Familial Influences on Adolescent Delinquent Behavior

By: Craig S. Cashwell, and Nicholas A. Vacc

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Abstract:
A path model was tested to examine a modified version of coercion theory. Results suggested that family cohesion is a salient issue in adolescent delinquent behavior, particularly as mediated by involvement with deviant peers.

Article:
Juvenile delinquency, which is defined as antisocial or criminal behavior by children or adolescents (Morris, 1980), has been an important concern to the American society. However, never has juvenile delinquency been more important as an issue than at the present time when crimes involving juveniles are increasing and counselors are seeking promising paradigms of intervention. An essential foundation for the development and evaluation of preventive interventions is determining what influences delinquent behavior. It is generally assumed that the family plays an important role in an adolescent's development, Therefore, the purpose of this study was to examine how family relationships influence self-reported delinquent behavior among adolescents.

The primary goal of this investigation was to examine how a modified version of the coercion theory (Patterson, 1982, 1986) of delinquent behavior fits the data. Specifically, family functioning rather than parental behavior was measured to incorporate a more systemic view of the family. Cashwell and Vacc (1996), in an exploratory study, examined a modified model of Patterson's (1982, 1986) coercion theory by examining family functioning rather than parental behavior. The results of the study were extremely encouraging, but confidence in the conclusions was limited by (a) a small sample size that limited any analyses by gender differences, (b) incomplete information on the demographics of the participants, and (c) use of a convenience sample. The intent of this study was to provide more data concerning familial influences on adolescent delinquent behavior to assist counselors in developing interventions.

Coercion theory, developed by Patterson (1982, 1986), suggests that family environment influences an adolescent's interpersonal style, which in turn influences peer-group selection. Peers with a more coercive interpersonal style tend to become involved with each other, and this relationship is assumed to increase the likelihood of being involved in delinquent behavior. A coercive interpersonal style is characterized by antisocial and noncompliant behavior (Patterson, DeBaryshe, & Ramsey, 1989). Understanding the nature of relationships of family functioning, which includes family adaptability, cohesion, and satisfaction, provides more information for counselors in understanding youths.

TESTED MODEL

Figure 1 provides a graphic presentation of the modified coercion theory model examined in this study. The model posits that family functioning (a) influences the interpersonal style of an adolescent, (b) has a direct effect on an adolescent's involvement with deviant peers and delinquent behavior, and (c) has an indirect effect on peer-group involvement mediated by the coercive interpersonal style of the adolescent. The modified model suggests that the path of influence begins with family functioning and ends with adolescent characteristics that determine success or failure within the peer group, all of which affect delinquent behavior. The variables

investigated as influencing delinquent behavior included family cohesion, family adaptability, family satisfaction, coercive interpersonal style, and deviant peer involvement. The importance of these variables in influencing adolescents has been reported in the literature.

Family Functioning

Patterson's (1986) coercion theory, which is supported by empirical testing, suggests that disrupted family management skills lead to adolescent development of a coercive and antisocial interpersonal style. This, in turn, leads to rejection by nondelinquent peers and subsequent involvement with a group of deviant peers (Patterson & Bank, 1989). In the present study, family functioning refers to the quality of interactions within a family system, including family cohesion, family adaptability, and communication (Olson, 1988; Olson et al., 1992; Olson, Sprenkle, & Russell, 1979; Olson & Wilson, 1982). The family influences an adolescent's interpersonal behaviors, with the adolescent tending to replicate family patterns in peer relationships (Bell, Cornwell, & Bell, 1988; Olweus, 1980; Patterson, 1982, 1986; Patterson & Bank, 1989). Research in structural equation modeling generally has supported the theory that disruptive parenting practices are causally related to child antisocial behavior (Borduin, Pruitt, & Henggeler, 1986; Henggeler, Edwards, & Borduin, 1987; Patterson et al., 1989; Patterson & Stouthamer-Loeber, 1984; Simons, Whitbeck, Conger, & Conger, 1991).

Coercive Interpersonal Style

Antisocial characteristics in the home often are generalized into the school setting (Ramsey, Patterson, & Walker, 1990) and from one peer setting to another (Coie & Kupersmidt, 1983). Thus, an adolescent" problems within the family may increase the likelihood of association with deviant peers (Patterson & Dishion, 1985). Rejection by conventional peers and subsequent involvement with deviant peers is a central component of coercion theory. Adolescents who self-report higher levels of delinquent behavior have been shown to report higher levels of aggression in their friendships (Giordano, Cernkovich, & Pugh, 1986; Patterson, Capaldi, & Bank, 1991). Patterson (1982, 1986) found that children raised in a coercive environment generalize this coercive interpersonal style to relationships with peers.

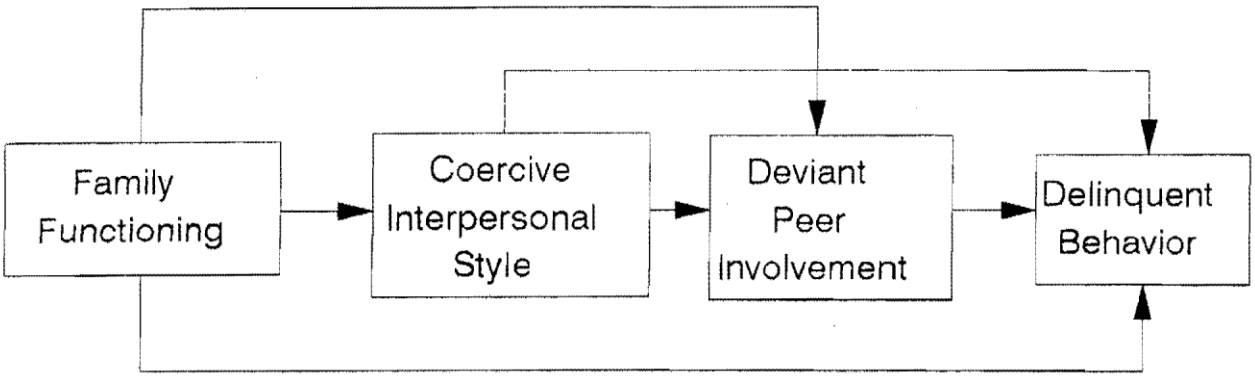

FIGURE 1
Hypothesized Path Model of Adolescent Delinquent Behavior

Deviant Peer Involvement

Considerable research exists to suggest that peers are influential in adolescent deviant behaviors (Brownfield & Thompson, 1991; Dishion, Patterson, Stoolmiller, & Skinner, 1991; East, 1989; Hartup, 1983; Levine & Singer, 1988). Peers are believed to provide adolescents with attitudes, motivations, and rationalizations that support delinquent behavior, as well as opportunities to engage in specific delinquent acts (Patterson et al., 1989). Empirical studies suggest that the peer group provides the social context for delinquent behavior (Agnew, 1991; Brownfield & Thompson, 1991; Elliott, Huizinga, & Ageton, 1985).

METHOD

This study examined a mediating model of the modified coercion theory. Specifically addressed were the (a) direct effect of family functioning (cohesion, adaptability, and satisfaction) on the interpersonal style of the adolescent, the adolescent's involvement with deviant peers, and the incidence of self-reported delinquent behavior; (b) indirect effect of family functioning on peer-group involvement mediated by the interpersonal

style of the adolescent, and delinquent behavior mediated by the interpersonal style of the adolescent and deviant peer involvement; (c) direct effect of interpersonal style on delinquent behavior; and (d) indirect effect of interpersonal style on delinquent behavior mediated by deviant peer involvement.

Participants

The participants were 619 adolescents in Grades 6, 7, and 8 from the 29 classrooms of a middle school in North Carolina. All classrooms in the school participated. The total number of participants consisted of 301 (49%) female and 318 (51%) male students; 301 (49%) Whites, 241 (39%) African Americans, 4(1%) Native Americans, 25 (4%) "other" (most of whom indicated that they were biracial), and 6 (1%) "unknown." Forty-two participants (7%) did not respond to this item.

The students were asked to provide information about their living arrangements. Among the participants responding, 296 (48%) indicated that they lived with both parents, 61 (10%) with their mother and stepfather, 14 (2%) with their father and stepmother, 135 (22%) with mother only, 18 (3%) with father only, 38 (6%) with other relatives, 3 (1%) in foster care, and 8 (1%) with "other" living arrangements. Forty-six participants (7%) did not specify living arrangements.

Instrumentation

Data were collected from the 619 participants using the following scales and a demographic information form. The reading level for all of the instruments, as calculated using Fry's Readability Graph (Fry, 1977), ranged between fourth and sixth grade.

Family Adaptability and Cohesion Evaluation Scales II (FACES II). FACES II (Olson et al., 1992) is a 30-item Likert-format instrument that measures the dimensions of family cohesion, defined as the emotional bonding within the family, and family adaptability, defined as the ability of the family to change in response to stress. Concurrent validity of FACES II, through correlations with other family instruments, has been calculated to be ,93 (cohesion) and ,79 (adaptability). Cronbach alphas have been measured at .87 (cohesion), .78 (adaptability), and .90 (total scale; Olson et al., 1992).

Family Satisfaction Scale (FM). The FSS (Olson et al., 1992) is a 14-item Likert-format instrument designed to assess satisfaction with current levels of family cohesion and adaptability. Cronbach alpha for the scale was reported to be .92. The 5-week test—retest correlation for the total score was .75 (Olson et al., 1992).

Deviant Peer Involvement Measure. Forty-one items were drawn from the Self-Report Delinquency Measure (SRDM). Content validity of the items was established through consensus of an expert panel of juvenile court authorities. Using a Likert-type scale with 1 being *none* and 5 being *all,* participants were asked to respond to how many of their close friends had engaged in any of the listed delinquent behaviors. An acceptable alpha level ($\alpha = .97$) was obtained in the present study to include this measure in the analyses.

Self-Report Delinquency Measure (SRDM). Developed by Hindelang, Hirschi, and Weis (1981), this instrument consists of 69 items partitioned into five scales; official contact, serious crime, delinquency, drugs, and school and family offenses. The scale scores can he summed to provide one quantitative rating of self-reported delinquent behavior. In this study, a count of the number of different offenses ever committed by a participant ("ever variety") was used to yield a single score. Hindelang et al. (1981) reported a Cronbach's alpha (mean of all possible split-halves) for the "ever variety" that ranged from, 86 to .93 for various subgroups (race, gender, socioeconomic status) with no "systematic or substantial variation as a function of demographic subgroup" (p. 81). The SRDM has been validated with a large and diverse sample pool and is relatively comprehensive in the types of acts it measures (Tolan, 1988).

Teacher Report of Coercive Interpersonal Style. Teachers were asked to report the level of coercive behavior that students demonstrate in interpersonal relation ships by responding to one item: "What level of coercion and/or aggressiveness does this student utilize in his/her interpersonal relationships." A Likert-type response

format with 1 being *none* to 5 being *very much* was used. Evidence exists that teachers can provide such information about their students with a high level of accuracy (Bower, 1981; Kupersmidt & Patterson, 1991).

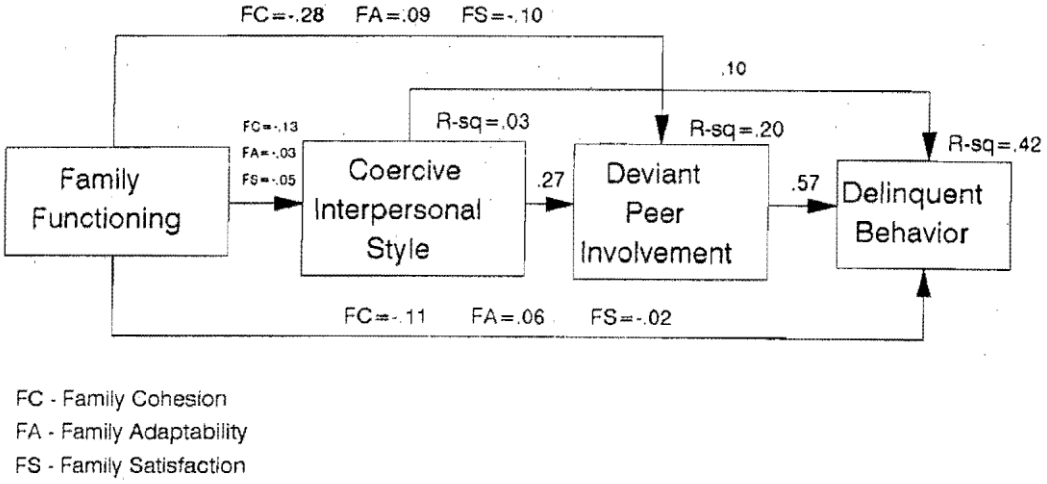

FIGURE 2
Results of Path Analysis

Procedure and Data Analysis

All instruments were in packets, and identification numbers were used to ensure anonymity of responses. The teachers at each school were asked to rate each student's level of coercive interpersonal style for students in their class at the time of data collection. These ratings were later matched with the respective student's packets through the use of the identification number.

The coded data were analyzed using the Statistical Package for the Social Sciences—X (SPSS Inc., 1990). Descriptive statistics (means and standard deviations) were calculated for each variable for the total population and separately for male and female participants. Additionally, a path analysis was conducted for the total sample and separately for male and female participants.

TABLE 1

Distributions of Variables Associated With Delinquent Behavior for 619 Adolescents and Separately by Gender

	Participants						
	Total ($N = 619$)		Male ($N = 318$)		Female ($N = 301$)		
Variable	*M*	*SD*	*M*	*SD*	*M*	*SD*	*t*(617)
Family cohesion	56.40	10.20	56.49	9.80	56.27	10.61	−0.27
Family adaptability	44.25	7.93	47.99	10.63	44.30	7.88	0.19
Family satisfaction	47.99	10.63	48.14	10.59	47.84	10.70	−0.35
Deviant peer involvement	22.30	27.63	27.06	31.13	17.30	22.43	−4.48*
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 ($p < .01$).

TABLE 2

Correlation Matrix of Variables Associated With Delinquent Behavior

Variable	1	2	3	4	5	6
1. Family cohesion	—	−.65*	−.70*	−.35*	−.18*	−.30*
2. Family adaptability		—	.66*	−.20*	−.15*	−.17*
3. Family satisfaction			—	−.29*	−.16*	−.24*
4. Deviant peer involvement				—	.33*	.64*
5. Coercive interpersonal style					—	.30*
6. Delinquent behavior						—

*$p \leq .01$.

RESULTS

Mean scores and standard deviations are presented in Table 1, and the zero-order correlation matrix is presented in Table 2. The strongest correlation in the model (,64, $p \leq .01$) occurred between deviant peer involvement and delinquent behavior.

The path analysis for the total sample is presented in Figure 2. Beta values were calculated for each of the bivariate relationships hypothesized in the modified model. Beta values are reported on the paths and R^2 values are reported above the variables. When all variables in the model were used to predict delinquent behavior, results were significant, $R^2 = .42$, $F(5, 491) = 70.5$, $p < .001$; the variables accounted for 42% of the variance in delinquent behavior, The strongest predictor of delinquent behavior was deviant peer involvement ($\beta = .57$). The largest direct effect on deviant peer involvement was family cohesion ($\beta = -.28$). Finally, the largest direct effect on coercive interpersonal style was family cohesion ($\beta = -.13$).

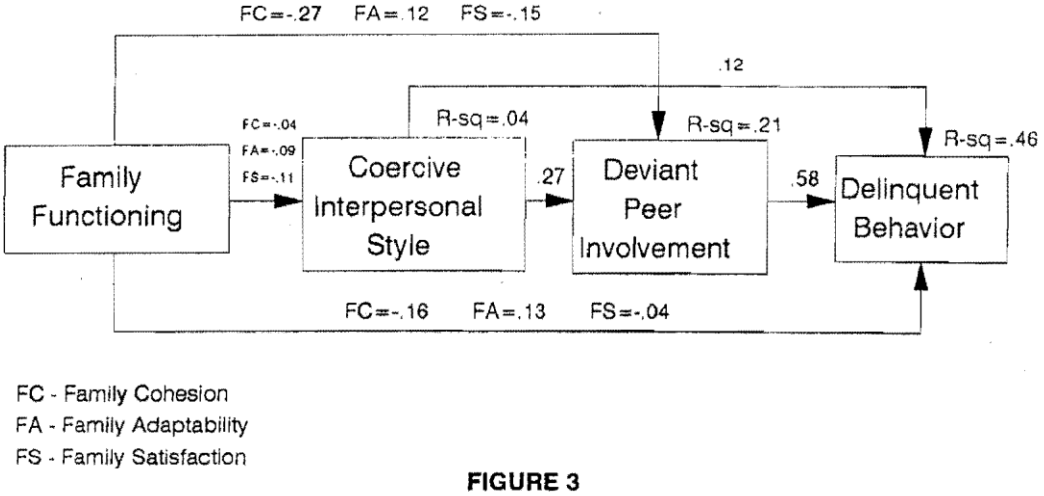

FIGURE 3
Results of Path Analysis for Male Participants

Gender Differences in the Modified Model

In addition to testing the modified model for the total number of participants, we tested the model separately for male and female participants to examine whether gender differences existed.

Male participants. The path analysis for male participants is presented in Figure 3. When all variables in the model were used to predict delinquent behavior among male participants, results were significant, $R^2 = .46$, $F(5, 242) = 41.03$, $p < .0001$. The variables in the model accounted for 46% of the variance in delinquent behavior for male participants.

A series of stepwise regressions were conducted to examine the relative strength of the predictors in the model for male participants using a criterion level of .05. Involvement with deviant peers loaded first as the strongest predictor of delinquent behavior for male participants, $R^2 = .43$, $\beta = .65$, $F(5, 242) = 184.45$, $p < .0001$. With deviant peer involvement already in the model, coercive interpersonal style loaded as the second strongest predictor, $R^2 = .44$, R^2 change = .01, $\beta = .12$, $F(5, 242) = 96.90$, $p < .0001$. No other variables provided significant predictive information at the .05 level.

Female participants. The path analysis for female participants is presented in Figure 4, When all variables in the model were used to predict delinquent behavior among female participants, results were significant, $R^2 = .32$, $F(2, 242) = 22.81$, $p < .0001$, although less variance was accounted for among female than among male participants. The variables in the modified model accounted for 32% of the variance in delinquent behavior for female participants.

A series of stepwise regressions using a .05 criterion level identified involvement with deviant peers as the strongest predictor of delinquent behavior for female participants, $R^2 = .30$, $\beta = .55$, $F(5, 242) = 106.53$, $p < .0001$. With deviant peer involvement already in the modified model, family cohesion loaded as the second

strongest predictor, $R^2 = .32$, R^2 change = .02, $\beta = -.13$, $F(5, 242) = 56.84$, $p < .0001$. No other variables provided significant predictive information at the .05 level.

DISCUSSION

In this study, we tested a modified model of Patterson's (1982, 1986) coercion theory of adolescent delinquent behavior that included family functioning rather than parental behavior. The specified model for the total group of participants accounted for a significant portion (42%) of the variance in delinquent behavior. Being involved with deviant peers was found to be the strongest direct predictor of adolescent delinquent behavior. A coercive interpersonal style was the second strongest direct predictor. Family cohesion provided the overall strongest familial influence on delinquent behavior. The direct influence of family cohesion on delinquent behavior ($\beta = -.11$) is smaller than the indirect path mediated by deviant peer involvement ($\beta = .16$). These results suggest that family cohesion is most influential on delinquent behavior as it influences peer-group choice. Living in a cohesive family appears to reduce the likelihood of becoming involved with deviant peers. The strength of the relationships in this study suggests that the indirect path from family cohesion to deviant peer involvement is particularly important in influencing delinquent behavior.

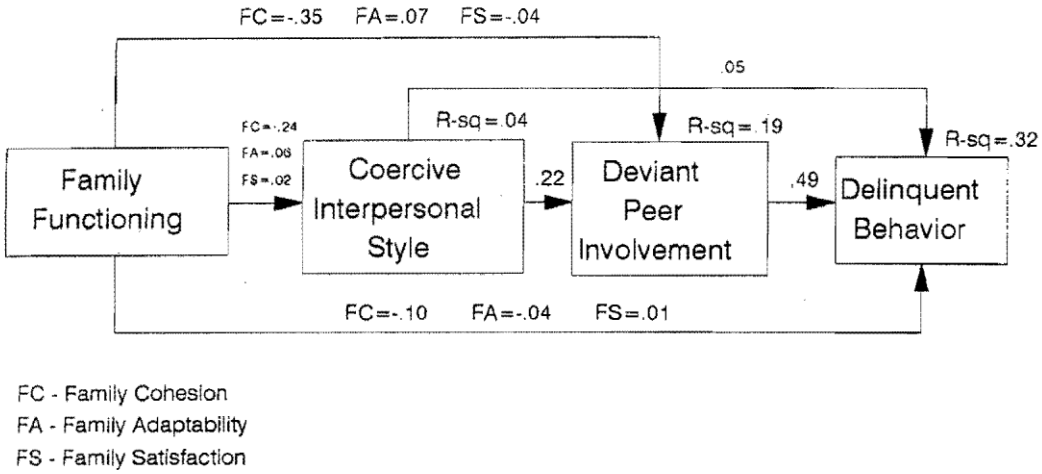

FIGURE 4
Results of Path Analysis for Female Participants

Support was obtained for the coercion theory of delinquency developed by Patterson and colleagues (Dishion et al., 1991; Patterson, 1982, 1986; Patterson & Bank, 1989; Patterson & Dishion, 1985). However, the present study differed from previous research on coercion theory in that no measure of parental coercion or aggression was obtained. Family cohesion or the emotional bonding of the family emerged as an influential predictor of delinquent behavior, particularly as it influenced involvement with deviant peers.

Some interesting gender differences emerged from this analysis. First, the overall model is more effective in predicting delinquent behavior for male than for female participants. Additional information is needed to examine family variables that contribute more fully to the incidence of female delinquent behavior. Second, variables differed as strong predictors by gender. Family cohesion and deviant peer involvement provided stronger predictive power for male than for female participants. Another difference was that the relationship between family adaptability and delinquent behavior was positive for male participants; the sign was reversed for female participants. This relationship suggests that higher family adaptability may benefit female participants in relation to delinquent behavior and may be detrimental to male participants. Further investigation of this specific relationship is warranted, particularly given ongoing debate over whether family adaptability, as measured by FACES H, is linear or curvilinear in nature.

IMPLICATIONS FOR INTERVENTIONS

Previous research (Cashwell & Pasley, 1995) suggested that it is important to consider both interpersonal and intrapersonal factors that may influence adolescents engaging in delinquent acts. The present study suggests that both family and peers influence delinquent behavior. Also, counseling interventions for boys and girls may

require differences in emphasis. Combating 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 families, children, and early adolescents with the resources to avoid delinquent behaviors. Given the results of this study, it is important for counselors and other helping professionals to provide communication training to families to increase the level of family cohesion, and to provide social skills training and information about the potential harmful effects of involvement in a deviant peer group.

Previous researchers (Coie & Kupersmidt, 1983; Dodge, 1983; Patterson, 1986; Patterson & Bank, 1989) have suggested that a lack of interpersonal skills results in an 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 *labeling and rejection* phenomenon previously described by Coie and Kupersmidt (1983) and Dodge (1983). Conducting this training in family sessions may have the secondary benefit of improving communication and social skills for other family members as well.

Secondary prevention, also referred to as early intervention, involves first identifying those adolescents who are at risk for engaging in delinquent behavior and then providing preventive services to these targeted students and their families. Given the familial influence on delinquent behavior among early adolescents, as identified in the present study, parent consultations and education, social skills training, and training on peer influence are essential considerations. Important components of parent consultation and education for these at-risk youths would be the value of family cohesion and how to increase cohesion within the family. Parent consultation and education, social skills training, and peer influence training most likely would be best accomplished in a group setting.

Tertiary prevention or treatment includes efforts to rehabilitate known delinquents. The literature provides fairly clear, although not promising, effects of such efforts (Patterson et al., 1989). Treatment interventions have had limited impact on adolescent delinquent behavior, and identified effects often do not persist over time (Kazdin, 1987). Given the lack of effectiveness found for tertiary prevention, interventions need to focus on younger children and their families. Results of the present study suggest that a substantial number of participants report involvement in delinquent behavior as early as middle school (Grades 6 through 8). Interventions, then, need to begin in the early elementary grades.

It has been consistently shown that teachers can effectively identify students who are engaging in antisocial behavior (Kupersmidt & Patterson, 1991; Parker & Asher, 1987; Tremblay, LeBlanc, & Schwartzman, 1988) and, consequently, are at higher risk for ongoing delinquent behavior in the future. Early identification and intense intervention for these at-risk students and their families likely will influence future antisocial behaviors. Without interventions, the implications for such an aggressive interpersonal style may extend well 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. Finally, because the previously mentioned labeling and rejection phenomenon appears to be a key issue, it is important that the intervention program providers avoid the stigma of the at-risk label with the adolescents they serve.

Results of this study should be viewed within the context of the limitations of the study. First, there is a strong reliance on self-report measures. Although previous researchers have called for adolescent report of information (Zaslow & Takanishi, 1993), there is a need to verify results of this study with multiple source data. Second, the items used to measure deviant peer involvement were drawn from the Self-Report Delinquency Measure and reworded to reflect peer behavior. However, the strong relationship between deviant peer involvement and delinquent behavior is consistent with the results of previous research (Elliott et al., 1985; Simons et al., 1991). A final limitation is the use of a single item, asked of teachers, to measure the level of coercion used by students in their interpersonal relationships.

CONCLUSIONS

This study provided further support for a modified model of the coercion theory of delinquent behavior. On the basis of the analyzed data, both family and peer relationships play a significant role in adolescents decisions about delinquent behavior in a complex and interdependent process for boys and girls. Intervention efforts need to recognize the importance of family functioning, interpersonal style, and peer group as predictors of delinquent behavior.

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