

ABSTRACT

Title of Thesis: PARENTING AND DELINQUENCY:
AN EXPLORATION OF GENDER EFFECTS

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In the search for the causes and correlates of juvenile delinquency, parenting has historically been recognized as one of the primary contributing or inhibiting factors to delinquent behaviors. The current study focuses on the relationship between the specific parenting practices of monitoring and attachment, and the delinquent behaviors of both males and female children, in the preadolescent ages of 7-11. This study finds that while parents monitor male and female children equally, parents report a higher level of attachment to their male children. Additionally, although most of the measures of parenting have similar impacts for male and female children, there are certain practices which produce divergent results based upon the child's gender. Parental reports of monitoring are a stronger inhibitor of intentions to use illicit substances for males, while the parent's attachment is a greater inhibitor of self-reported rebellious behavior for females. These results have implications for future research and program design.

Parenting and Delinquency: An Exploration of Gender Effects

by

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I. Introduction

All too often throughout the history of criminology, crime and delinquency has been studied as a male phenomenon. In an effort to expand the discipline, many studies have begun to explore the similarities and differences in the causes and correlates of male and female rates of crime and delinquency. Additionally, theory and research have begun to explore how gender itself may interact with other variables to influence the propensity towards delinquent and/or criminal behaviors.

This study attempts to contribute to such efforts by analyzing the relationship between parenting and delinquency, and its potential variations by gender. Specifically, this research is intended to evaluate whether parental monitoring and attachment vary according to gender, as previous studies have indicated. Potential interactions between monitoring and/or attachment and gender, which may effect the relationship between these parenting practices and the delinquent tendencies of children will also be examined.

II. Literature Review

For decades criminologists have explored the relationship between delinquents and the parents who raise them. Throughout that time, the beliefs about the nature of this relationship have been molded through a variety of different, and often conflicting criminological theories. Beginning with the early theories of social control and social learning and moving forward to the more recent general theory, life-course, and interactional theories it is clear that criminology has long been interested in exploring the relationship between the dynamics of family interactions and the development of delinquent behaviors in children.

The research spawned by these theories has focused on several key measures of parental practices, most notably direct forms of control, including monitoring and discipline, as well as indirect controls, such as attachment and affectional identification. Although the emphasis placed on each of these concepts and the constructs used to measure them have varied, theories have consistently postulated and research has repeatedly proven that the impacts of a variety of parenting practices on the likelihood of children's delinquency are significant and substantial.

More recent research has focused on the intricacies of these relationships and the interaction of key variables, such as gender, with specific parental practices, and the potential effects of such interaction on delinquent propensities. The review of the research to date indicates that there are, in fact, differences in the levels of specific parenting practices based on children's gender. However, prior research which has attempted to bring to light variations in the relationships between those specific parental practices and delinquency, according to gender, have thus far failed to produce more than modest, and often conflicting, results.

A. Social Control Theories

The greatest emphasis on parental roles in the formation of delinquent behavior stems from social control theories. The basic premise of all control theories assumes that humans are inherently self-gratifying and that we are restrained into law abiding behavior by our attachments to conventional society. Based on this premise, the question control theory seeks to answer is not why humans commit crime, but why they do not. Social control theorists tend to credit the attachments and commitments of social bonds as the

agents which keep our natural tendencies towards engaging in aberrant behaviors in check (Hirschi, 1969; Nye, 1958; Sampson and Laub, 1993). Social bonds come in various forms, typified most often by family, peers, education, and employment. While the proportionate relevance of each of these remains in continual debate, the focus of the current research will be on the social bonds within the family, specifically monitoring and attachment.

Recognized as one of the earliest social control theorists, Ivan Nye, in his 1958 study of family relationships and delinquent behavior, identified numerous aspects of parenting, such as discipline and acceptance, which he found to be significantly associated with rates of delinquency. Nye defined the threat and application of rewards and punishment, in an effort to regulate behavior and achieve adherence to societal norms, as direct controls. In the context of the family, direct controls are limited by the physical proximity of parents and to their children and are, therefore, generally confined to observable behaviors within the home (Nye, 1958). Due to this limitation, Nye was inclined to minimize the potential of this type of control in producing conformity and decreasing deviance once children were free to act independently within society.

The work of Nye was further expounded upon and developed into a well known theory of delinquency by Travis Hirschi (1969). Hirschi, likewise, believed that direct control decreases as children move into adolescence, hindering its effectiveness for inhibiting delinquent behaviors. Therefore, he focused on the elements of indirect controls, or what he termed “virtual supervision” (Hirschi, 1969). In the absence of direct control, Hirschi presumed that it was the children’s level of attachment to their parents which served as the key motivator in abstaining from deviant or delinquent

behaviors. This concept of virtual supervision was contingent upon the child's belief that their parents would either approve or disapprove of their activities, and equally impinged upon the degree to which the child cared whether their parents would approve or disapprove of their behavior.

Hence, Hirschi's theory postulates that the propensity for delinquent behavior will not predominantly be determined by the direct monitoring and supervision of children by their parents, but instead by the level of communication and attachment between the child and parent (1969). Communication is vital to the parents' maintenance of virtual supervision, through inquiries and discussion with the child, concerning their activities during those periods lacking direct supervision. Likewise, attachment and the bonds of "affectional identification, love, or respect" (Hirschi, 1969) are necessary to discourage the child from delinquent acts through the desire not to disappoint their parents and jeopardize the valued relationship. Subsequent research on the social bonding and control attributed to parental attachments has generally supported the position that this factor contributes to the decreased likelihood of delinquent behaviors (Akers, 1994; Rankin and Kern, 1994; Rankin and Wells, 1990; Wells and Rankin, 1988).

1. General Theory of Crime

Later in his career Hirschi teamed up with Gottfredson and released a general theory of crime and deviance, which has been viewed by some scholars as a partially integrated theory, and has received a barrage of empirical tests since its release in 1990. The general theory of crime largely stems from the suppositions of control theory. However, contrary to social control theories, for Gottfredson and Hirschi, it is the development of individuals' self-control which is paramount. General theory essentially

presumes that self-control is the mechanism through which persons refrain from committing crimes, deviant behaviors, and analogous acts (Gottfredson and Hirschi, 1990). When persons lacking in self-control are presented with opportunities for deviance, they will act upon them, as they do not possess the self-regulating and inhibiting characteristics of self-control.

According to Gottfredson and Hirschi, self-control is established very early in life, generally before the age of 8 or 10, and effective child-rearing by parents is the main source of its development. Effective parenting constitutes the means by which children are socialized and develop their own sense of self-control. This effective parenting includes monitoring children, recognizing deviant behaviors, and applying appropriate sanctions in response to those behaviors (1990).

Subsequent research and empirical testing of this theory has indicated that self-control is an important component to limiting delinquent and criminal behaviors. However, studies have failed to sufficiently prove that self-control is the *only* variable, outside of opportunity, which is important (Pratt and Cullen, 2000). Specifically, studies have shown that parenting practices do not merely influence delinquency indirectly through their impact on self-control, but that specific parenting behaviors, such as monitoring and attachment, also have a direct effect on delinquent behaviors (Gibbs *et al.*, 2003; Hay, 2001; Perrone *et al.*, 2004). Therefore, as becomes evident with much of the research involving parenting, it is apparent that attachment to and control by parents exert not only a direct effect on children's delinquent tendencies, but indirect effects as well, in this case through the development of self-control.

2. Life-Course Theory

The importance of social bonds are further explored in the life-course perspective of criminology introduced by Sampson and Laub (1993). By reexamining the data collected by Sheldon and Elenor Glueck, which followed a male cohort throughout childhood, adolescence, and into adulthood, Sampson and Laub developed an age-graded theory of informal social control and social bonds. In short, drawing on aspects of a variety of different theories, they assert a “unified model of informal family social control which focuses on three dimensions – discipline, supervision and attachment” (1993: 68). This model is used to explain the initial bond between a child and society, which is facilitated by parenting practices. Unlike Gottfredson and Hirschi, however, Sampson and Laub contend that throughout the various stages of life, social bonds may change, leading either towards or away from delinquency and crime.

So, while Gottfredson and Hirschi maintain that bonding is indirectly related to deviancy through self-control and that an individual’s level of self-control maintains relative stability throughout one’s life, Sampson and Laub argue that it is the bonds themselves which directly influence deviancy. Using this presumption, they explain the initial involvement in antisocial behavior and deviancy through poorly developed parenting and familial bonds, and the desistance from delinquency and crime through the later developments of alternative social bonds, such as education, employment and, marriage (1993).

B. Social Learning Theories

While social bond theorists have persistently explored the relationship between

parenting and delinquency, they are certainly not the only ones. Competing theories have also consistently relied on parental practices to explain the origins of deviant behavior. The differences in the theories are manifested in the means by which this relationship is explained, or the magnitude of the expected relationships. For example, social learning theory asserts that parental practices influence children through differential associations and social learning, rather than through direct or indirect controls. Sutherland's original conception of differential association recognized that behavior is not inherent, but is learned through exposure to attitudes and behaviors in a variety of settings (1973). These definitions of acceptable responses are learned most frequently in intimate settings, such as the family. Within this atmosphere, children learn to either exhibit law-abiding or law-breaking behaviors based on the amount and intensity of the communication supporting either perception.

Despite the acknowledgement that this type of learning exists in a variety of settings including peers, coworkers, communities, etc., the most frequent, especially in the early stages of life, is within the family. Therefore, the impact of the messages received from parents are fundamental to the development of delinquency and criminality as learned behaviors. It is interesting, then, to note that much of the research focusing on differential association has tested the impact of peer groups on delinquency, rather than that of the family (Agnew, 1991; Warr, 1993). This may be an indication of a commonly held belief in criminology that the impact of parenting wanes as youths enter adolescence and the impact of peer groups becomes more paramount during the years when delinquent behaviors are most likely exhibited. However, as another prominent social learning theorist, Ronald Akers (1998) argues, the effect of early behaviors learned as a

result of parenting may continue to be evidenced in the adolescent's choices concerning which types of peers to associate with. Again we see that parenting is hypothesized to exert both direct and indirect effects on delinquency.

Patterson and Dishion (1985) explore the cumulative effects of both poor familial processes and involvement with delinquent peers to form a social interactionist theory, which views the involvement in delinquency as the outcome of an extended process. In this model, early deficiencies in parental practices of monitoring and discipline result in "family members directly train(ing) the child to perform antisocial behaviors" (Patterson *et al.*, 1989: 330).

Social learning within the dysfunctional family not only increases the likelihood of childhood antisocial behaviors, but also hinders the development of positive social and academic skills. This consistency of poor parenting into adolescence and the poorly developed social skills combine to increase the likelihood of delinquent peer choices, all of which combine to increase the probability of delinquent behaviors (Dishion *et al.*, 1991; Patterson and Dishion, 1985; Patterson *et al.*, 1989; Patterson and Stouthamer-Loeber, 1984; Simons *et al.*, 1994). The results of research associated with this theory again show parental practices, most notably monitoring, as having both direct as well as indirect (through deviant peer selection) effects on the rates of juvenile delinquent behaviors.

C. Gender Effects

Theorists from various academic disciplines have noted that there are differences in the way that society behaves towards its children, based upon the sex of the child.

Specific to the field of criminology, feminist criminologists have attempted to explain the differences in the rates of male and female offending through the socialization process of gender hierarchy (Chesney-Lind, 1989; Simpson, 1989). According to these theories, the societal roles that are proscribed to and learned by females teach girls to suppress their tendencies toward aggression and independence. Meanwhile, males in society are taught that these are admirable or acceptable traits and are provided with more opportunities to express these tendencies within a social structure that is simultaneously monitoring females to a greater extent than males. This socialization process has been advanced by various researchers as one explanation for the divergence in crime and delinquency rates between males and females (Chesney-Lind, 1989; Simpson, 1989).

Hagan also explored the impacts of such disparate socialization between girls and boys, but with a stronger emphasis on the familial unit. According to his power-control theory, patriarchal families teach girls to be more passive, while teaching males to take more risks (Hagan *et al.*, 1985). However, tests of this theory which explore the rates of delinquency for girls and boys raised in more egalitarian families versus the traditional patriarchal family type, have thus far produced ambiguous results (Hagan, 1989; Hagan *et al.*, 1985).

1. Gender and Monitoring

Theorists agree and evidence supports the contention that parents tend to treat male and female children differently. In 1975, Adler demonstrated that females were more often kept at home or more closely supervised, as they were taught stereotypical, feminine roles. Subsequently, various researchers have presented data supporting the fact that female daughters are subjected to significantly greater levels of control and

supervision within the family than their male counterparts (Cernkovick and Giordano, 1987; Hagan *et al.*, 1987; Seydlitz, 1991). In fact, adolescent males are generally given greater freedom to move about and engage in spontaneous activities outside the home, especially at night (Bottcher, 1995).

Due to these obvious discrepancies in the levels of monitoring for boys and girls, theorists have successfully argued that gender differences in delinquency rates may be partially explained by the disparate levels of monitoring. In Gottfredson and Hirschi's general theory, they attribute female's lower rates of delinquency to the stronger socialization process experienced by females, which they argue creates a greater level of self-control, coupled with the increased level of monitoring experienced by girls, thereby reducing opportunities to engage in delinquent activities (1990). Subsequently, in a test of Gottfredson and Hirschi's theory, LeGrange and Silverman found evidence in support of this notion, that indeed the differences in male and female delinquency rates could largely be explained by disparate parental supervision and self-control (1999).

However, the evidence that females are subjected to higher levels of parental monitoring and have lower rates of delinquency than males does not necessarily indicate, as was originally asserted by Nye (1958) and echoed again by Hagan (1987), that direct controls, such as monitoring, are more important to females than males in the effort to decrease delinquent tendencies. While traditionally females have been subjected to higher rates of monitoring, research indicates that increased levels of monitoring are more effective in reducing general delinquency for males than females, indicating an interaction effect between monitoring and gender (Canter, 1982; Cernkovich and Giordano, 1987; Heimer, 1996). Likewise, Seydlitz noted in her research that parental

control over children's leisure time had a greater effect on the reduction of delinquent acts for males than for females (1991). In a further exploration of violent delinquency, Heimer and DeCoster concluded that "direct, overt controls like supervision ... contribute little to the explanation of variation in female violence, while they are important for explaining variation in male violence" (1999: 303).

2. Gender and Attachment

Attempts have also been made to ascertain whether gender influences the level of attachment between children and their parents. Traditional patriarchal beliefs led some theorists to argue that the socialization of girls would result in stronger bonding to the conventional social order, and therefore women would be more likely to have stronger familial attachments (Elliott *et al.*, 1979). However, a significant body of research indicates that these beliefs are unfounded, and that the levels of parental attachment are virtually the same for boys and girls (Anderson *et al.*, 1999; Canter, 1982; Cernkovich and Giordano, 1987; Sokol-Katz and Dunham, 1997).

Despite the fact that levels of parental attachment may be similar for boys and girls, the way in which that attachment functions to decrease delinquency, again, may be different for the two genders, indicating an interaction effect. Nye (1958) believed that indirect controls, such as attachment, would be more important to decreasing boys' delinquency than girls'. Modest support for this was found in a study by Anderson and colleagues in 1999, which indicated that, for males, increased attachment to parents was associated with a decrease in the severity of delinquent involvement, while for girls it was not. Additionally, Canter (1982) found that the level of family bonding was more predictive of males' delinquency than females', especially in the case of serious offenses.

In contrast, while studying emotional bonding within families, Heimer and DeCoster (1999) found that these bonds were negatively related to the learning of 'violent definitions' for girls, but not boys. Similarly, Alarid *et al.* (2000) concluded that parental attachment was more effective for inhibiting violent crime among females than males. However, it may be that the effect of gender on attachment and delinquency is limited to violence and violent crimes, since no such discrepancy was found for measures of drug use and property crimes.

It is also possible that the measures used to define attachment could confound the results of past research. When analyzing a variety of dimensions of family interaction, Cernkovich and Giordano determined that "while family attachment is important in inhibiting delinquency among all adolescents, the various dimensions of this bond operate somewhat differently among males and females" (1987: 315). Specifically, the level of intimate communication with parents was an important factor for reducing males' delinquency, but not for females'. Furthermore, while many studies focus on the level of attachment from children to their parents, results of varying impacts by gender have been found in a study which, instead, measured the level of the parent's feelings toward their child. In 1982, Gove and Crutchfield found that this factor was a much stronger predictor of delinquency for females than males.

Not only do the measures of attachment appear to influence results, but the manner in which delinquency is conceptualized may effect the perception of the relationships as well. For instance, Seydlitz found in 1991 that a measure of 'consideration for parents' had a stronger effect on inhibiting substance abuse for females than males, but that the same measure was associated with inhibiting delinquent acts

more for boys than girls.

Research by Seydlitz (1990, 1991) also indicates that these relationships may depend upon, or be effected by, age. The measure of ‘virtual supervision’ as an inhibitor of delinquency was strongest for males in mid-adolescence, around age 15, but not so for girls. These results support earlier findings concerning age interactions by LeGrange and White (1985), from research on a sample limited to males.

Needless to say, the specific effects of parental practices on delinquency, and the interactions of gender upon these relationships, have yet to be fully explored or understood by past research.

III. Hypotheses

Based on prior evidence, it is reasonable to conclude that specific parental practices do interact with gender, in their effect on delinquent behaviors. The current research hopes to expand this field of inquiry by examining the practices of both parental monitoring and attachment, and their potential interactions with gender on the outcome of delinquent propensities.

The first hypothesis, consistent with prior research, is that levels of parental monitoring will vary by gender, while levels of parental attachment will not. Second, it is hypothesized that gender will interact with parental monitoring to inhibit delinquency to a greater degree for males than females, when levels of monitoring are held constant. Lastly, it is hypothesized that, within the current sample, gender will not significantly interact with parental attachment, in its capacity to inhibit the minor forms of delinquency measured herein.

VI. Methods and Procedures

A. Sample

The data used for this research is taken from the Strengthening Washington D.C. Families Project (hereafter referred to as SWFP), a regional implementation of the Strengthening Families Project (hereafter referred to as SFP). The original SFP was designed in the 1980s, based upon cognitive-behavioral social learning theory, as a program which targeted families with children whose parents were involved in a methadone maintenance program. The SWFP was “a randomized effectiveness trial designed to assess the outcomes of SFP among children of primarily African American families in the Washington DC metropolitan area” (Gottfredson *et al.*, 2006: 59).

The original data consists of questionnaire answers provided by 715 families recruited by five organizations, throughout the Washington D.C. area, for participation in this project. All of the information utilized herein was collected from the pre-test which was administered prior to participation in the program, thereby eliminating the possibility that any program-related effects would confound the results of this study. The participants were identified as “at-risk” and recruited for participation in the study mainly due to the family’s residing in a neighborhood with social, economic, and demographic characteristics generally associated with an increased risk for delinquent involvement. The participants all reside in urban communities with high unemployment rates and were predominantly of African-American race.

Many of the socio-economic factors which are present in this sample have themselves been studied as causes and correlates of delinquency and crime. Various aspects of these disadvantaged communities, such as the high unemployment rates and

low annual family incomes, have long been associated with increased levels of deviant behaviors. Additionally, structural factors, such as single parent families, have been extensively studied for their contributions to high urban crime rates. Furthermore, these factors may also indirectly impact delinquent outcomes through parenting itself. For example, a parent's ability to consistently monitor their child can be contingent upon both their need to be away from home for employment and their financial ability to provide adequate after school supervision, especially in the case of single parent homes. However, while acknowledging the myriad of compounding social and economic factors which exert considerable influence, both directly and indirectly, on the rates of juvenile delinquency, the focus of this research is solely on the direct impact of the parenting practices themselves, specifically monitoring and attachment.

Although the sample used in the SWFP and this study are not a nationally representative sample, the unique characteristics of this sample are desirable in the current study for a variety of reasons. The young age of the respondents is rare in studies of self-reported delinquency, which typically focus on youths during mid to late adolescence. However, as researchers have noted that the effects of parental practices early in life are evidenced in later manifestations of delinquent behavior (Loeber and Stouthamer-Loeber, 1987; Sampson and Laub, 1993; Simons *et al.*, 1994; Snyder and Patterson, 1987; Wasserman *et al.*, 1996), the assessment of parental effects at such an early period in child development is justifiable, as well as beneficial, in contributing to a greater understanding of how parenting and delinquency are related.

Furthermore, many past studies of parenting and delinquency have focused on not only older, but predominantly male samples of limited ethnic diversity (Dishion *et al.*,

1991; LaGrange and White, 1985; Patterson and Dishion, 1985; Rankin and Wells, 1990; Wells and Rankin, 1988). To greater understand the relationship between parenting and delinquency it is important to test for replications of identified relationships in a variety of populations. Most importantly, to assess the potential interactions between gender, parental practices, and delinquency, a mixed-gender sample is necessary. The current sample is comprised of both female and male child respondents, with females representing almost half, or 43.4%, of the total sample.

The original SWFP included 715 families, from which information was collected on and from the target child and the participating parent. For the current analysis several families were eliminated, due to either inadequate information pertaining to the gender of the target child or because the child was outside of the specified age range of seven to eleven years old, resulting in 693 families comprising the current study. Table 1 describes the demographic characteristics of the program participants. The target child was identified by the participating parent as the child within the appropriate age range whom had the most behavioral issues¹ and the participating parent was most often the mother (Gottfredson *et al.*, 2006). Questionnaires were administered mainly in small groups overseen by a qualified research assistant who would read the questions aloud to the whole group or to smaller groups who needed extra reading help.

¹ In the instances of families having both male and female children within the appropriate age range, the parents were twice as likely to select a male as the target child. However, analysis of variance testing indicates that the relationship between the child's reports of their rebellious behaviors and their selection as the target child does not significantly differ by gender. Additional regression analysis supports the conclusion that the relationship between selection and rebellious behaviors is not dependent upon gender.

Table 1: Participant Demographic Characteristics

	Males N = 392	Females N = 301	Total N = 693
Parent Gender			
Male	8.7 %	3.3 %	6.3 %
Female	90.8 %	96.7 %	93.4 %
Unknown	0.5 %	0.0%	0.3 %
Parent Race/Ethnicity			
African American	72.2 %	76.7 %	74.2 %
Caucasian	15.1 %	13.3 %	14.3 %
Hispanic	7.4 %	7.6 %	7.5 %
Other/Mixed	4.9%	1.3 %	3.3 %
Unknown	0.5 %	1.0 %	0.7 %
Parent Age			
Under 18	1.5 %	1.0 %	1.3 %
18-30	27.8 %	31.2 %	29.3 %
31-45	58.9 %	58.1 %	58.6 %
Over 45	10.7 %	8.7 %	9.8 %
Unknown	1.0 %	1.0 %	1.0 %
Parent Education Level			
College Graduate	15.6 %	13.3 %	14.6 %
Some College	24.2 %	29.2 %	26.4 %
HS Graduate	44.6 %	44.9 %	44.7 %
Jr. High or less	12.0 %	9.3 %	10.8 %
Unknown	3.6 %	3.3 %	3.5 %
Household Annual Income			
Under \$5,000	15.8 %	15.6 %	15.7 %
\$5,000-\$19,999	32.9 %	35.9 %	34.2 %
\$20,000-\$49,999	33.9 %	32.9 %	33.5 %
\$50,000 or more	13.0 %	10.0 %	1.7 %
Unknown	4.3 %	5.6 %	4.9 %
Number of Adults in Home			
1	48.5%	52.5%	50.2%
2	37.2%	35.9%	36.7%
3-4	12.3%	9.3%	11.0%
5-8	1.1%	0.9%	1.0%
Unknown	0.9%	1.3%	1.1%
Child Race/Ethnicity			
African American	66.8 %	68.1 %	67.4 %
Caucasian	9.2 %	10.0%	9.5 %
Hispanic	5.1 %	6.6 %	5.8 %
Other/Mixed	16.1 %	13.0 %	14.7 %
Unknown	2.8 %	2.3 %	2.6 %
Child Education Level			
5 th -7 th Grade	23.3 %	33.2 %	27.6 %
3 rd -4 th Grade	41.6 %	32.6 %	37.7 %
1 st -2 nd Grade	32.4 %	31.5 %	32.0 %
Other	2.0 %	0.7 %	1.4 %
Unknown	0.8 %	2.0 %	1.3 %
Child Age			
Mean	8.59	8.72	8.64
SD	1.41	1.41	1.41

B. Measures

The data from the Strengthening Washington D.C. Families Projects includes numerous scales and measures of parenting behaviors, child behaviors and family interactions. The answers provided by the participating parent and target child were, in some cases, referencing identical questions, however in many cases varying scales and questions were used to measure the same construct. The result is that for the majority of the items, the specific answers by the parent and child cannot be compared, as different questions and scales were developed, appropriate for either parent or child respondents. Correlation analyses for all of the variables can be located in Appendix H.

Although a few of the construct variables are measured using single-response items, the majority are calculated using scales which compile answers from a varied number of questions relating to that specific construct. These multi-item scales were computed by averaging the answers from all of the individual questions which constituted that particular scale. Generally, if at least three-fourths (or 75%) of the individual questions comprising the scale have a valid answer than the score for the scale has been calculated. In the instance of less than three-fourths valid responses, the scale response is coded as missing. Additionally, all of the scales, as well as the single-item response measures, were coded (or recoded) such that higher scores denote less desirable behaviors or traits.

1. Parental Controls

Despite a wide variety of measures used in the past to define each aspect of direct and indirect control, a comprehensive review of the literature on the topic identifies two measures which are consistently and significantly associated with delinquent behaviors;

monitoring and attachment. The relative effects of each of these constructs have been the focus of numerous prior criminological studies. Furthermore, many researchers and theorists have focused on the specific manner and means by which these parenting practices may result in delinquency involvement, exploring both the direct and indirect effects. For instance, Gottfredson and Hirchi (1990) propose that effective parenting, including monitoring, leads to decreased delinquency through the mediating factor of increased self-control. In the current research, the goal is not to determine precisely how monitoring and attachment influence delinquent involvement, but to address the issue more broadly and attempt to identify the general effect of these practices and their direct impact on delinquent behaviors. Consequently, the results of the current analyses are likely to differ from studies which include mediating factors in their models.

a) Monitoring

In the case of monitoring as a construct variable representing the direct control exerted by parents over children, the evidence has been overwhelmingly in favor of an inverse linear relationship between amounts of parental monitoring and the propensity toward delinquent behaviors (Burton *et al.*, 1995; Dishion *et al.*, 1991; Dishion and McMahon, 1998; Griffin *et al.*, 2000; Patterson and Dishion, 1985; Patterson and Stouthamer-Loeber, 1984; Sampson and Laub, 1993; Snyder and Patterson, 1987; Steinberg *et al.*, 1994; Wells and Rankin, 1988; Wright and Cullen, 2001).

Parental monitoring is measured by the parents' responses to "How often do you monitor and watch your child's behavior" and "How many of the last 24 hours was your child unsupervised?" The response scales for these questions can be found in Appendix A. The use of these two questions as a measure of parental monitoring has potential

limitations, especially considering that correlation analysis, found in Appendix H, reveals no significant correlation between the two measures themselves, nor any significant correlation with any of the other measures of parenting. However, both items possess face validity in that the questions directly target both the parent's perception of overall monitoring, as well as a specific measure of actual supervision. Unfortunately, the question pertaining to hours left unsupervised has a particularly high rate of non-response (close to 7%), creating the potential for some bias in the interpretation of the relationship between parental reports of monitoring and the outcome measures.

Due to these potential shortcomings, it was of particular importance to also include a measure of the *child's perception of parental monitoring*. The child's questionnaire includes items from a scale of poor parental supervision. This scale is comprised of questions which directly measure the construct of monitoring, such as "(My parents) almost always know where I am and what I am doing" and "(My parents) usually know if I do something wrong." The scale was developed and has been used by prior researchers (Gottfredson and Gottfredson, 1999). The majority of the items which make up the scale itself show significant correlations with one another, with shared variances ranging from 1-13%.

Although the scale of the child's perception of monitoring is not significantly correlated with either of the parental reports for monitoring, it is significantly correlated with the child's attachment to their parents, with a moderate correlation strength (.30), indicating a shared variance of 9%. The results of the correlation analyses are located in Appendix H and the discrepancy between parent and child responses is addressed further in the discussion section. Detailed information pertaining to the child's perception of

parental monitoring scale and its reliability may be found in Appendix B.

b) Attachment

Prior research has also indicated the significant separate, as well as additive, impacts of both indirect and direct parental controls on delinquency, so it is likewise important to include a strong measure of indirect control in the current research.

Attachment has been identified for decades as an important component of effective parenting, having an inverse linear relationship with measures of children's deviancy (Hirschi, 1969; Kierkus and Baer, 2002; LaGrange and White, 1985; Nye, 1958; Rankin and Kern, 1994; Rankin and Wells, 1990; Sampson and Laub, 1993; Sokol-Katz and Dunham, 1997; Wright and Cullen, 2001). The current research therefore also includes measures of attachment, both from the parent to the child and vice versa, from child to parent, as the second focal aspect of parenting.

Parental attachment to the child is measured by the parent's response to the question "Compared to other children you have known or have raised, how much would you say you love and are close to this child?" The complete response scales for this measure can be found in Appendix A. There are inherent issues of validity in the use of this single-item measure, especially since many of the parents have other children of their own to use in drawing the comparison while the remainder are using their level of closeness to children who are not their own as a basis for comparison. This issue is discussed further in the limitations section. Additionally, the parent's level of attachment is not significantly correlated with any of the parental monitoring measures, and is only correlated with the child's level of attachment at a very small level (.08), indicating less than a 1% shared variance. These correlation results can also be located in Appendix H.

The *child's attachment to their parents* is measured using responses from a scale of closeness to parents developed and used by previous researchers, including such items as "I feel very close to my father/mother" and "I would like to be the kind of person my father/mother is" (Hawkins *et al.*, 1992). The correlation analysis, found in Appendix H, reveals that all of the items comprising this scale are significantly correlated, with shared variances ranging from 4-34%. For the computation of this particular scale, if all of the information for one parent was missing, the scale was computed using only the information pertaining to the remaining parent. This tactic was used in an attempt to avoid any bias resulting from single parent families in which the child may not have had substantial exposure to the absentee parent and therefore chose not to answer the questions relating to that parent. The totality of this scale and its reliability measures can be located in Appendix C.

2. Delinquency

Due to the young age of the sample, the dependent outcome of delinquent propensity is measured in a variety of ways, including self-reports by the child on their intentions to use controlled substances and the frequency of past actions which are deemed as 'rebellious behaviors'. Additionally, the parental reports of antisocial behaviors displayed by the child in the preceding three weeks are used as an additional measure of delinquent propensity. Prior research and intuition indicate that the correlations among these three outcome variables should be positive and significant. The results of the correlation analyses, which are located in Appendix H, indicate that these measures do, in fact, each have small, but significant correlations to one another, with shared variances ranging from 2-4%.

Although some of the behaviors and actions used in this study are legally delinquent behaviors, such as stealing, or status offenses, such as running away from home, many of the measures simply encompass behaviors which are contrary to maintaining social order and may entail harm to the child or others. Following the suppositions of the general theory of crime (Gottfredson and Hirschi, 1990), in the current study analogous acts such as these are viewed as similar to, and indicative of, delinquent propensities. Information pertaining to the frequency of the outcome variables can be located in Table 2.

a) Intent to use

Prior research has indicated that children's intentions to use substances such as tobacco and alcohol are related to their actual usage in the future. This has been found in samples of adolescents as well as elementary aged children (Andrews *et al.*, 2003; Maher and Rickwood, 1997). Since the level of actual substance use is very low for children aged seven to eleven, responses from the child indicating their intentions to use tobacco, alcohol, and marijuana in the future are used as the first outcome of interest, *intent to use*. Inter-item correlation analysis indicates that these three measures are highly and significantly correlated, with shared variances ranging from 35-65%, indicating strong inter-item reliability and content validity.

However, the vast majority of children involved in this study indicated a lack of intentions to use, creating a high skewness in this outcome variable, as originally coded (1.65). Subsequently, the results from this scale were dichotomized such that those respondents with no intentions to use any substances were coded as 0, and those with intentions to use any or all of the substances were coded as 1, thus allowing for the use of

logistic regression while decreasing the skew of this variable (1.05). The specific information pertaining to this original scale and its reliability, as well as the descriptive statistics for the recoded variable can be found in Appendix D. The frequency statistics for the outcome measures located in Table 2, as well as the correlation analysis found in Appendix H, and all of the subsequent logistic regression analyses reflect results using the binary recoded variable of intentions to use.

b) Antisocial and rebellious behaviors

Child development literature, as well psychological and criminological studies have consistently indicated that early problem behaviors are a predominant risk factor for future delinquency (Loeber and Stouthamer-Loeber, 1987; Tremblay *et al.*, 1992). To measure the propensity for future delinquent behavior in the current sample, we must rely on the proxy measures of *antisocial and rebellious behaviors*. The parent reports indicate the frequency of antisocial behaviors displayed by the child, such as “Hurts others physically” and “Damages other people’s property on purpose.” Appendix E includes the information pertaining to the scale reliability, as well as the specific items and responses found in the scale of antisocial behavior, which was developed and validated by previous researchers (Gresham and Elliott, 1990; Kellam, 1990). Children self-report on their own rebellious behaviors, including items like stealing, fighting, and cheating in school. The items on this scale were reproduced from prior research (Gottfredson and Gottfredson, 1999) and the information pertaining to this scale and its reliability can be found in Appendix F.

Table 2: Frequency of Outcome Measures

	<u>Males</u>			<u>Females</u>			<u>Aggregate</u>			
	Mean	SD	N	Mean	SD	N	Mean	SD	Skew	N
Intent to Use	0.28	0.45	382	0.26	0.44	294	0.27	0.44	1.05	676
Antisocial Behavior	1.72	0.42	386	1.59	0.36	301	1.66	0.40	0.88	687
Rebellious Behavior	1.41	0.32	388	1.30	0.29	298	1.37	0.31	1.11	686

3. General Controls

Control measures for this study include indications of socio-economic status, such as parent’s income and education. Information on the health of the child as well as the presence of mental and/or learning disabilities are also included and utilized as controls.² A complete list of the controls and their response scales is included in Appendix G.

C. Procedures

To test Hypothesis 1, *t*- tests are used to determine whether the levels of parental monitoring or attachment differ significantly, based upon the gender of their child. Once the results of the mean comparison have been assessed, linear regression is conducted to further explore gender distinctions, while controlling for other potentially confounding factors.

To test Hypothesis 2, for the outcomes of antisocial and rebellious behaviors, regression analyses are conducted, both with and without each separate interaction term for gender, multiplied by each monitoring variable. Then the results of the separate models, as well as tests for model improvement, are examined to determine the explained

² Control variables which were explored, yet excluded from the analyses due to a lack of any significant correlation with the outcomes of interest, include the parent’s gender and age, relationship to child, parent’s race/ethnicity, the number of adults in the home, as well as the child’s race/ethnicity.

variance of each model. For the outcome of intention to use, which is coded as a dichotomous variable, logistic regression is used due to the non-normal distribution of the outcome. Interaction terms are entered into the model and comparisons of explained variance and model fit are likewise conducted. These processes are repeated using the measures of attachment and their interactions with gender to test Hypothesis 3.

For all of the regression models, preliminary analyses were necessary in order to determine which of the various control measures are pertinent and, ultimately, which variables were included in the final models. Due to the skewed nature of the data for the outcomes of antisocial behavior (Skewness = 0.88) and rebellious behavior (Skewness = 1.11), all of these analyses were also conducted using squared terms and logged terms for the dependent variables. These transformations resulted in a reduction of the skew for both of these outcome variables. Squaring the outcome of antisocial behavior reduced the skew to 0.55 and reduced the skew of rebellious behavior to 0.83. Logging both of the terms further reduced the skew to 0.25 for antisocial behavior and 0.59 for rebellious behavior. However, when the regression analyses were rerun using either the squared or logged outcomes, there were no identifiable changes in the nature of any of the relationships identified, therefore the results from the original analyses are presented in the frequency information contained in Table 2, as well as all of the subsequent regression results contained in this report.

Additionally, for all of the regression analyses relating to antisocial and rebellious behaviors pairwise deletion was used, in an effort to retain as many cases as possible for analysis. These regressions were also conducted using listwise deletion and there were no significant differences in the outcomes, therefore the results of the analyses using

pairwise deletion are reported herein. However, for the binary logistic regressions used to evaluate the outcome of intent to use, listwise deletion was necessary, due to the inherent functions of the statistical software, SPSS, and those results are reported. Due to a significant number of non-responses for particular monitoring measures, the use of listwise deletion does create an unavoidable potential for selection bias, as failure to answer pertinent questions leads to the exclusion from analyses.

V. Results

A. Parental Monitoring and Attachment by Gender

1. Monitoring

a) Parental reports

The results of the *t*-tests conducted, which can be found in Table 3, do not support the assertions presented in Hypothesis 1. Although the parental responses concerning how often they monitor their child's behavior do show a slightly higher level of monitoring for boys, this difference is not statistically significant. Likewise, while parental responses to the question of how many of the previous 24 hours their child had been unsupervised indicate that parents left their female daughters alone for slightly less time than males, this difference also does not reach a level of statistical significance. Separate regression analysis for each of these parental reports of monitoring also indicates that gender does not significantly impact either of these measures, controlling for other correlated variables including family income, parent education and the age of the child. The correlation analyses are located in Appendix H and the results of these regression analyses can be found in Table 4.

b) Child reports

When analyzing the children's responses for the scale of parental monitoring, using a comparison of means, significant differences do emerge. The results of the *t*-test, found in Table 3, indicate that female children perceive themselves to be more strongly monitored by their parents than male children do, and although this difference is slight, it is a statistically significant difference in the level of parental supervision, based on the child's perception. However, when regression analysis is performed the effect of gender is no longer significant once other factors, including family income, parent education, the child's age and learning disabilities, are controlled. The use of these specific control variables was determined based upon the correlation analyses found in Appendix H.

These findings, located in Table 4, indicate that for the child's perception of parental monitoring, the difference in the mean level by gender is more likely due to the confounding influences of these other variables, rather than simply gender itself. These results are contrary to the hypothesized relationship which predicted a difference in the level of monitoring by gender, such that female children would be more likely to experience greater levels of monitoring than their male counterparts, regardless of controlling or intervening factors.

Table 3: Monitoring by Gender: Comparison of Means (*t*-tests)

	N	t	DF	Signif.	Eta squared
Parent Monitoring	689	-1.00	687	0.32	0.001
Hours Unsupervised	646	0.36	644	0.73	0.000
Child Monitoring	674	2.28	672	0.02	0.008

Bold items are significant at $p < .05$.

Table 4: Monitoring by Gender: Linear Regression Analysis

	Unstandardized B	Standardized Beta	Significance Value
Parent Monitoring			
(N = 645; R sq = 0.16)			
Family Income	0.03	0.06	0.19
Parent Education	0.12	0.13	0.00
Child Age	0.01	0.02	0.69
Child Gender	0.07	0.04	0.32
Hours Unsupervised			
(N = 620; R sq = 0.19)			
Family Income	-0.02	-0.06	0.18
Parent Education	0.01	0.01	0.77
Child Age	0.08	0.18	0.00
Child Gender	-0.03	-0.02	0.60
Child Monitoring			
(N = 646; R sq = 0.26)			
Family Income	0.01	0.05	0.24
Parent Education	0.02	0.10	0.02
Learning Disability	0.02	0.09	0.02
Child Age	-0.02	-0.19	0.00
Child Gender	-0.02	-0.06	0.12

Bold items are significant at $p < .05$.

2. Attachment

a) Parent's attachment to child

The results of the t -tests for levels of attachment can be found in Table 5.

Analysis of the t -tests for attachment, as reported by the parents, does not provide support for the hypothesized results. Although parents report a small discrepancy in levels of attachment by gender, with parents reporting greater attachment to their male children, this small difference is not statistically significant. When regression analysis of parental attachment is performed, however, it does produce statistically significant evidence in support of this gender difference, which is inconsistent with the hypothesized relationship. Once the family income, parent education, age and mental problems of the child are controlled for, the impact of gender indicates that parents are actually less attached to female children than male (keeping in mind that the coding for parental

attachment is such that unit increases denote lower levels of attachment). The correlation analyses are located in Appendix H and the results of the regression analyses for attachment can be found in Table 6.

b) Child's attachment to parents

The comparison of means analysis found in Table 5 suggests that, although female daughters report a slightly greater level of attachment to their parents than the males in this sample, the difference is not significantly different from zero. This finding is consistent with the hypothesized relationship and is further supported by the results of the regression analysis in Table 6, which show no significant impact of gender on the child's level of attachment, controlling for the family income, parent education, and child's age. A summation of the original hypothesis and the results for the gender comparisons of both monitoring and attachment are provided in Table 7.

Table 5: Attachment by Gender: Comparison of Means (*t*-tests)

	N	t	DF	Signif.	Eta squared
Parent Attachment	675	-1.73	673	0.09	0.004
Child Attachment	662	1.65	655	0.10	0.004

***Bold** items are significant at $p < .05$.*

Table 6: Attachment by Gender: Linear Regression Analysis

	Unstandardized B	Standardized Beta	Significance Value
Parent Attachment			
(N = 646; R sq = 0.14)			
Family Income	-0.03	-0.06	0.15
Parent Education	0.07	0.07	0.11
Mental Problem	0.28	0.11	0.01
Child Age	-0.01	-0.02	0.64
Child Gender	0.16	0.08	0.04
Child Attachment			
(N = 632; R sq = 0.09)			
Family Income	-0.01	-0.01	0.76
Parent Education	0.06	0.07	0.10
Child Age	-0.01	-0.01	0.80
Child Gender	-0.08	-0.06	0.13

Bold items are significant at $p < .05$.

Table 7: Summary of Hypotheses and Results for Monitoring and Attachment by Gender

	Hypothesized Relationship	Actual Relationship
Monitoring		
Parent Monitor	Greater amount for females	Same for both
Hours Unsupervised	Greater amount for males	Same for both
Child Monitor	Greater amount for females	Same for both
Attachment		
Parent's Attachment	Same for both	Greater amount for males
Child's Attachment	Same for both	Same for both

B. Parental Monitoring and Delinquent Behaviors

1. Parental Monitoring and Intent to Use

a) Parent reports of monitoring

In order to create the appropriate regression models to test for the potential interactions of monitoring and gender and their effects on the outcomes of interest, a series of preliminary analyses were first performed. For the first outcome of interest, the child's intentions to use, correlation analysis located in Appendix H reveals that neither of the parental questions concerning monitoring are correlated with the outcome (both

correlations were below 0.05, indicating that they share less than 1% of their variance).

Of the various control measures, correlation analysis, also found in Appendix H, indicates only the parent's level of education and the presence of a learning disability in the child have any significant correlation with the child's intent to use. Therefore, these variables, as well as the child's sex, are included as controls in the subsequent analyses for the child's intention to use. The initial binary logistic regression model for all the subjects, which includes the aforementioned control measures and all of the independent variables of interest, indicates that neither of the parental reports of monitoring have a significant impact upon the child's intentions to use. These results are found in Table 8.

When interaction terms are entered separately into the model, however, one significant relationship does emerge. There is an interaction between the parent's report of how closely they monitor their child and the child's sex on the outcome of intent to use, indicating that the relationship between parental monitoring and the child's intentions to use is dependent upon gender. The results of the logistic regression analyses can be found in Table 9. The model fit specifications for both the original model and the interaction model are presented in Table 10 and indicate a small, but significant, improvement in the overall model fit.

Table 8: Intent to Use

	Logit B	Wald Statistic	Significance Value	Odds Ratio Exp(B)
Original Model				
Parent Education	0.07	0.40	0.53	1.07
Learning Disabled	0.19	2.19	0.14	0.21
Child Gender	-0.06	0.08	0.78	0.94
Parent Monitoring	-0.02	0.02	0.90	0.99
Hours Unsupervised	0.13	0.70	0.40	1.14
Child Monitoring	3.40	31.19	0.00	29.82
Parent's Attachment	0.14	1.88	0.17	1.15
Child's Attachment	-0.15	1.03	0.31	0.86

N = 560

Bold items are significant at $p < .05$.

Table 9: Intent to Use: Interaction of Gender and Parental Monitoring

	Logit B	Wald Statistic	Significance Value	Odds Ratio Exp(B)
Interaction Model				
Parent Education	0.08	0.49	0.49	1.08
Learning Disabled	0.19	2.15	0.14	1.21
Child Gender	-0.83	3.76	0.05	0.44
Parent Monitoring	0.71	3.75	0.05	2.04
Hours Unsupervised	0.13	0.68	0.41	1.14
Child Monitoring	3.49	32.67	0.00	32.88
Parent's Attachment	0.15	2.06	0.15	1.16
Child's Attachment	-0.17	1.24	0.27	0.84
Interaction Term				
Gender*Parent Monitor	-0.50	4.20	0.04	0.61

N = 560

Bold items are significant at $p < .05$.

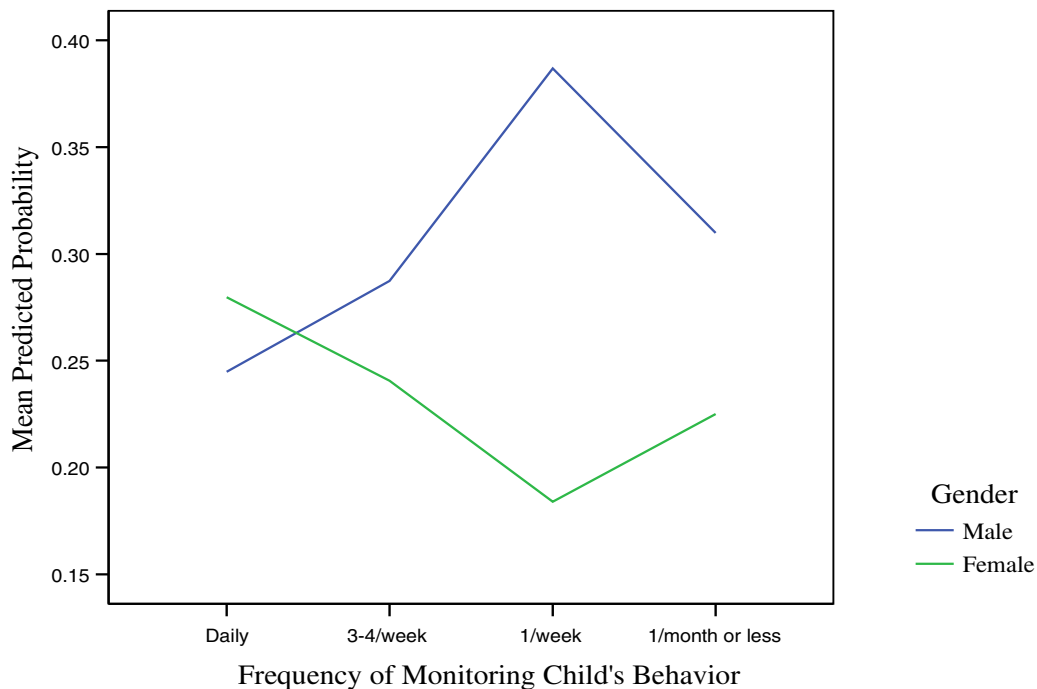
Table 10: Intent to Use: Original and Interaction Model Specifications

	<u>Original Model</u>		<u>Interactional Model</u>	
	Value	Signif.	Value	Signif.
Model Chi-square	39.97	0.00	44.26	0.00
Step Chi-square			4.29	0.04
H & L Chi-square	8.29	0.41	3.29	0.92
Nagelkerke R square	0.10		0.11	

To interpret how the specific effect of parental monitoring on intentions to use differs for girls and boys, the predicted mean values of the outcome variable were

calculated. A graphic depiction of the divergent gender relationships is presented in Graph 1. The graph clearly indicates that increased monitoring by parents has a greater inhibitory effect on intentions to use for males than for females. In fact, while males tend to shower higher levels of intent associated with decreasing amounts of monitoring, it appears that lowered levels of monitoring for girls is associated with a decreased intent to use. The finding that the inhibitory effect of monitoring on intent to use is greater for males supports the hypothesized relationship.

Graph 1: Impact of Parental Monitoring on Intent to Use



b) Child reports of parental monitoring

Correlation analysis, presented in Appendix H, reveals that the children's reports of parental monitoring are correlated with the scale of intent to use, for the sample as a

whole, at a level of 0.27, indicating that they share 7% of their variance and there is a moderate correlation between the two variables. Logistic regression analysis shows that the child's report of parental supervision is significant in its influence on the child's intent to use ($Beta = 3.4, p < .01$) and can also be found in Table 8. However, when an interaction term for the child's gender and reports of parental monitoring is entered into the analysis, the interaction term fails to reach significance.

2. Parental Monitoring and Antisocial Behavior

a) Parent reports of monitoring

Correlation analysis for the outcome of antisocial behaviors exhibited by the child, as reported by the parent, indicates that neither of the measures of monitoring, as reported by the parent, are significantly correlated with the outcome of interest. Both show a Pearson Correlation value of less than 0.05, and neither are significantly different than zero. Based on the results of this preliminary correlation analysis found in Appendix H, the control variables for the regression analysis of antisocial behavior include household income, level of parental education, gender of the child, as well as the presence of child mental and health problems and learning disabilities.

When assessing the outcome of antisocial behaviors, the lack of correlation between parental reports of monitoring and antisocial behaviors is supported by the regression analysis. This analysis shows that neither the parent's rating of how closely they monitor their child nor how many hours the child was left unsupervised in the preceding day, had any significant impact on the amount of the child's antisocial behaviors, as reported by the parent. The results of this regression model are located in

Table 11. Subsequent inclusion of interaction terms for gender and monitoring reveals that there are no interaction effects apparent between gender and either of the measures of monitoring, as reported by the parent. These findings do not support the hypothesis that gender will interact with monitoring to greater inhibit antisocial behaviors for males.

b) Child reports of parental monitoring

Correlation analysis shows that the children's reports of parental monitoring are significantly correlated, albeit to a small degree, with their antisocial behavior. The Pearson Correlation level for these variables is at 0.15, indicating a shared variance of 2.25%, and can also be located in Appendix H. The regression results, found in Table 11, indicate that for the group as a whole, the child's perception of parental monitoring does slightly reduce the likelihood of antisocial behaviors ($Beta = 0.09, p < .05$). However, with the inclusion of an interaction term between gender and the child reports of parental monitoring, this interaction fails to reach statistical significance. So, despite an overall finding showing a significant impact of the child's perception of parental monitoring on antisocial behaviors, no interactions with gender are identified. Again, these results fail to support the hypothesis that antisocial behavior, or delinquent propensity, would be inhibited by parental monitoring to a greater degree for males than females.

Table 11: Antisocial Behavior

	Unstandardized B	Standardized Beta	Significance Value
Original Model			
Family Income	0.02	0.08	0.07
Parent Education	0.02	0.05	0.19
Child Gender	-0.08	-0.10	0.01
Learning Disabled	0.07	0.14	0.00
Heath Problem	0.02	0.03	0.51
Mental Problem	0.22	0.20	0.00
Parent Monitoring	0.02	0.05	0.25
Hours Unsupervised	0.03	0.04	0.28
Child Monitoring	0.21	0.09	0.03
Parent's Attachment	0.06	0.14	0.00
Child's Attachment	0.01	0.02	0.69

N = 627; R sq = 0.16

Bold items are significant at $p < .05$.

3. Parental Monitoring and Rebellious Behavior

a) Parent reports of monitoring

For the child's self-reports of rebellious behaviors, again it is found that the measures of monitoring reported by the parent each have a very low Pearson Correlation, sharing less than 1% of variation with the outcome, and neither are statistically significant. Of the potential control variables included in this dataset, those which were identified as relevant and are used as the controls for the regression analysis of rebellious behavior include parent's education, child's gender and sex, as well as the presence of a learning disability in the child. These correlation results are presented in Appendix H.

The results of the regression analysis indicate that parental assessment of monitoring has no significant impact on the rebellious behaviors reported by the child. When interaction terms for both of the parent reported monitoring variables and gender are entered, neither of them reaches statistical significance. This suggests that the effect of monitoring on rebellious behavior does not depend on gender and provides no support

for the second hypothesis. The results of these analyses can be located in Table 12.

b) Child reports of parental monitoring

There is a moderate correlation between the children's reports of parental monitoring and reports of their own rebellious behaviors. This correlation is 0.2, indicating a shared variance of 4%, and can be located in Appendix H. The regression analysis, for the sample as a whole, shows that the child's perception of parental monitoring does significantly impact the incidence of their reported rebellious behaviors ($Beta = 0.2, p < .01$).

However, the interaction between the child's gender and their perception of parental monitoring does not reach statistical significance. These analyses indicate that while children who believe their parents more closely monitor their behavior are slightly less likely to report their involvement in rebellious behavior, this impact is not dependent upon the gender of the child. Again, these findings provide no support for the hypothesized relationship, which presumed a greater deterrent effect for males. These results are also included in Table 12. A summary of the second hypothesis and the results of the analyses relating to the influence of gender on the relationship between parental monitoring and delinquent behaviors can be found in Table 13.

Table 12: Rebellious Behavior

	Unstandardized B	Standardized Beta	Significance Value
Original Model			
Parent Education	0.02	0.05	0.24
Learning Disabled	0.04	0.10	0.01
Child Gender	-0.09	-0.14	0.00
Child Age	0.05	0.23	0.00
Parent Monitoring	0.01	0.02	0.65
Hours Unsupervised	-0.02	-0.04	0.30
Child Monitoring	0.37	0.20	0.00
Parent's Attachment	-0.02*	-0.07*	0.08
Child's Attachment	0.03*	0.08*	0.06

N = 627; R sq = 0.14

Bold items are significant at $p < .05$.

* Items are significant at $p < .10$.

Table 13: Hypotheses and Results of Monitoring, Delinquency, and Gender Interactions

	Hypothesized Relationship	Actual Relationship
Intent to Use		
Parent Monitor	Greater inhibitor for males	Greater inhibitor for males
Hours Unsupervised	Greater inhibitor for males	None
Child Monitor	Greater inhibitor for males	None
Antisocial Behavior		
Parent Monitor	Greater inhibitor for males	None
Hours Unsupervised	Greater inhibitor for males	None
Child Monitor	Greater inhibitor for males	None
Rebellious Behavior		
Parent Monitor	Greater inhibitor for males	None
Hours Unsupervised	Greater inhibitor for males	None
Child Monitor	Greater inhibitor for males	None

C. Attachment and Delinquent Behaviors

1. Intent to Use

a) Parental attachment to child

For the first outcome of interest, the child's intent to use, the controls for the analysis again include the level of the parent's education and the presence of a learning disability in the child. Pearson Correlation, located in Appendix H, reveals that the measure of attachment from the parent to their child is correlated with this outcome at

only 0.06, having a shared variance of less than 1% with the child's intent to use. Therefore, it is not surprising that binary logistic regression analysis shows the level of parental attachment to the child fails to have a significant impact on the child's intentions to use tobacco, alcohol, and/or marijuana. The results of the original regression can be located in Table 8.

When an interaction term of gender and parental attachment to the child is included in the regression, there is no significant interaction between the gender of the child and the parent's attachment to the child, on the child's intent to use. This lack of interaction supports the hypothesis that the effect of attachment on delinquency does not depend upon gender.

b) Child's attachment to parents

Correlation analysis, found in Appendix H, also indicates that the level of the child's attachment to their parents does not significantly correlate with the outcome of intent to use and binary logistic regression shows that, for the sample as a whole, there is no significant impact of the child's attachment on this outcome. These regression results can be found in Table 8. Upon the addition of an interaction term between the child's closeness to their parent and gender, the analysis indicates that there is no significant interaction between these variables. This lack of a gender interaction is also consistent with the hypothesized relationship.

2. Antisocial Behavior

a) Parent attachment to child

When evaluating the parent's reports of antisocial behaviors displayed by their child, there is a significant correlation between this outcome and the parental reports of

their level of closeness to the child. The Pearson Correlation, located in Appendix H, is 0.15, showing that these variables share 2.25% of their variation, which is a relatively small correlation. The controls for the regression analyses of attachment are consistent with those used to evaluate the effects of the other independent variables on antisocial behavior and include the family income, parent's education, as well as learning, health and mental problems of the child.

The regression analysis indicates that for the sample as a whole the parental reports of closeness to their child do have a significant impact on the child's antisocial behavior ($Beta = 0.14, p < .01$). The results from this original model are located in Table 11. Upon the inclusion of an interaction term for the measure of parental attachment to the child and the child's gender, the interaction term is found to have no statistical significance. These findings support the hypothesis that the effect of parental attachment to their child does not depend upon gender, for the outcome of antisocial behaviors.

b) Child's attachment to parents

Correlation analysis from Appendix H indicates that there is no significant correlation between the child's attachment to their parents and the parental reports of the child's antisocial behaviors. Additionally, when conducting regression analysis on the entire sample, the child's reports of closeness to their parents does not show any significant effect on the child's antisocial behavior. The results of these analyses can also be found in Table 11.

Upon the introduction of an interaction term into the regression, there is no significant interaction of gender with the child's attachment to their parents for this outcome. These findings contribute additional support for the hypothesized relationship,

that the effect of attachment on antisocial behavior, or delinquent propensity, is not dependent upon gender.

3. Rebellious Behavior

a) Parental attachment to child

Correlation analysis presented in Appendix H indicates that the parent's reported level of attachment to their child is not significantly correlated with the child's own reports of their rebellious behaviors. The controls used for the linear regression remain the same as prior regressions exploring impacts on rebelliousness, and include the household yearly income, the gender and age of the child, as well as the presence of a learning disability in the child. The original regression indicates a nearly significant relationship in which, the children whose parents report lower levels of closeness actually report slightly less instances of their own rebellious behavior ($Beta = -0.07, p < .10$) and can be found in Table 12.

The addition of an interaction term for the parent's attachment level and child's gender provided results which are quite contrary to the proposed hypothesis. Linear regression indicates a difference in the effect of parental attachment on rebellious behavior, dependent upon gender, which comes very close to significance ($p = .06$). The results of these analyses can be located in Table 14. Additionally, the F test indicates a small (0.005) increase in the explanatory power of the model with the inclusion of the interaction term. This finding is contrary to the hypothesis that attachment will not interact with gender in its effect on rebellious behavior, or delinquent propensity.

Table 14: Rebellious Behavior: Interaction of Gender and Parent’s Attachment

	Unstandardized B	Standardized Beta	Significance Value
Interaction Model			
Parent Education	0.02	0.05	0.24
Learning Disabled	0.04	0.10	0.01
Child Gender	-0.18	-0.29	0.00
Child Age	0.05	0.23	0.00
Parent Monitoring	0.01	0.02	0.61
Hours Unsupervised	-0.02	-0.04	0.33
Child Monitoring	0.37	0.20	0.00
Parent’s Attachment	-0.09	-0.28	0.02
Child’s Attachment	0.03*	0.08*	0.06
Interaction Term			
Gender*Parent’s Attach	0.05*	0.27*	0.06

N = 628; R sq = 0.15

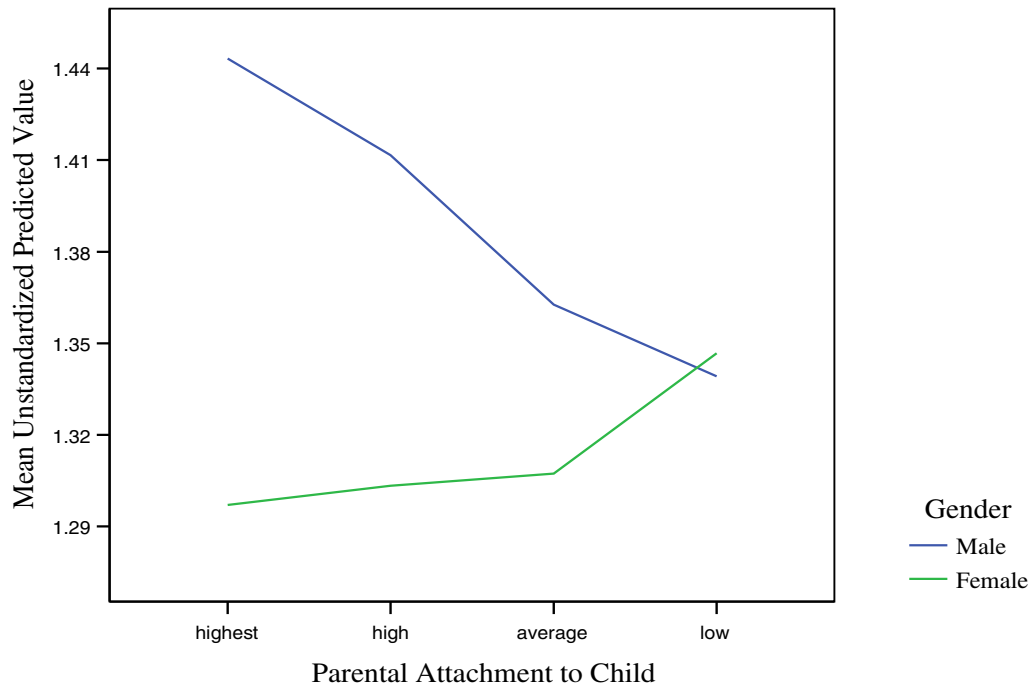
R sq change = 0.005; Signif. Value = 0.06

Bold items are significant at $p < .05$.

* Items are significant at $p < .10$.

To understand the specific nature of the relationship between parent’s attachment and the rebellious behaviors of the child, the predicted values of the outcome variable were calculated. These values were then plotted according to gender and can be found in Graph 2. The divergent lines for males and females clearly indicate that the effect of parent’s level of attachment on the rebellious behaviors self-reported by the child is dependent upon the gender of the child. While for females in the sample, lower levels of attachment are indicative of increasing rebellious behaviors, the relationship for males is quite the opposite. In fact, for males, there is a clear indication that lower levels of parent’s attachment are actually associated with lower levels of reported rebellious behaviors. These findings are not consistent with the hypothesis that the impact of attachment on rebellious or delinquent behavior is not dependent upon gender.

Graph 2: Effect of Parent's Level of Attachment on Child's Rebellious Behavior



b) Child's attachment to parents

The original correlation assessment for this variable, found in Appendix H, shows a significant relationship between the child's reports of their own rebellious behaviors and the child's rating of attachment to their parents. This Pearson Correlation is 0.14, portraying a small shared variance of about 2%. Regression analysis reveals that, for the sample as a whole, increased closeness to parents is indicative of a slightly lower level of self-reported rebellious behavior, or delinquent propensity, ($Beta = 0.08, p < .10$). These results are included in Table 12. When the interaction term for gender and child's attachment is added to the original model, it neither reaches statistical significance nor improves upon the original model. This finding supports the hypothesis that the effect of

attachment on the child's rebellious behaviors is not dependent upon the gender of the child.

A summary of the third hypothesis and results of the analyses relating to the influence of gender on the relationship between attachment and delinquent behaviors can be found in Table 15.

Table 15 : Hypotheses and Results of Attachment, Delinquency, and Gender Interactions

	Hypothesized Relationship	Actual Relationship
Intent to Use		
Parent's Attachment	None	None
Child's Attachment	None	None
Antisocial Behavior		
Parent's Attachment	None	None
Child's Attachment	None	None
Rebellious Behavior		
Parent's Attachment	None	Greater inhibitor for females
Child's Attachment	None	None

VI. Discussion

The results of the *t*-tests and regression analysis conducted to ascertain any significant differences in the levels of monitoring by gender, do not support the first hypothesis and are largely inconsistent with the findings of prior research. Although the children's responses do appear to indicate that female children perceive themselves to be more closely monitored by their parents than males, regression analysis indicates that this difference results from other confounding factors rather than gender. This lack of a statistically significant difference in monitoring for females and males is neither consistent with the findings of prior research, nor theories such as social control and feminist theory, which often credit disparate levels of monitoring as an explanation for the gender gap in delinquency (Cernkovick and Giordano, 1987; Gottfredson and Hirschi,

1990; Hagan *et al.*, 1987; Seydlitz, 1991).

The discrepancy between the answers provided by the parents and their children, and the low level of correlation between their responses may result from several factors. It is possible that the two questions asked of the parents were simply too limited and therefore were not as comprehensive in their prediction of monitoring as the scale of parental supervision, which combined the children's answers for a considerably greater number of questions on the subject of supervision and monitoring. It is also likely that the children and parents honestly perceive the level of monitoring differently. Although their individual responses are not correlated with one another, each of the measures correlates with other related factors and neither of the measures can be rejected as clearly invalid. The parent's responses about monitoring are very nearly significantly correlated with the child's, and the parent's reports of hours left unsupervised is significantly correlated with age, which makes sense logically, as parents are more likely to leave older children unsupervised. Likewise, the children's reports of parental monitoring are also significantly correlated with their age. These correlation results are located in Appendix H.

Previous researchers have noted this phenomena and have encouraged research which includes both child and parent measures, since the perceptions may differ (Krohn *et al.*, 1992). While the actual levels may not differ, the perception does, and since the child's reports of monitoring were the only factor to consistently be associated with a decrease in the delinquent outcomes, it appears from this research that the child's perception of monitoring is more pertinent than the parent's. However, since a causal relationship cannot be validated by this cross-sectional research, one must equally

consider the possibility that increased delinquent propensities present in the child cause them to perceive themselves as less monitored by their parents, as opposed to the perception causing the delinquency.

The tests on the levels of attachment between parents and children produced results which only partially support the hypothesized relationship. The *t*-tests indicate no significant differences between male and female children in either their attachment to their parents or their parents' attachment to them. Regression analysis of the child's attachment to parents supports the mean comparison finding, showing no significant impact of gender on the child's attachment to their parents. However, when regression analysis was conducted to assess the impact of gender on the parent's attachment to their child, a significant relationship was uncovered. These results indicate that parents do tend to report higher levels of attachment to male children, in the current sample.

This finding is contrary to the bulk of prior social control research which has indicated no difference in levels of attachment by gender (Anderson *et al.*, 1999; Canter, 1982; Cernkovich and Giordano, 1987; Sokol-Katz and Dunham, 1997). However, as the majority of prior research has not focused on urban, minority populations this may be the cause of the discrepancy. It is possible, knowing the increased risk for boys growing up in this environment of ending up involved in drugs, gangs, and/or crime, that these parents try to insulate their sons to a greater degree than their daughters by increasing attachment to them.

While this sample provided little support for the first hypothesis, the same must also be said for the second hypothesis, that gender will interact with monitoring to inhibit delinquent outcomes to a greater degree for male children than female. In fact, for both

antisocial behaviors of the child, as reported by the parent, and rebellious behaviors self-reported by the child, there are no apparent interactions with gender for any of the measures of monitoring, either as reported by the parent or the child. The only measure for which the effect of parental monitoring depends upon gender is the child's future intentions to use tobacco, alcohol and marijuana.

The results from this sample indicate that this measure of parental monitoring does interact with gender, with increased levels of monitoring associated with a greater reduction in intentions to use for males. This finding is consistent with the original hypothesis, as well as the findings of prior researchers and theories which have concluded that direct controls, such as monitoring, are more effective in reducing delinquency for males (Canter, 1982; Cernkovich and Giordano, 1987; Heimer 1996; Seydlitz, 1991). However, the current results are not consistent with the assertions of earlier social control theorists, such as Nye (1958) and Hirschi (1987), who claimed that monitoring is a stronger inhibitor of females' delinquency than males'. In fact, for the current sample, increased parental monitoring of females is actually associated with an increase in intentions to use.

Another interesting trend, evident in Graph 1, is that the very lowest level of parental monitoring appears to indicate a return toward the mean level of intent to use, for both males and females. However, this finding may be unduly influenced by the nature of the parent-child relationship for those in this category. It is possible that the adult respondents who answered the questionnaire claiming such low levels of monitoring are not actually the primary caretaker for the child. Regardless of this potential anomaly, it is clear that the relationship between parental reports of monitoring and the child's

intentions to use controlled substances does differ for males and females in the current sample, such that parental monitoring has a greater inhibitory effect for males.

The lack of significant gender interactions with the measures of monitoring for the outcomes of rebellious and antisocial behavior in the current sample is interesting, in that these findings are contrary to prior social control and social learning research concerning parenting and delinquency (Canter, 1982; Cernkovich and Giordano, 1987; Heimer, 1996; Heimer and DeCoster, 1999; Seydlitz 1991). The bulk of prior research indicates that direct controls such as monitoring are more effective in reducing male's delinquency than female's, however in the current sample the only results consistent with these earlier findings are for the outcome of intentions to use controlled substances. One possible explanation for the largely inconsistent results found in the current study may be the combination of too few actual antisocial and rebellious behaviors evidenced in such a young age group, coupled with a lack of discrepancy between the monitoring of boys and girls at such a young age. These factors may combine to make gender interactions difficult to identify for current, tangible behaviors, while intent to use has greater variance, since the measure is not of actual behavior at this young age, but of anticipated future behavior, allowing the gender interaction to be more readily apparent.

Further exploration of the results concerning the third hypothesis, that attachment between children and parents will not interact with gender, in their effect on the delinquent propensities measured in this sample, produces some modest support, but also additional contradictions to prior research and the current suppositions. Although there are no interactions apparent between gender and attachment for the outcomes of intent to use and antisocial behavior, as hypothesized, there is a significant interaction between

gender and the parent's level of attachment for the outcome of rebellious behavior.

The lack of gender interactions between levels of attachment and intentions to use, as well as antisocial behaviors is consistent with the original hypothesis. The prior research on this subject has produced a great deal of disparate results. While some researchers have concluded that attachment is more important to reducing male delinquency (Anderson *et al*, 1999; Canter, 1982; Cernkovich and Giordano, 1987; Nye, 1958), others have argued just the opposite, that attachment is a greater inhibitor for females (Alarid, 2000; Gove and Crutchfield, 1982; Heimer and DeCoster, 1999). In the current research it appears that the inhibitory influence of attachment is generally not dependent upon gender, with the only exception being the relationship between parent's level of attachment and the child's rebellious behaviors.

A critical look at the results of the analysis concerning rebellious behaviors, as reported by the child, provides evidence that the null hypothesis of attachment and gender interaction cannot be supported by this data. Results which are very close to statistical significance ($p = .06$) indicate that the effect of parental attachment on rebellious behaviors is dependent upon gender. For this sample, the inhibitory effect of increased levels of attachment from their parents on rebellious behaviors is greater for females than for males. This finding is contrary to the assertions of Nye's early social control theory, in which he presumed that indirect controls such as attachment would be more effective in reducing male delinquency (1958), as well as more recent research by Seydlitz (1991). However, these results are consistent with both prior social learning and social control research which indicate that emotional bonding and attachment inhibit the learning of 'violent definitions,' as well as involvement in violent crime, to a greater

degree for females than males (Alarid *et al*, 2000; Heimer and DeCoster, 1999).

Overall, the results generally do not support the first hypothesis that levels of monitoring will vary by gender, while levels of attachment do not. In fact, for this sample, none of the measures of monitoring are dependent on gender, while the measure of parental attachment indicates that parents are more attached to male children. The second hypothesis explored in this research, that levels of parental monitoring are dependent upon gender in their effect on delinquent behaviors, is supported in part for the outcome of the child's intentions to use, but not at all for the outcomes of antisocial and rebellious behavior. This sole interaction between gender and parental reports of monitoring is the only support for the hypothesized relationship that monitoring more greatly inhibits delinquent behaviors for males.

Finally, the third hypothesis, that the effect of attachment between the parents and children on the child's delinquency will not depend upon gender, produces mixed results. There are no interactional effects of gender and attachment on the outcomes of antisocial behavior and intent to use. However, there is a distinction by gender in the effects of parent's attachment on rebellious behavior, indicating that the inhibitory effects are greater for females.

In general, the current study provides further support for the claims of various social control theorists, in that increased monitoring and attachment are generally found to reduce delinquent propensities. For the group as a whole, the child's perception of parental monitoring is negatively related to the reported intentions to use, as well as antisocial and rebellious behaviors. The findings for attachment are not as strong nor as consistent, however decreased parental attachment is associated with increased antisocial

behaviors and decreased rebellious behavior for females. The child's attachment to parents is negatively related to their rebellious behaviors.

The aim of the current research, however, is to determine whether monitoring and attachment vary according to the gender of the child, as well as the potential interactions of monitoring and attachment with gender, in their effect on delinquency. Although many of the proposed relationships are not validated in this sample, some interesting findings do emerge. The only significant interaction of monitoring and gender is seen in the effect of parental monitoring on intentions to use, and the inhibitory effects of monitoring are greater for males. There is also one interaction between attachment and gender which comes very close to statistical significance, the impact of the parent's attachment on the child's rebellious behavior. This nearly significant relationship indicates that the inhibitory effect of attachment is greater for the females in this sample.

One potential reason why parental attachment has a greater inhibitory effect on rebellious behaviors for females in the current sample, may simply be that the old patriarchal belief is true, that the way in which females are socialized and their role as future caregivers creates in girls a stronger attachment to families and conventional social order (Elliott *et al*, 1979). However, as this study found no evidence that girls are actually more attached to their parents than their male counterparts, this rationale seems unlikely.

When considering the unique socio-demographic characteristics of this sample, other explanations seem more plausible. Despite the fact that the male and female children experience the same level of monitoring and very similar levels of attachments within the family, there are a variety of other factors which were not measured in this

study which may influence the effects of these bonds. For instance, many previous researchers have explored the effects of peers on delinquent propensities and found that the type of friends that one has and the behaviors they engage in often influences one's own behaviors. So, for the current sample, the boys may have more delinquent associates who are involved in more serious forms of delinquent behaviors than the females. The impact of the bonds with these types of peers may serve to negate some of the inhibitory effects of the familial bonds, creating the weaker effect of attachment for males. Additionally, the absence of peer influences may contribute to the fact that, with only one exception, the direct controls of parental monitoring were generally not a greater inhibitor of male delinquency than female. This exclusion of peer influences in the current study is one limitation which should be addressed and explored by future research.

VII. Limitations

In addition to the exclusion of peer influences, there are several other limitations to the current research, especially concerning the validity of some of the construct measures used. Of particular concern is the construct validity for several of the single-item measures for parental supervision and attachment. It is highly probable that the use of such narrow measures influenced the accuracy and reliability of the research results. Further research should be conducted which employs stronger measures for both of these constructs, in an attempt to replicate the current results.

The scales used to measure both antisocial and rebellious behaviors are comprised mainly of items dealing with overt behaviors, such as fighting, cheating, or running away from home. Researchers have identified these types of openly aggressive behavior as

being more prevalent in males, while females have a tendency toward relational aggression. Relational aggression focuses on more indirect forms of social aggression, in which the aim is to hurt another's social standing or friendships and generally the aggressor remains anonymous (Crick and Grotpeter, 1995). Although the results of the current analyses are biased towards finding the types of aggressive behaviors more often displayed by males, as the aim of the study is to identify potentially delinquent behaviors and not merely aggressive behaviors, the exclusion of social, relational types of aggression should not discredit the current findings. However, further exploration of these relationships which includes measures of relational aggression is encouraged.

One additional limitation of this study is that the results may largely be affected by the age of the child respondents. While the majority of delinquency and parenting studies have focused on older populations, the children in this study are all aged 7-11, well below the age of adolescence, when delinquent behaviors often emerge. Since antisocial and rebellious behaviors, as well as beliefs about substance use, are often present early in childhood, the current study expands upon the existing literature by attempting to identify relationships at this younger age. However, the young age of the sample may also inhibit the ability of the analyses to determine significant gender discrepancies, especially for many of the monitoring measures. It is probable that disparities in parental monitoring are more likely to develop as children reach adolescence and are allowed greater freedom. At such a young age parents may be more inclined to monitor both male and female children equally, making gender distinctions and interactions more difficult to uncover. It is recommended that similar, gender stratified, research be continued with adolescent aged groups to discover whether greater

variation can be discerned with the progression from childhood into the teenage years.

Furthermore, prior research has asserted that there may be an interaction of age and gender which may influence the nature of the relationship between gender and the parenting variables (Seydlitz, 1991). Some precursory examination of potential three-way interactions was explored, which suggests that there are significant interactions between age, gender and all of the parenting measures, specifically for the outcome of rebellious behaviors self-reported by the child. Additional research is recommended to further understand the manner in which gender effects the impact of parenting practices throughout these various ages of childhood.

Finally, a significant limitation of the current research is that the study is cross-sectional in nature. Due to the lack of longitudinal data analysis, temporal relationships cannot be established between the variables. Therefore, while the results indicate potential relationships, one cannot conclude causal relationships based on these analyses. Future research should be done to validate the current findings using longitudinal data.

VIII. Conclusion

Despite the limitations in the current study, this research does present significant findings which have implications for future research as well as the practice of delinquency prevention. The results of these analyses indicate that, although they are few, certain interactions of gender with specific parenting practices do exist and need to be explored more fully in future research. Too often in the past, studies of juvenile delinquency have focused on males, to the exclusion of females. However, it is evident that the same practices may not produce the same results when applied to male and

female children. Therefore, studies which hope to bring to light the most effective means of reducing delinquency need to assess their findings in terms gender. Additionally, practitioners hoping to implement individual, family and/or community programs which successfully reduce delinquent behaviors in youths need to consider the implications of research such as this. It is clear that the relative effects of certain elements of monitoring and attachment on delinquency are not simply the same for males and females, and therefore specific program attributes may be more successful when tailored to fit the needs of the specific participants' gender.

APPENDIX A

Single Item Response Scales

Parental Monitoring Measures

1. How often do you monitor and watch your child's behavior?

<u>Response Scale</u>	<u>Descriptive Statistics</u>	
1 = Daily	N	689
2 = 3-4 times a week	Mean	1.55
3 = Once a week	St. Dev.	0.86
4 = Once a month or less		

2. How many of the last 24 hours was your child unsupervised?

<u>Response Scale</u>	<u>Descriptive Statistics</u>	
1 = None	N	646
2 = 1-3 hours	Mean	1.26
3 = 4-8 hours	St. Dev.	0.60
4 = 9 or more hours		

Parental Attachment to Child Measure

1. Compared to other children you have known or have raised, how much would you say you love and are close to this child?

<u>Response Scale*</u>	<u>Descriptive Statistics</u>	
1 = Much more than others	N	675
2 = More than others	Mean	1.97
3 = Same as others	St. Dev.	0.95
4 = Less than others		

*The scale for this item has been collapsed. The original scale responses includes a measure of 'Much less than others' which has been combined with 'Less than others' for the current research, due to the small number of responses (only 2) in the original measure.

APPENDIX B

Poor Parental Supervision Scale (Child Reports)

Items reproduced from the What About You Survey (Gottfredson and Gottfredson, 1999).

Are the following statements mostly true or mostly false about your parents?

- 1 True
- 2 False

Usually know how well I'm doing in school.
Keep close track of how well I am doing in school.
*Let me stay away from the house when I want.
*Usually don't know what I do after school.
Usually know if I do something wrong.
*Usually let me go wherever I want after school.
Almost always know where I am and what I am doing.
Would be very angry if I smoked cigarettes.
I would be punished at home if my parents knew I broke a school rule.
*It is OK with my parents if I drink beer or wine once in a while.
I would be in big trouble with my parents if I smoked marijuana.
*Smoking cigarettes or drinking beer in OK with my parents as long as I stay away from other drugs.
An adult is usually at home when I get home from school.

Scale Reliability Statistics:

Original scale range	1-2
Number of items	13
Alpha	0.62
N	616

Descriptive Statistics:

N	674
Mean	1.19
St. Dev.	0.17

*Variable was recoded so that higher scores reflect undesirable traits.

APPENDIX C

Not Close to Parents Scale (Child Reports)

Items reproduced from the Seattle Social Development Project (Hawkins, Catalano, Morrison, O'Donnell, Abbott, and Day, 1992).

- | | |
|---|--------------------|
| 1 | Disagree very much |
| 2 | Disagree |
| 3 | Agree |
| 4 | Agree very much |

How much do you agree with the following statements about your father?

- *I feel very close to my father.
- *I enjoy spending time with my father.
- *I would like to be the kind of person my father is.
- *I share my thoughts and feelings with my father.

How much do you agree with the following statements about your mother?

- *I feel very close to my mother.
- *I enjoy spending time with my mother.
- *I would like to be the kind of person my mother is.
- *I share my thoughts and feelings with my mother.

Scale Reliability Statistics:

Original scale range	1-4
Number of items	8
Alpha	0.83
N	578

Descriptive Statistics:

N	662
Mean	1.82
St. Dev.	0.69

*Variable was recoded so that higher scores reflect undesirable traits

APPENDIX D

Intent to Use Scale (Child Reports)

- | | |
|---|-------|
| 1 | True |
| 2 | False |
- I will never drink alcohol.
I will never smoke marijuana.
I will never smoke cigarettes.

Scale Reliability Statistics:

Original scale range	1-2
Number of items	3
Alpha	0.87
N	676

Descriptive Statistics:

N	676
Mean	1.19
St. Dev.	0.35
Skewness	1.65

Dichotomous Recode of Intent to Use

- | | |
|---|---|
| 0 | No intention to use alcohol, marijuana, or cigarettes. |
| 1 | Intention to use alcohol, marijuana, and/or cigarettes. |

Descriptive Statistics:

N	676
Mean	0.27
St. Dev.	0.44
Skewness	1.05

APPENDIX E

POCA/SSRS Child Antisocial Behavior Scale (Parent Reports)

Items reproduced from The Social Skills Rating System (SSRS) (Gresham and Elliott, 1990), and from the POCA-R (Kellam, 1990).

In the past three weeks, how often has each statement been true for your child?

- | | |
|---|-----------|
| 1 | Never |
| 2 | Sometimes |
| 3 | Often |
| 4 | Always |

Breaks rules.
Hurts others physically.
Breaks things.
Yells at others.
Takes others' property.
Fights.
Damages other people's property on purpose.
Lies.
Argues with adults.
Teases other children.
Uses a weapon in a fight.
Runs away from home overnight.
Starts physical fights with other children.
Has broken into someone else's house, building or car.
Is irritable.
Loses temper.

Scale Reliability Statistics:

Original scale range	1-4
Number of items	16
Alpha	0.83
N	614

Descriptive Statistics:

N	687
Mean	1.66
St. Dev.	0.40
Skewness	0.88

APPENDIX F

Rebellious Behavior Scale (Child Reports)

Items reproduced from the What About You Survey (Gottfredson and Gottfredson, 1999).

How often do you do the following things?

- 1 Often
- 2 Sometimes
- 3 Never

Pay attention in class.

*Take things that do not belong to me.

Do what the teacher asks me to do.

*Break other people's things.

*Try to hurt or bother other people (by tripping, hitting or throwing things).

*Tease other students.

*Fight with other students.

*Talk back to the teacher.

*Show off in class.

*Do things I know will make the teacher angry.

*Cheat on tests.

*Copy someone else's homework.

*Come late to class.

Scale Reliability Statistics:

Original scale range	1-3
Number of items	13
Alpha	0.80
N	634

Descriptive Statistics:

N	686
Mean	1.37
St. Dev.	0.31
Skewness	1.11

*Variable was recoded so that higher scores reflect undesirable traits.

APPENDIX G

Control Measures

Response Scale

Total family yearly income for the household.

1 = \$50,000 or more
2 = \$25,000 - \$49,999
3 = \$20,000 - \$24,999
4 = \$15,000 - \$19,999
5 = \$5,000 - \$14,999
6 = Less than \$5,000

Education level of the participating parent.

1 = College graduate
2 = Attended college
3 = High School graduate
4 = Junior High graduate
5 = Attended Elementary

Presence of a health problem in the child.

1 = No
2 = Possibly
3 = Yes

Presence of a learning disability in the child.

1 = No
2 = Possibly
3 = Yes

Presence of a mental problem in the child.

1 = No
2 = Possibly
3 = Yes

Gender of the child.

1 = Male
2 = Female

Age of the child.

7-11

APPENDIX H
Correlation Table

	Family Income	Parent Education	Health Problem	Learning Disability	Mental Problem	Child Sex	Child Age	Parent Monitor	Hours Unsuper.	Child Monitor	Parent Attach	Child Attach	Intent to Use	Antisocial Behavior	Rebellious Behavior
Family Income	1	.39	.08	.07	.01	.03	-.02	.11	-.06	.10	-.03	.01	.01	.11	.05
Parent Education	.39	1	-.04	-.03	-.05	-.02	.06	.15	.00	.10	.03	.07	.08	.09	.08
Health Problem	.08	-.04	1	.19	.20	-.12	.01	.00	-.01	.05	-.03	.04	-.01	.11	.04
Learning Disability	.07	-.03	.19	1	.33	-.19	.02	-.02	.07	.10	.02	.01	.11	.25	.14
Mental Problem	.01	-.05	.20	.33	1	-.12	.02	-.04	.03	.03	.09	.01	.03	.28	.06
Child Sex	.03	-.02	-.12	-.19	-.12	1	.05	.04	-.01	-.09	.07	-.06	-.03	-.15	-.18
Child Age	-.02	.06	.01	.02	.02	.05	1	.02	.19	-.19	-.01	-.01	.01	-.06	.19
Parent Monitoring	.11	.15	.00	-.02	-.04	.04	.02	1	-.04	.07	-.01	-.01	.03	.05	.04
Hours Unsupervised	-.06	.00	-.01	.07	.03	-.01	.19	-.04	1	-.05	-.05	-.02	.06	.04	.00
Child Monitoring	.10	.10	.05	.10	.03	-.09	-.19	.07	-.05	1	.03	.30	.26	.14	.20
Parent Attachment	-.03	.03	-.03	.02	.09	.07	-.01	-.01	-.05	.03	1	.08	.05	.15	-.06
Child Attachment	.01	.07	.04	.01	.01	-.06	-.01	-.01	-.02	.30	.08	1	.06	.07	.14
Intent to Use	.01	.08	-.01	.11	.03	-.03	.01	.03	.06	.26	.05	.06	1	.15	.14
Antisocial Behavior	.11	.09	.11	.25	.28	-.15	-.06	.05	.04	.14	.15	.07	.15	1	.19
Rebellious Behavior	.05	.08	.04	.14	.06	-.18	.19	.04	.00	.20	-.06	.14	.14	.19	1

Bold items are significant at $p < .05$.

Works Cited

- Adler, F.
1975 *Sisters in Crime: The Rise of the New Female Criminal*. New York: McGraw-Hill.
- Agnew, R.
1985 Social control theory and delinquency: A longitudinal test. *Criminology* 23:47-61.
1991 A longitudinal test of social control theory and delinquency. *Journal of Research in Crime and Delinquency* 28: 126-156.
- Akers, R.
1994 *Criminological Theories: Introduction and Evaluation*. Los Angeles: Roxbury.
1998 *Social Learning and Social Structure: A General Theory of Crime and Deviance*. Boston: Northeastern University Press
- Alarid, L.F., Burton, V.S., & Cullen, F.T.
2000 Gender and crime among felony offenders: Assessing the generality of social control and differential association theories. *Journal of Research in Crime and Delinquency* 37:171-199.
- Anderson, B.J., Holmes, M.D., & Ostresh, E.
1999 Male and female delinquents' attachments and effects of attachments on severity of self-reported delinquency. *Criminal Justice and Behavior* 26:435-452.
- Andrews, J.A., Tildesley, E., Hops, H., Duncan, S.C., & Severson, H.H.
2003 Elementary school aged children's future intentions and use of substances. *Journal of Clinical Child and Adolescent Psychology* 32:566-567.
- Bottcher, J.
1995 Gender as social control. *Justice Quarterly* 12:33-57.
- Burton, V.S. Jr., Cullen, F.T., Evans, T.D., Dunaway, R.G., Kethineni, S.R., & Payne, G.L.
1995 The impact of parental controls on delinquency. *Journal of Criminal Justice* 23:111-126.
- Canter, R.J.
1982 Family correlates of male and female delinquency. *Criminology* 20:149-167.
- Chesney-Lind, M.
1989 Girl's crime and women's place: Toward a feminist model of female delinquency. *Crime and Delinquency* 35:5-29.
- Cernkovich, S., & Giordano, P.
1987 Family relationships and delinquency. *Criminology* 25:295-321.
- Crick, N.R., & Grotpeter, J.K.
1995 Relational aggression, gender, and social psychological adjustment. *Child Development* 66: 710-722.

- Dishion, T.J., & McMahon, R.J.
 1998 Parental monitoring and the prevention of child and adolescent problem behavior: A conceptual and empirical formulation. *Clinical Child and Family Psychology Review* 1:61-75.
- Dishion, T.J., Patterson, G.R., Stoolmiller, M., & Skinner, M.L.
 1991 Family, school, and behavioral antecedents to early adolescent involvement with antisocial peers. *Developmental Psychology* 27:172-180.
- Ellittott, D.S., Ageton, S.S., & Canter, R.J.
 1979 An integrated theoretical perspective on delinquent behavior. *Journal of Research in Crime and Delinquency* 16:3-27.
- Gibbs, J.J., Giever, D., & Higgins, G.E.
 2003 A test of Gottfredson and Hirschi's general theory using structural equation modeling. *Criminal Justice and Behavior* 30:441-448.
- Gottfredson, D., Kumpfer, K., Polizzi-Fox, D., Wilson, D., Puryear, V., Beatty, P., & Vilmenay, M.
 2006 The Strengthening Washington D.C. Families Project: A randomized effectiveness trial of family-based prevention. *Prevention Science* 7:57-74.
- Gottfredson, G.D., & Gottfredson, D.C.
 1999 Development and Applications of Theroretical Measures for Evaluating Drug and Delnquency Prevention Programs: Technical Manual for Research Editions of What About You (WAY). Ellicott City, MD: Gottfredson Associates, Inc.
- Gottfredson, M.R., & Hirschi, T.
 1990 A General Theory of Crime. Stanford, CA: Stanford University Press.
- Griffin, K.W., Botvin, G.J., Scheier, L.M., Diaz, T., & Miller, N.L.
 2000 Parenting practices as predictors of substance use, delinquency, and aggression among urban minority youth: Moderating effects of family structure and gender. *Psychology of Addictive Behaviors* 14:174-184.
- Gove, W.R., & Crutchfield, R.D.
 1982 The family and juvenile delinquency. *The Sociological Quarterly* 23:301-319.
- Gresham, F.M., & Elliott, S.N.
 1990 Social Skills Rating System Manual. Circle Pines, MN: American Guidance Service.
- Hagan, J.
 1989 Structural Criminology. New Brunswick, NJ: Rutgers University Press.
- Hagan, J., Gillis, A.R., & Simpson, J.
 1985 The class structure of gender and delinquency: Toward a power-control theory of common delinquent behavior. *American Journal of Sociology* 90:1151-1178.
- Hagan, J., Simpson, J., & Gillis, A.R.
 1987 Class in the household: A power-control theory of gender and delinquency. *American Journal of Sociology* 92:788-816.
- Hawkins, J.D., Catalano, R.F., Morrison, D.M., O'Donnell, J., Abbott, R.D., & Day, L.E.
 1992 The Seattle Social Development Project: Effects of the first four years on protective factors and problem behaviors. In J. McCord and R.E. Tremblay (eds.), *Preventing Antisocial Behavior: Intervention from Birth through Adolescence (162-195)*. New York: Guilford.

- Hay, C.
2001 Parenting, self-control, and delinquency: A test of self-control theory. *Criminology* 39:707-736
- Heimer, K.
1996 Gender, interaction, and delinquency: Testing a theory of differential social control. *Social Psychology Quarterly* 59:39-61.
- Heimer, K., & DeCoster, S.
1999 The gendering of violent delinquency. *Criminology* 37:277-318.
- Hirschi, T.
1969 *Causes of Delinquency*. Berkeley: University of California Press.
- Kellam, S.G.
1990 Developmental epidemiological framework for family research on depression and aggression. In G.R. Patterson (ed.) *Depression and Aggression in Family Interaction* (11-48). Hillsdale, NJ: Lawrence Erlbaum.
- Kierkus, C.A., & Baer, D.
2002 A social control explanation of the relationship between family structure and delinquent behaviour. *Canadian Journal of Criminology* 425-458.
- Krohn, M.D., Stern, S.B., Thornberry, T.P., & Jang, S.J.
1992 The measurement of family process variables: The effect of adolescent and parent perceptions of family life on delinquent behavior. *Journal of Quantitative Criminology* 8:287-315.
- LaGrange, T.C., & Silverman, R.A.
1999 Low self-control and opportunity: Testing the general theory of crime as an explanation for gender differences in delinquency. *Criminology* 37:41-72.
- LaGrange, R. L., & White, H.R.
1985 Age differences in delinquency: A test of theory. *Criminology* 23:19-45
- Loeber, R., & Stouthamer-Loeber, M.
1987 Prediction. In Herbert C. Quay (ed.), *Handbook of Juvenile Delinquency*. New York: John Wiley & Sons.
- Maher, R.A., & Rickwood, D.
1997 The theory of planned behavior, domain specific self-efficacy and adolescent smoking. *Journal of Child and Adolescent Substance Abuse* 6:57-76.
- Nye, F. I.
1958 *Family Relationships and Delinquent Behavior*. New York: Wiley.
- Patterson, G.R., DeBaryshe, B.D., & Ramsey, E.
1989 A developmental perspective on antisocial behavior. *American Psychologist* 44:329-335.
- Patterson, G.R., & Dishion, T.J.
1985 Contributions of families and peers to delinquency. *Criminology* 23:63-79.
- Patterson, G.R., & Stouthamer-Loeber, M.
1984 The correlation of family management practices and delinquency. *Child Development* 55:1299-1307.

- Perrone, D., Sullivan, C.J., Pratt, T.C., & Margaryan, S.
 2004 Parental efficacy, self-control, and delinquency: A test of a general theory of crime on a nationally representative sample of youth. *International Journal of Offender Therapy and Comparative Criminology* 48:298-312.
- Pratt, T.C., & Cullen, F.T.
 2000 The empirical status of Gottfredson and Hirschi's general theory of crime: A meta-analysis. *Criminology* 38:931-964.
- Rankin, J.H., & Kern, R.
 1994 Parental attachments and delinquency. *Criminology* 32:495-520.
- Rankin, J.H., & Wells, L.E.
 1990 The effect of parental attachments and direct controls on delinquency. *Journal of Research in Crime and Delinquency* 27:140-165.
- Sampson, R., & Laub, J.
 1993 *Crime in the Making: Pathways and Turning Points Through Life*. Cambridge, MA: Harvard University Press.
- Seydlitz, R.
 1990 The effects of gender, age, and parental attachment and delinquency: A test for interactions. *Sociological Spectrum* 10:209-225.
 1991 The effects of age and gender on parental control and delinquency. *Youth & Society* 23:175-201.
- Simons, R.L., Wu, C., Conger, R.D., & Lorenz, F.O.
 1994 Two routes to delinquency: Differences between early and late starters in the impact of parenting and deviant peers. *Criminology* 32:247-276.
- Simpson, S.
 1989 Feminist theory, crime, and justice. *Criminology* 27:605-631.
- Snyder, J., & Patterson, G.R.
 1987 Family interaction and delinquent behavior. In Herbert C. Quay (ed.), *Handbook of Juvenile Delinquency*. New York: John Wiley & Sons.
- Sokol-Katz, J., & Dunham, R.
 1997 Family structure versus parental attachment in controlling adolescent deviant behavior: A social control model. *Adolescence* 32:17.
- Steinberg, L., Fletcher, A., & Darling, N.
 1994 Parental monitoring and peer influences on adolescent substance use. *Pediatrics* 93:1060-1064.
- Sutherland, E.H.
 1973 A statement of the theory. In Edwin H. Sutherland (ed.), *On Analyzing Crime*. Chicago: University of Chicago Press.
- Tremblay, R.E., Masse, B., Perron, D., Leblanc, M., Schwartzman, A.E., & Ledingham, J.E.
 1992 Early disruptive behavior, poor school achievement, delinquent behavior, and delinquent personality: Longitudinal analysis. *Journal of Consulting and Clinical Psychology* 60:64-72.

- Warr, M.
1993 Age, peers and delinquency. *Criminology* 31:17-40.
- Wasserman, G.A., Miller, L.S., Pinner, E., & Jaramillo, B.
1996 Parenting predictors of early conduct problems in urban, high-risk boys. *Journal of the American Academy of Child Psychiatry* 35:1227-1236.
- Wells, L. E., & Rankin, J.
1988 Direct parental controls and delinquency. *Criminology* 26:263-285.
- Wright, J.P., & Cullen, F.T.
2001 Parental efficacy and delinquent behavior: Do control and support matter?
Criminology 39:677-705