WHY IS "BAD" PARENTING CRIMINOGENIC?

A TEST OF RIVAL THEORIES*

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ABSRACT

Gottfredson and Hirschi (1990) claim that "bad" or ineffective parenting produces criminal behavior by fostering low self-control. Alternatively, differential association/social learning theorists contend that bad parenting produces criminogenic learning, including the internalization of aggressive attitudes. The current research tests these two rival theories and their competing accounts of "why bad parenting matters" with data from a sample of middle school students. The analysis revealed that several dimensions of parenting (including monitoring/caring, harsh parenting, inconsistent punishment, and the negative reinforcement of aggressive behavior) affected both low self-control and aggressive attitudes. Furthermore, both low self-control and aggressive attitudes predicted delinquent involvement and were found to partially mediate the effect of parenting measures on delinquency. Self-control and attitudes were also found to be interrelated and to have a significant interaction effect. Taken together, these findings suggest that these two rival theories may have identified not only important links between parenting and delinquency but also criminogenic risk factors that are often found in the same individuals.

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Although dissenting views can be found (Harris, 1995; but see Collins, Maccoby, Steinberg, Hetherington, and Bornstein, 2000), social scientists—including criminologists—believe that "bad" parenting is a cause of youthful misconduct. However, criminologists are not nearly as certain as to why ineffective or bad parenting is related to juvenile delinquency. The purpose of this paper is to further elucidate the intervening processes that occur between bad parenting and delinquent acts.

In so doing, we test propositions central to two longstanding rival theories that address why bad parenting is a cause of crime: the general theory of crime and the differential association/social learning perspective. More specifically, we assess three issues: (1) Gottfredson and Hirschi's key proposition that bad parenting affects delinquency through its impact on low self control; (2) the differential association/social learning proposition that bad parenting affects delinquency through its impact on aggressive attitudes; and (3) whether low self-control and aggressive attitudes each uniquely predict delinquency.

The research on "bad" parenting as a cause of crime is experiencing a subtle yet salient shift in its empirical emphasis. Initially, research focused on simply showing that ineffective parenting and crime were interrelated. Now, however, the focus has shifted to defining more precisely what constitutes "bad" parenting and explicating the negative social-psychological consequences engendered by ineffective parenting and how they may be related to criminal behavior (Patterson, 1998). In fact, Agnew (1993) argues that

the major delinquency theories are more clearly distinguished by the intervening processes they propose than by their independent variables. Agnew goes on to contend that focusing on these intervening processes is often the only way to assess empirically the relative merits of competing theories. This is certainly the case when examining parenting variables, because the major theories often identify as criminogenic many of the same aspects of inept parenting but differ from one another in terms of why such parenting fosters illegal conduct. In this context, the current study examines two major intervening factors described in the theoretical literature—low self-control and aggressive attitudes—and, in so doing, attempts to provide an empirical test of the divergent predictions from two rival theories of crime.

PARENTING AND THE GENERAL THEORY OF CRIME

The central assumption of Gottfredson and Hirschi's general theory is that a stable propensity to engage in crime—criminality or "low self-control"—is the prime cause of involvement in crime and in deviant or "analogous" behaviors. Gottfredson and Hirschi's (1990) argue further that ineffective parenting is the reason why youngsters fail to develop self-control. Gottfredson and Hirschi are clear in their definition as to what constitutes ineffective parenting. Ineffective parenting includes three components: (1) monitoring or tracking the child's behavior, (2) recognition of deviant behavior when it occurs, and (3) consistent and proportionate punishment for the deviant behavior when it is recognized.

Gottfredson and Hirschi (1990) are also clear as to what constitutes low self-control. Adolescents, who behave impulsively, enjoy taking risks, prefer physical

activities to mental exertion, are self-centered and short-tempered, and choose simple tasks over complex ones are said to have low self-control. They argue that low self-control is an individual propensity that persists across the life span, thus predisposing individuals with low self-control to a lifetime of engaging in criminal or analogous behaviors. Importantly, the general theory of crime boldly argues that the influence of ineffective parenting on criminal behavior should be entirely mediated by the effect of low self-control

In summary, Gottfredson and Hirschi contend that children raised in unstructured environments fail to develop the ability to control their behavior and therefore are prone to engage in risky behaviors that give them either a short-term reward or relief from momentary irritations (i.e., criminal behavior). They reject the argument that parent-child interactions model or teach children attitudes and actions that predispose them to engage in either aggressive or criminal acts. As Gottfredson and Hirschi state: "One thing is, however, clear: low self-control is not produced by training, tutelage, or socialization. As a matter of fact, all of the characteristics associated with low self-control tend to show themselves in the absence of nurturance, discipline, or training" (Gottfredson and Hirschi, 1990: 95). In short, Gottfredson and Hirschi argue that self-control is not a learned behavior.

Despite its centrality to the general theory, relatively few studies have examined Gottfredson and Hirschi's thesis on ineffective parenting, low self-control, and crime (for exceptions, see Hay, 2001; Gibbs, Giever, and Martin, 1998; Unnever, Cullen, and Pratt, 2002). In part, this neglect is due to researchers using older samples (i.e., late teens or

adults) and/or samples that do not contain measures of ineffective parenting and self-control.

In any event, the results from these studies partially support the general theory of crime. They show that ineffective parenting is related to low self-control, which in turn is related to criminal behavior. However, Hay (2001) and Unnever et al. (2002) also found that ineffective parenting directly influenced criminal behavior after controlling for the influence of low self-control. They both conclude that while Gottfredson and Hirschi (1990) are correct that ineffective parenting is related to low self-control, "bad" parenting must also generate other negative social-psychological consequences than just low self-control which may mediate its effects on delinquent involvement. Accordingly, they suggest that further research is needed that examines what other possible negative social-psychological consequences are related to ineffective parenting and how they may be related to criminal behavior.

PARENTING AND THE DIFFERENTIAL ASSOCIATION/ SOCIAL LEARNING PERSPECTIVE

The differential association/social learning perspective focuses on many of the same dimensions of bad parenting as the general theory of crime but explains the effect of bad parenting in terms of definitions favorable to crime and, in the case of the social learning version, the differential reinforcement of crime and exposure to aggressive models (Akers, 1985, 1998). This theoretical perspective argues that bad parenting differentially models, reinforces, and provides definitions favorable to committing delinquency. For example, Patterson et al. (1992) and others (Snyder and Stoolmiller,

2002) maintain that bad parenting can negatively reinforce criminal tendencies if parents desist from punishing the child when he or she acts aggressively toward them and parents can positively reinforce a child's criminal tendencies when, for example, they give the child what he or she wants because the child antagonistically demands it. The differential association/social learning perspective further asserts that bad parenting sometimes inadvertently models behavior increasing the likelihood of delinquency when, for example, parents punish aggression in their children by spanking or beating them.[1] In sum, for this approach, children differentially exposed to bad parenting come to view delinquency as a desirable or appropriate response in certain situations (Akers, 1999).

The extant research indicates that one of the cognitive deficits or underlying processes that may intervene between bad parenting and delinquent behavior is when children learn a set of definitions favorable to the use of aggressive behavior (Eron, 1987; Slaby and Guerra, 1988). The research by Eron (1987) has established a link between bad parenting and cognitively developing a set of attitudes, standards, and norms for behavior that are favorable to the use of aggressive behavior. Additionally, Slaby and Guerra (1988) have established a link between attitudes favorable to the use of aggressive behavior and criminal behavior. They discovered that adolescents who were incarcerated for violent crimes and high school students who were rated high in aggression by their teachers were more likely to hold a set of beliefs supporting the use of aggression (Slaby and Guerra, 1988). Researchers have also demonstrated that aggressive attitudes predict a range of behaviors, including aggression, dating violence, bullying, school discipline referrals, detention, and suspensions (Foo and Margolin, 1995; Huesmann and Guerra, 1997; McConville and Cornell, in press).

In this paper, we test whether adolescents are more likely to learn a set of definitions that support the use of aggressive behavior if they have been differentially exposed to harsh parenting and if their parents have differentially reinforced their aggressive behavior. We also test whether adolescents who hold a set of definitions that support the use of aggression are more likely to engage in criminal behavior. In short, we test whether aggressive attitudes mediate the relationship between bad parenting and criminal behavior.

RESEARCH STRATEGY

The current paper attempts to contribute to the debate about ineffective parenting and delinquency in three ways. First, we look at two key intervening variables largely neglected by the prior research on parenting and crime, low self-control and aggressive attitudes (e.g., Brezina, 1998; Scaramella et al., 2002; Simons et al., 1994a, 1994b). Again, this allows us to furnish an empirical test of the rival self-control and differential association/social learning perspectives. In so doing, we are able to see whether the causal variables identified by these theories mediate the effects of bad parenting and whether the relationship to delinquency of self-control and attitudes is unique, spurious, and/or interactive.

Second, we examine a broader range of parenting variables than previous scholars who have investigated the intervening processes between parenting and crime (e.g., Brezina, 1998). As part of this effort, we include a potentially significant parenting variable, the negative reinforcement of aggressive behavior, which has been largely ignored by criminologists (Brezina, 1998; Simons et al., 1994a, 1994b; Stewart et al.,

2002). Third, prior studies have been limited in sample size, household diversity (e.g., only intact households—Simons et al., 1994a, 1994b), and social diversity (e.g., limited to boys—Brezina, 1998; Simons et al., 1994a, 1994b). We extend the prior research by analyzing a relatively large data set that includes a socially and economically diverse population of over 2,400 middle school boys and girls representing six schools. Notably, the use of a diverse sample presents the opportunity to weigh a core contention of the self-control and learning perspectives: that the effects of central theoretical variables are general across social groups.

In summary, the causal relationships that we examine are theoretically derived and consistent with prior tests of the general theory's ineffective parenting thesis and with the social learning perspective (Eron, 1987; Hay, 2001; Slaby and Guerra, 1988; Unnever et al., 2002). However, we recognize that alternative causal relationships could be hypothesized. It is possible that parents may initiate or escalate their use of ineffective parenting techniques if previous attempts to effectively raise their children do not result in improved behavior (Stewart et al., 2002). These "child effects," interactional, or reciprocal relationships are well documented in the literature (Stewart et al., 2002; Thornberry et al., 1991; Vuchinich et al., 1992; Wright and Cullen, 2001). Given that our survey is cross-sectional, we cannot test nor control for possible reciprocal relationships between bad parenting, low self-control, aggressive attitudes, and delinquency. However, it is noteworthy that researchers have shown that parental practices are related to juvenile delinquency even after taking into consideration the consequences of possible child effects (Stewart, et al., 2002; Vuchinich et al., 1992; Wright and Cullen, 2001). Stewart et al. (2002) and others (Scaramella et al., 2002; Wright and Cullen, 2001) have

concluded that ineffective parenting is a major explanation for problem behaviors, even after the influence of earlier misbehavior is taken into account.

Although the data set does not allow us to control for possible child effects, we do control for a characteristic of children that may be related to them being less responsive to initial attempts to effectively parent. We control for whether or not the child had been prescribed medication for ADHD. Controlling for whether the child has ADHD also allowed us to control for one possible genetic/biological correlate of aggressive and criminal behavior (Moffitt, 1993; Rowe, 2002; Unnever and Cornell, in press; Unnever et al., 2002).

Our data set also does not include measures of deviant peer group affiliation. A longitudinal data set with measures of peer group affiliation would allow us to assess whether ineffective parenting causes children to develop aggressive attitudes or low self-control, which results in them affiliating with deviant peers and developing school related problems, which in turn contributes to their greater involvement in delinquency (Dishion et al., 1991; Patterson et al., 1992; Scaramella et al., 2002; Simons et al., 1994b). However, the general theory of crime argues and the prior research shows that both parenting and the development of individual characteristics such as low self-control and aggressive attitudes are relatively stable over time and that children with these characteristics affiliate with children similar to themselves (Eron, 1987; Olweus, 1979; Patterson, 1998; Scaramella et al., 2002; Vuchinich et al., 1992). The prior research also shows that ineffective parenting can affect the development of aggressive behaviors and attitudes even after controlling for deviant peer group affiliation (Simons et al., 1994b). These findings suggest that including a measure of deviant peer affiliation may partially

mediate the relationship between having aggressive attitudes and low self-control and delinquency; however, it should not substantially alter the relationship between parenting and these possible intervening mechanisms.

METHOD

Sample

The data we employ in this study were collected for a project designed to gather baseline data on school bullying and school violence. The sample was drawn from the six public middle schools that serve a metropolitan area with a diverse population of nearly 100,000 inhabitants in Virginia. The six middle schools served a total enrollment of 3,038 students in grades six, seven, and eight. Approximately, 46.5 percent of the middle schools student population was nonwhite, 52 percent received a free or reduced cost breakfast or lunch at school, and 50 percent were male. The percentage of students receiving some services in special education based on an IEP (individualized education plan) was 19.6 percent and the dropout rate for the middle schools in 1999-2000 was 1.9 percent.

All middle school students in attendance on the day of the survey were eligible for the study.[2] In all, 2,472 students completed the survey (a response rate of 81%). School administrators sent an "opt-out" letter to all the parents/guardians of the students before the administration of the survey. The parents of 42 students declined to allow their children to participate in the survey. Teachers administered an anonymous survey in classrooms during the fall of 2000.

The respondents who completed the survey closely matched the total population of students. The percentage of students who reported they were non-white was 40 percent in comparison to the student population of 46.5 percent; the percentage of male study participants was 48.9 percent in comparison to the student population of 50 percent; and the percentage of students who reported that they received a free or reduced cost breakfast or lunch was 49.8 percent in comparison to the student population, for grades 7-12, of 52 percent.

Surveys were carefully screened for complete and accurate information (patterned responses). Thirty-one surveys were deleted in which the students gave the same response to every question on one or more pages (excluding the pages focused on bullying and having been bullied). Also, four surveys were dropped in which the student reported an unlikely height (over six foot five inches) or weight (over 300 pounds). School principals confirmed that no students in the school were this large.

Using LISREL 8.5 for Windows and the EM algorithm (Schafer, 1997), we substituted values for missing cases. The EM algorithm generated values based on a data set that included the variables used in the present analysis. All analyses were run with and without missing cases; the results did not differ substantively. After imputing values for the missing cases, the sample included 2,437 middle school students. We used ordinary least squares as the estimation procedure. We did not detect any excessive collinearity. None of the correlations exceeded .75 and no VIF value exceeded 2.5 (Fisher and Mason, 1981).

Measures

Table 1 shows the coding of the variables included in this analysis. Variable names are in the first column, the coding categories are in the second, and descriptive statistics are in the last columns.

-----Insert Table 1 About Here-----

Dependent Variables. A self-report instrument adapted from the National Youth Survey was used to create three scales to measure delinquent involvement (Elliott, Huizinga, and Ageton, 1985; Elliott, Huizinga, and Menard, 1989). To ensure a clear reference period for offending, students were asked to indicate how often "since school started in August" that they had engaged in nine relatively serious delinquent acts. The survey was administered in the last week in October 2000. To respond to the self-report items, the youths used a scale ranging from 0 (never) to 4 (4 or more times).

We constructed three scales, a general delinquency scale, a violent crime scale (carry a hidden weapon, attack someone, gang fights, hit or threaten to hit a teacher or your parents, and use force or threaten to use force to get money), and a scale measuring nonviolent crimes (use of alcohol and illegal drugs, purposely damage or destroy school property, sell illegal drugs, and set fire to personal property). The students' scores were summed across each of the items composing the scales and were standardized. The alpha coefficient for the General Delinquency scale was .87, the alpha coefficient for the Violent Crimes scale was .82 and the alpha coefficient for the Nonviolent Crimes scale was .78. The log transformations of the scales scores were used in the analysis given that they were positively skewed.

Ineffective Parenting. The data set provided an opportunity to assess propositions central to the debate about the relationship between bad parenting and delinquency. More specifically, it included two scales and one single-item derived from the work of Simons et al. (1994b). The data set also included a single-item measure of ineffective parenting, the negative reinforcement of aggression, a measure largely ignored by criminologists (Larzelere and Patterson, 1990).

Harsh discipline. A five-item self-report scale was used to form an indicator of harsh parenting (Simons et al., 1994b). The students were asked a series of questions including; "How often have your parents/guardians disagreed with at you?", "When you have had disagreements, how often have your parents/guardians discussed them calmly with you (reverse coded)?", "How often have your parents/guardians argued heatedly or shouted at you?", "How often have your parents/guardians ended up threatening you?", and "How often have the arguments between you and your parents/guardians ended up being physical (e.g., hitting, shaking, shoving, etc.)?" The responses ranged from 0 (never) to 4 (always). The scores were summed across the five items and standardized with higher scores indicating harsher discipline. The standardized alpha for Coercive Parenting was .72.

Parental Monitoring/Involvement. This scale assessed how closely parents or guardians monitored the behavior of their children (Simons et al., 1994b). The scale was composed of five items including "How often do/does your parent or parents (guardians) know who you are with when you are away from home?" and "In the course of a day, how often do/does your parent or parents (guardians) know where you are?" It also included "My parents (guardians) care how late I stay out," "My parents (guardians) care

how I do in school," and "My parents (guardians) help me with my homework." The responses ranged from 0 (never) to 4 (always). The scores were reverse coded summed across these items and standardized with higher scores indicating closer monitoring. The standardized alpha coefficient for the Parent Monitoring/Involvement scale was .74.

Inconsistent discipline. Inconsistent discipline was measured using a single-item developed by Simons et al. (1994b), "How often do/does your parent or parents (guardians) punish you for something at one time and then at other times not punish you for the same thing?" The responses ranged from 0 (never) to 4 (always) with higher scores indicating greater inconsistence in discipline.[3]

Negative reinforcement. The negative reinforcement of aggressive behavior was measured using a single-item, "When I get angry or yell at my guardians (parents) they give me what I want." The responses were reverse coded and ranged from 0 (strongly agree) to 3 (strongly disagree) with higher scores indicating more negative reinforcement of aggressive behavior.[4]

Intervening Social-Psychological Measures. Given the richness of the data set, we were able to include two social-psychological variables that should intervene between ineffective parenting and juvenile delinquency, low self-control and aggressive attitudes.

Low self-control. The Grasmick et al. (1993) scale was used to measure the respondent's level of low self-control. Responses were summed across the items and the scores were standardized. The standardized alpha coefficient for Low Self-control was .87. This reliability is consistent with previous research (Arneklev, Grasmick, Tittle, and Bursik, 1993; Gibbs and Giever, 1995; Gibbs et al., 1998; Hay, 2001; Longshore, 1998; Longshore

and Turner, 1998; Piquero and Tibbetts, 1996). Note that we have coded this measure so that a high score means the respondent has less self-control.

Aggressive attitudes, the extent to which students endorsed attitudes supportive of aggressive behavior, was measured using five items derived from previous studies of aggressive adolescents (McConville and Cornell, in press; Slaby and Guerra, 1988). These items have been found to be predictive of peer aggression and disciplinary infractions at school (McConville and Cornell, in press). The items used to construct the Aggressive Attitudes scale included: "If a kid threatens you, it is OK to hit them," "It feels good when I hit someone," and "If you fight a lot, everyone will look up to you." It also includes "Sometimes you have only two choices-get punched or punch the other kid first" and "If you are afraid to fight, you will not have any friends." The responses to these items ranged from strongly agree to strongly disagree. The scores were reversed coded, summed and standardized. Higher scores indicated students with more aggressive attitudes. The standardized alpha coefficient for the Aggressive Attitude scale was .79.

Control Variables. We control for a number of factors that may be related to ineffective parenting, low self-control, aggressive attitudes, or juvenile delinquency including whether the child had been prescribed medication for ADHD. Our measure of *ADHD* was an item that asked, "Have you ever taken medication for being hyperactive (attention-deficit hyperactivity disorder) (1=yes and no=0).

We additionally controlled for *intact families* (1 =intact and 0 =other). The effects of family structure on delinquency are subject to substantial debate (Gelles, 1989; Juby and Farrington, 2001; Wells and Rankin, 1991). However, it is possible that intact families may be able to more effectively parent their children (e.g., by sharing the

responsibilities of monitoring their children's behavior). Thus, we included a single dichotomous measure for whether or not the child lived in an intact household.

It has also been argued that families living in poverty encounter greater environmental stressors undermining their effectiveness as parents and thereby increasing the misbehavior of their children (Amato and Both, 1997; Belsky, 1980; Gelles, 1992). Therefore, we controlled for the family's socioeconomic status. Our measure of the family's socioeconomic status, *free lunch* (yes =1 and no=0), was based on the student's response to the question, "Do you get a free or reduced cost breakfast or lunch at school?"

Furthermore, we have controlled for *family conflict*. Research suggests that family conflict is indirectly related to children's maladjustment because it alters parenting practices and the quality of parent-child relations (Buehler and Gerard, 2002; Foo and Margolin, 1995). A five-item self-report scale, similar to the one used to measure harsh parenting was used to create the family conflict scale (Simons et al., 1994b). The respondents were asked a series of questions that ranged from "How often have your parents or guardians disagreed with one another?" to "How often have your parents/guardians ended up being physical (e.g., hitting, shaking, shoving, etc.)?" The responses ranged from 0 (never) to 4 (always). The scores were summed across the five items and standardized with higher scores indicating greater family conflict. The standardized alpha for Family Conflict was .77.

Finally, we included dichotomous measures for gender (male =1 and female=0), and race (1=African-American and 0=other), and we controlled for the respondent's age, in years.

RESULTS

The Impact of Parenting on Self-Control and Aggressive Attitudes

The general theory of crime and differential association/social learning theories predict that ineffective parenting should be related to low self-control and aggressive attitudes, respectively. Table 2 presents the results of regressing low self-control and aggressive attitudes on our four measures of ineffective parenting while holding constant the effects of the control variables. Model 1 of Table 2 shows the results for low self-control and Model 2 presents the results for aggressive attitudes.

The results from Model 1 of Table 2 indicate that low self-control was related to ineffective parenting. The results show that adolescents with low self-control were more likely to have parents who negatively reinforced their aggression by giving into them when they were angry and to have parents who did not closely monitor their behavior. The beta weights also indicate that adolescents with low self-control were equally likely to have parents who either inconsistently or harshly punished them. Low self-control was also related to five of the control variables. Adolescents with low self-control were more likely to have received a federally funded lunch, be male, have ADHD, and have been exposed to family conflict. Model 1 additionally indicates that adolescents with low self-control were less likely to be living in an intact household.

The results from Model II of Table 2 indicate that the aggressive attitudes scale was also influenced by the ineffective parenting measures. The results show that adolescents with aggressive attitudes were more likely to have parents who negatively reinforced their aggression by giving into them when they were angry and to have parents who did not closely monitor their behavior. Adolescents with aggressive attitudes were

also more likely to be either inconsistently or harshly punished. The aggressive attitude scale was related to six of the control variables. Adolescents with aggressive attitudes were more likely to be older, male, have received a federally funded lunch, and to have been exposed to family conflict. Model II further indicates that adolescents with aggressive attitudes were less likely to be living in an intact household.

Comparing the models presented in Table 2 indicates that the effects of ineffective parenting on low self-control and aggressive attitudes are similar but that there are also substantive differences. For example, the effect of inconsistent punishment on low self-control is 3 times larger than its effect on aggressive attitudes. In addition, negatively reinforcing aggressive behavior is nearly 20% more likely to be related to aggressive attitudes than low self-control. The difference in these effects is statistically significant (Brame, Paternoster, Mazerolle, and Piquero, 1998). In addition, harsh parenting is 25% more likely to be related to low self-control than aggressive attitudes and effective monitoring is 11% more likely to be related to low self-control than aggressive attitudes. There were other dissimilarities. Age was not a factor associated with low self-control but older students were more likely to have aggressive attitudes, ADHD was related to low self-control but not with aggressive attitudes, and African-Americans were more likely to report having aggressive attitudes but they were not more likely to have low self-control.

Parenting, Theoretical Variables, and Delinquency

Table 3 presents the results from regressing delinquency on the ineffective parenting and control variables while including or not including low self-control in the equations. The results from Table 3 assessed three key propositions of Gottfredson and

Hirschi's (1990) general theory of crime; (1) low self-control should directly influence delinquent behavior, (2) low self-control should entirely mediate the effects of the ineffective parenting and control measures, and (3) low self-control should similarly affect the delinquency measures. The results supported the first of Gottfredson and Hirschi's key propositions; adolescents with low self-control were significantly more likely to commit delinquent acts.

However, the results from Table 3 do not support Gottfredson and Hirschi's second proposition; low self-control did not entirely mediate the effects of the ineffective parenting and control measures. Models II, IV, and VI of Table 3 show that even after taking into consideration the effect of low self-control, adolescents were more likely to commit crimes if they were poorly monitored, had their aggressive behavior reinforced, and were harshly parented. Indeed, the factor that most influenced an adolescent's likelihood of committing delinquent acts was not, as Gottfredson and Hirschi predicted low self-control, but rather whether parents effectively monitored their adolescent's behavior. It is also notable, that depending on the type of crimes analyzed, age, gender, race, and family conflict also directly affected delinquency. The results from Table 3 supported Gottfredson and Hirschi's (1990) third proposition; low self-control similarly influenced each of the three measures of delinquency.

Table 4 presents the results from regressing delinquency on the ineffective parenting and control variables while including or not including aggressive attitudes in the equations. These results address key propositions raised by differential association/ social learning theorists. Based on these theories, we expected that each measure of delinquency should be influenced by aggressive attitudes with perhaps the strongest

relationship being between aggressive attitudes and violent crimes. We did not expect that aggressive attitudes should entirely mediate the influence of ineffective parenting on crime. Aggressive attitudes should be just one of many possible components of the underlying processes that are operative in each individual's learning history and in the immediate situation in which an opportunity for a crime occurs (Akers, 1999).

The results presented in Table 4 supported the differential association/social learning theories' prediction that aggressive attitudes should significantly predict juvenile delinquency. The aggressive attitude scale was significantly related to each of the delinquency measures even after holding constant the effects of the ineffective parenting and control measures. The results also show that the aggressive attitudes scale predicted violent crimes better than it predicted property crimes, although the difference in the beta coefficients was only .05.

As expected, the aggressive attitude scale did not entirely mediate the effects of the ineffective parenting measures. Parental monitoring/involvement, negative reinforcement, and harsh parenting directly affected the delinquency measures even after controlling for the effect of the aggressive attitudes scale. Notably, the aggressive attitude scale did mediate, on average, over a third of the effect of negative reinforcement on the delinquency measures. Similar, to low self-control, aggressive attitudes was, in general, the second best predictor of delinquency. The monitoring/involvement scale was the variable most related to delinquency.

Table 5 presents the results from regressing delinquency on the ineffective parenting and control variables while including or not including low self-control and the aggressive attitude scales in the equations. The results presented in Table 5 assessed

whether low self-control and aggressive attitudes uniquely predicted delinquency and whether these two constructs mediated the effects of the ineffective parenting measures. Incremental F tests indicated that including the low self-control and the aggressive attitudes scales in the equations significantly increased the explained variances.

The results from Table 5 indicate that adolescents were more likely to commit delinquent acts if they had either low self-control or if they held a set of attitudes that support the use of aggressive behavior. Notably, the aggressive attitudes scale was more strongly related to general delinquency and violent crimes than was the low self-control scale. However, low self-control was a better predictor of property crimes than was aggressive attitudes.

It is noteworthy that the low self-control and aggressive attitudes scales did not entirely mediate the effects of ineffective parenting on delinquency. Even after controlling for the effects of low self-control and aggressive attitudes, adolescents were more likely to commit delinquent acts if they were ineffectively monitored, harshly parented, and if their aggressive behaviors were negatively reinforced. In addition, age, gender, race, and family conflict directly influenced one or more of the delinquency measures with family conflict having the most consistent effect.[5]

The Generality of Effects

Our data set allows for an assessment of another key proposition of the general theory of crime and social learning theory: that the effects of self-control and attitudes (or definitions) are "general," that is, not specific to any social group (Akers, 1998; Gottfredson and Hirschi, 1990). Using LISREL 8.5 and the main effect equation presented in Table 5, we tested Model 1 to see if it was invariant across gender. The

differences in the Chi-squares showed that the only set of measures that had at least two of its parameters significantly vary across gender were the error variances for the three endogenous variables. These results indicate that the model significantly explained more variance in female low self-control, aggressive attitudes, and delinquency than they did for males. However, the regression weights were invariant across gender. We also examined whether Model 1 was invariant across race. The results replicated the gender analyses. The model significantly explained more variance in non-black low self-control, aggressive attitudes, and delinquency; however, the regression weights were invariant across race. Thus, these results support a key proposition of the general theory of crime and social learning theory; they show that impact of bad parenting on low self-control and aggressive attitudes and the influence of bad parenting, low self-control, and aggressive attitudes on crime is similar for males and females and for blacks and non-blacks.

The Interrelationship Between Low Self-Control and Aggressive Attitudes

Research reports that programs designed to lessen the saliency of aggressive attitudes also reduce impulsivity (Guerra and Slaby, 1990; Henry et al., 2000). This suggests that aggressive attitudes and low self-control may be correlated. Our data indicate that the correlation between aggressive attitudes and low self-control is .71. It is important to note that while the data show that adolescents who have low self-control are more likely to hold aggressive attitudes, our results also indicate that low self-control and aggressive attitudes each uniquely predict delinquency. That is, our findings indicate that while these constructs are correlated, the variance they do not share uniquely increases a child's likelihood of committing delinquent acts.[6]

It is also possible that adolescents who had little self-control and who most strongly identified with aggressive attitudes were the ones most likely to be delinquent. We tested this possibility by including an interaction term (aggressive attitudes X low self-control) in the main effect regression equation presented in Table 5, Model 1 and found that it was statistically significant ($p = .000$). After further examination of the data, we discovered that adolescents who had the least amount of self-control and who strongly identified with aggressive attitudes were the ones most likely to engage in delinquency. In fact, the data indicated that the probability of committing at least one delinquent act for adolescents who strongly identified with aggressive attitudes *and* had little self-control was 26.5 times the probability of adolescents who did not hold a set of attitudes that supported aggressive behavior *and* did not have problems controlling their behavior.[7]

These findings suggest that children who strongly support the use of aggression and who have little self-control may have an underlying psychological disorder such as an antisocial disorder or an oppositional defiant disorder and are, therefore, the ones most likely to commit crime (Farrington, 1989; Loeber and Stouthamer-Loeber, 1998; Reid et al., 2002; Simons et al., 2001). However, our results also show that adolescents who hold attitudes that support the use of aggression or who have low self-control are, uniquely, likely to commit crime. In short, we found that each of these constructs, low self-control and aggressive attitudes, should be independently considered as criminogenic; however, it is the combination of the two that is the most problematic.

DISCUSSION

Control theory and differential association/social learning theory have shaped, if not dominated, micro-level sociological thinking about crime for the past three decades (Agnew, 2001; Lilly et al., 2002). Since Hirschi's (1969) initial statement of control theory, these two paradigms have been juxtaposed as rival—indeed, as mutually exclusive—explanations of crime and delinquency (see, e.g., Akers, 1998; Costello, 1997; Kornhauser, 1978; Matsueda, 1988, 1997; Sampson, 1999). The current study has attempted to contribute to this ongoing debate by empirically assessing the answer each of these perspectives gives to the question: How does "bad" parenting lead to delinquent conduct? In so doing, we have endeavored to disentangle which theory—if not both—are "right" or "wrong."

To reiterate, Gottfredson and Hirschi (1990) contend that bad parenting has one criminogenic consequence: low self-control. They also state unequivocally that low self-control is not a learned behavior. Rather, children inadvertently develop low self-control because bad parenting creates a chaotic home life. An unstructured home life fails to inculcate in children the necessary internal social controls that will prevent them from impulsively engaging in criminal and analogous behaviors. In short, Gottfredson and Hirschi claim that ineffective parenting is the principal source of low self-control and, in turn, that self-control mediates the effects between parenting and crime/deviance.

Alternatively, differential association/social learning theorists contend that bad parenting can have multiple consequences including low self-control (Akers, 1985, 1998; Patterson et al., 1989). However, the social learning perspective emphasizes that bad parenting teaches children through role modeling, imitation, differential association, and

by negatively and positively rewarding behaviors, a set of attitudes and definitions that predispose them to engage in criminal behavior. The research by Slaby and Guerra (1998) and others (Foo and Margolin, 1995; Huesmann and Guerra, 1997; McConville and Cornell, in press) indicates that one possible outcome of bad parenting is adolescents learning a set of attitudes that support the use of aggressive behavior. This extant research also indicates that adolescents who hold a set of attitudes that condone the use of aggression are more likely to engage in criminal activity.

In this context, the current research tested these two perspectives' competing propositions regarding the impact of inept parenting on delinquency. The analysis revealed that Gottfredson and Hirschi's (1990) claim that bad parenting has a single criminogenic outcome, low self-control, was not confirmed. Instead, our results support the conclusion that the quality of parenting predicts not only low self-control but also having a set of attitudes that encourages the use of aggressive behavior. Accordingly, it appears that the data lend credence to both perspectives.

Indeed, it is noteworthy that low self-control and aggressive attitudes mediated a meaningful amount of the effects of the ineffective parenting measures on delinquency. On average, low self-control and aggressive attitudes mediated 30% of the effect of the ineffective parenting measures (monitoring/involvement, negative reinforcement, and harsh parenting). Negative reinforcement was the one measure of ineffective parenting that had the greatest indirect effect through low self-control and aggressive attitudes; nearly 50% of its effect was mediated.

At the same time, ineffective parenting continued to have direct effects above and beyond its indirect effects through low self-control and aggressive attitudes. These

findings suggest that a range of intervening criminogenic factors might be implicated in the link between parenting and delinquency. Therefore, in addition to aggressive attitudes, social learning theory might point to the causal significance of how parents model or otherwise teach beliefs encouraging of or conducive to crime (e.g., neutralizations) (Akers, 1998) or how children inadvertently acquire deficits in information processing resulting in developing a hostile attributional bias (Dodge, 1986; Dodge et al., 1990, 1995). Alternative theories might also identify candidates for intervening processes. For example, general strain theory might envision how bad parenting creates trait and state anger (Agnew, 1993), while routine activity theory might be relevant to the extent that ineffective parenting permits adolescents access to opportunities to offender (LaGrange and Silverman, 1999). If these alternative pathways from parenting to delinquency do in fact exist, then they would call into question the claim by both Gottfredson and Hirschi (1990) and Akers (1998) that they have set forth truly "general" theories of crime.

Again, both theories earn a measure of empirical support to the extent that self-control and aggressive attitudes have independent effects on delinquent involvement. These effects, moreover, appear to be—as predicted by these rival perspectives—general across gender and race. Even so, in an ironic finding—ironic, that is, given the long competition between control and learning theories—it appears that bad parenting produces in many individuals *both* low self-control and aggressive attitudes. The analysis revealed that adolescents who have little self-control and who strongly identify with aggressive attitudes are especially at-risk for offending behavior. It is possible that low self-control and aggressive attitudes are part of an integrated antisocial propensity

(Farrington, 1989; Loeber and Stouthamer-Loeber, 1998; Reid et al., 2002; Simons et al., 2001). At the least, however, it appears that ineffective parenting is likely to produce multiple criminogenic risk factors in youngsters that include deficits in control and in pro-social attitudes.

The policy implications of this observation are two-fold. First, building more effective parenting is likely to be a profitable source of intervention because it potentially impacts several salient risk factors (see, e.g., Alexander, Pugh, and Parsons, 1998; Farrington, 1994; Henggeler, 1997; Henggeler, Mihalic, Rone, Thomas, and Timmons-Mitchell, 1998). Second, it also appears that low self-control and aggressive attitudes are important predictors of criminal involvement, and thus that these factors should be targeted for change when family, school-based, or other interventions are undertaken (see also, Andrews and Bonta, 2003).

Footnotes

1. It is also possible that a very small minority of parents intentionally teach their children the definitions, rationalizations, attitudes, and techniques that may predispose them to engage in crime. This possibility could explain the strong and consistent relationship between parents with a criminal background and their children's criminal behavior (Farrington, 1989).

2. An alternative school with 50 seventh and eighth graders was excluded from participation in the survey by the school administration.

3. Ideally, to operationalize Gottfredson and Hirschi (1990) concept of ineffective parenting it would be necessary to have measures that indicate the timing of when the parents administered punishments. Gottfredson and Hirschi argue that ineffective parents do not punish the child immediately after they become aware of the deviant behavior. This measurement difficulty could be overcome with observational data. However, to date, the extant research has used survey data, which has not included questions concerning the timing of the punishment (Hay, 2001; Gibbs, Giever, and Martin, 1998; Unnever, Cullen, and Pratt, 2002). The present research also uses survey data and the data set analyzed did not contain information regarding the timing of the punishment. Hay (2001:715) contends that omitting this dimension of parental management may be "acceptable" because "research has consistently identified monitoring and discipline as the key aspects of effective parenting."

4. It must be emphasized that the differential association/social learning theories and the general theory of crime both contend that ineffective parenting should affect their corresponding intervening variables, that is, attitudes that support the use of aggression

and low self-control, respectively. For example, Gottfredson and Hirschi (1990:102) might be correct that low self-control is strengthened when parents give into their children because they are threatening them. However, it is also possible, as differential association/social learning theorists would contend, that attitudes that support the use of aggression are negatively reinforced when parents give into their children because they are threatening them. If these theories are both correct, we should find that our measures of ineffective parenting should affect low self-control and attitudes that support the use of aggression.

5. We also assessed whether the models presented in Table 5 would generalize to an "analogous" behavior, school bullying. The scores on school bullying ranged from 0 (I have not bullied another student at school) to 4 (several times a week). The results presented in Table 5 for the effects of bad parenting, low self-control, and aggressive attitudes on the three measures of delinquency were reproduced in our analysis of the bullying data. These finding suggest that the general theory of crime and social learning theory are equally applicable to understanding criminal and analogous behaviors.

6. Future research may want to theoretically investigate and empirically explore the strong association between low self-control and aggressive attitudes. It is possible that aggressive attitudes are another component of low self-control or low self-control and aggressive attitudes are both components of a yet broader theoretical construct.

7. Fifty three percent (n=53) of the adolescents who were in the top 10% of the scores on the low self-control and aggressive attitude scales (high-high on aggressive attitudes and low-low on self-control--N=148) committed at least one delinquent act in comparison to less than 2% (n=2) of the adolescents who were in the lower 10% of the scores on low

self-control and aggressive attitude scales (low-low on aggressive attitudes and high-high on self-control--N=149). The standardized estimate for the aggressive attitudes X low self-control interaction term is .06 and its unstandardized estimate is .04.

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Table 1. Coding of Variables

Variable Names	Coding/Range	Mean	Standard Deviation
Age	In years	12.386	1.029
Received Federally Funded Meal	0=no free meal 1=free meal	.500	.500
Gender	0=female 1=male	.488	.499
Race	0=other 1=African-American	.400	.490
ADHD	0=no 1=yes	.147	.354
Intact Family	0=no 1=yes	.410	.492
Family Conflict	-1.09-4.25--Higher standardized scores indicating more family conflict	.008	.900
Parental Monitoring/ Involvement	-1.01-4.35--Higher standardized scores indicating less parental monitoring or involvement	.009	.972
Inconsistent Punishment	1-4 Higher scores indicating more inconsistency in parental punishment	1.453	1.254
Negative Reinforcement	1-4—(Reverse coded) Higher scores indicating more negative reinforcement	-3.328	.800
Harsh Parenting	-1.47-3.75--Higher standardized scores indicating harsher parenting	.004	.970
Low Self-Control	-2.92-3.18--Higher standardized scores indicating less self-control	.071	.893

Aggressive Attitudes	-1.53-2.71--Higher standardized scores indicating more aggressive attitudes	.028	.937
General Delinquent Involvement	-.23-3.53--Higher logged scores indicating more delinquent involvement	.380	.703
Violent Delinquent Involvement	-.19-3.04--Higher logged scores indicating more violent delinquent involvement	.263	.562
Nonviolent Delinquent Involvement	-.24-3.04--Higher logged scores indicating more nonviolent delinquent involvement	.326	.629

Table 2. The Impact of Ineffective Parenting on Low Self-Control and Aggressive Attitudes

	Model I (Low Self-Control)		Model II (Aggressive Attitudes)	
Independent Variables	**Beta**	**B**	**Beta**	**B**
Age	.018	.015	.071***	.065
Received Federally Funded Meal	.117***	.210	.109***	.204
Gender (1=male)	.178***	.318	.207***	.388
Race (1=Black)	.031	.057	.102***	.195
ADHD	.100***	.254	.025	.068
Intact Family	-.078***	-.142	-.044**	-.085
Family Conflict	.076***	.075	.037*	.039
Monitoring/Involvement	.208***	.191	.186***	-.179
Inconsistent Punishment	.124***	.088	.045**	.033
Negative Reinforcement	.229***	-.256	.279***	-.327
Harsh Parenting	.124***	.115	.093***	.089

* p<.05, ** p<.01, *** p<.001
N = 2,437
R^2 for Model 1= .370***
R^2 for Model 2 = .340***

Table 3. Ineffective Parenting, Low Self-Control and Delinquency

	General		Violent		Nonviolent	
Independent Variables	Model I	Model II	Model III	Model IV	Model V	Model VI
Age	.070***	.066***	.035*	.031	.153***	.150***
	(.048)	(.045)	(.019)	(.017)	(.094)	(.092)
Received Federally Funded Meal	.043*	.019	.057**	.037	.008	-.010
	(.060)	(.027)	(.064)	(.042)	(.010)	(-.013)
Gender (1=male)	.102***	.067***	.083***	.053**	.013	-.015
	(.144)	(.094)	(.093)	(.059)	(.017)	(-.018)
Race (1=Black)	.064***	.058***	.052**	.047**	.021	.016
	(.093)	(.084)	(.060)	(.054)	(.028)	(.021)
ADHD	.048**	.028	.042*	.025	.036*	.020
	(.096)	(.056)	(.067)	(.040)	(.065)	(.036)
Intact Family	.003	.019	.001	.014	-.018	-.006
	(.005)	(.027)	(.001)	(.016)	(-.024)	(-.007)
Family Conflict	.071***	.056**	.072***	.059**	.081***	.068***
	(.056)	(.044)	(.045)	(.037)	(.056)	(.048)
Monitoring/Involvement	.264***	.222***	.242***	.206***	.225***	.191***
	(.191)	(.160)	(.139)	(.119)	(.145)	(.123)
Inconsistent Punishment	.008	-.015	-.010	-.031	.016	-.003
	(.005)	(-.008)	(-.004)	(-.014)	(.008)	(-.001)
Negative Reinforcement	.138***	.091***	.154***	.115***	.104***	.067***
	(.121)	(.080)	(.108)	(.080)	(.081)	(.052)
Harsh Parenting	.132***	.107***	.144***	.123***	.126***	.106***
	(.095)	(.077)	(.083)	(.071)	(.082)	(.069)
Low Self-Control	------	.200***	------	.169***	-------	.162***
		(.157)		(.106)		(.114)

* p<.05, ** p<.01, *** p<.001
N = 2,437
Standardized estimates and unstandardized estimates in parentheses
R^2 for Model 1 = .241*** R^2 for Model 3 = .220*** R^2 for Model 5 = .200***
R^2 for Model 2 = .266*** R^2 for Model 4 = .238*** R^2 for Model 6 = .217***

Table 4. Ineffective Parenting, Aggressive Attitudes, and Delinquency

	General		Violent		Nonviolent	
Independent Variables	Model I	Model II	Model III	Model IV	Model V	Model VI
Age	.070***	.054**	.035*	.021	.153***	.143***
	(.048)	(.037)	(.019)	(.011)	(.094)	(.087)
Received Federally Funded Meal	.043*	.019	.057**	.036	.008	-.006
	(.060)	(.027)	(.064)	(.041)	(.010)	(-.008)
Gender (1=male)	.102***	.058***	.083***	.044**	.013	-.014
	(.144)	(.082)	(.093)	(.050)	(.017)	(-.018)
Race (1=Black)	.064***	.042**	.052**	.033	.021	.007
	(.093)	(.061)	(.060)	(.038)	(.028)	(.010)
ADHD	.048**	.043**	.042*	.037*	.036*	.033
	(.096)	(.085)	(.067)	(.060)	(.065)	(.059)
Intact Family	.003	.013	.001	.009	-.018	-.012
	(.005)	(.018)	(.001)	(.011)	(-.024)	(-.016)
Family Conflict	.071***	.063**	.072***	.065***	.081***	.075***
	(.056)	(.049)	(.045)	(.040)	(.056)	(.053)
Monitoring/Involvement	.264***	.224***	.242***	.206***	.225***	.199***
	(.191)	(.162)	(.139)	(.119)	(.145)	(.129)
Inconsistent Punishment	.008	-.010	-.010	-.019	.016	.010
	(.005)	(-.000)	(-.004)	(-.008)	(.008)	(.005)
Negative Reinforcement	.138***	.078***	.154***	.101***	.104***	.066***
	(.121)	(.068)	(.108)	(.071)	(.081)	(.051)
Harsh Parenting	.132***	.112***	.144***	.126***	.126***	.113***
	(.095)	(.081)	(.083)	(.073)	(.082)	(.073)
Aggressive Attitudes	------	.214***	------	.188***	-------	.137***
		(.160)		(.111)		(.092)

* p<.05, ** p<.01, *** p<.001
N = 2,437
Standardized estimates and unstandardized estimates in parentheses
R^2 for Model 1 = .241*** R^2 for Model 3 = .220*** R^2 for Model 5 = .200***
R^2 for Model 2 = .271*** R^2 for Model 4 = .243*** R^2 for Model 6 = .213***

Table 5. Ineffective Parenting, Low Self-Control, Aggressive Attitudes, and Delinquency

	General		Violent		Nonviolent	
Independent Variables	Model I	Model II	Model III	Model IV	Model V	Model VI
Age	.070***	.057***	.035*	.023	.153***	.146***
	(.048)	(.039)	(.019)	(.012)	(.094)	(.089)
Received Federally	.043*	.013	.057**	.032	.008	-.013
Funded Meal	(.060)	(.019)	(.064)	(.036)	(.010)	(-.016)
Gender (1=male)	.102***	.052**	.083***	.039*	.013	-.021
	(.144)	(.073)	(.093)	(.044)	(.017)	(-.027))
Race (1=Black)	.064***	.045**	.052**	.035	.021	.011
	(.093)	(.065)	(.060)	(.041)	(.028)	(.014)
ADHD	.048**	.033	.042*	.030	.036*	.022
	(.096)	(.067)	(.067)	(.048)	(.065)	(.040)
Intact Family	.003	.019	.001	.014	-.018	-.006
	(.005)	(.027)	(.001)	(.016)	(-.024)	(-.008)
Family Conflict	.071***	.057**	.072***	.060**	.081***	.069***
	(.056)	(.045)	(.045)	(.037)	(.056)	(.048)
Monitoring/Involvement	.264***	.213***	.242***	.198***	.225***	.187***
	(.191)	(.154)	(.139)	(.114)	(.145)	(.121)
Inconsistent Punishment	.008	-.006	-.010	-.027	.016	-.001
	(.005)	(-.011)	(-.004)	(-.012)	(.008)	(-.000)
Negative Reinforcement	.138***	.070***	.154***	.095***	.104***	.057**
	(.121)	(.062)	(.108)	(.067)	(.081)	(.045)
Harsh Parenting	.132***	.104***	.144***	.120***	.126***	.105***
	(.095)	(.075)	(.083)	(.070)	(.082)	(.068)
Low Self-Control	------	.109***	------	.085***	-------	.121***
		(.085)		(.053)		(.085)
Aggressive Attitudes	-------	.151***	-------	.138***	-------	.067**
		(.113)		(.083)		(.045)

N = 2,437 * p<.05, ** p<.01, *** p<.001 Standardized and unstandardized estimates in parentheses

R^2 for Model 1 = .241*** R^2 for Model 3 = .220*** R^2 for Model 5 = .200***

R^2 for Model 2 = .276*** R^2 for Model 4 = .246*** R^2 for Model 6 = .219***