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PARENTAL ATTACHMENT, PEER ATTACHMENT, STRAIN AND VIOLENCE: A STUDY OF THE INTERACTION BETWEEN COMPONENTS OF SOCIAL CONTROL THEORY AND STRAIN THEORY

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ABSTRACT

PARENTAL ATTACHMENT, PEER ATTACHMENT, STRAIN, AND VIOLENCE: A STUDY OF THE INTERACTION BETWEEN COMPONENTS OF SOCIAL CONTROL THEORY AND STRAIN THEORY

By

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Youth violence has become an alarming problem in the United States, and the ability of current theories to explain youth violence is questionable. The purpose of this study is to combine components of social control theory and strain theory to explore the possible interaction that may exist between these two theories. Specifically, this study seeks to examine the interaction between parental and peer attachment and the strain in those relationships and how this affects violence in youth. This study uses data from Wave I and II of the National Youth Survey. Simple linear regression is used to examine the both the direct effects of the variables used in this model and the interactions. This study finds that an interaction between attachment and stress does not exist, however, results indicate that peer pressure, family income, and peer delinquency all are important factors affecting violence in youth.

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Introduction

Youth violence has become one of the leading causes of death for teenage adolescents (Blumstein, 1995). With the increase in youth violence occurring all over the United States, many wonder why youth are becoming more violent. Even more important, can previously supported theories be used to explain this phenomena? The purpose of this study is to examine social control theory and strain theory to see if they can explain why some youth commit violent acts. Specifically, this study will examine parental and peer attachment and the strain within the family and peer relationships. Although these parts of both theories have found empirical support in the past (Gardner & Shoemaker, 1998; Paternoster & Mazerolle, 1994), neither aspect has been used to explain specific delinquency. In addition to examining these variables separately, this study will combine these theories to see to see if attachment to parents or peers becomes contingent on the strain experienced in those relationships.

Hirschi (1969) first developed social control theory from the idea that there are certain aspects of youths' lives that make them conform to societal norms. Although there were many factors that Hirschi proposed as increasing resiliency in youth, attachment to parents and peers were found to be most influential (Gardner & Shoemaker, 1989; Junger-Tas, 1992; Patterson, Pryor, & Field, 1995; Paschall, Ennett, & Flewelling, 1996; Rankin & Wells, 1990; Warr, 1993). Parental attachment has been the most supported factor affecting delinquency, with many findings that suggest that youth with strong attachments to their parents are less likely to become involved with delinquent peers (Gardner & Shoemaker, 1989). Peer attachment has also been supported as a (Junger-Tas, 1992). However, the original relationship between peer attachment and

delinquency was restated when researchers found that a major determining factor was whether or not the youth were attached to delinquent peers (Cressey, 1964; Junger-Tas, 1992). In fact, juveniles who associated with deviant or delinquent peers were found to be more likely to imitate such behavior (Cressey, 1964).

Years later, Agnew (1989) developed a revised strain theory that examined the relationships that youth had with parents and peers. This theory held that youth with stress within their familial relationships often felt the need to retaliate to reduce the feeling of injustice these relationships caused (Brezina, 1996). Youth were also found to participate in violent activities because of peer pressure (Pearl, Bryan, & Herzog, 1990).

Yet, whether youth have strong or weak attachments or high amounts of strain within their relationships the ability of these theories alone to adequately explain all delinquent behaviors is questionable (Trojanowicz & Morash, 1992). In fact, some researchers believe that one theory cannot explain all behaviors because individuals are so different (Trojanowica & Morash, 1992). Therefore, theories should be combined to see if together they could explain more adequately youth behavior (Trojanowicz & Morash, 1992).

This study uses secondary data collected for the National Youth Survey that questioned parents and youth about their lives and activities. A total of seven waves were completed, however, only the first and second waves are used for this study.

Because the purpose of this study is to see if parental and peer attachments interact with the stress present in those relationships, multidimensional scales are created by combining variables that represented different aspects of each theoretical component. Once the scales are defined and statistically supported, the following methods are

conducted:

- To examine the direct relationships, Analysis of Variance (ANOVA) and simple linear regression are used.
- To examine the direct relationships while controlling for other variables, multivariate regression is used.
- To examine the interaction between attachment and strain, multiple regression analyses is conducted.

Youth Violence in the United States

In 1990, 2.9 million people died resulting from violence in the United States (Roth, n.d.). Although the U.S. has seen higher violent rates in the past for adults, youth violence has risen dramatically since 1967 (Blumstein, 1995; Chandler, Chapman, Rand, & Taylor, 1998; Greenfield, 1996; Kelley, Huizinga, Thornberry, & Loeber, 1997; Ollendick, 1996; Roth, n.d.;). In fact, there has been a 67% increase in violent activities such as murder, manslaughter, rape, robbery, and aggravated assault committed by juveniles (Greenfield, 1997). Comparisons of American youth and youth from other industrialized countries has found that American youth are the most violent (Kelly et al., 1997). In addition, youth in the U.S. are also more likely to be victims of violent crimes (Greenfield, 1996; Kelly et al., 1997); with the probability of death resulting from violent acts being the highest for teenaged adolescents (Goldstein & Conoley, 1997). The previous findings (Blumstein, 1995; Chandler et al., 1998; Greenfield, 1996; Kelly et al., 1997) and the increase in the media's portrayals of youth violence occurring in the streets, schools, and homes, has researchers and practitioners wondering: Why are American youth so violent?

Delinquency Theories

Multiple researchers have developed theories used to explain why so many youth have been involved in deviant and delinquent activities (Agnew, 1989; Hirschi, 1969). Theories such as social control theory and strain theory have examined family and peer relationships and the stress or strain that juveniles have experienced (Agnew, 1991). These theories have been used as ways to explain the behaviors of many juveniles (Hirschi, 1969). Although these theories have limitations (Junger-Tas, 1992; Paternoster

& Mazerolle, 1994), both have been continually supported and reexamined to determine how effectively these theories explain general delinquency. Recently researchers have begun to combine these theories to explore the interaction that may exist between social control and strain theory (Agnew, 1991; Paternoster & Mazerolle, 1994).

Social Control Theory

Hirschi's social control theory was first developed in the 1960's as a way to rationally explain why some individuals engage in delinquent behavior (Hirschi, 1969). Developed from the idea that researchers should be looking for reasons why some people do not engage in criminal activities, Hirschi (1969) believed that individuals would conform to social norms and uphold the beliefs of society if these individuals had strong bonds to social institutions. Hirschi proposed four elements of social bonds: attachment, commitment, involvement, and belief. This theory proposed that strong attachments to parents and peers, commitment to society, involvement in non-delinquent activities, and belief in conventional norms, would prevent juveniles from committing deviant or delinquent activities (Hirschi, 1969). Research has empirically supported this theory; the most notable relationship being the strength of attachment youth feel towards their parents (Gardner & Shoemaker, 1989). In fact, numerous studies have found that youth with strong attachments are less likely to be involved in delinquent activities (Gardner & Shoemaker, 1989; Junger-Tas, 1992; Patterson, et al., 1995; Paschall, et al., 1996; Rankin & Wells, 1990; Warr, 1993). In addition, involvement, commitment, and belief in conventional activities have been found to be significantly related to non-delinquency in youth (Gardner & Shoemaker, 1989).

Although all aspects of social control theory have been empirically supported

(Gardner & Shoemaker, 1989; Patterson et al., 1995), research has found that attachment to parents and peers are the most significant predicting factors of later delinquency in youth (Agnew, 1991; Akers & Cochran, 1998; Brownfield & Thompson, 1991; Knight & Tripodi, 1996; Patterson et al., 1995; Thompson, Mitchell, & Dodder, 1984). And the ability of parental and peer attachment to predict delinquency in youth suggests the importance of this theoretical component. Because this study seeks to examine if youth become violent behavior because of relationships in their lives, it is essential that we investigate youth attachments.

Parental Attachment

Attachment to parents has frequently been measured by examining self-report data that ask youth multiple questions regarding their family relationships (Gardner & Shoemaker, 1989). Typically, parental attachment has been defined as the amount of time youth spent with their parents, the feeling of closeness to their parents, and the quality of the communication youth had with their parents (Gardner & Shoemaker, 1989). Findings indicate that youth with strong attachments to their parents are less likely to be involved in deviant or delinquent behaviors than their counterparts (Gardner & Shoemaker, 1989; Junger-Tas, 1992; Le Blanc, 1991; Rankin & Wells, 1990; Sweet, 1991). Strong attachments to parents also resulted in having fewer friends that were involved in deviant or delinquent activities, which suggests that high rates of family attachment inhibited the youth from attaching with delinquent peers (Warr, 1993). One reason could be that youth with strong parental attachments spent more time at home, and less time with their friends (Warr, 1993). Youth with strong attachments were also less likely to be involved with delinquent peers because they reported fearing their parents'

disapproval (Warr, 1993). These youth consistently reported higher levels of identification and acceptance of parental belief than their counterparts (Junger-Tas, 1992). Youth with high levels of identification and acceptance were also found to have lower incidences of deviant or delinquent behaviors (Junger-Tas, 1992).

Yet, research that has examined social control theory cannot explain why some juveniles with strong attachments to their parents still commit deviant or delinquent acts (Junger-Tas, 1992). In addition, these studies have also been unable to explain why youth with weak attachments to their parents are non delinquent (Junger-Tas, 1992); thus suggesting that mediating factors may exist that enhance or remove the effects of parental attachment on youth behavior (Agnew, 1991).

Peer Attachment

According to social control theory, strong attachments to peers may reduce the probability of involvement in delinquent activities (Hirschi, 1969). However, other researchers have not found support for the suggested direction of this relationship (Cressey, 1964). Studies have indicated that the ability of peer attachments to impede youth from committing crimes is contingent on the activities of those peers that the youth is attached (Agnew, 1991; Akers & Cochran, 1985; Gardner & Shoemaker, 1989). In fact, juveniles who associated with deviant or delinquent peers were found to be more likely to imitate such behavior (Cressey, 1964). Association with peers has also been shown to weaken parental attachments as youth move through adolescence (Junger-Tas, 1992). One reason could be that parental attachment was weaken because peers become more important (Junger-Tas,1992; Pearl et al., 1990). Adolescent girls reported that they engaged in delinquent behaviors because it was acceptable behavior according to their

friends (Pearl et al., 1990). This suggests that the original relationship proposed by Hirschi (1969) was only partially correct. Instead, the relationship between peer attachment and delinquency became contingent on whether or not the youth had delinquent peers (Pearl et al., 1990); thus suggesting that peer relations could be positive or negative influence, depending on the peers in which they associate (Cressey, 1964).

Yet, whether youth have strong or weak peer attachments, the ability of social control theory to adequately explain delinquent behavior in youth is questionable (Trojanowicz & Morash, 1992). Researchers who have tested social control theory cannot always explain why youth want to be involved in delinquent activities (Junger-Tas, 1992; Trojanowicz & Morash, 1992). Some may suggest that youth that report high levels of attachment to delinquent peers are more likely to be involved in delinquent activities (Junger-Tas, 1992). Few have explored this relationship in depth. In addition, social control variables cannot be used to predict specific types of delinquency, encompass all delinquent acts, or explain why some youth do become engaged in delinquent activities while their counterparts do not (Trojanowicz & Morash, 1992). Therefore, it is important to examine other theories.

Strain Theory

Robert Merton, who believed that juveniles became delinquent because they could not obtain their personal goals, first developed strain theory. These juveniles were believed to come from disadvantaged areas, which impeded their ability to adequately provide the necessary tools to obtain expected goals (Burton & Cullen, 1992). The norms of society were not followed by such youth because they did not provide pathways to success. Therefore, the norms no longer restricted the youth from deviance or

delinquency but rather forced the adolescents to become involved in criminal activities (Burton & Cullen, 1992; Burton, Cullen, Evans, & Dunaway, 1994). For instance, one study found that youth that perceived fair or poor chances of graduating high school were more likely to be involved in delinquent activities. And because the youth were not able to obtain the expected goals of completion of high school, they turned toward delinquency (Rankin, 1980). However, there was no proof that delinquency followed the youth's beliefs that they might not graduate from high school (Rankin, 1980). In fact, this is a major problem with strain theory. Strain theorists have typically relied on self-report data that measures youth's perceptions to obtain future goals (Agnew, 1989). These theorists have been unable to indicate causal direction, specifically whether delinquent behavior caused youth to believe they are less able to obtain expected future goals or vice versa (Agnew, 1989). In addition, strain theorists have tended to focus on future goals and ignore the present goals of many adolescents. Family stress and peer pressure may be immediate problems in the youth's lives. And research indicates that youth tend to be most concerned with immediate issues than future ones (Agnew, 1985, 1989; Paternoster & Mazerolle, 1994).

Understanding the problems of Merton's strain theory, Agnew (1985) developed a revised theory that examined the strain experienced as a result of painful or negative situations. Agnew stated that youth may use delinquency as a way to escape negative situations. In addition, Agnew proposed that youth who cannot escape such situations would become angry and aggressive. Although previous researchers held that youth tend to leave when faced with aversive situations, Agnew (1989) believed that some youth may be blocked from the ability to leave such situations. This may be particularly true for

youth that live in stressful homes or have received a lot of peer pressure from their peers. Generally, research empirically supports this new version of strain theory (Agnew, 1993; Gottfredson, McNeil, & Gottfredson, 1991). In fact, neighborhood problems, negative life events, negative relationships with adults, and strain from lack of goal attainment were all related to general delinquency in youth (Paternoster & Mazerolle, 1994). Changes in relationships were also found to cause stress in youth, who then turned to delinquency as a way to release tension (Agnew, 1989); thus youth with high levels of stress are likely to retaliate and use violence to reduce the feeling of injustice in their lives (Gottfredson et al., 1991). Such youth are also more likely to report feeling cheated in life and were more likely to believe they deserved to retaliate (Brezina, 1996).

Family Stress

The examination of the impact of external environmental factors in which families operate has discovered that adolescents from highly disorganized areas were found to have poor parental attachments and higher instances of involvement in delinquent activities (Agnew, 1989; Gottfredson et al., 1991). These disorganized areas often created high levels of stress in family relationships (Gottfredson et al., 1991). Parental bonding was also weaker for adolescents from urban areas when compared to rural areas; thus suggesting that external stress factors were mediating the effects of parental influence, especially for youth living in the poorest and highly stressful neighborhoods (Gardner & Shoemaker, 1989).

Mediating factors can also include internal environmental factors that decreased the attachment youth have with their parents (Agnew, 1989). Internal stress factors could include family socioeconomic status, marital discord, number of conflicts in the home,

and the movement of parents or adults in and out of the home (Agnew, 1993). These factors were found to lead to stress, anger, and frustration in many youth (Agnew, 1993; Gottfredson et al., 1991; Junger-Tas, 1992; Paternoster & Mazerolle, 1994). For example, parents who reacted to the adolescents' delinquent activities with arguments and conflict had teenagers that reported weaker bonds with their parents (Junger-Tas,1992). Parents who have also experienced high levels of stress reported poor attachment with their children; therefore suggesting that parental stress and youth stress reduced familial bonding (Stern & Smith, 1995). Youth exposed to many family stress factors, such as marital conflict and other problems with their parents, are also more likely to deal with the stress in their lives by engaging in delinquent activities (Brezina, 1996; Paternoster & Mazerolle, 1994). In fact, studies have found that youth with high amounts of stress in their family lives used delinquent activities as a coping mechanism (Brezina, 1996; Bruce, 1970; Windle, 1992).

Peer Pressure

During adolescence, peer relationships can be very important (Cressey, 1964; Hirschi, 1969). Therefore, it is easy to believe that when youth are asked to commit deviant or delinquent acts by their friends, it is hard for them to say no. Yet, some youth seem not to be susceptible to such peer pressure (Pearl et al., 1990). Adolescents are likely to engage in delinquent activities at the request of their peers if they perceived the outcome to be a personal "payoff" or acceptable by their peers (Pearl et al., 1990). Females are less likely to decline the invitation to be involved in delinquency because they fear losing their friends. Females are also more likely to believe that they need to satisfy their friends by their actions, whereas males engage in activities for personal gain

(Pearl et al., 1990). Other researchers have indicated that youth defined as "loners" were less likely to be influenced by peer pressure. In fact, these youth were more likely to be involved in conventional activities than youth who were highly involved with their friends (Tolone & Tieman, 1990). Agnew (1991) found that the removal of juveniles from their delinquent peers did not reduce the juveniles' delinquent behavior. Instead, Agnew found that a reduction in the stress related to the peer relationship, such as the perceived need to please or obtain acceptance from peers, was the main factor impacting youth's decisions. Thus suggesting that the stress in peer relationships was determining the actions of youth (Agnew, 1991; Patternoster & Mazerolle, 1994).

Combination Approach

Research has suggested that criminal theories are not able to adequately explain all delinquency in youth (Trojanowicz & Morash, 1992). Therefore, researchers have begun to combine aspects of different theories to see if a combination approach will reach better results (Paternoster & Mazerolle, 1994; Rankin & Wells, 1990). By combining social control theory and strain theory, we can test whether or not the attachments to family and peers have a direct effect on delinquency, or if they are contingent on the stress that is prevalent in those relationships (Agnew, 1991). As previous research suggested, the amount of stress in a relationship may mediate the relationship youth have with their parents and peers (Agnew, 1991). In fact, some researchers found that general strain theory and social control theory were complementary (Paternoster & Mazerolle, 1994).

Support for such an interaction has not been found (Agnew, 1991; Paternoster & Mazerolle, 1994). Those studies that have concluded that there was no interaction used

unreliable scales whose alpha score was well below .6 (Paternoster & Mazerolle, 1994). These studies also used questionable definitions of attachment and stress, and examined the effects only for general delinquency (Paternoster & Mazerolle, 1994). Both unreliable scales and the way in which stress was defined could have affected the final conclusions that attachment and stress did not interact. In addition, support for the interaction may not have occurred because of the dependent variable encompasses a whole spectrum of delinquent activities. It may be possible that an interaction does occur for only some delinquent activities. And based on other studies (Agnew, 1991; Paternoster & Mazerolle, 1994), it is undetermined how well this mediating relationship will hold for specific delinquent acts.

Goals and Objectives

Similar to Agnew's (1991) study of peer attachment and stress and Paternoster and Mazerolle's (1994) study of the interaction between social control and general strain theory, the purpose of this study is to see if there is an interaction between social control and strain theory that may explain why some juveniles engage in delinquent activities. Specifically, this research will explore the relationship between family attachments, family stress, peer attachments, and peer pressure and violent activity in youth. This study hopes to find evidence that supports the belief that parental attachment and family stress are negatively related and that peer attachment and peer pressure are positively related to violent behaviors in youth. Based on previous research, the following general hypothesized relationships will be examined:

Direct Effects

- Youth with strong attachments to parents are less likely to be involved in violent acts. Based on previous research, an direct causal relationship is hypothesized.
- Youth with weak attachments to peers are less likely to be involved in violent acts. Because previous research suggests that youth with weak peer attachment are less likely to be involved in violence, this study will hypothesize a direct relationship.
- Youth with high levels of family stress are more likely to be involved in violent acts. This relationship is hypothesized as direct causation.
- Youth with high levels of perceived peer pressure are more likely to be involved in violent acts. This relationship is also hypothesized as direct

causation.

Interactive/Moderated Effects

- Youth with weak attachments to parents and high levels of family stress are more likely to be involved in violent crimes than youth with weak attachments and low levels of family stress and youth who are strongly attached to their parents.
- Youth with strong attachments to peers and high levels of perceived peer pressure are more likely to be involved in violent acts than youth with strong attachments to peers and low levels of perceived peer pressure and youth that reported weak attachments to peers.

Data

The data used in this research were collected for the National Youth Survey (NYS) to learn about aspects of parents and youth's lives. The information was originally collected to examine the lives of youth across the United States over a period of 11 years, however only the first and second waves will be used. This survey collected information on the demographics of respondents, family life, neighborhood descriptors, peer interactions, school interactions, community involvement, and illegal activities of youth. Some information was collected from their parents in Wave I. The subjects were selected through area probability sampling. Once selected, the subjects were interviewed by trained personnel (Elliot, 1977).

Youth Demographics

Youth demographics are an important component used for understanding the population selected. Knowledge of the individuals selected for this survey defines the ability of researchers to later make generalized conclusions (Maxfield & Babbie, 1995). A total of 1726 youth and their parents were surveyed. The demographic characteristics for Wave I and the control variables are listed in Table 1.

Table 1

Demographic Characteristics for Youth Surveyed in the National Youth Survey, Wave I, 1978.

Characteristics	Percentage
Sex	
Male	53.2
Female	46.8
Ethnicity	
White	79.0
Black	15.1
Other	5.9
Age[a] (years)	
11 to 13	45.1
14 to 15	29.7
16 to 17	25.3
Grade	
4^{th} to 5^{th}	5.6
6^{th} to 8^{th}	45.1
9^{th} to 12^{th}	47.2
Other	2.2
GPA	
Mostly A's	17.0
Mostly B's	44.9
Mostly C's	32.8
Mostly D's and F's	5.2
Family Income[b] ($)	
10,000 or Less	26.5
10,001 - 18,000	33.9
18,001 - 26,000	24.6
26,001 - More	15.0

Note. N = 1725.
[a]Average age was 13.87 years.
[b]Average family income was $14,001 - 18,000.

Methods

Independent Variables

Parental Attachment

Parental attachment has been operationalized in many different ways. For instance, some researchers have defined attachment as the ability to control activities in their children, the amount of closeness children feel towards their parents, amount of time spent with their parents, and the amount of communication parents have with their children (Rankin & Wells, 1990). Use of secondary data has restricted the ability of this study to operationalized parental attachment in a complete manner. However, the National Youth Survey asked youth their perceptions concerning the feeling of closeness to their parents and how much time they spent with their parents. Therefore, the parental attachment variable scale will be based on these two theoretical components of attachment (Gottfredson et al., 1991; Paschall, Ennett, & Flewelling, 1996). For closeness, items will be combined that will consist of questions such as "Sometimes I feel lonely when I'm with my family," and "I feel close to my family (Elliot, 1977)." Amount of time will be measured by including questions such as "On the weekends, how much time have you generally spent talking, working, or playing with your family," and "On the average, how many afternoons during the school week . . . have you spent talking, working, or playing with your family (Elliot, 1977)?" Questions regarding closeness are asked in a five-point Likert-scale and youth are given choices for amount of time spent with parents. The choices for amount of time range from zero days a week to five days a week.

A correlation matrix was conducted to determine the reliability of combining

elements regarding closeness and amount of time. The results from the reliability analysis indicated that the scale was highly reliable for the questions included (See the Appendix). This was determined by examination of Cronbach's alpha (.664). A factor analysis was also conducted to determine if these variables are interrelated. The factor score coefficients are listed in Table 2. Since all of the coefficient scores are above .5, all of the variables selected can be used to create a scale, which will represent multiple variables that are meaningful when combined.

Table 2

Factor Analysis Coefficient Scores for Parental Attachment

Variables	Score
Afternoons/ school week spent with family.	.540
Evenings/School week spent with family.	.578
Weekends spent with family.	.632
Outsider with family.	-.609
Family listens to problems.	.554
Feel lonely with family.	-.523
Feel close to family.	.690

Note. $\alpha = .664$.

Peer Attachment

To be consistent with the operationalization of attachment used previously in this study, and for the purposes of direct comparison between parental attachment and peer attachment, peer attachment will also be operationalized as the reported feeling of closeness to friends and amount of time the youth spent with these friends (Agnew, 1991). A scale will be constructed that will be inclusive of closeness to peers and time spent with peers. Closeness to peers will be determined by combining items such as "I don't feel that I fit in very well with my friends," and "I feel close to my friends (Elliot, 1977)." Time spent with peers will consist of such questions as "On the average, how many evenings during the school week . . . have you spent with your friends," and "On the average, how many afternoons during the school week . . . have you spent with your friends (Elliot, 1977)?" All questions are asked by using a five-point Likert-scale. As with parental attachment, the higher youth score on this scale, the higher the level of attachment was reported.

Based on the reliability analysis, the questions that represented the amount of time the youth spend with their peers had to be eliminated from the scale. In order to make the scale reliable above the .6 level, only questions that pertained to the closeness youth felt toward their peers could be included. These questions combined resulted in a Cronbach's alpha of .638 (see Appendix). However, direct comparison of the scale to family attachment will be difficult because the peer attachment scale could not include the amount of time youth spent with their peers. A factor analysis was also conducted in order to see if these variables can be combined into one factor. The results are listed in Table 3. Since all of the variables are over .5, it was determined that the variables could

be combined into a scale.

Table 3

Factor Analysis Coefficient Scores for Peer Attachment

Variables	Score
Don't fit well with friends.	-.591
Feel close to friends.	.694
Friends listen to problems.	.699
Feel lonely with friends.	-.500
Friends don't take interest.	-.730

Note. $\alpha = .638$.

Family Stress

Family stress will be measured by combining elements relating to the marital status of the parents, serious illnesses or accidents occurring during the year, other children in the home with legal problems, employment status of parents, and the movement of the family and its members. Previous research that has used the National Youth Survey has indicated that the previous items may not be reliable when combined. These studies continued to use the scale, regardless of the fact that the alpha was .5 or lower.

Analysis of the reliability scale indicated that the reliability of the scale suffered when the scale was inclusive of all items; therefore, multiple items had to be deleted to

get Cronbach's alpha above the .6 level. Only questions that pertain to the martial status and mobility of the family members were included in the final reliability analysis, which resulted in an alpha of .641 (see Appendix). Items were excluded to see if the increase in the reliability of the scale would change the interaction this scales has with the parental attachment scale. This is particularly important since previous studies that used less reliable scales found no interaction. A factor analysis was also conducted for these variables and the results are listed in Table 4. All of the variables listed have a factor coefficient score above .5, which suggests that these variables are interrelated and therefore a scale could be created.

Table 4

Factor Analysis Coefficient Scores for Family Stress

Variables	Score
Parents are divorced	.620
Parents are separated.	.802
Mother moves in and out of home.	.602
Father moves in and out of home.	.734

Note. $\alpha = .641$.

Peer Pressure

Peer pressure will be measured following Agnew's (1991) concept of peer pressure. Questions such as "if you found that your friends were leading you into trouble,

would you still run around with them," and "It's okay to lie to keep your friends out of trouble (Elliot, 1977)," will be used for the construction of the peer pressure scale (see Appendix). These elements were found to be highly reliable in Agnew's study. The reliability analysis supported his findings, with a Cronbach's alpha of .665. As stated earlier, an alpha more than .6 is regarded as highly reliable; therefore, this scale not only has theoretical but statistical support. In addition, the factor analysis revealed that these variables had high factor loadings, which suggest that these variables are interrelated and can be combined to make a multidimensional scale (See Table 5).

Table 5

Factor Analysis Coefficient Scores for Peer Pressure

Variables	Score
With friends, good impression is foremost.	.563
Lying okay if keeps friends out of trouble.	.636
Beat up kids to gain respect of friends.	.652
Break rules to be popular.	.732
Break parents' rules to keep friends.	.696

Note. $\alpha = .665$

Dependent Variable

According to the National Victimization Survey, violent activities can be defined as murder, manslaughter, forced rape, robbery, and aggravated assault (Greenfield, 1996;

Kelly et al., 1997). However, because this survey was originally developed to examine the general delinquency of youth, specifically drug use and deviance, few indicators of violent activity could be found. In addition, these respondents did not report violent activity in large quantities. For most questions pertaining to violence, fewer than 10% reported any violent activities. Therefore, to adequately represent violence in youth in this sample, this study will construct scales for violence consists of variables that measure the frequency of property damage, use of force, and assault. In order to show directional cause, variables used in this scale were from Wave II. All other scales were conducted from Wave I variables.

Analysis of the reliability scale for reported frequency of violence revealed that the scale was slightly reliable. This was based on the fact that Cronbach's alpha was only .552, which is slightly below the .6 reliability level. However, the factor analysis showed that the variables were interrelated and could be combined in a meaningful way (See Table 6). Therefore, based on these analysis, the delinquency scale will be used.

Table 6

Factor Analysis Coefficient Scores for Delinquency

Variables	Score
Damaged family property.	.523
Damaged other property.	.617
Hit teacher.	.743
Used force on students.	.807
Used force on others.	.793

Note. $\alpha = .552$. All questions referred to the frequency of such acts.

Control Variables

For this research five control variables will be used. Sex, race, age, family income, and delinquency of peers were selected because prior research has indicated a relationship between those variables and delinquency in youth (Brownfield & Thompson, 1991; Clark & Shields, 1996; Paschall et al., 1996; Rankin & Wells, 1990; Sarri, 1983; Seydlitz, 1993; Stern & Smith, 1995). Percentages for each sex, race, age, and family income are listed in Table 1. Reliability and factor analyses were conducted for the peer delinquency variables. The results of these analyses are listed in Table 7 and the original questions are listed in Appendix. Based on the reliability alpha, this scale is highly reliable. In addition, the factor scores indicated that the variables are interrelated and can be combined.

Table 7

Factor Analysis Coefficient Scores for Peer Delinquency

Variables	Score
Peer ever cheated on school tests.	.566
Destroyed property.	.647
Used marijuana.	.789
Stolen something worth less than $5.	.703
Used alcohol.	.772
Broken into vehicle.	.612
Stolen something worth more than $50.	.608
Suggested that you break the law.	.716
Gotten drunk.	.754
Used prescription drugs.	.624
Sold or given alcohol.	.703

Note. $\alpha = .875$.

Analysis

Two types of bivariate analysis will be conducted. In addition, two main types of mulivariate analysis will be conducted: the direct effects of each independent variable, controlling for sex, race, age, family income, and delinquency of peers, on violent activity and the interactions between attachment and stress and their effects on violent activity.

Direct Effects

One-way Analysis of Variances (ANOVAs) and simple linear regressions will be conducted to examine the bivariate relationship between the independent variables and the dependent variable. These analyses will be used for a comparison of how the relationships changed when other variables were controlled.

Direct Effects While Controlling for Other Variables

Multivariate regression will be used to simultaneously see how multiple independent variables effect violent activity in youth. Regression will be used because previous research suggests that the relationships between each of the independent variables and delinquency are linear. Scatterplots of the data used in this study have supported this finding. Other researchers examining these variables have used correlation tables, bivariate analyses, or multiple analysis of covariance (MANCOVA). However, many of these analyses use lower levels of measurement, which may affect the results of the data. Since multivariate regression uses the highest levels of measurement (interval and ratio) and can control for multiple factors, this analysis will be used to look at the direct effect of the independent variables while controlling for other variables.

Interactions

Interactions will also be examined by conducting multiple regression. For this analysis, the stress variables will be the moderators. Based on this assumption, we can say that we are examining if the relationship between attachment to parents and peers and violent youth behavior depends on whether or not the youth have stress within the relationship.

Results

Bivariate Results

Independent Variables

Table 8 contains data for the regression analyses of parental attachment, peer attachment, family stress, peer pressure, age, and peer delinquency and their affects on self-reported violent behavior. This table includes the constant, beta coefficient, t-score and the Proportionate Reduction in Error statistic (r^2) for each relationship.

The regression analysis (See Table 8) reveals that the relationship between parental attachment and violent activity is significant ($t = -2.542$; $p = .011$). The analysis also indicates that parental attachment only accounted for .7% of the explained variation of the dependent variable, self-reported violent behavior. Based on these results, it can be stated that the relationship between parental attachment and self-reported violence is negative.

Table 8

Bivariate Regression Analyses for Continuous Variables on Self-Reported Violent Behavior

Variable	Constant	B	t	r^2
Parental Attachment	.002	-.083	-2.542*	.007
Peer Attachment	.002	-.059	-1.818	.004
Family Stress	.001	.012	.356	.000
Peer Pressure	.006	.186	5.838**	.035
Age	.118	-.009	-.545	.000
Peer Delinquency	.015	.272	7.362**	.062

Note.

*p < .05. **p < .01.

The analysis of the relationship between peer pressure and reported violent behavior indicates that the relationship is significant (t = 5.838; p< .001). However, peer pressure accounted for only 3.5% of the explained variation of the reported violent behavior. These findings indicate that as the level of peer pressure increases, violent activity reported by youth surveyed also increases (See Table 8).

Although other studies have found a relationship between peer attachment and delinquency, results from the regression analysis for this study did not reveal a significant relationship at the .05 level. The results for family stress indicates that there is not a

significant relationship between family stress and violent behavior reported by youth surveyed.

Control Variables

The analysis for delinquency of peers and self-reported violent activity reveals that there is a statistically significant relationship ($t = 7.362$; $p < .001$). These results indicate that as the number of delinquent peers increases the number violent acts reported also increases. According to these results, delinquency of peers only explained 6.2 % of the explained variation in reported violent acts. Although the percentage of explained variation is relatively low, the delinquent peer variable was the strongest predictor of self-reported violent activity for this sample.

The regression analysis for age of respondent and reported violent acts indicates that there is not a significant relationship between age and violent acts reported ($t = -.545$; $p = .586$). Although this relationship is not significant statistically it is interesting that the analysis indicates that as the age of the respondent increases the likelihood of violent activity reported decreases. This is similar to what other studies have found (Menard & Elliot, 1990).

Table 9 contains information for the ANOVA analyses conducted for all the categorical level variables. Information in this table includes the mean and the F statistic. For this study the dependent variable was recoded into z-scores. Those means that are negative indicate that the group means were below the mean number of reported violent acts for the whole sample. Positive means represent group means that were above the mean number of reported violent acts for the whole sample.

Table 9

Analysis of Variance Results if Categorical Variables[a] and Self-Reported Violent Behavior

Variable	Mean	F
Sex		33.987*
Male	.120	
Female	-.130	
Grade		2.012
4th to 5th	-.127	
6th to 8th	.084	
9th to 12th	-.057	
Other	-.162	
Race		.112
White	-.008	
Black	.031	
Other	.030	
Grade Point Average		3.827**
Mostly A's	-.114	
Mostly B's	-.059	
Mostly C's	.087	
Mostly D's	.530	
Mostly F's	.329	
Income		4.016**
10,000 or less	.194	
10,001 - 18,000	-.077	
18,001 - 26,000	-.021	
26,001 – more	-.085	

Note. a. The delinquency scale for this study was converted into z-scores. Those who have a negative mean scored below the mean number of violent acts on the delinquency scale and those with a positive mean scored above the mean number of violent acts on the delinquency scale.

*$p < .05$. ** $p < .01$.

The distinction between the mean scores for males (.120 violent acts) and females (-.130 violent acts) suggests that a difference exists between males and females (See Table 9). This suspicion is supported by analysis of the F score ($F = 33.987$; $p < .01$). This indicates that being male increases the likelihood of being above the mean number of self-reported violent behaviors for this sample population.

For youth GPA, the ANOVA analysis reveals that the mean number of violent acts reported by youth may differ between GPA groups (See Table 9); which was supported by the F-score ($F = 3.827$; $p = .004$). The Bonferroni Post Hoc test reveals that there is a statistically significant difference between those youth who reported receiving Mostly D's (mean = .530 violent acts reported) and Mostly B's (mean = -.059 violent acts reported; $p = .015$). The test also reveals that there is a significant difference between those youth reporting Mostly D's (mean = .530 violent acts) and Mostly A's (mean = -.114 violent acts; $p = .010$). This suggests that youth who indicated that they were receiving mostly D's reported more violent acts than their counterparts who received better grades. These are the only groups found to be statistically different.

For family income, the means for each group of income suggest that there might be a difference between each group (See Table 9). The one-way ANOVA did indicate that there is a difference between groups ($F = 4.016$; $p = .007$). A Bonferroni Post Hoc test was conducted and revealed the following results: youth whose families reported their family income at $10,000 or less were significantly different from youth whose families reported income between $10,001 and $18,000 ($p = .012$); youth whose families reported their income at $10,000 or less were significantly different from youth whose families reported their income at $26,000 or more ($p = .023$). These results indicate that

youth from families with lower incomes, specifically income $10,000 or less, reported more violent acts than youth from families with higher incomes.

Based on the analysis of the means for grade levels, the group means seem to differ (See Table 9). However, the one-way ANOVA reveals that the mean number of violent acts reported by youth did not differ between grade levels. This is based on the significance of the F-score which is above .05 ($F = 2.012$; $p = .111$).

Based on the group means for each race, there seems to be only a difference between white respondents and the other races ("White" mean: -.008 violent acts reported; "Black" mean = .031 violent acts reported; "Other" mean = .030). However, the results from the one-way ANOVA reveal that the mean number of violent acts reported by youth is not different for the different groups of race.

Multivariate Results

Table 10 includes the summary of the regression results of four models that were conducted. Model I includes data for parental attachment and seven control variables (sex, race, grade, income, peer delinquency, GPA, and age) and their relationship with self-reported violent behaviors. Model II includes peer attachment and the control variables listed above, Model III includes family stress and the control variables, Model IV includes peer pressure and the control variables and Model V includes all variables. The table also includes the constant and r^2 for each model.

The regression analysis of the multivariate results indicates that only two variables, income and peer delinquency, consistently remained significant when controlling for other variables (See Table 10). For income, the direction of the relationship with self-reported violent behavior is negative for each model and the

constant remained similar. Peer delinquency also continues to have a similar constant for each model. The direction of the relationship between peer delinquency and violent behavior reported continues to be positive. Two conclusions can be made from these findings. First, income is an important predictor of violent behavior in youth. The results indicate that youth from low-income families are more likely report using violence. Second, the number of delinquent youth is the most important predicting factor of violent activity.

Table 10

Summary of the Regression Analysis for Variables Predicting Violent Behavior

Variable	Model I	Model II	Model III	Model IV	Model V
Constant	1.315	1.297	1.319	1.190	1.178
Sex	-1.689	-1.631	-1.673	-1.351	-1.308
Race	.800	.852	.768	1.068	1.020
Grade	-1.717	-1.642	-1.725	-1.674	-1.681
Income	-2.263*	-2.243*	-2.356*	-2.223*	-2.277*
Peer Delinquency	7.578**	7.730**	7.717**	6.758**	6.576**
GPA	-1.330	-1.356	-1.285	-1.112	-1.065
Age	-.966	-.956	-.942	-.821	-.744
Parental Attachment	-.234	--	--	--	.473
Peer Attachment	--	-.477	--	--	-.038
Family Stress	--	--	.430	--	.322
Peer Pressure	--	--	--	-2.942**	-2.856**
r^2	.100	.100	.098	.109	.107

Note. Dashes indicate that those variables were not included in the model.

*$p < .05$. **$p < .01$.

Peer pressure was also found to be significant when controlling for other variables. In fact, this variable was the second highest predictor of violence in youth. These results are similar to those found at the bivariate level, meaning that the direction

of the relationship continued to be negative. This indicates that as peer pressure increases the number of violent offenses reported increases even while controlling for other variables. Model IV, which included peer pressure and other control variables, accounted for the most explained variation in the dependent variable (10.9%). This indicates that the variables included in this model were the most significant predictors of violent behavior reported by youth.

The relationship between parental attachment violent behavior did not remain significant controlling for other independent variables. There are two possible explanations for this finding. First, there is a possibility that a controlling variable is an intervening variable. In this instance only income and peer delinquency could have been the intervening variable because they were the only variables that remained significant when controlling for other variables. Based on previous studies, there is a greater possibility that peer delinquency was the intervening variable (Junger-Tas, 1992; Warr, 1993). However, this analysis does not indicate if this suspicion is correct. The second possibility is that the bivariate relationship was spurious, meaning that income or peer delinquency caused both parental attachment and violent behavior. Most studies would suggest that income would be the most likely culprit of this type of conclusion because most theorists would agree that parental attachment (or lack of) occurs before interactions with peers (Gardner & Shoemaker, 1989; Junger-Tas, 1992; LeBlanc, 1991).

Sex of the respondent and GPA also did not remain significant when other variables were included in the regression equation. For sex, this finding can be contributed to an intervening variable because the sex of the respondent cannot be caused by another variable. For example, sex can affect the number of delinquent peers one has,

which could then affect violent activity in youth. For GPA, this finding could be contributed to either an intervening variable or a spurious relationship between GPA and violent offenses reported. The remaining variables, peer attachment, family stress, age, grade and race, continue not to be significant even when controlling for other variables.

Interaction

Table 11 and 12 contain the results for the interaction analyses. The constant, r^2, t-scores are all represented in these tables. Table 11 includes information from the interaction between parental attachment and family stress and Table 12 includes the results from the interaction between peer attachment and peer pressure.

Analysis of the regression analysis reveals that an interaction did not occur between family stress and parental attachment (See Table 11). This indicates that the combination of parental attachment and family stress did not effect the probability of reporting violent activity. Youth with strong attachments to parents and high levels of family stress are not statistically different from youth with weak parental attachments and high levels of family stress and youth with strong parental attachments. Therefore, the proposed hypothesis is rejected.

Table 11

Interaction Results of the Regression Analysis for Parental Attachment and Family Stress

Variable	B	t	r^2
Constant	1.297		.098
Parental Attachment	-.054	-.139	
Family Stress	-.016	-.442	
Parental Attachment • Family Stress	.001	.035	
Sex	-.125	-1.672	
Race	.008	.045	
Grade	-.184	-1.725	
Income	-.085	-2.346*	
Peer Delinquency	.327	7.441**	
GPA	-.060	-1.248	
Age	-.031	-.922	

Note. The interaction is indicated by the (•) symbol.

*p < .05; **p < .01.

The results of the interaction between peer attachment and peer pressure also reveal that an interaction did not occur (See Table 12). The combination of peer attachment and peer pressure did not affect the relationship between the two independent variables and the dependent variables. Based on this finding, the proposed hypothesis

was not supported. Therefore, there is no difference between youth with strong peer attachments and high levels of peer pressure were more likely to be violent than youth with strong peer attachments and low levels of peer pressure and those with weak peer attachments.

Table 12

Interaction Results of the Regression Analysis for Peer Attachment and Peer pressure

Variable	B	T	r^2
Constant	1.099		.111
Peer Attachment	-.001	-0.34	
Peer Pressure	.112	2.919**	
Peer Attachment * Peer Pressure	.037	1.169	
Sex	-.096	-1.274	
Race	.162	.631	
Grade	-.184	-1.695	
Income	-.078	-2.221*	
Peer Delinquency	.302	6.829**	
GPA	-.055	-1.142	
Age	-.028	-.837	

Note. The interaction is indicated by the (*) symbol.

*p < .05; **p < .01.

Discussion

The purpose of this study was to explore the relationship between attachment and stress and how it relates to violence in youth. Specifically, this study sought to examine the possible interaction between attachment and stress. Past researchers believed that the influence of attachment may be mediated by the stress within those relationships (Agnew, 1991; Paternoster & Mazerolle, 1994). However, researchers have not been able to statistically support this assumption (Paternoster & Mazerolle, 1994). This study sought to further the exploration of the belief that an interaction between attachment and stress did exist and that previous studies failed to find such results because of poor scale construction and the use nominal and ordinal level statistical methods. However, this study found similar results, meaning that no interaction was indicated. Yet this study did find some support for other theories that have been used to explain delinquent behavior.

One important finding was that peer pressure continued to be significant even while controlling for other variables. This study found similar results to that proposed by Agnew (1991) who believed that peer pressure would be a significant factor in youth's lives. Although this theory has been typically used to examine general delinquency (Agnew, 1991; Paternoster & Mazerolle, 1994), this study found that this relationship was upheld when examining violence in youth. In addition, peer pressure continued to remain significant even when controlling for the presence of delinquent peers, and important finding that supports previous discoveries (Agnew, 1991). The results of this study indicated peer pressure seemed to increase the likelihood of reporting violence, which suggests that peer pressure may create anger and frustration in youth that propels them toward using violence. This also suggests that peers are a major part of youth's lives

and that youth may feel the need to please their peers.

Parental attachment has been one of the most supported portions of the social control theory (Gardner & Shoemaker, 1989; Junter-Tas, 1992; Paschall et al., 1996; Patterson et al., 1995; Rankin & Wells, 1990; Warr, 1993). This study also found a relationship between parental attachment and violence reported by youth. However, this study did not totally support the theoretical assumption originally offered by Hirschi (1996). Instead, this study found that the effects of parental attachment disappeared when other variables were included in the model. Other studies have found similar results, and have indicated that the number of delinquent peers played a role in the disappearance of this relationship (Junger-Tas, 1992). Although statistically I can not make a sound conclusion concerning this proposed relationship, previous research supports the suspicion that this may have occurred (Junger-Tas, 1992). If this is true, it can be said that parental attachment affected the number of delinquent peers a youth associated with which in turn affected the amount of violent acts the youth reported.

Peer attachment, a component of social control theory, has also found statistical support in the past (Akers & Cochran, 1985; Gardner & Shoemaker, 1989). Researchers have suggested that youth with strong attachments to their peers are less likely to be involved in delinquent activities (Gardner & Shoemaker, 1989). Theorists contend that involvement with ones peers increases youths' identification and feeling of acceptance (Gardner & Shoemaker,1989; Junger-Tas, 1992). These feelings in turn impede youth from involvement in socially unacceptable behavior for fear of no belonging. However, this study did not find such results. The results did indicate that those with stronger attachments reported less violent activities, yet this relationship was not found to be

statistically significant. Instead, this study found that it was not how attached youth were to their peers but to whom youth were attached. And this discovery is similar to what others have concluded (Pearl et al., 1990), all of which support the differential association theory.

Differential association theorists have often found support for their belief that the number of delinquent peers a youth has affects the likelihood of being delinquent (Cressey, 1964; Pearl et al., 1990). Even supporters of social control theory have found that the type of friends with whom the youth associated mediated peer attachment (Pearl et al., 1990). Although delinquent peers was not an independent variable in this study, it was a control variable because of such conclusions. This theory has found support from this study; a direct relationship between violence reported and the number of delinquent peers did exist.

Family stress has been defined as both internal and external factors that create stress within the family. Internal environmental factors have often been defined as socioeconomic status, marital discord, number of conflicts in the home, and the movement of parents or adults in and out of the home (Gottfredson et al., 1991). These factors have been discovered to create high levels of stress, anger and frustration in youth (Agnew, 1993; Gottfredson et al., 1991; Junger-Tas, 1992; Patternoster & Mazerolle, 1994). This frustration is then directed to involvement in delinquent activities as a way to cope with this stress (Agnew, 1993), which has been connected to violent behavior exhibited by youth (Brezina, 1996). However, this study did not support such a conclusion. Family stress was not found to increase the likelihood of being involved in delinquent activities. Yet this study did find that family income was statistically related

to violent activity. Because of reliability issues stated earlier in Chapter 4, family income could not be included in the family stress scale. However because there is ample evidence that income did affect violent activity reported, there is a possibility that a component of the definition of family stress did have some impact on violent activity. If this is true, it could be concluded that family income created high levels of frustration and stress in the youths' lives. This stress may have caused them to be involved in delinquent activities.

Limitations and Recommendations

There were many limitations to this study that may have affected the relationships found. Although every study has some statistical and methodological flaw, this study had multiple issues that create concerns when making generalizations. First, because the sample was surveyed in the late 1970's, the external validity of this study is questionable. Youth and families in the past decade have changed dramatically. There are more single-headed and double income families now than ever before. More children come from marriages that have ended from divorce. Therefore, it is virtually impossible to compare the youth of the 70's with those of today. These issues of today's youth may influence youths' decisions to be involved in delinquent activities, especially those involving violence. For instance, family stress may not be related to violent activity in youth during the 1970's. But due to the weak external validity of this study it is difficult to conclude that this is true for youth in the 90's because of the great differences between these youth. Therefore, it is suggested a similar study be conducted with today's youth to see if the increase in family and peer pressure felt by today's youth does violent behavior.

The second limitation was the ability to define family stress. Using secondary

data severely limited the ability to holistically encompass the family stress variable. The questions we included in our scale only measured the status of the family (i.e., Are you divorced?). Ideally, the scale would have included the feelings that accompanied this change in status. For future studies, it is recommend that this variable encompasses more in-depth definitions and questions that use higher levels of measurement.

Policy Implications

The main purpose of this study was to examine why youth commit violent acts. Ideally, learning more about why individuals become involved in violence may help create policies that may prevent or intervene with youth at risk for such behavior. Based on the findings for this study, youth need help with dealing with stress caused by the feeling to please their peers. Programs such as Drug Abuse Resistance Education (D.A.R.E.) and Conflict Resolution/Mediation have been created to help youth say no to negative behaviors and deal with stress. Yet many of these programs focus their energy on younger children. More resources should delegated to programs that help adolescents deal with peer pressure. And it is important that these programs are offered to adolescents since adolescence is often the time when peers become most important and influential.

Another important implication is the need for parents, teachers, and other individuals working with youth to identify youths' friends. Programs may need to be created that open communication lines between school officials, parents, and juvenile justice programs. Programs may need to be developed to get troubled youth off the streets, out of gangs or away from destructive friends. Parents may need to learn how to increase the strength of their relationship with their child, and help them deal with the

stress of growing up. Whatever the method chosen, it is important for adults and positive peer relationships are used to remove adolescents from unhealthy relationships with delinquent youths.

APPENDIX

Questions Included in the Variable Scales.

Parental Attachment Scale

1. I feel like an outsider in my family.
   5—Strongly Agree, 4—Agree, 3—Agree Nor Disagree, 2—Disagree, 1—Strongly Disagree

2. My family is willing to listen if I have a problem.
   5—Strongly Agree, 4—Agree, 3—Agree Nor Disagree, 2—Disagree, 1—Strongly Disagree

3. Sometimes I feel lonely when I'm with my family.
   5—Strongly Agree, 4—Agree, 3—Agree Nor Disagree, 2—Disagree, 1—Strongly Disagree

4. I feel close to my friends.
   5—Strongly Agree, 4—Agree, 3—Agree Nor Disagree, 2—Disagree, 1—Strongly Disagree

5. On the average, how many afternoons during the school week, from the end of school or work to dinner, have you spent talking, working, or playing with your family?

6. On the average,-how many evenings during the school week, from dinnertime to bedtime, have you spent talking, working, or playing with your family?

7. On the weekends, how much time have you generally spent talking, working, or playing with your family?
   5—A great deal, 4—Quite a bit, 3—Some, 2—Not too much

Peer Attachment Scale

1. Don't feel that I fit in very well with my friends.
   5—Strongly Agree, 4—Agree, 3—Agree Nor Disagree, 2—Disagree, 1—Strongly Disagree

2. My friends don't take much interest in my problems.
   5—Strongly Agree, 4—Agree, 3—Agree Nor Disagree, 2—Disagree, 1—Strongly Disagree

3. I feel close to my friends.

5—Strongly Agree, 4—Agree, 3—Agree Nor Disagree, 2—Disagree, 1—Strongly Disagree

4. My friends are willing to listen if I have a problem.
   5—Strongly Agree, 4—Agree, 3—Agree Nor Disagree, 2—Disagree, 1—Strongly Disagree

5. Sometimes I feel lonely when I'm with my friends.
   5—Strongly Agree, 4—Agree, 3—Agree Nor Disagree, 2—Disagree, 1—Strongly Disagree

Family Stress Scale

Which of the following events has occurred in your family in the past year?

1. Divorce
2. Separation
3. Mother moved in or out of home.
4. Father moved in or out of home.

Peer Pressure Scale

1. With friends, making a good impression is foremost.
   5—Strongly Agree, 4—Agree, 3—Agree Nor Disagree, 2—Disagree, 1—Strongly Disagree

2. Lying is okay if it keeps friends out of trouble.
   5—Strongly Agree, 4—Agree, 3—Agree Nor Disagree, 2—Disagree, 1—Strongly Disagree

3. It is okay to beat up kids to gain respect of friends.
   5—Strongly Agree, 4—Agree, 3—Agree Nor Disagree, 2—Disagree, 1—Strongly Disagree

4. You have to be willing to break some rules if you want to be popular with your friends.
   5—Strongly Agree, 4—Agree, 3—Agree Nor Disagree, 2—Disagree, 1—Strongly Disagree

5. It may be necessary to break some of your parent's rules in order to keep some of your friends.
   5—Strongly Agree, 4—Agree, 3—Agree Nor Disagree, 2—Disagree, 1—Strongly Disagree

Delinquency Scale

How many times in the last year have you:

1. Damaged school property?
2. Damaged other property?
3. Used force on students?
4. Used force on others?
5. Hit a teacher?

Peer Delinquency Scale

How many of your friends have:

1. Cheated on school tests?
2. Destroyed property?
3. Used marijuana?
4. Stolen something worth less than $5?
5. Used alcohol?
6. Broken into a vehicle?
7. Stolen something worth more than $50?
8. Suggest you break the law?
9. Gotten drunk?
10. Used prescription drugs?
11. Sold or given alcohol?

5—All of them, 4—Most of them, 4—Some of them, 2—Very few of them, 1—None of them

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