliabilities as measured by Cronbach alphas are .85 (cohesion), .84 (adaptability), and .92 (total scale) for a sample of 2,056 adults and 412 adolescents (Olson et al., 1992). Olson et al. (1992) recommended using the total scale as opposed to subscales due to enhanced validity and reliability. The total score was used for the current study. The five-week, test-retest correlation for the total score was .75 (Olson et al., 1992). The reading level of

the FSS was calculated, using Fry's Readability Graph (Fry, 1977), to be fourth grade.

Rosenberg Self-Esteem Scale (RSE)

The RSE is a 10-item Guttman scale with a Likert-style format. Responses range from Strongly Disagree (1) to Strongly Agree (4). The scale has a Coefficient of Reproducibility of 92% and a Coefficient of Scalability of 72% (Rosenberg, 1979). Recent confirmatory analysis provides support for the validity of the RSE as a measure of experienced self-esteem (Demo, 1985). The reading level of the FSS was calculated, using Fry's Readability Graph (Fry, 1977), to be third grade.

Defining Issues Test of Moral Judgment (DIT) (short form)

The DIT short form consists of three stories involving moral dilemmas. After each moral dilemma, subjects are asked to rate and rank 12 issues as to the importance of each in making a decision about what ought to be done (Rest, 1979). In the first story, a man must decide whether to steal an expensive drug that he cannot afford to save his wife who is near death from a special kind of cancer. In the second story, a man has escaped from prison and lived life as a solid citizen for eight years. A former neighbor recognizes him one day and must decide what to do. In the third story, a student has begun publishing a school newspaper that spurred on student unrest and protests. The moral dilemma revolves around whether the principal should

stop the newspaper. While DIT research is based on Kohlberg's developmental theory, scores are not strictly equivalent to Kohlberg's test of moral development. The DIT's index locates a subject on a developmental continuum of moral development and contains two internal checks of subject reliability (Rest, 1990). Various studies using the DIT have had test-retest reliabilities in the high .70s or .80s with a Cronbach's alpha index of internal consistency generally in the high .70s (Rest, 1979, 1990). Rest (1979, 1990) reported that criterion group and convergent validities are acceptable. The reading level of the DIT was calculated using Fry's Readability Graph (Fry, 1977). The dilemmas tested at the seventh-grade level and the issues tested at the eighth-grade level. The DIT was read to the subjects by an examiner. This format has previously been used with subjects in the age range of the current study (Hains and Miller, 1980; McColgan 1975).

Deviant Peer Involvement

The measure of Deviant Peer Involvement includes 41 items that were drawn from the Self-Report Delinquency Measure (SRDM) described below. The items were selected as representative of the 69 items in the SRDM. Subjects were asked to respond, on a continuum ranging from none to all, as to how many of their close friends had engaged in any of the behaviors. The internal consistency of the new scale was acceptable for the current sample (alpha = .97). The

reading level of the measure of deviant peer involvement was calculated using Fry's Readability Graph (Fry, 1977), to be fifth grade.

The Self-Report Delinquency Measure (SRDM)

The SRDM was developed by Hindelang et al. (1981) and consists of 69 items partitioned into five scales: official contact, serious crime, delinquency, drugs, and school and family offenses. The scale scores can be summed to provide one quantitative rating of self-reported delinquent behavior. While Hindelang et al. (1981) provided three scoring indexes (a count of the number of different offenses the subject has ever committed, a count of the number of different offenses the subject has committed in the past year, and the sum of the frequencies of each offense in the past year), previous research (Tolan & Lorion, 1988) suggested that these three indexes are highly correlated. For the purpose of this study the "ever variety" (count of the number of different offenses the subject has ever committed) will be used. Hindelang et al. (1981) reported Cronbach's alphas for the "ever variety" that ranged from .86 to .93 for various sub-groups (race, gender, SES) with no "systematic or substantial variation as a function of demographic subgroup" (p. 81). Test-retest reliability (45 minute interim) of a 22 item subset of the items resulted in Pearson's r-values that were above .9 for every subgroup except black males with police contact. Support for the

construct validity of the SRDM has been obtained with a large and diverse sample pool and is relatively comprehensive in the types of acts it measures (Tolan, 1988b). The majority of studies on the validity of the SRDM produce validity coefficients in the moderate to strong range (Hindelang et al., 1981). The reading level of the SRDM was calculated using Fry's Readability Graph (Fry, 1977), to be fifth grade.

Teacher Report of Coercive Interpersonal Style (CIS)

The CIS measure (see Appendix B) was drawn from teacher responses to the level of coercive behavior that students demonstrate in interpersonal relationships. Teachers were asked to respond to one item: "What level of coercion and/or aggressiveness does this student utilize in his/her interpersonal relationships." A Likert format response was used (1=none to 5=very much). Teachers provided this information for each of the students in the study. Evidence exists that teachers can provide such information about their students with a high level of accuracy (Bower, 1981; Hymel & Rubin, 1985; Kupersmidt & Patterson, 1991; Ledingham & Younger, 1985; Parker & Asher, 1987; Tremblay, LeBlanc, & Schwartzman, 1988).

Procedure

This study examined approximately 200 students from each of grades six, seven, and eight. Consent forms were distributed to students to take home to their parents, who

had the option of not allowing their child to participate in the study. Research packets including teacher instructions, instrument booklets, opscan forms, and pencils were distributed to teachers who administered the instruments during a two-hour block of time. Initial administrations of the instruments suggested that two hours was adequate for test administration. An instrument booklet was distributed to subjects that included each of the following instruments (Appendix A contains the instrument booklet): Family Adaptability and Cohesion Evaluation Scales II (FACES II), Rosenberg Self-Esteem Scale, Deviant Peer Involvement, the Self-report Delinquency Measure (SRDM), and a demographics sheet. The instruments was distributed in booklet form. Student identification numbers were utilized to insure anonymity of responses, while allowing various measures (instrumentation booklet, DIT, teacher report of coercive interpersonal style) to be analyzed. Teachers facilitated the administration of the instruments. School counselors and the primary researcher were available for consultation if needed. Students completed FACES II, the RSE, DIT, measure of deviant peer involvement, and the SRDM on their own. Teachers then read the DIT moral dilemmas and issue statements to students who completed the DIT as it was being read to them. Teachers defined any words that were not understood but provided no other guidance to the students. Teachers were asked to rate the students' level of coercive

interpersonal style.

Data Analysis

The data analysis included descriptive and inferential measures of the study variables. Descriptive statistics were used to describe the subjects. T-tests were used to compare mean scores on all instruments across gender. The analysis of variance (ANOVA) procedure was used to compare mean scores on all instruments across grade level. A Pearson R was calculated between measures on the delinquency index of the SRDM and the drug index of the SRDM to examine the notion of a syndrome of problem behaviors (Donovan & Jessor, 1985).

Additionally, a path analysis was used with the single measure of delinquent behavior as the criterion variable to examine the relationships between the variables in the model for the entire sample. A calculation of R-square scores and beta coefficients was used to examine these relationships. A number of assumptions underlie the use of path analysis (Pedhazur, 1982). First, the relations of the variables in the model are assumed to be linear, additive, and causal. Second, variables not included in the model and subsumed under residuals are assumed to be uncorrelated with the variables in the model. Third, there is a one-way causal flow in the model. Fourth, the variables in the model are measured on an interval scale. Finally, the variables are assumed to be measured without error. It is recognized in

the current study that the assumptions of path analysis are rarely rigorously met.

CHAPTER IV

RESULTS

This chapter provides the results of the current study based on descriptive statistic analysis, analysis of variance statistics, regression analysis, and path analysis. The data are presented in the following sections: Research hypotheses, examination of the study variables, and examination of the model.

Research Hypotheses

The research hypotheses in the current study reflect the need to examine the direct, indirect, and total effects of the independent variables in the specified model. Hypothesis one posited that the Family Functioning variables would have direct effects on incidence of self-reported delinquent behavior. These path coefficients were calculated to be -.21 (Family Cohesion), .08 (Family Adaptability), and .001 (Family Satisfaction).

Hypothesis two indicated that the Family Functioning variables would have direct effects on adolescent Self-Esteem, Coercive Interpersonal Style, Moral Judgment, and Deviant Peer Involvement. Path coefficients for hypothesis two are shown in Table 1.

Table 1

Path Coefficients for Direct Effects of Family Functioning on Self-esteem, Coercive Interpersonal Style, Moral Judgment, and Deviant Peer Involvement

	Dependent Variable			
Family Variable	Self-Esteem	Coercive Interpersonal Style	Moral Judgment	Deviant Peer Involvement
Family Cohesion	.06	-.13	.14	-.37
Family Adaptability	.11	-.03	-.06	.13
Family Satisfaction	.35	-.05	-.10	-.04

Hypothesis three indicated that the Family Functioning variables would have an indirect effect on Deviant Peer Involvement mediated by Self-Esteem, Coercive Interpersonal Style, and Moral Judgment. Path coefficients for this hypothesis are shown in Table 2.

Table 2

Path Coefficients for Indirect Effects of Family Functioning on Deviant Peer Involvement

	Mediating Variable		
Family Variable	Self-Esteem	Coercive Interpersonal Style	Moral Judgment
Family Cohesion	-.0024	-.0416	.0028
Family Adaptability	-.0044	-.0096	-.0012
Family Satisfaction	-.01	-.016	-.002

Hypothesis four posited that the Family Functioning variables would have an indirect effect on Delinquent Behavior mediated by Self-Esteem, Coercive Interpersonal Style, Moral Judgment, and Deviant Peer Involvement. There were seven indirect paths from each of the Family Functioning Variables to Delinquent Behavior. Path coefficients for hypothesis four are shown in Table 3.

Table 3

Path Coefficients for Indirect effects of Family Functioning on Delinquent Behavior

	Mediating Path						
Family Variables	Self-Esteem	Coercive Interpersonal Style	Moral Judgment	Deviant Peer Involvement	Self-Esteem/ Deviant Peer Involvement	Coercive Interpersonal Style/Deviant Peer Involvement	Moral Judgment/ Deviant Peer
Family Cohesion	.0042	-.0156	.014	-.170	-.001104	-.01913	.001288
Family Adaptability	.0077	-.0036	-.006	.0598	-.002024	-.004416	-.000552
Family Satisfaction	.024	-.006	-.01	-.023	-.00644	-.00736	-.00092

Hypothesis five indicated that Self-esteem, Moral Judgment, and Coercive Interpersonal Style would have direct effects on Deviant Peer Involvement. These path coefficients were calculated to be .04 (Self-Esteem), .32 (Coercive Interpersonal Style), and .02 (Moral Judgment), respectively.

Hypothesis six posited that Self-Esteem, Moral Judgment, Coercive Interpersonal Style, and Deviant Peer Involvement would have direct effects on Delinquent Behavior. These path coefficients were calculated to be .07

(Self-Esteem), .10 (Moral Judgment), .12 (Coercive Interpersonal Style), and .46 (Deviant Peer Involvement), respectively.

Hypothesis seven posited that Self-Esteem, Moral Judgment, and Coercive Interpersonal Style will have indirect effects on Delinquent Behavior mediated by Deviant Peer Involvement. The path coefficients for these indirect effects were .0184 (Self-Esteem), .0092 (Moral Judgment), and .1472 (Coercive Interpersonal Style).

Total Effects

Based on the direct and indirect effects of Family Cohesion, Family Adaptability, Family Satisfaction, Self-Esteem, Coercive Interpersonal Style, Moral Judgment, and Deviant Peer Involvement, total effects were calculated. The total effects represent the sum of direct effects and all indirect paths, and are provided in Table 4.

Table 4

Total Effects of Variables Affecting Delinquent Behavior

Variable	Total Effect
Family Cohesion	.4355
Family Adaptability	.1641
Family Satisfaction	.0792
Self-Esteem	.0884
Coercive Interpersonal Style	.2672
Moral Judgment	.1092
Deviant Peer Involvement	.46

Examination of the Study Variables

Measures of each of the variables posited to affect delinquent behavior were collected. The means and standard deviations for each of these variables are reported in Table 5.

Differences in means between male and female adolescents were conducted using *t*-tests. Significant differences were found between males and females on Deviant Peer Involvement, Coercive Interpersonal Style and Delinquent Behavior. Male respondents reported greater involvement with deviant peers and a higher incidence of delinquent behavior than did female respondents. Teachers

Table 5

Means, Standard Deviations, and T-Values of Variables Affecting Delinquent Behavior, by Adolescent Group.

	Subjects						
	All (n = 619)		Males (n = 318)		Females (n = 301)		
Variable	Mean	S.D.	Mean	S.D.	Mean	S.D.	T-value
Family Cohesion	56.40	10.20	56.49	9.80	56.27	10.61	-.27
Family Adaptability	44.25	7.93	47.99	10.63	44.30	7.88	.19
Family Satisfaction	47.99	10.63	48.14	10.59	47.84	10.70	-.35
Deviant Peer Involvement	22.30	27.63	27.06	31.13	17.30	22.43	-4.48*
Self-Esteem	31.77	5.98	31.88	5.88	31.65	6.09	-.48
Moral Judgment	6.12	3.81	6.12	4.01	6.13	3.65	.02
Coercive Interpersonal Style	2.45	1.30	2.66	1.35	2.23	1.21	-4.15*
Delinquent Behavior	6.76	14.39	9.09	17.27	4.44	10.32	-3.67*

* Means are significantly different (p < .01)]

rated male students higher on Coercive Interpersonal Style than they rated female students.

A oneway analysis of variance (ANOVA) was used to test the variability between respondents by grade for grades six, seven, and eight. Results are reported in Table 6. There were five significant results. Effects for grade level were obtained for Family Cohesion ($F = 3.54$, $df = 585$, $p < .05$), Family Satisfaction ($F = 5.13$, $df = 591$, $p < .05$), Deviant Peer Involvement ($F = 4.08$, $df = 591$, $p < .05$), Coercive Interpersonal Style ($F = 19.76$, $df = 591$, $p < .01$), and Delinquent Behavior ($F = 4.31$, $df = 484$, $p < .05$).

Table 6

Means, Standard Deviations, and Oneway Analysis of Variance (ANOVA) of Variables Affecting Delinquent Behavior, by Grade Level.

	Grade						
	Six (n = 219)		Seven (n = 201)		Eight (n = 176)		
Variable	Mean	S.D.	Mean	S.D.	Mean	S.D.	F
Family Cohesion	57.54	10.25	57.80	9.82	54.85	10.31	3.54*
Family Adaptability	43.90	8.12	45.04	7.55	43.83	7.63	1.51
Family Satisfaction	49.28	10.80	48.30	10.33	45.92	10.35	5.13*
Deviant Peer Involvement	20.78	29.16	19.97	23.77	27.44	29.36	4.08*
Self-Esteem	31.98	6.27	31.70	5.34	31.49	6.22	.33
Moral Judgment	6.03	4.00	6.25	3.99	6.10	3.48	.08
Coercive Interpersonal Style	2.86	1.36	2.15	1.25	2.25	1.10	19.76*
Delinquent Behavior	4.53	9.42	6.94	17.30	9.26	15.23	4.31*

* Omnibus F-test is significant ($p < .05$)

Scheffe's procedure was used to conduct post-hoc comparisons. Eighth-grade students reported a significantly lower level of Family Cohesion and Family Satisfaction and higher levels of Delinquent Behavior than did sixth-grade students. Eighth-grade students reported a significantly higher level of Deviant Peer Involvement than did seventh-grade students. Finally, teachers rated sixth-grade students higher on Coercive Interpersonal Style than either seventh-grade or eighth-grade students.

All of the study variables are intercorrelated at a significant level ($p \leq .01$) with the exception of the measure of Moral Judgment, which did not correlate significantly with any of the study variables. The zero-order correlation matrix for the variables is presented in Table 6.

A Pearson r was calculated between measures on the delinquency index and the drug index of the Self-Report Delinquency Measure (SRDM) to examine the notion of a syndrome of problem behaviors. The two indices correlated significantly ($r = .84$, $p < .01$).

Table 7

Correlation Matrix of Variables Affecting Delinquent Behavior

		Family Adaptability	Family Satisfaction	Deviant Peer	Self-Esteem	Moral Judgment	Coercive Interpersonal Style	Delinquent Behavior
Family Cohesion	1.00	.65**	.70**	-.35**	.38**	.04	.18**	-.30**
Family Adaptability		1.00	.66**	-.20**	.38**	-.02	-.15**	-.17**
Family Satisfaction			1.00	-.29**	.47**	-.02	-.16**	-.24**
Deviant Peer Involvement				1.00	-.16**	-.01	.33**	.64**
Self-Esteem					1.00	.02	-.11**	-.14**
Moral Judgment						1.00	-.06	.10
Coercive Interpersonal							1.00	.30**
Delinquent Behavior								1.00

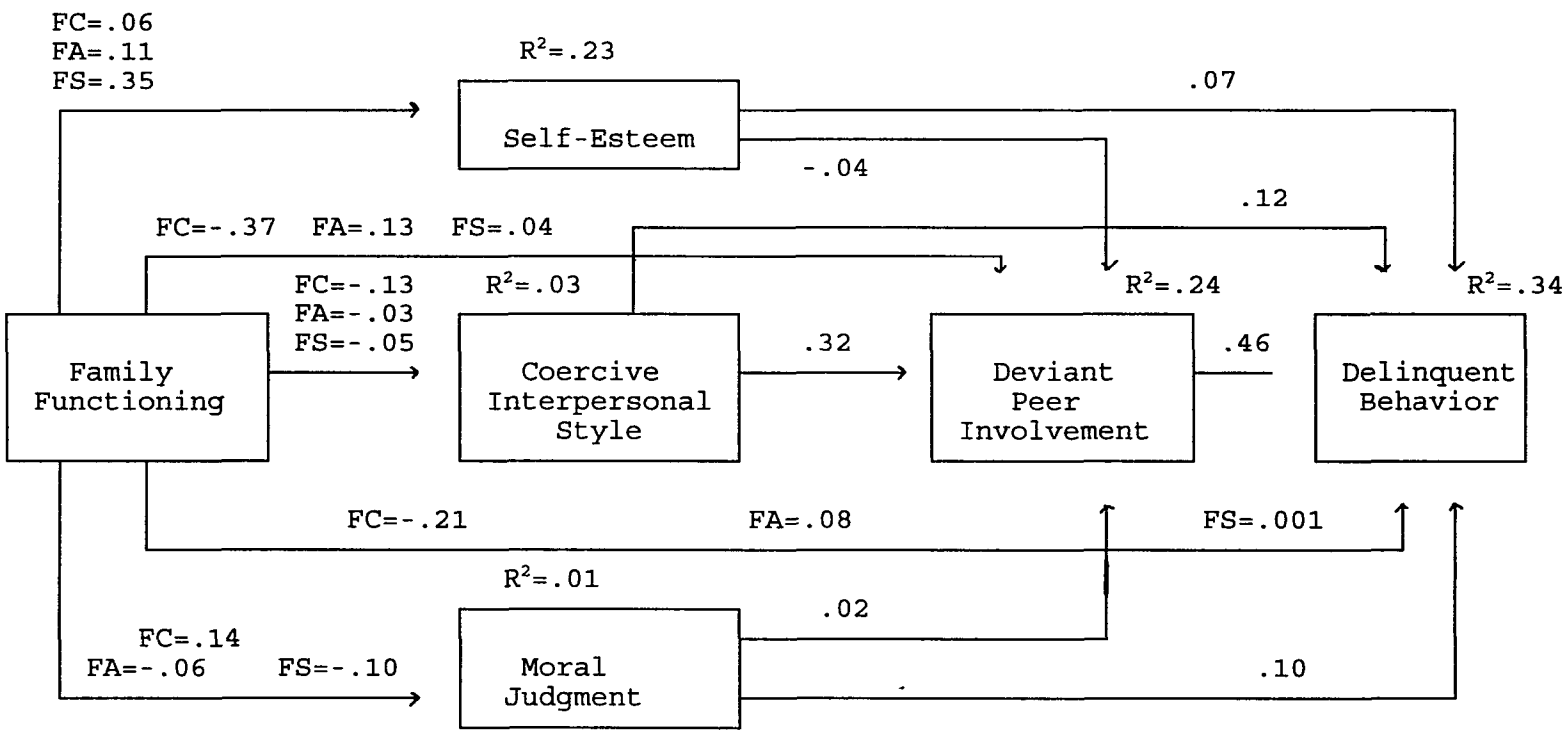
** $p \leq .01$

Examination of the Model

The path analysis for the total sample is presented in Figure 2. Beta-values are reported on the paths and R^2 values are reported above the variables. When all of the predictors in the model were used to predict Delinquent Behavior, results were significant ($R^2 = .34$, $F = 16.91$, $p < .001$). The variables in the model accounted for 34% of the variance in delinquent behavior.

Additional regression analyses were conducted to examine other predictive relationships within the model. Family Functioning (Cohesion, Adaptability, and Satisfaction), Self-Esteem, Coercive Interpersonal Style, and Moral Judgment accounted for 24% of the variance in Deviant Peer Involvement ($R^2 = .24$, $F = 15.06$, $p < .001$). Family Functioning accounted for 23% of the variance in Self-Esteem ($R^2 = .23$, $F = 59.40$, $p < .001$), 3% of the variance in Coercive Interpersonal Style ($R^2 = .03$, $F = 7.08$, $p < .001$), and 1% of the variance in Moral Judgment ($R^2 = .01$, $F = 1.02$, $p > .05$).

Figure 2. Results of Path Analysis for Examining the Predictive Relationships of Family Cohesion (FC), Family Adaptability (FA), and Family Satisfaction (FS) for the Total Sample.



Relative Influence of the Predictor Variables

In addition to the above regression analyses, a series of stepwise regressions were conducted to examine the relative strength of the predictors in the model. A criterion-level of .05 was established for inclusion in the model. The results of the stepwise regression analyses are displayed in Table 8.

Stepwise analyses indicated that Deviant Peer Involvement and Family Cohesion provided significant predictive information about Delinquent Behavior. Family Cohesion and Coercive Interpersonal Style provided significant predictive information about Deviant Peer Involvement. Family Satisfaction and Family Adaptability provided significant predictive information about Self-Esteem. Finally, Family Cohesion provided significant predictive information about Coercive Interpersonal Style.

Table 8

Stepwise Regression Analyses for Total Sample

Predictor Variable	Beta	R^2	F
Delinquent Behavior			
Deviant Peer Involvement	.54	.29	99.05*
Family Cohesion	-.13	.31	52.96*
Deviant Peer Involvement			
Family Cohesion	-.37	.14	44.96*
Coercive Style	.32	.23	43.38*
Self-Esteem			
Family Satisfaction	.47	.22	166.96*
Family Adaptability	.13	.23	88.36*
Coercive Interpersonal Style			
Family Cohesion	-.18	.03	20.01*

Note. No predictor variables provided significant information about level of Moral Judgment at the .05 level.

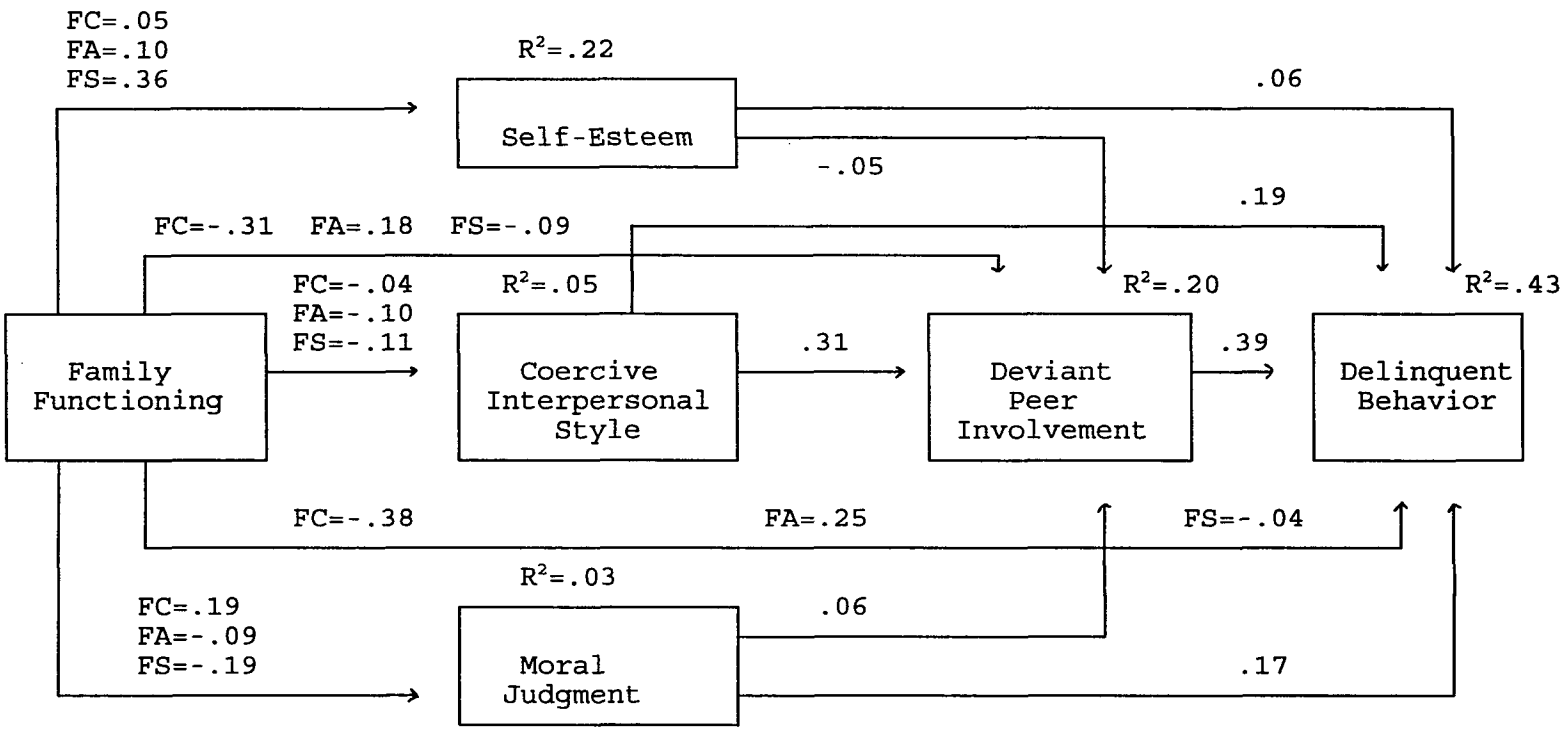
* $p < .001$

Gender Differences in the Model

In addition to testing the model for the total sample, the model also was tested separately for male and female subjects to examine any gender differences in the model.

Male Subjects. The path analysis for male subjects is presented in Figure 3. When all of the predictors in the model were used to predict Delinquent Behavior among male subjects, results were significant (R^2 = .43, F = 10.66,

Figure 3. Results of Path Analysis for Examining the Predictive Relationships of Family Cohesion (FC), Family Adaptability (FA), and Family Satisfaction (FS) for Male Subjects.



$p < .001$). The variables in the model accounted for 43% of the variance in delinquent behavior for male subjects.

Additional regression analyses were conducted to examine other predictive relationships within the model. Family Functioning (Cohesion, Adaptability, and Satisfaction), Self-esteem, Coercive Interpersonal Style, and Moral Judgment accounted for 20% of the variance in Deviant Peer Involvement ($R^2 = .20$, $F = 5.04$, $p < .001$) for males. Family Functioning accounted for 22% of the variance in Self-Esteem ($R^2 = .22$, $F = 28.30$, $p < .001$), 5% of the variance in Coercive Interpersonal Style ($R^2 = .05$, $F = 4.94$, $p < .003$), and 3% of the variance in Moral Judgment ($R^2 = .03$, $F = 1.30$, $p > .05$).

As with the total sample, a series of stepwise regressions were conducted to examine the relative strength of the predictors in the model for male subjects. The results of the stepwise regression analyses for male subjects are displayed in Table 9.

Table 9

Stepwise Regression Analyses for Male Subjects

Predictor Variable	Beta	R^2	F
Delinquent Behavior			
Deviant Peer Involvement	.54	.29	43.72*
Family Cohesion	-.23	.34	26.84*
Moral Judgment	.17	.37	20.17*
Family Adaptability	.19	.40	16.68*
Coercive Style	.19	.43	15.01*
Deviant Peer Involvement			
Coercive Style	.32	.10	14.07*
Family Cohesion	-.27	.17	13.21*
Self-Esteem			
Family Satisfaction	.46	.21	81.18*
Coercive Interpersonal Style			
Family Satisfaction	-.20	.04	12.38*

Note. No predictor variables provided significant information about level of Moral Judgment at the .05 level.

* $p < .001$

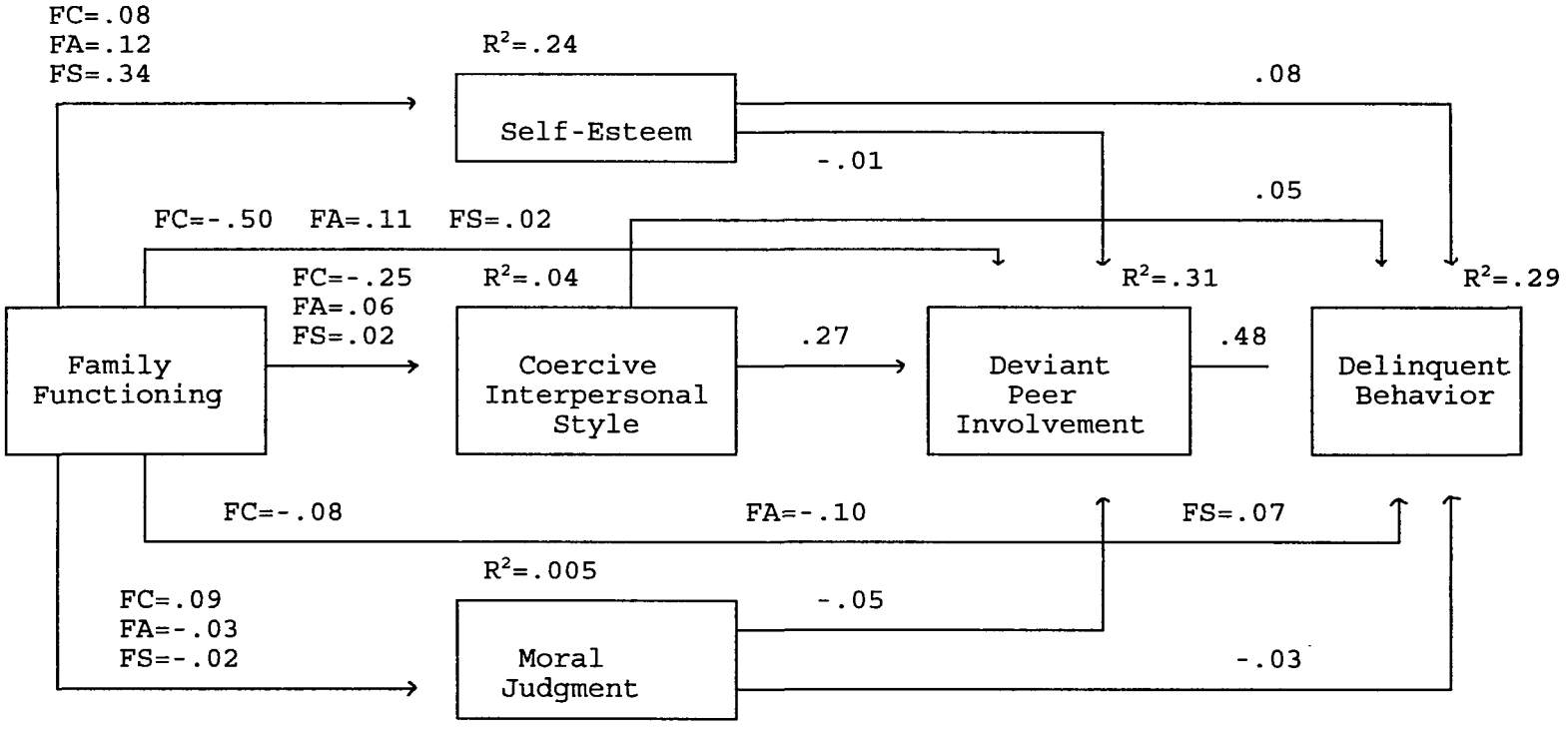
Stepwise analyses for male subjects indicated that Deviant Peer Involvement, Family Cohesion, Moral Judgment, Family Adaptability, and Coercive Interpersonal Style provided significant predictive information about Delinquent Behavior. Coercive Interpersonal Style and Family Cohesion

provided significant predictive information about Deviant Peer Involvement. Family Satisfaction provided significant predictive information about Self-Esteem. Finally, Family Satisfaction provided significant predictive information about Coercive Interpersonal Style.

Female Subjects. The path analysis for female subjects is presented in Figure 4. When all of the predictors in the model were used to predict Delinquent Behavior for female subjects, results were significant (R^2 = .29, F = 7.35, $p < .001$) but provided less predictive information than did the model for males. The variables in the model accounted for 29% of the variance in delinquent behavior for female subjects.

Additional regression analyses were conducted to examine other predictive relationships within the model. Family Functioning (Cohesion, Adaptability, and Satisfaction), Self-esteem, Coercive Interpersonal Style, and Moral Judgment accounted for 30% of the variance in Deviant Peer Involvement (R^2 = .30, F = 10.98, $p < .001$). Family Functioning accounted for 24% of the variance in Self-Esteem (R^2 = .24, F = 30.60, $p < .001$), 4% of the

Figure 4. Results of Path Analysis for Examining the Predictive Relationships of Family Cohesion (FC), Family Adaptability (FA), and Family Satisfaction (FS) for Female Subjects.



variance in Coercive Interpersonal Style (R^2 = .04, $F = 4.16$, $p < .01$), and less than 1% of the variance in Moral Judgment (R^2 = .005, $F = .24$, $p > .05$).

A series of stepwise regressions were conducted to examine the relative strength of the predictors in the model for female subjects. The results of the stepwise regression analyses for female subjects are displayed in Table 10.

Table 10

Stepwise Regression Analyses for Female Subjects

Predictor Variable	Beta	R^2	F
Delinquent Behavior			
Deviant Peer Involvement	.52	.27	49.95*
Deviant Peer Involvement			
Family Cohesion	-.47	.22	44.40*
Coercive Style	.27	.29	32.08*
Self-Esteem			
Family Satisfaction	.47	.22	84.94*
Family Adaptability	.15	.24	45.43*
Coercive Interpersonal Style			
Family Cohesion	-.20	.04	11.74*

Note. No predictor variables provided significant information about level of Moral Judgment at the .05 level.

* $p < .001$

Stepwise analyses for female subjects indicated that Deviant Peer Involvement was the lone significant predictor of Delinquent Behavior. Family Cohesion and Coercive Interpersonal Style provided significant predictive information about Deviant Peer Involvement. Family Satisfaction and Family Adaptability provided significant predictive information about Self-Esteem. Finally, Family Cohesion provided significant predictive information about Coercive Interpersonal Style.

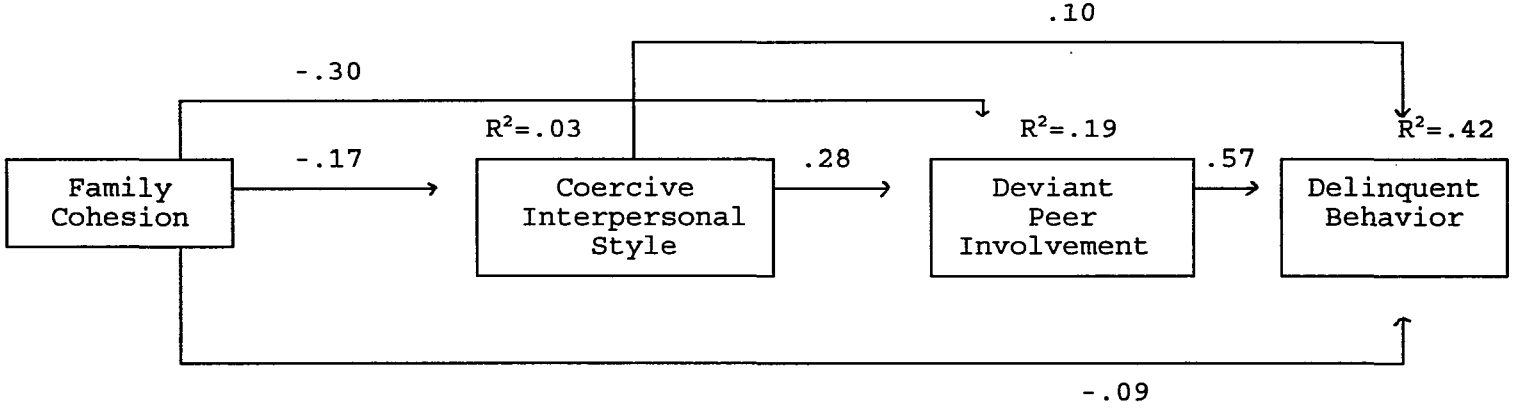
A More Parsimonious Model

In view of path coefficients and regression analyses, a more parsimonious model was specified and tested. Variables that had limited effect on the outcome variable were removed from the model. Specifically, Family Adaptability, Family Satisfaction, Self-Esteem, and Moral Judgment were removed from the model. The path analysis of the revised model for all subjects is presented in Figure 5.

When all of the predictors in the revised model were used to predict Delinquent Behavior, results were significant (R^2 =.42, F = 118.43, $p < .001$), and the model was strengthened. The variables in the revised model accounted for 42% of the variance in Delinquent Behavior.

Additional regression analyses were conducted to examine other predictive relationships within the revised model. Family Cohesion and Coercive Interpersonal Style accounted for 19% of the variance in Deviant Peer

Figure 5. Results of Path Analysis for Examining the Predictive Relationships of Family Cohesion (FC), Family Adaptability (FA), and Family Satisfaction (FS) for the Revised Model.



Involvement (R^2 = .19, F = 72.35, p < .001). Family Cohesion accounted for 3% of the variance in Coercive Interpersonal Style (R^2 = .03, F = 19.62, p < .001).

A series of stepwise regressions were conducted to examine the relative strength of the predictors in the revised model. The results of these analyses are provided in Table 11.

Table 11

Stepwise Regression Analyses for Revised Model

Predictor Variable	Beta	R^2	F
Delinquent Behavior			
Deviant Peer Involvement	.63	.40	332.82*
Coercive Style	.11	.41	173.10*
Family Cohesion	-.09	.42	118.43*
Deviant Peer Involvement			
Family Cohesion	-.35	.12	82.48*
Coercive Style	.28	.19	72.35*

* p < .001

Deviant Peer Involvement, Coercive Interpersonal Style, and Family Cohesion provided significant predictive information about Delinquent Behavior in the revised model. Family Cohesion and Coercive Interpersonal Style provided significant information about Deviant Peer Involvement.

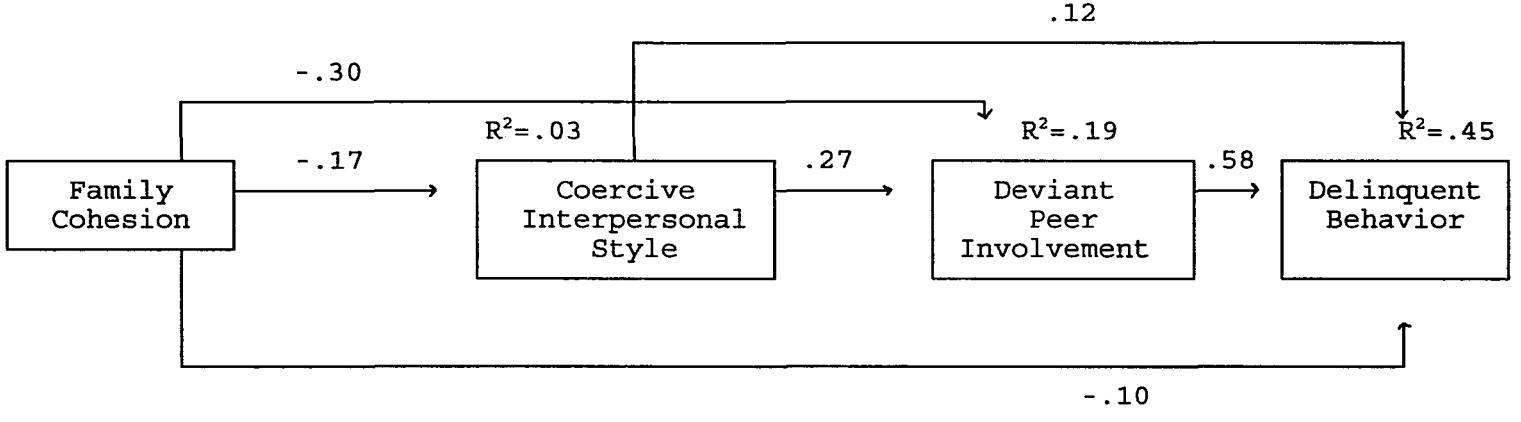
Gender Differences in the Revised Model

Additional analyses were conducted to determine if the revised "best-fit" model above would be the same if calculated separately for males and females. A "best-fit" model is defined here as the model providing the largest R^2 value for the outcome variable with the fewest number of predictor variables possible.

Male Subjects. The "best-fit" model for male subjects included the same variables as the best fit model for all subjects. The revised path model for male subjects is presented in Figure 6. When all of the predictors in the revised model were used to predict Delinquent Behavior among male subjects, results were significant (R^2 =.45, $F = 67.38$, $p < .001$). The variables in the revised model accounted for 45% of the variance in Delinquent Behavior for male subjects.

Additional regression analyses were conducted to examine other predictive relationships within the revised model. Family Cohesion and Coercive Interpersonal Style accounted for 19% of the variance in Deviant Peer Involvement ($R^2 = .19$, $F = 36.15$, $p < .001$). Family Cohesion accounted for 3% of the variance in Coercive Interpersonal Style ($R^2 = .03$, $F = 9.42$, $p < .003$).

Figure 6. Results of Path Analysis for Examining the Predictive Relationships for the Revised Model for Male Subjects.



A series of stepwise regressions were conducted to examine the relative strength of the predictors for the revised model among male subjects. The results of these analyses are provided in Table 12. Deviant Peer Involvement, Coercive Interpersonal Style, and Family Cohesion provided significant predictive information about Delinquent Behavior. Family Cohesion and Coercive Interpersonal Style provided significant predictive information about Deviant Peer Involvement.

Table 12

Stepwise Regression Analyses for Revised Model for Male Subjects

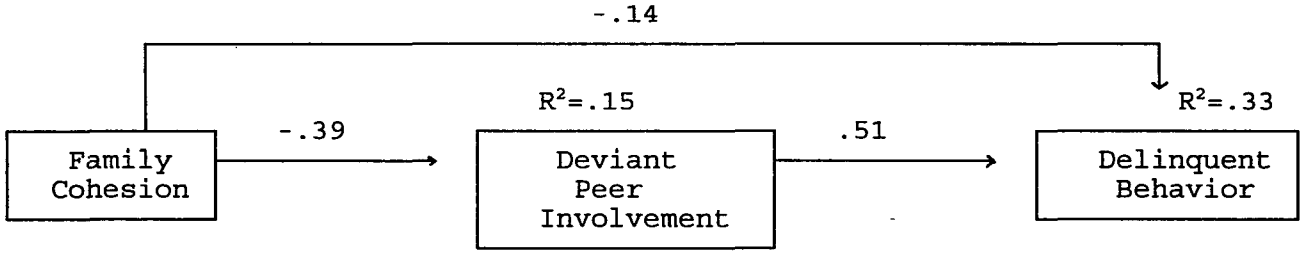
Predictor Variable	Beta	R^2	F
Delinquent Behavior			
Deviant Peer Involvement	.66	.43	185.99*
Coercive Style	.12	.44	97.97*
Family Cohesion	-.10	.45	67.38*
Deviant Peer Involvement			
Family Cohesion	-.35	.12	41.45*
Coercive Style	.27	.19	36.15*

* $p < .001$

Female Subjects. To specify the "best-fit" model for females, the Coercive Interpersonal Style variable was deleted. The "best-fit" model for female subjects is presented in Figure 7. This revised model accounted for 33% of the variance in Delinquent Behavior among female subjects (R^2 = .33, F = 60.80, p < .001) with only two predictor variables (Family Cohesion and Deviant Peer Involvement).

In the stepwise analysis of the revised model for female subjects, Deviant Peer Involvement loaded first as the strongest predictor (R^2 = .32, F = 113.47, p < .001) and Family Cohesion loaded as the second strongest predictor (R^2 = .33, F = 60.80, p < .001).

Figure 7. Results of Path Analysis for Examining the Predictive Relationships for the Revised Model for Female Subjects.



CHAPTER V

DISCUSSION AND CONCLUSIONS

Previous researchers have reported that family relationships (Campbell, 1987; Simons et al., 1989; Tolan, 1988a; Tolan & Lorion, 1988; Tolan & Thomas, 1988), self-esteem (Eskilson et al., 1986), a coercive interpersonal style (Patterson 1982, 1986; Simons et al., 1991), moral judgment (Hains & Miller, 1980; Hanson & Mullis, 1984), and involvement with deviant peers (Dishion et al., 1991) influence the incidence of delinquent behavior. The present study tested a model that attempted to infuse individual level and developmental variables into a social systems framework (coercion theory) to specify the interrelationships and causal sequences among these variables.

Summary

A descriptive analysis indicated that male respondents in the samples reported more involvement with deviant peers and a higher incidence of delinquent behavior than did female respondents. Teacher ratings of level of coercion indicated that male students use significantly more coercion in their interpersonal relationships. These findings are generally consistent with those of previous investigations (Hill & Atkinson, 1988; Johnson, 1987). Also, the strong correlation between self-reported delinquent behaviors and

self-reported substance abuse is consistent with the research of Donovan and Jessor (1985).

Developmental Patterns. There appeared to be some developmental patterns that emerged in the current study. Eighth-grade students reported a significantly lower level of family cohesion and family satisfaction than did sixth-grade students. Eighth-grade students reported a significantly higher level of involvement with deviant peers than did seventh-grade students. Finally, eighth grade students reported higher levels of delinquent behavior than did sixth-grade students. This latter result was not surprising because students' report of delinquent behavior was of cumulative behavior. However, it appeared that as adolescents become less involved and less satisfied with family relations, there is an increase in involvement with deviant peers and delinquent behavior. This is consistent with results of previous studies (Patterson, 1982, 1986; Simons et al., 1991).

The Model. The initial model specified in the current study accounted for a significant portion of the variance in delinquent behavior (34%). However, the path analysis revealed that a number of variables were not contributing to the prediction of the dependent variable. Based on this analysis, a number of variables were removed, and the model was respecified and strengthened. The more parsimonious model, using Family Cohesion, Coercive Interpersonal Style,

and Deviant Peer Involvement as predictor variables, accounted for a larger amount of variance (42%) of delinquent behavior for the total sample. After testing the more parsimonious revised model separately for male and female subjects, it was discovered that the model for females could be further strengthened by deleting Coercive Interpersonal Style as a predictor model. Thus, "best-fit" models were established.

The Best-Fit Model. The "best-fit" model for males included Family Cohesion, Coercive Interpersonal Style, and Deviant Peer Involvement as predictor variables to account for 45% of the variance in Delinquent Behavior. The "best-fit" model for females included Family Cohesion and Deviant Peer Involvement to account for 33% of the variance in Delinquent Behavior.

Being involved with deviant peers, then, was found to be the strongest predictor of adolescent delinquent behavior, accounting for 31% of the variance in delinquent behavior for females and 43% for males. The cohesiveness of the family unit was the second strongest predictor for females while a coercive interpersonal style was the second strongest predictor for males. Family cohesion was the third strongest predictor for males. In total, the models accounted for 33% of the variance in delinquent behavior for females and 45% for males.

It is important to note that the second strongest path in the revised model was the indirect path from family cohesion to delinquency mediated by deviant peer involvement, rather than the direct path from family cohesion to delinquent behavior. These results suggest that a cohesive family is important for two reasons. First, living in a cohesive family directly reduces the risk of delinquent behavior. Second, and as this study suggests, more importantly, living in a cohesive family reduces the likelihood of becoming involved with deviant peers. The strength of the relationships in this study suggests that it is this indirect path from family cohesion through deviant peer involvement that is particularly important in influencing delinquent behavior.

Considerations. Four important considerations emerge from these results. First, the variables used in the current study provide more predictive information for male subjects than for female subjects. Ongoing research is needed to distinguish what variables, in addition to those found to be important in the current study, will provide additional predictive information for females.

Second, Coercive Interpersonal Style emerged as a significant predictor of Delinquent Behavior for male subjects but not for females. Coercive Interpersonal Style provided a much stronger direct effect on Delinquent Behavior for male subjects than for females. Previous

research (Simons et al., 1991) concluded that the presence of coercion in interpersonal relationships directly increased the probability of involvement in delinquency. However, small sample sizes in Simons et al., (1991) research precluded performing path analysis by gender. The path analysis by gender in the current study suggests that a coercive interpersonal style may have a direct effect on delinquent behavior for male subjects only.

Third, the individual level variable (self-esteem) and developmental variable (moral judgment) failed to provide predictive information of significance. A primary goal of the current study was to develop a model of adolescent delinquent behavior that incorporated individual and developmental level variables into the social systems framework of coercion theory. Support was obtained for the coercion theory of delinquency developed by Patterson and colleagues (Dishion, Patterson, Stoolmiller, & Skinner, 1991; Patterson, 1982, 1986; Patterson & Reid, 1984; Patterson & Dishion, 1985; Patterson and Bank, 1989) but the individual and developmental level variables (Self-Esteem and Moral Judgment) did not strengthen the model.

Fourth, the current study differed from previous research on coercion theory in that no measure of parental coercion or aggression was obtained. Family cohesion, the emotional bonding of the family, emerged as an influential predictor of both involvement with deviant peers and

delinquent behavior. Future research including measures of family cohesion and parental aggressiveness may further clarify the role that family cohesion plays in the prediction of adolescent delinquent behavior.

Self-Esteem. In contrast to previous research which found self-esteem and delinquency to be related, self-esteem of adolescents did not contribute significantly to the prediction of delinquent behavior in the current study. However, studies which found self-esteem and delinquency to be related often used samples of incarcerated or adjudicated delinquents (Evans et al., 1991; Eskilson et al., 1986). Results of the current study are consistent with previous studies that found the influence of adolescent self-esteem on delinquent behavior to be negligible (Wells & Rankin, 1983). The literature on the relationship between self-esteem and delinquency remains inconclusive, and further research is needed. This may be explained in part because a brief (10 item) measure of global self-esteem was used in this study.

Moral Judgment. Moral Judgment also did not contribute to the prediction of delinquent behavior in the current study. As with previous research on self-esteem, previous research concluding that moral judgment and delinquency are related often has used samples of incarcerated or adjudicated delinquents (Lee & Prentice, 1988; McColgan, 1975). The fact that moral judgment failed to provide

predictive information on delinquent behavior among a school sample is consistent with previous research of Delorto and Cullen (1985). In the current study, however, this result should be interpreted cautiously. Only 48% of the respondents in the current study provided a valid profile on the Defining Issues Test. The high number of nonvalid scores may suggest some problem in the administration of the instrument. Although there was precedence for using the Defining Issues Test with this age group (Hains & Miller, 1980; McColgan 1975), it appears that the complexity of the instrument may preclude accurate results within this age group.

Family Satisfaction and Family Adaptability. Family Satisfaction and Family Adaptability also failed to contribute to the prediction of delinquency in the current study. It is important to note that Family Satisfaction was the strongest predictor of self-esteem. However, inasmuch as self-esteem was neither a primary outcome variable in the current study nor a significant predictor of delinquent behavior, it was deleted from the revised model. The strength of the relationship between family satisfaction and global self-esteem is worth noting, and merits further attention in the literature.

Implications for Counselors

It is also important to consider the implications of the current study for counselors providing treatment and prevention services. Previous research (Cashwell & Pasley, 1993) suggested that it is important to consider both interpersonal and intrapersonal factors that may influence adolescents to engage in delinquent acts. The current study also suggests that, among early adolescents, influence stems from the family, from peers, and from the level of coercion or aggression the adolescent uses with his/her peers.

Combatting the problem of adolescent delinquent behavior is a multi-tiered process that includes primary, secondary, and tertiary prevention. Primary prevention refers to broad-scope efforts to provide children and early adolescents with the internal resources to avoid delinquent behaviors. Given the direct effects of a coercive interpersonal style on delinquency found for males in the current study, it is important for counselors to provide social-skills training. Previous researchers (Coie & Kupersmidt, 1983; Dodge, 1983; Patterson, 1986; Patterson & Bank, 1989) have suggested that it is a lack of interpersonal skills that result in the adolescent's rejection from a "conventional" peer group and inclusion in a more deviant peer group. Thus, teaching preadolescents more appropriate ways of interacting with their peers may help to circumvent the "labelling and rejection" phenomena

previously described in the literature (Coie & Kupersmidt, 1983; Dodge, 1983). Additionally, educating preadolescents on the potential negative influences of peers may prove helpful.

Secondary prevention, also referred to as early intervention, involves first identifying those students who are "at-risk" to engage in delinquent behavior and providing counseling services to these targeted students. Given the familial influence on delinquent behavior among early adolescents found in the current study, providing parent education would be an important consideration, as well as social-skills training and training on peer influence. Each of these (parent education, social-skills training and peer influence training) likely would be best accomplished in a group setting.

Tertiary prevention, or treatment, include efforts to rehabilitate known delinquents. The literature is fairly clear, and not promising, regarding the effects of such efforts (Patterson et al., 1989). Treatment interventions have had limited impact on adolescent delinquent behavior, and often the effects that are found do not persist over time (Kazdin, 1987; Wilson & Herrnstein, 1985).

However, the results of prevention and early intervention efforts appear more promising (Patterson et al., 1989). In particular, parent training is effective for younger children who are displaying antisocial behavior.

Given the lack of effectiveness found for tertiary prevention, or treatment efforts, interventions need to focus on younger children. Results of the current study suggest that, even as early as middle school (grades six through eight), a substantial number of students report involvement in some delinquent behavior. Interventions, then, need to begin in the elementary grades.

It has been shown consistently that teachers can effectively identify those students who are engaging in antisocial behavior (Kupersmidt & Patterson, 1991; Parker & Asher, 1987; Tremblay, LeBlanc, & Schwartzman, 1988) and who are, consequently, at higher risk for on-going delinquent behavior in the future. Identifying these "at-risk" students in the elementary grades and providing intense intervention programs for these targeted individuals likely will influence future antisocial behaviors. As the "labelling and rejection" phenomenon previously mentioned appears to be a key issue, it is important that program providers avoid the stigma of the "at-risk" label with the adolescents they serve.

Once those students are identified that could benefit most from early intervention efforts, the current study and previous research would seem to give some direction to program efforts. In the current study, the bonding or cohesion of the family proved a significant predictor of delinquent behavior. Parent training, then, for elementary

aged antisocial students is an important intervention component that has, in fact, been shown to be effective (Kazdin, 1987; Patterson et al., 1989).

Patterson et al. (1989) also argued that social-skills training would be an important component of intervention efforts. The current study suggests that this may be particularly important for males.

Recommendations for Future Research

The current study, along with previous research, provide direction for future research on adolescent delinquent behavior. First, ongoing research is needed to determine individual and developmental aspects of adolescents that add to the strength of this model. One possibility may be to include developmental issues related to social perspective-taking based either on Selman's stage theory of social cognition (Selman, 1971, 1976, 1977, 1980; Selman & Byrne, 1980) or Elkind's theory of adolescent egocentrism (Elkind, 1967; Elkind & Bowen, 1979).

Second, research is needed that uses measures of compartmentalized self-esteem (e.g., social self-esteem, academic self-esteem) and multiple measures to avoid over-reliance on self-report. The current study used a self-report measure of global self-esteem. Additional research is needed to understand previous inconsistent results regarding the relationship between self-esteem and delinquency. Such research will allow a more in-depth

understanding of adolescent delinquent behavior and provide more direction for prevention and treatment efforts.

Third, replication of the results involving the Coercive Interpersonal Style variable is needed. The current study used teacher report based on one question for each student. Future research may overcome this limitation by using multiple measures of coercion, such as collecting reports from more than one teacher, other students, and parents.

Finally, replication is needed to further the understanding of the relationship between moral judgment and delinquent behavior. Alternate measures of moral judgment (e.g., Kohlbergian interviews) may be needed with samples of early adolescents. At the least, the results of the current study, which suggest that moral judgment does not significantly influence delinquent behavior, must be replicated before any conclusions can be drawn.

Limitations of the Current Study

Results of the current study should be viewed within the context of the limitations of the study. The first limitation of the current study is the strong reliance on self-report measures. While previous researchers have called for adolescent report of information (Zaslow & Takanishi, 1993), there is a need to verify this information using multiple sources. It is difficult to conduct research that uses multiple sources of information and has an

adequate sample size to allow, for example, a path analysis by gender. At this time, however, it is precisely this type of research that is needed to strengthen our understanding of adolescent delinquent behavior.

A second limitation, perhaps related to the first, is the format of the measure of deviant peer involvement. The items for this measure were drawn from the Self-Report Delinquency Measure and reworded to reflect peer behavior. Efforts were made to avoid a response set (e.g., placing numerous items between the measure of Deviant Peer Involvement and Self-Report Delinquency Measure items, changing the response format of the measure of Deviant Peer Involvement to a five-point Likert response, and reordering the items on the measure of Deviant Peer Involvement). It cannot be ruled out, however, that some type of response set occurred between the items measuring Deviant Peer Involvement and the Self-Report Delinquency Measure items, accounting in part for the strength of the relationship between involvement with deviant peers and delinquent behavior. However, a strong relationship between deviant peer involvement and delinquent behavior is consistent with previous research (Elliott et al., 1985; Simons et al., 1991). Elliot et al. (1985) found a measure of involvement with delinquent peers to be the only significant predictor of delinquent behavior.

A third limitation of the current study is the use of global self-esteem as a variable. In the current study, self-esteem did not significantly influence delinquent behavior. However, such a global measure of self-esteem may not adequately measure the experience of the adolescent.

A fourth limitation of the current study was the use of a single item, asked of teachers, to measure the level of coercion used by students in their interpersonal relationships. Additionally, teachers were provided with only minimal explanation of the instrument and time was not made available by the school for establishing inter-rater reliability among the teachers.

A fifth limitation of the current study is the large number of nonvalid responses (52%) on the Defining Issues Test of moral judgment. Such a response pattern calls into question results regarding the moral judgment variable.

Conclusions

The current study provided support for a coercion theory of delinquent behavior. Efforts to integrate individual and developmental variables into the coercion theory framework were not successful, however. Ongoing research is needed to examine other characteristics of adolescents that may add to the predictive power of the coercion theory model.

Based on the revised model in the current study, both the family and peer relationships play a significant role in

adolescents' decisions about delinquent behavior in a complex and interdependent process. Intervention efforts must recognize the complexity of this, and address the multiple factors (familial, interpersonal style, peer group) that the current study supports as predictive of delinquent behavior. It is only through the comprehensive efforts of service-providers (schools, community counseling agencies, and community service organizations) that antisocial youth can be identified, intervention services provided, and the prevalence of adolescent delinquent behavior reduced.

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Appendix A: Instrumentation Booklet

Please read the following statements and decide for each one how frequently, on a scale that ranges from 1 (almost never) to 5 (almost always), the described behavior occurs in your family.

1 Almost Never	2 Once in Awhile	3 Sometimes	4 Frequently	5 Almost Always

Describe Your Family:

1. Family members are supportive of each other during difficult times.
2. In our family, it is easy for everyone to express his/her opinions.
3. It is easier to discuss problems with people outside the family than with other family members.
4. Each family member has input regarding major family decisions.
5. Our family gathers together in the same room.
6. Children have a say in discipline.
7. Our family does things together.
8. Family members discuss problems and feel good about the solutions.
9. In our family, everyone goes his/her own way.
10. We shift household responsibilities from person to person.
11. Family members know each other's close friends.
12. It is hard to know what the rules are in our family.
13. Family members consult other family members on personal decisions.
14. Family members say what they want.
15. We have difficulty thinking of things to do as a family.
16. In solving problems, the children's suggestions are followed.
17. Family members feel very close to each other.
18. Discipline is fair in our family.
19. Family members feel closer to people outside the family than to other family members.
20. Our family tries new ways of dealing with problems.
21. Family members go along with what the family decides to do.
22. In our family, everyone shares responsibilities.
23. Family members like to spend their free time with each other.
24. It is difficult to get a rule changed in our family.
25. Family members avoid each other at home.
26. When problems arise, we compromise.
27. We approve of each other's friends.
28. Family members are afraid to say what is on their minds.
29. Family members pair up rather than do things as a total family.
30. Family members share interests and hobbies with each other.

Please read the following statements and decide for each one how satisfied, on a scale that ranges from 1 (dissatisfied) to 5 (extremely satisfied), you are in each of the given areas.

RESPONSE SCALE				
1	2	3	4	5
DISSATISFIED	SOMEWHAT DISSATISFIED	GENERALLY SATISFIED	VERY SATISFIED	EXTREMELY SATISFIED

HOW SATISFIED ARE YOU:

31. With how close you feel to the rest of your family?

32. With your ability to say what you want in your family?

33. With your family's ability to try new things?

34. With how often parents make decisions in your family?

35. With how much mother and father argue with each other?

36. With how fair the criticism is in your family?

37. With the amount of time you spend with your family?

38. With the way you talk together to solve family problems?

39. With your freedom to be alone when you want to?

40. With how strictly you stay with who does what chores in your family?

41. With your family's acceptance of your friends?

42. With how clear it is what your family expects of you?

43. With how often you make decisions as a family, rather than individually?

44. With the number of fun things your family does together?

Think about your **close friends**. How many of your close friends have done each of the following things?

1	2	3	4	5
None	A Few	Half	Most	All

45. Been questioned as a suspect by the police about some crime.
46. Been caught shoplifting by the clerk or owner of a store.
47. Sold something they had stolen themself.
48. Broken into a house, store, school or other building and taken money, stereo equipment, guns, or something else they wanted.
49. Broken into a car to get something from it.
50. Taken things worth between $10 and $50 from a store without paying for them.
51. Threatened to beat someone up if they didn't give them money or something else they wanted.
52. Carried a razor, switchblade, or gun with the intention of using it in a fight.
53. Broken into a house, store, school or other building with the intention of breaking things up or causing other damage.
54. Taken things of large value (worth more than $50) from a store without paying for them.
55. Used physical force (like twisting an arm or choking) to get money from another person.
56. Taken things from a wallet or purse (or the whole wallet or purse) while the owner wasn't around or wasn't looking.
57. Hit a teacher or some other school official.
58. Taken a bicycle belonging to someone they didn't know with no intention of returning it.
59. Intentionally started a building on fire.
60. Grabbed a purse from someone and run with it.
61. Taken little things (worth less than $2) from a store without paying for them.
62. Broken the windows of an empty house or other unoccupied building.
63. Used a slug or fake money in a candy, coke, coin, or stamp machine.
64. Fired a BB gun at some other person, at passing cars, or at windows of buildings.
65. Taken things they weren't supposed to take from a desk or locker at school.
66. Bought something they knew had been stolen.
67. Broken the windows of a school building.
68. Purposely broken a car window.
69. Picked a fight with someone they didn't know just for the fun of it.
70. Helped break up chairs, tables, desks, or other furniture in a school, church, or other public building.

How many of your **close friends** have done each of the following things?

1	2	3	4	5
None	A Few	Half	Most	All

71. Jumped or helped jump somebody and then beat them up.
72. Slashed the seats in a bus, a movie house, or some other place.
73. Punctured or slashed the tires of a car.
74. Drunk beer or wine.
75. Drunk whiskey, gin, vodka or other "hard" liquor.
76. Smoked marijuana (grass, pot).
77. Gone to school when they were drunk or high on some drugs.
78. Sold illegal drugs such as heroin, marijuana, LSD, or cocaine.
79. Driven a car when they were drunk or high on some drugs.
80. Been sent out of a classroom.
81. Stayed away from school when their parents thought they were there.
82. Gone out at night when their parents told them that they couldn't go.
83. Been suspended or expelled from school.
84. Run away from home and stayed overnight.
85. Hit one of their parents.

Please indicate whether you: Strongly Disagree (1), Disagree (2), Agree (3), or Strongly Agree (4) with each of the following items by circling the best response to each item.

1	2	3	4
Strongly Disagree	Disagree	Agree	Strongly Agree

86. On the whole, I am satisfied with myself.

87. At times I think I am no good at all.

88. I feel that I have a number of good qualities.

89. I am able to do things as well as most other people.

90. I feel I do not have much to be proud of.

91. I certainly feel useless at times.

92. I feel that I'm a person of worth, at least on an equal plane with others.

93. I wish I could have more respect for myself.

94. All in all, I am inclined to feel that I am a failure.

95. I take a positive attitude toward myself.

HAVE YOU EVER...

	1 NO	2 YES
96.	Been questioned as a suspect by the police about some crime.	
97.	Been held by the police or court until you could be released into the custody of your parents or guardians.	
98.	Been placed on probation by a juvenile court judge.	
99.	Been caught shoplifting by the clerk or owner of a store.	
100.	Been sentenced to training school or some other institution by a judge.	
101.	Sold something you had stolen yourself.	
102.	Broken into a house, store, school or other building and taken money, stereo equipment, guns, or something else you wanted.	
103.	Broken into a locked car to get something from it.	
104.	Taken hubcaps, wheels, the battery, or some other expensive part of a car without the owner's permission.	
105.	Taken gasoline from a car without the owner's permission.	
106.	Taken things worth between $10 and $50 from a store without paying for them.	
107.	Threatened to beat someone up if they didn't give you money or something else you wanted.	
108.	Carried a razor, switchblade, or gun with the intention of using it in a fight.	
109.	Pulled a knife, gun, or some other weapon on someone just to let them know you meant business.	
110.	Beat someone up so badly they probably needed a doctor.	
111.	Taken a car belonging to someone you didn't know for a ride without the owner's permission.	
112.	Taken a tape deck or a CB radio from a car.	
113.	Broken into a house, store, school or other building with the intention of breaking things up or causing other damage.	
114.	Taken things of large value (worth more than $50) from a store without paying for them.	
115.	Tried to get away from a police officer by fighting or struggling.	
116.	Used physical force (like twisting an arm or choking) to get money from another person.	
117.	Used a club, knife, or gun to get something from someone.	
118.	Taken things from a wallet or purse (or the whole wallet or purse) while the owner wasn't around or wasn't looking.	
119.	Hit a teacher or some other school official.	
120.	Taken a bicycle belonging to someone you didn't know with no intention of returning it.	

1	2
NO	YES

121. Tried to pass a check by signing someone's else's name.
122. Intentionally started a building on fire.
123. Grabbed a purse from someone and run with it.
124. Forced another person to have sex relations when they did not want to.
125. Taken little things (worth less than $2) from a store without paying for them.
126. Broken the windows of an empty house or other unoccupied building.
127. Let the air out of car or truck tires.
128. Used a slug or fake money in a candy, coke, coin, or stamp machine.
129. Fired a BB gun at some other person, at passing cars, or at windows of buildings.
130. Taken things you weren't supposed to take from a desk or locker at school.
131. Bought something you knew had been stolen.
132. Broken the windows of a school building.
133. Taken material or equipment from a construction site.
134. Refused to tell the police or some official what you knew about a crime.
135. Purposely broken a car window.
136. Picked a fight with someone you didn't know just for the hell of it.
137. Helped break up chairs, tables, desks, or other furniture in a school, church, or other public building.
138. Jumped or helped jump somebody and then beat them up.
139. Slashed the seats in a bus, a movie theater, or some other place.
140. Punctured or slashed the tires of a car.
141. Destroyed things at a construction site.
142. Destroyed mailboxes.
143. Kept money for yourself that you collected for a team, a charity (like the March of Dimes), or someone else's paper route.
144. Driven away from the scene of an accident that you were involved in without identifying yourself.
145. Taken mail from someone else's mailbox and opened it.
146. Broken into a parking meter or the coin box of a pay phone.
147. Drunk beer or wine.
148. Drunk whiskey, gin, vodka or other "hard" liquor.
149. Smoked marijuana (grass, pot).
150. Gone to school when you were drunk or high on some drugs.
151. Pretended to be older than you were to buy beer and cigarettes.
152. Sold illegal drugs such as heroin, marijuana, LSD, or cocaine.

1	2
NO	YES

153. Driven a car when you were drunk or high on some drugs.
154. Taken barbiturates (downers) or methedrine (speed or other uppers) without a prescription.
155. Used cocaine.
156. Taken angel dust, LSD, or mescaline.
157. Used heroin (smack).
158. Been sent out of a classroom.
159. Stayed away from school when your parents thought you were there.
160. Gone out at night when your parents told you that you couldn't go.
161. Been suspended or expelled from school.
162. Cursed or threatened an adult in a loud and mean way just to let them know who was boss.
163. Run away from home and stayed overnight.
164. Hit one of your parents.

The next series of questions is aimed at understanding how people think about social problems. Different people often have different opinions about questions of right or wrong. There are no "right" answers in the way that there are right answers to math problems. You will be asked to give your opinion concerning several problem stories. Your teacher will read each of the stories and following statements to you. Please follow along with your teacher. Please ask your teacher if you have any questions or if you are not sure what a word means.

In Europe a woman was near death from a special kind of cancer. There was one drug that the doctors thought might save her. It was a form of radium that a druggist in the same town had recently discovered. The drug was expensive to make, but the druggist was charging ten times what the drug cost to make. He paid $200 for the radium and charged $2000 for a small dose of the drug. The sick woman's husband, Heinz, went to everyone he knew to borrow the money but he could only get together about $1000, which is half of what it cost. He told the druggist that his wife was dying, and asked him to sell it cheaper or let him pay later. But the druggist said, "No, I discovered the drug and I'm going to make money from it." So Heinz got desperate and began to think about breaking into the man's store to steal the drug for his wife.

Should Heinz steal the drug? (Check one)

_____Should steal the drug
_____Can't decide
_____Should not steal the drug

Importance: Great	Much	Some	Little	No		
___	___	___	___	___	1.	Whether a community's laws are going to be upheld.
___	___	___	___	___	2.	Isn't it only natural for a loving husband to care so much for his wife that he'd steal.
___	___	___	___	___	3.	Is Heinz willing to risk getting shot as a burglar or going to jail for the chance that stealing the drug might help?
___	___	___	___	___	4.	Whether Heinz is a professional wrestler, or has considerable influence with professional wrestlers.
___	___	___	___	___	5.	Whether Heinz is stealing for himself or doing this solely to help someone else.
___	___	___	___	___	6.	Whether the druggist's rights to his invention have to be respected.

Importance: Great	Much	Some	Little	No		
___	___	___	___	___	7.	Whether the essence of living is more encompassing than the termination of dying, socially and individually.
___	___	___	___	___	8.	What values are going to be the basis for governing how people act towards each other?
___	___	___	___	___	9.	Whether the druggist is going to be allowed to hide behind a worthless law which only protects the rich anyhow.
___	___	___	___	___	10.	Whether the law in this case is getting in the way of the most basic claim of any member of society.
___	___	___	___	___	11.	Whether the druggist deserves to be robbed for being so greedy and cruel.
___	___	___	___	___	12.	Would stealing in such a case bring about more total good for the whole society or not?

From the list of questions above, select the four most important:

_____Most important
_____Second most important
_____Third most important
_____Fourth most important

A man had been sentenced to prison for 10 years. After one year, however, he escaped from prison, moved to a new area of the country, and took on the name of Thompson. For 8 years, he worked hard, and gradually he saved enough money to buy his own business. He was fair to his customers, gave his employees top wages, and gave most of his own profits to charity. Then one day, Mrs. Jones, an old neighbor, recognized his as the man who had escaped from prison 8 years before, and whom the police had been looking for.

Should Mrs. Jones report Mr. Thompson to the police and have him sent back to prison? (Check one)

_____Should report him
_____Can't decide
_____Should not report him

Importance: Great	Much	Some	Little	No		
___	___	___	___	___	13.	Hasn't Mr. Thompson been good enough for such a long time to prove he isn't a bad person?
___	___	___	___	___	14.	Everytime someone escapes punishment for a crime, doesn't that just encourage more crime?
___	___	___	___	___	15.	Wouldn't we be better off without prisons and the oppression of our legal systems?
___	___	___	___	___	16.	Has Mr. Thompson really paid his debt to society?
___	___	___	___	___	17.	Would society be failing what Mr. Thompson should fairly expect?
___	___	___	___	___	18.	What benefits would prisons be apart from society, especially for a charitable man?
___	___	___	___	___	19.	How could anyone be so cruel and heartless as to send Mr. Thompson to prison?
___	___	___	___	___	20.	Would it be fair to all the prisoners who had to serve out their sentences if Mr. Thompson was let off?
___	___	___	___	___	21.	Was Mrs. Jones a good friend of Mr. Thompson?
___	___	___	___	___	22.	Wouldn't it be a citizen's duty to report an escaped criminal, regardless of the circumstances?

Importance:
Great Much Some Little No

___ ___ ___ ___ ___ 23. How will the will of the people and the public good best be served?

___ ___ ___ ___ ___ 24. Would going to prison do any good for Mr. Thompson or protect anybody?

From the list of questions above, select the four most important:
_____Most important
_____Second most important
_____Third most important
_____Fourth most important

Fred, a senior in high school, wanted to publish a mimeographed newspaper for students so that he could express many of his opinions. He wanted to speak out against the war in Vietnam and to speak out against some of the schools rules, like the rule forbidding boys to wear long hair. When Fred started his newspaper, he asked his principal for permission. The principal said it would be all right if before every publication Fred would turn in all his articles for the principal's approval. The principal approved all of them and Fred published two issues of the paper in the next two weeks. But the principal had not expected that Fred's newspaper would receive so much attention. Students were so excited by the paper that they began to organize protests against the hair regulation and other school rules. Angry parents objected to Fred's opinions. They phoned the principal telling him that the newspaper was unpatriotic and should not be published. As a result of the rising excitement, the principal ordered Fred to stop publishing. He gave as a reason that Fred's activities were disruptive to the operation of the school.

Should the principal stop the newspaper? (Check one)
_____Should stop it
_____Can't decide
_____Should not stop it

Importance: Great	Much	Some	Little	No		
___	___	___	___	___	25.	Is the principal more responsible to the students or to the parents?
___	___	___	___	___	26.	Did the principal give his word that the newspaper could be published for a long time, or did he just promise to approve the newspaper one issue at a time?
___	___	___	___	___	27.	Would the students start protesting even more if the principal stopped the newspaper?
___	___	___	___	___	28.	When the welfare of the school is threatened, does the principal have the right to give orders to students?
___	___	___	___	___	29.	Does the principal have the freedom of speech to say "no" in this case?
___	___	___	___	___	30.	If the principal stopped the newspaper, would he be preventing full discussion of important problems?
___	___	___	___	___	31.	Whether the principal's order would make Fred lose faith in the principal.
___	___	___	___	___	32.	Whether Fred was really loyal to his school and patriotic to his country.
___	___	___	___	___	33.	What effect would stopping the paper have on the students' education in critical thinking and judgments?
___	___	___	___	___	34.	Whether Fred was in anyway violating the rights of others in publishing his own opinions.
___	___	___	___	___	35.	Whether the principal should be influenced by some angry parents when it is the principal who knows best what is going on in the school.
___	___	___	___	___	36.	Whether Fred was using the newspaper to stir up hatred and discontent.

From the list of questions above, select the four most important:

_____Most important
_____Second most important
_____Third most important
_____Fourth most important

Please circle the best answer.

37. GRADE

1 - 6th Grade 2 - 7th Grade 3 - 8th Grade

38. AGE

1 - 12 or younger

2 - 13 years old

3 - 14 years old

4 - 15 years old

5 - 16 or older

39. RACE

1 - white

2 - black

3 - indian

4 - other Please specify_____

5 - unknown

40. WHO DO YOU LIVE WITH?

1 - Both parents

2 - Mother and stepfather

3 - Father and stepmother

4 - Mother only

5 - Father only

6 - Other relatives

7 - Foster Care

8 - Other Please specify_____

41. DO YOU GET FREE LUNCH?

1 - Yes

2 - No

Appendix B: Form for Teacher Report of Coercive Interpersonal Style

"What level of coercion and/or aggressiveness does this student utilize in his/her interpersonal relationships."

1 None 2 Little 3 Some 4 Much 5 Very Much

NAME	ID	Rating
1.		1 2 3 4 5
2.		1 2 3 4 5
3.		1 2 3 4 5
4.		1 2 3 4 5
5.		1 2 3 4 5
6.		1 2 3 4 5
7.		1 2 3 4 5
8.		1 2 3 4 5
9.		1 2 3 4 5
10.		1 2 3 4 5
11.		1 2 3 4 5
12.		1 2 3 4 5
13.		1 2 3 4 5
14.		1 2 3 4 5
15.		1 2 3 4 5
16.		1 2 3 4 5
17.		1 2 3 4 5
18.		1 2 3 4 5
19.		1 2 3 4 5
20.		1 2 3 4 5

NAME	ID	Rating
21.		1 2 3 4 5
22.		1 2 3 4 5
23.		1 2 3 4 5
24.		1 2 3 4 5
25.		1 2 3 4 5
26.		1 2 3 4 5
27.		1 2 3 4 5
28.		1 2 3 4 5
29.		1 2 3 4 5
30.		1 2 3 4 5
31.		1 2 3 4 5
32.		1 2 3 4 5
33.		1 2 3 4 5
34.		1 2 3 4 5
35.		1 2 3 4 5
36.		1 2 3 4 5
37.		1 2 3 4 5
38.		1 2 3 4 5
39.		1 2 3 4 5
40.		1 2 3 4 5

Appendix C: Consent Form

(DATE)

Dear Reidsville Middle School Parent:

We have the opportunity to participate in an exciting research project with the University of North Carolina at Greensboro. Data will be collected in our school to look at how such factors as family relationships, self-esteem, and peer relationships influence adolescent behavior. Your child will be asked to complete a number of instruments to measure these variables. The instruments will be administered during the regular school day and should take less than two hours. **All scores will be anonymous**. Your child will not be identified by his or her scores. If you decide that your child should not participate in this project, this will not effect his/her grades.

If you have any further questions about this research project, please call your school counselor, Jill McFarland, at 342-2949. Thank you in advance for your support of this exciting project.

Sincerely,

Jill E. McFarland,
School Counselor
Reidsville Middle School

Craig S. Cashwell,
Ph. D Doctoral Candidate
Dept. of Counselor Education
University of North Carolina - Greensboro

Appendix D: Teacher Instruction Form

Dear Teacher:

First and foremost, thank you for your effort in this research project.

You should have the following items in sufficient quantity to distribute to your class:

-Test booklets
-Bubble sheets
-Copies of Defining Issues Test
-Pencils

Please take a few minutes to look over the instrument to see if you have any questions before you begin. If you do have questions, please direct them to the guidance counselor's office.

Please use the following instructions in collecting the data:

1. Distribute the test booklets, bubble sheets, and pencils to students by student ID no. Have all students begin at the same time.

2. Read the following statement to students: "You will be asked to respond to items that will ask questions about you. **Your answers will be anonymous**. This means that no one at this school or in your home will know what you have answered. You can be completely honest For example, the first 30 questions will ask you to describe your family. For example, item number one states, 'Family members are supportive of each other during difficult times.' Answer one means your family is almost never this way; answer two means your family is this way once in awhile, and so on. Please mark your answers on the bubble sheets. Bubble in the appropriate answer completely and make no stray marks. Do not write on the booklet. Please read carefully the directions for each section. If you have any questions, please raise your hand and I will come to your seat." Allow students to begin. You may answer any questions about how to use the bubble sheets or about the definition of words in the test booklet.

3. During the time that students are working, please complete the teacher report of coercive interpersonal style for each student. After you have completed the teacher report of interpersonal style, please cut out the column that includes students' names and destroy this by tearing it into small pieces.

PLEASE NOTE THAT ANSWERS TO THE DEFINING ISSUES TEST (DIT) AND THE DEMOGRAPHIC QUESTIONS FOLLOWING THE DIT ARE NOT ANSWERED ON THE BUBBLE SHEET; ANSWERS ARE NOTED DIRECTLY ON THE QUESTIONNAIRE.

Administration of the Defining Issues Test (DIT)

1. Distribute copies of the DIT.

2. Say to your students: "The next questions are aimed at understanding how people think about social problems. Different people often have different opinions about questions of right or wrong. There are no "right" answers in the way there are right answers to math problems. I will read each of the stories and following statements to you. Please following with me. Please ask me if you have any questions or if you are not sure what a word means."

3. Read the first story to the students. When you get to the appropriate place, ask students to check whether they think Heinz should steal the drug, should not steal the drug, or can't decide. Then begin item 165 by saying: "How important in the decision you just made would each of the following issues be?" Then read each of the items, allowing students to check the appropriate box. Pilot tests of this instrument suggest that some students may have difficulty understanding this part of the instrument and may need additional coaching. Continue until this instrument is completed.

AT THE END OF THE DAY, SOMEONE WILL COME BY TO PICK UP TEST BOOKLETS, BUBBLE SHEETS, DEFINING ISSUES TEST BOOKLETS, AND PENCILS. THANK YOU FOR YOUR CONTRIBUTION TO THIS PROJECT.