EXPLAINING JUVENILE DELINQUENCY: A TEST OF ROBERT AGNEW’S GENERAL STRAIN THEORY, UTILIZING THE NATIONAL LONGITUDINAL STUDY OF ADOLESCENT HEALTH DATA

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Strain theory has a long academic lineage for explaining criminal and deviant behavior from the classical writings of Emile Durkheim to the contemporary writings of Robert Agnew. The purpose of this research is to conduct an empirical test of Agnew’s general strain theory utilizing Wave 1 data from the 1994-1996 National Longitudinal Study of Adolescent Health data (Add Health) \(N = 6,503\). Utilizing the Add Health data set represents a new attempt at empirically evaluating Agnew’s theory. Scales were constructed by the author operationalizing the propositions of general strain theory utilizing variables from this data set. Regression was used to find out if juvenile delinquency is associated with Agnew’s general strain theory. Research findings show that taken together, the propositions of general strain theory, cumulative measures of failure to achieve goals, loss of valued objects and introduction of stressful events are all statistically significant predictors of juvenile delinquency. Regression and scale correlations indicated a low positive relationship between juvenile delinquency and Agnew’s general strain theory propositions. This study represents an attempt in utilizing a data set which has not been used before to empirically test general strain theory.
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by

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CHAPTER 1
INTRODUCTION

Today the career criminal has been replaced by the unstable teenager who is willing to pull the trigger over an insult, joke, or problems with social life. Deviant acts are disproportionately committed by juveniles. For 2005, youth under the age of 18 accounted for 27% of the population size and disproportionately accounted for 29% of those arrested for crimes (Lotz, 2005). Juvenile delinquency is an issue that clearly merits continued research and theoretical understanding.

One of the most influential theories of delinquency is Robert Agnew’s general strain theory. General strain theory offers three specific predictions about the causes of juvenile delinquency. These are: (a) juvenile delinquency results when an individual is blocked from attaining positive goals, (b) juvenile delinquency results when positive goals are removed or threatened to be removed, and (c) juvenile delinquency results when youth are exposed to negative stimuli. Propositions of general strain theory (GST) have been previously used as an explanation for the cause of juvenile delinquency. For example, Paternoster and Mazerolle (1994) and Agnew (1990) utilized various propositions of GST for explaining why juveniles are involved in a wide range of delinquent activity such as theft, robbery and drug use. The purpose of this dissertation was to conduct an empirical test of Agnew’s general strain theory utilizing Wave 1 of the National Longitudinal Study of Adolescent Health (Add Health). The central problem that was explored in this study is to determine if each of the propositions in GST can help
explain why some juvenile delinquents engage in delinquent behavior. The research is
guided by the general question: Is juvenile delinquency associated with general strain?
Though a limited number of studies have examined the applicability of general strain
theory in understanding juvenile delinquency (Agnew 1990; Paternoster & Mazerolle,
1994), general strain theory has yet to be empirically evaluated with Wave 1 data from
the National Longitudinal Study of Adolescent Health in reference to juvenile
delinquency. It is important to understand how GST can be used to explain juvenile
delinquency because if researchers do not have an adequate theoretical basis for
explaining delinquent behavior then such social behavior can never be understood and
practical programs for curtailing such behavior go unguided.

Rationale

There is a limited body of literature which adequately tests Agnew’s GST with
particular reference to juvenile delinquency. This research will add to the existing body
of knowledge concerning juvenile delinquency by testing GST utilizing the National
Longitudinal Study of Adolescent Health data. This study is also unique in that it is the
first study that has tested general strain theory using the National Longitudinal Study of
Adolescent Health data from Wave 1. Past empirical tests of GST have relied on
inadequate and outdated data sets (Agnew & White, 1992; Paternoster & Mazerolle,
1994). This research is an advance because Wave I of the Add Health data set allows for
a test of Agnew’s entire theory including all three of Agnew’s proposed hypotheses
found in general strain theory plus one additional devised hypothesis.

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There were four hypotheses tested in this research study. Hypothesis 1 states that the failure to achieve an individual’s goals increases the probability of juvenile delinquency. Hypothesis 2 states that the withdrawal of loss of valued objects increases the probability of juvenile delinquency. Hypothesis 3 states that the introduction of negative stimuli increases the probability of juvenile delinquency. Each of these hypotheses was derived directly from Agnew (1992). Hypothesis 4 states that the interaction of measures of strain will increase the probability of juvenile delinquency. Hypothesis 4 was formulated to examine at the combined effect of the three independent variables of failure to achieve goals, loss of valued objects, and the introduction to stressful life events on the independent variable of juvenile delinquency.

Definition of Terms

The following terms will be utilized in this research.

- Anomie: This refers to the psychological states of individuals in situations of social structural strain as well as individual level strain (Agnew, 1992).
- Blocked goals: This refers to outside forces preventing an individual from achieving desired aspirations (Agnew, 1992).
- General strain theory: Robert Agnew’s theory based upon the premise that delinquency results when individuals are unable to achieve goals through legitimate channels or when individuals are exposed to negative stimuli or have positive stimuli taken away (Agnew, 1992).
- Juvenile: Defined as persons who have achieved puberty, older than 12 yet are under the age of 18 (Agnew, 1992).
• Juvenile delinquency: Unlawful acts including property offenses and violent offenses committed by youth under the age of 18 (Agnew, 1992).

• Status offense: Violations such as underage drinking, running away from home or truancy (Agnew, 1992).

• Negative stimuli: Disapproving or harmful occurrences in an individual’s life (Agnew, 1992).

• Positive stimuli: An item of value and or encouragement for an individual (Agnew, 1992).

Summary

Agnew identifies three major types of strain in his general strain theory. In particular, strain occurs when others (a) prevent or threaten to prevent an individual from achieving positively valued goals, (b) remove or threaten to remove positively valued stimuli that the individual possess, or (c) present or threaten to present an individual with negative valued stimuli (Agnew 1992). Only the second and third types of strain, involving removal of positive stimuli and presence of negative stimuli, have received attention in criminology in terms of empirical testing. The first type of strain has been largely neglected in the literature.

This project is an attempt to test all three major types of strain as proposed by Robert Agnew. This research will address the question, is strain associated with juvenile delinquency? This research will also further the literature on empirically testing Agnew’s theory. To accomplish this task, regression analysis will be used to analyze the
association between constructed scales measuring all three propositions as proposed by Agnew with the dependent variable of juvenile delinquency.

Chapter 2 provides an overview of the literature that guides this research, along with information about the theoretical framework of strain theory. Chapter 3 provides an overview of the methodology to be used in the data analysis, and will identify the hypotheses. Chapter 4 presents the results of the hypothesis testing. Chapter 5 examines the significance of the findings in terms of application of programs to reduce strain among youth and will conclude with suggestions for future research.
CHAPTER 2
LITERATURE REVIEW

Historical Creation of Juvenile Delinquency

This chapter will discuss the historical creation of juvenile delinquency as a social concept. Also covered in this chapter will be a discussion of the evolution of strain theory and the major contributions of theorists to this strain of thought.

Youth throughout history have committed deviant acts and engaged in other illegal behavior, yet the term juvenile delinquency is a relatively recent construction. As Sutton (1988) points out, as early as 1646 in colonial Massachusetts the “stubborn or rebellious” child law was drafted. It represents the first statute of its kind to define legal child regulation and the obligation of parents to bring their disobedient child to the attention of the court system (Weis, Crutchfield, & Bridges, 1996). Among the first juvenile delinquency laws was a statute that made it a capital offense for a child to disobey his or her parents:

If a man have a stubborn or rebellious son, of sufficient years and understanding (viz.) sixteen years of age, which will not obey the voice of his Father, or the voice of his Mother, and that when they have chastened him will not harken unto them: then shall his Father and Mother being his natural parents, lay hold of him, and bring him to the Magistrates assembled in Court and testify unto them, that their son is stubborn and rebellious and will not obey their voice and chastisement, but lives in sundry notorious crimes, such a son shall be put to death (Sutton, 1988, p. 35).

Capital punishment for not obeying one’s parents was harsh and barbaric by contemporary standards of child care; however, it was never imposed (Weis, Crutchfield, & Bridges, 1996). The law was meant as a message to children and their parents that
immoral conduct, perceived as a threat to social order, would not be tolerated from anyone, even children (Weis, Crutchfield, & Bridges, 1996).

In early American society, essentially two life stages existed—childhood and adulthood. In early agrarian America, the normative expectations for children and for adults were clearly differentiated, and fairly well defined. Young children were considered helpless and totally dependent upon other family members for survival. As soon as a child was physically capable of helping around the house or out in the fields, routine chores were assigned. Children were expected to obey their parents, and the adage, “Children should be seen, but not heard” was widely practiced (Thompson, 1992). The early American colonists, reflecting the sober and traditional child-rearing practices of their European and religious backgrounds, were strict disciplinarians. Normative conformity and “godliness” were almost synonymous, while punishment and correction of children was largely seen as a family function.

In early America, adulthood was not reached until after the onset of puberty, when expectations of work, marriage, and other adult activities were assumed. As American society industrialized a majority of the rural population moved to the cities. No longer able to assume meaningful responsibilities on the farm, urban youth were utilized as labor in factories and forced to work long hours in dangerous conditions. The child saving movement took notice of the harsh conditions in which children were forced to work and successfully created child labor laws.

The child saving movement which started in 1880 was a moral crusade characterized by rhetoric of legitimization built upon traditional values and imagery.
According to Platt (1969) the 1880s and 1890s represented for many intellectuals and professionals a period of discovery of the poverty-stricken sections of populous cities:

The city was suddenly discovered to be a place of scarcity, disease, neglect, ignorance, and dangerous influences. Its slums were the last resorts of the penniless and the criminal; here the humanity reached its lowest level of degradation and despair (Platt, 1969, p. 34).

It was widely agreed in the nineteenth century that it was a woman’s business to be involved in regulating the welfare of children, for women were considered the “natural caretakers” of wayward children. The child savers helped create special judicial and correctional institutions for the processing and management of troublesome youth. Their aim was to extend governmental control over a wide variety of personal misdeeds and to regulate potentially disruptive adolescents. The child saver reforms were politically aimed at lower class behavior and were instrumental in intimidating and controlling the poor (Platt, 1969).

Members of the child savers movement regarded themselves as moral crusaders and supported governmental programs which had been instituted to eliminate youthful immorality. The government juvenile courts were utilized as a tool to officially place the label of juvenile delinquent on many misbehaving youth of the time.

A latent effect of the child savers movement and the creation of child labor laws was that youth experienced an extended delay before assuming the responsibilities of adulthood. The concept of adolescence was socially created to describe that period between childhood and adulthood. Within the adolescent period children were seen as an economic burden to the family. Adolescents were marginalized because they were neither children nor adults. The creation of adolescence produced a legal dilemma in terms of
dealing with the adolescent who violated the law (Thompson, 1992). In response to society’s desire to hold children over the age of seven legally accountable for their behavior, but not as fully accountable as adults, new laws were enacted to deal with the special problem of law violations by youth. The term “juvenile” began to be used when states passed laws establishing the legal age for adulthood. The term “juvenile” came to refer to any person under the legal age of the majority (Thompson, 1992). The creation of the social concept of adolescence along with the legal concept of juvenile created a new social problem for American society hence the development of juvenile delinquency.

Evolution of the Concepts of Anomie and Strain

Anomie as a concept leans heavily on the work of one of the founding fathers of sociology, Emile Durkheim. Durkheim used the term anomie to describe the lack of social regulation in modern societies as one factor that could elevate higher suicide rates (Durkheim, 1897/1966). Robert Merton (1957) redefined anomie and applied it to modern industrial societies. According to Merton, anomie is the form that societal incoherence takes when there is a significant disjuncture between society’s approved goals and the means of achievement (Akers, 2000). Focus is placed upon the socially created goal of material success and the inability of some of the population of a society to attain them legitimately, leading to a condition of strain. The basic sources of strain and anomie have been redefined by several theorists for explaining deviant behavior throughout the historical development of strain theory (Durkheim 1897/1966; Cohen 1955; Merton 1957; Agnew 1985; Cloward & Ohlin 1992).
Emile Durkheim’s Strain Theory

Emile Durkheim (1897/1966) contributed a great deal of theoretical knowledge to the sociology of deviance through the publication of his great work, *Suicide*. The underlying assumption in this work was that nonconforming behavior arises out of social circumstances in which individuals or groups experience normative confusion or disruption, termed anomie (Durkheim, 1897/1966). Confronted with a traumatic social situation, some people respond in a deviant manner.

In *Suicide*, Durkheim (1897/1966) developed the idea of anomie to characterize the condition of a society or group with a high degree of confusion or contradiction in its basic norms. Durkheim traced the unusually high suicide rates during periods of serious economic conditions, severe political crisis and upheavals, rapid social change, and other unstable social conditions to the absence or sharply reduced efficacy of normative regulation during such times. Under such conditions, Durkheim hypothesized that the usual rules that constrain us from committing socially unacceptable acts can become weakened or suspended. In this state of anomie, it is difficult for people to know exactly what is expected of them. In extreme cases, such persons may engage in deviant behavior, such as committing suicide in response to social conditions. Durkheim contended that rates of suicide could be predicted from a careful study of prevailing social conditions. Durkheim was one of the first theorists to successfully contribute to the sociological understanding of this type of behavior.

Durkheim’s concept of anomie greatly influenced the work of other sociologists including Robert Merton. Merton’s main purpose (1957) was to discover how the social
structure exerts pressure on certain individuals to engage in deviant behavior. Merton’s strain theory distinguishes two elements for explaining deviance: culturally defined goals and the societal means of striving towards these goals. The theory integrates these two elements in the concept of structural strain, which refers to a situation in which there is an overemphasis on monetary success, under-emphasis on adhering to legitimate means, and a class-based distribution of legitimate opportunities (Bernard, 1984). The goals of society along with the institutionalized means to achieve those goals do not always coincide for all in society. In some instances there may be an emphasis on the goals of society; in others there may be an emphasis on the means to achieve the goals. When a disjuncture exists between society’s approved of goals and the means to achieve those goals, anomie exists. In some cases, an attempt to resolve this condition of anomie may result in deviant or criminal behavior.

Merton’s Strain Theory

Merton (1957) extends Durkheim’s ideas concerning anomie. Merton’s anomie concept is based on the idea of demoralization stemming from a breakdown in the ability of society to regulate the natural appetites of individuals. Demoralization of the individual results from de-institutionalization of means based on the disjuncture between society’s approved-of goals and the means to achieve these goals. When this disjuncture exists human conduct becomes guided by the most effective procedure, whether legitimate or illegitimate, for striving towards goals. In particular instances deviants give up on the goals of society completely when opportunities are blocked for them. For example a youth may start stealing cars if they are blocked from avenues of education,
legitimate employment, or from rising up to the next social class position. In this youth’s eyes, stealing cars is the most effective means for achieving their goal.

Merton developed a scheme of five modes of adaptation to the social structure. He examined the various ways that individuals in different social positions adapt to cultural goals and the institutionalized means to achieve means to reach those goals. The five modes of adaptation are listed in Table 1. Acceptance of a goal or means is signified by a plus sign (+), rejection of a goal or means by a negative sign (-), and rejection of a goal or means and the substitution of a new goal or means by a plus-minus (+-) sign. The differing modes of adaptation are based on how the goals of society and the means for achievement are dealt with. For example, Merton’s retreatist mode of adaptation rejects both society’s approved of goals as well as society’s means for achieving those goals. A good example would be a drug user who retreats into the world of drugs. The drug user neither attempts to achieve the goals of society, nor managed to attain any of the proposed goals. Merton’s general theory of anomie offers an organized framework of logical explanations that can be applied to several kinds of deviant.

Table 1

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<tr>
<th>Modes of Adaptation</th>
<th>Goals</th>
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<tr>
<td>I. Conformity</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>II. Innovation</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>III. Ritualism</td>
<td>-</td>
<td>+</td>
</tr>
<tr>
<td>IV. Retreatism</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>V. Rebellion</td>
<td>+/-</td>
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*Source: Merton 1957*
Cohen's Strain Theory

Albert K. Cohen continued the academic lineage of strain theory. Cohen’s basic point is that, except for the category of rebellion, Merton’s strain theory is incapable of explaining purposeless crime (Cohen, 1955). Cohen's thesis is that class based status frustration is the origin of subculture malice, and negativism form the content of subcultures, and the presence of young, working-class males explain the distribution of subcultures. Cohen's focus is on school based achievement status (Cohen, 1955). The institution of the school embodies middle class values of honesty, courtesy, personality, and responsibility. It is this milieu where competition takes place for status, approval, or respect. Strain for Cohen is interpersonal, located at the level of group interaction.
"Group interaction is a sort of catalyst which releases potentialities not otherwise visible" (Cohen 1955, p. 136).

Losers in the competition for status experience strong feelings of frustration or deprivation. For Cohen, members of the working class, a descriptive term including lower, working, and the qualitatively similar middle class, are more or less incapable of revising their aspirations downward (Cohen, 1955). What distinguishes those who turn to crime is largely a function of the variables of peer influence and the psychological variable of reaction formation. These two variables work together to produce a type of interpersonal and normative strain (frustration). (Cohen, 1955)

Frustration is generally regarded as a reactionary state due to blocked goals or due to any irritating event (S. Glueck & E. Glueck, 1950). Cloward views blocked access to illegitimate as well as legitimate opportunities as a logical extension of Mertonian strain
theory. In criminology, blocked access to opportunities in life has often been implicated in explanations of unexpected acts of violence and aggression (S. Glueck & E. Glueck, 1950; McCord & Zola, 1959). Frustration due to lower status origins would appear to be associated with more serious, repetitious offending.

According to Cohen's strain theory, there is no abrupt leap from a stressful situation to crime. Instead, action is "tentative, groping, advancing, backtracking, and sounding out" (Cohen, 1965, p. 8). The reaction formation variable is necessary to complete the causal chain from frustration to deviance. According to Cohen’s strain theory, the importance of having deviant friends is to help deal with a common problem of legitimacy. Actors become insulated from conventional standards as espoused by middle class values and beliefs. They may even plan offenses that will legitimate their group within social settings. Haskell (1962) provides evidence from his studies in recidivism that suggests youths in trouble do derive psychological satisfaction from their peer groups.

Cloward and Ohlin's Strain Theory

Cloward and Ohlin were influenced by Merton, but differ somewhat in terms of theoretical premises. Cloward and Ohlin (1960) argue that Merton's anomie theory is inadequate because it looked at the disjuncture between society’s approved-of goals and the socially approved-of means of achievement. According to Cloward and Ohlin this assumes that access to all illegitimate means was more-or-less equally distributed throughout geographic areas which realistically is not the case (Cloward & Ohlin, 1960).
Cloward and Ohlin’s theory of juvenile delinquency concurs with Merton’s emphasis on the utilitarian nature of crime. Cloward and Ohlin agreed with Cohen that some gang delinquency is motivated by the pursuit of status and by a reaction against middle class values. But they argue that these youth tend to be the less serious delinquents and are simply looking for wealth and not status.

Transmission of criminal culture which occurs in organized slums provides the structure of illegitimate opportunity for success. Cloward and Ohlin devised the "theory of differential opportunity systems" (Cloward & Ohlin, 1960) that focuses upon the intervening variables that account for the particular forms that crime and deviance can take. An illegitimate opportunity is more than simply the chance to get away with committing an act which is looked down upon by society; it involves learning and expressing the values necessary for sub-cultural support. These values constitute the main intervening variables in Cloward and Ohlin's strain theory. (Cloward & Ohlin, 1960). If illegitimate opportunities are presented then these youths will tend to form criminal gangs, in which the emphasis is on the production and accumulation of wealth. If there are no legitimate or illegitimate opportunities available then the youth’s frustration and strain will begin to build. In these circumstances the youth will tend to form violent gangs in order to vent their frustration which could potentially result in negative activities. (Cloward & Ohlin, 1960). Cloward and Ohlin also point out that eventually many members of malicious gangs turn to drug and alcohol abuse due to prohibitions against these activities.
The Formation of General Strain Theory

In recent years, there have been many theoretical rebirths in the disciplines of sociology and criminology (Bursik & Webb, 1982; Link, 1982; Heitgerd & Bursik, 1987; Link, Cullen, Frank, & Wozniak 1987; Bursik, 1988; Sampson & Groves, 1989; Matsueda, 1992). Strain theory is one example. Traditional strain theory was used to explain juvenile delinquency beginning in the 1930s but was discarded during the 1960s. In operationalizing this type of strain, most researchers have measured it in terms of conventional aspirations, conventional expectations, or as a discrepancy between the two (Paternoster & Mazerolle, 1994). Strain theory is based on the premise that youth are motivated to commit delinquent acts because they have failed to achieve desired goals, such as middle class status or economic success (Cohen, 1955; Merton, 1957). Strain theories also argue that crime and delinquency are the product of social forces driving individuals to do things they otherwise would not do (Bernard, 1984).

The classic strain theories of Merton (1957) and Cloward and Ohlin (1960) suggest that individuals who cannot find a way to achieve material success through legitimate channels are more likely than others to engage in crime. Although a few studies have shown support for traditional strain theory (Gold, 1966; Quicker, 1974), general support has not been particularly strong as measured discrepancies between occupational/educational aspirations and expectations have been found to be unrelated (Paternoster & Mazerolle, 1994). Empirical tests of the theory usually focus on the disjunction between aspirations and expectations for some goal, typically occupational, educational, and-most recently-monetary. This disjunction is viewed as a cause of strain
and frustration. Most tests find that this disjunction is unrelated to crime, especially when the main effects of aspirations and expectations are controlled (Farnworth & Leiber, 1989; Burton & Cullen, 1992; Agnew, 1994; Burton et al., 1994; Jensen, 1995). Overall, the popularity of traditional strain theory has declined as a result of a lack of empirical evidence during the 1960s.

Rather than abandon the theory altogether, Agnew sought to expand the theory and give it more explanatory power. Agnew's general strain theory represents one of the most important theoretical developments in criminology within the past 20 years. Agnew's work is a pinnacle case of "theory elaboration" in that his theory is an improvement over its predecessors (Wagner & Berger, 1985). Agnew distinguished his theory from classic strain theories by including the affective variable of negative emotions in his theoretical model. Robert Agnew also utilizes the notion of anomie in the formulation of GST.

Agnew has recast strain theory as blocked opportunities to leave aversive situations rather than as blocked opportunities for culturally prescribed success as Merton espoused (Menard, 1995). Agnew views the inability to escape unpleasant home or school experiences as sources of frustration and viewed frustration as leading to delinquency. Although Agnew viewed strain as a necessary cause of delinquency, it is not sufficient (Paternoster & Mazerolle, 1994). A critical intervening variable in GST is the psychological state of "negative affect," which includes disappointment, frustration, and most importantly, anger (Agnew, 1992). As a solution to the undesirable affective state of anger, delinquency can be instrumental (as one tries to regain what one has lost or
obtain what one has been prevented from obtaining), retaliatory (as one strikes back at
the source of strain), and escapist (as one attempts to seek solace from the disagreeable
states of anger and strain). In response to strain and the negative emotional states that go
along with it adolescents may respond with acts of theft, violence, vandalism, and drug
abuse (Paternoster and Mazerolle, 1994). Although the inability to escape aversive
situations may be influenced by social structure, Agnew’s (1985, 1992) formulations of
strain theory focus on the individual.

Three forms of strain are included in GST (Agnew, 1992). First, strain results
when an individual is unable to achieve positively valued goals. A second form of strain
occurs when there is removal of positive or desired stimuli from the individual. Third,
strain results when an individual is confronted with negative stimuli. Agnew is operating
under the assumption that individuals have goals which are conventional. When these
conventional goals are not met strain is the result. In order to deal with strain individuals
commit deviant acts.

Strain from the outside environment can cause negative feelings in an individual
including defeat, despair, and fear, but the feeling that is most applicable to crime is
anger. Agnew asserted that individuals become angry when they blame their negative
circumstances and relationships on others. Anger was found to incite a person to action,
lower inhibitions, and create a desire for revenge. Individuals who are subject to
repetitive strain may be more likely to commit criminal or delinquent acts (Agnew,
Agnew additionally builds on the propositions of Homans’ exchange theory. The central premise of Homans’ exchange theory is that social behavior is an exchange of activity, tangible or intangible, and more or less rewarding or costly, between at least two persons” (Homans, 1961, p. 13). Key facets of Homans’ theory that apply to GST include his aggression-approval proposition, and the value proposition (Homans, 1961, p. 37).

Homans’ aggression-approval proposition states:

When a person’s action does not receive the reward he expected, or receives punishment he did not expect, he will become angry; he becomes more likely to perform aggressive behavior, and the results of such behavior become more valuable to him. (1974, p. 37)

Agnew uses Homans’ aggression-approval proposition in order to construct his first GST proposition which states that failure to achieve an individual’s goals results in strain, occurring when an individual is unable to achieve positively valued goals (Agnew, 1992). Although at first glance Homans’ and Agnew’s propositions seem to be stating the same idea, the difference lies in the creation of strain and how individuals deal with that strain. Homans does not include the notion of strain in any of his propositions. According to Agnew, when strain is created from the failure to achieve valued goals the individual may act out in a deviant fashion in order to alleviate their strain. In Agnew’s formation of GST he did “stand on the shoulders of giants” in developing his propositions since there is such a high degree of similarity between the two theories.

Homans’ value proposition was also utilized by Agnew in his GST development. The value proposition states; “The more valuable to a person is the result of his action, the more likely he is to perform the action” (1974, p. 25). Homans’ introduces the concepts of rewards and punishments in this proposition. Rewards are actions with
positive values. An increase in rewards is more likely to elicit desired behavior. Punishments are actions with negative values (Homans, 1974). An increase in punishment means that the actor is less likely to manifest undesired behaviors (Homans, 1974).

Agnew utilizes the value proposition in the creation of the second main statement of GST which proposes that strain occurs when there is removal of positive or desired valued goals from an individual (Agnew, 1992). The removal of desired rewards creates a source of strain in an individual. In order to contend with this stress, individuals may act out in a deviant fashion. Agnew (1992) also utilizes the value proposition for the creation of his third GST statement which proposes that strain results when an individual is confronted with negative stimuli. Homan introduces the negative stimuli factor in his exchange theory which is carried over to Agnew’s GST. Agnew contends that when individuals are experiencing negative stimuli in their day-to-day activities this creates a source of strain. Once strain is created individuals deal with it by acting out in a criminal or deviant fashion (Agnew, 1992).

Empirical Tests of General Strain Theory

Empirical tests of general strain theory are few to date, and those that have been conducted use data that are inadequate to appropriately test the theory due to variable constraints which limits fully testing Agnew’s theory (Paternoster & Mazerolle, 1994). Agnew (1995) reviewed the body of work testing general strain theory and concluded that previous research is severely limited because it suffers from two particular problems. Agnew's first critique of previous tests of general strain theory is that many of the key
measures of strain outlined in GST are missing such as measures of goal blockage and measures of negative treatment. The second problem which Agnew finds is that most research on GST examines the effect of a single, cumulative measure of strain on delinquency.

Agnew has been at the forefront in empirically testing his own theory. Agnew and White (1992) performed a cross sectional regression analysis on eight different measures of strain and social control as well as two measures of deviance utilizing longitudinal data from the Rutgers Health and Human Development Project. Data from a sample of 1,380 New Jersey adolescents provided support for general strain theory (GST). Agnew and White found that strain measures of the type described in GST have a substantial effect on delinquency (1992). Agnew and White (1992) suggest, however, that their data were not optimal for a longitudinal analysis. Another problem Agnew and White faced was they could not fully explore all relations within the three main GST propositions. They were limited in the number of variables they had, and could not operationalize all the hypotheses due to these limitations.

Paternoster and Mazerolle (1994) conducted a more comprehensive test of Agnew’s GST by constructing several different measures of strain paralleling those used by Agnew and White. The data came from the first and second Waves of the National Youth Survey, a longitudinal study conducted in the 1974 that examined the correlates of delinquency and drug use. The data set obtained from the National Youth Survey allowed the authors to examine the relationship between general strain, social control/differential association variables, and measures of prior and subsequent involvement in a wide range
of delinquent behaviors. Paternoster and Mazerolle found that several dimensions of GST are positively related to involvement in a wide range of delinquent acts. Strain has both a direct effect on delinquency and indirect effects by weakening the inhibitions of the social bond and increasing one’s involvement with delinquent peers. Paternoster and Mazerolle were able to provide a rudimentary causal model that connects strain with differential association and social control theory. Support was found for differential association in the study but the researchers suggest further empirical and theoretical work be done to explore this link. Both authors suggest that what is perhaps needed the most is a data collection effort of which the express purpose is the measurement and test of GST (Paternoster and Mazerolle, 1994).

Other Uses of General Strain Theory

General strain theory has also been used to explain community differences in crime rates (Agnew, 1999). Agnew argues that community differences in crime rates are a function of community differences in strain (1999). Agnew argued “high-crime communities are more likely to select and retain strained individuals, produce strain, and foster criminal responses to strain” (1999, p. 236). Utilizing the theoretical premises of GST, Agnew found that communities contribute to strain in multiple ways. First, communities influence the goals that individuals pursue and the ability of individuals to achieve these goals (Agnew, 1999). Second, communities influence the individual’s sense of relative deprivation as well as absolute level of goal blockage. Third, communities influence definitions of aversive stimuli including economic deprivation, family disruption, child abuse, signs of incivility and the degree of exposure to such
stimuli. Community level variables contribute to strain and have a positive influence on
the different levels of criminality and delinquency which can be found between
communities (Agnew, 1999).

Agnew's general strain theory predicts that community differences, including
racial and economic inequality, influence levels of community strain, which may then
lead to higher crime rates. However, Agnew's explications of the macro-level model
strongly suggest that a multilevel integrated theory of general strain is also appropriate.
Using original survey data from 430 students attending high school, Jang and Johnson
(2003) investigated the degree to which negative community characteristics influence
individual levels of strain, and delinquency and whether the effects of strain on individual
delinquency are more characteristic within communities characterized by higher levels of
inequality. Results from a linear regression model of high school students within 2,000
US Census block groups did not support the negative strain level proposition of general
strain theory in terms of community characteristics. However qualitative analysis
revealed that a positive relationship did exist between negative community characteristics
and levels of juvenile delinquency found among youth. The differences observed were
based on methodological problems with survey construction (2003).

Agnew’s GST has also been used to explain the relationship between gender and
crime (Broidy and Agnew, 1997). According to Broidy and Agnew two questions
dominate the theoretical literature on gender and crime: (a) How can we explain the
higher rate for crime among males? And (b) How can we explain why females
engage in crime? Agnew’s general strain theory offers insight into these two questions. First, males and females tend to experience different types of strain with male strain leading to more serious violent and property crimes (Broidy and Agnew, 1997). Males are more likely to respond to strain with property or violent crime because of differences in social support, opportunities, and the disposition to engage in crime. Male strains lead the individual to more serious violent and property crimes (Broidy and Agnew, 1997). Females are more likely to be accompanied by depression, anxiety, and guilt when experiencing strain. Female responses to strain are more likely to reduce the likelihood of aggressive crimes and increase the likelihood of self-destructive and escapist attempts such as drug abuse.

Summary

Juvenile delinquency has evolved into a social problem which merits in-depth study. It costs society billions each year by overloading the juvenile justice system and creates many problems for society in general. In order to explain juvenile delinquency several theorists (Dukheim, 1897/1966; Merton, 1938, 1964; Cloward & Ohlin, 1960; Cohen, 1965) have refined strain theory and continued the lineage mode of thought to the present day form of general strain theory as developed and refined by Robert Agnew. Existing literature fails to adequately test Agnew’s general Strain Theory dealing with juvenile delinquents (see Agnew 1992, 1995) due to data limitations. For example, Paternoster and Mazerolle’s (1994) test of Agnew’s GST was limited because they could not test the entire theory due to lack of variables in their data set. Agnew’s theory has proven difficult to adequately test (Agnew & White, 1992; Paternoster & Mazerolle,
1994). Although Paternoster and Mazerolle (1994) and Agnew and White (1992) have provided evidence that, respectively, general strain theory provides a partial explanation for juvenile delinquency, it remains unclear if all of the GST propositions are related to delinquent behavior.
CHAPTER 3

METHODOLOGY

Chapter 3 will discuss the design for completing this research project. Also included will be a discussion concerning the Add Health Data, research assumptions and control variables utilized. This chapter will also discuss each of the scales utilized in this research.

Research Design

For purposes of this research, a secondary data analysis was utilized in order to test the four proposed hypotheses. Items were selected from the National Longitudinal Study of Adolescent Health (Add Health) instruments that corresponded conceptually and operationally with the propositions in Agnew’s general strain theory. Items selected from the Add Health questionnaire were broken down into scales including a juvenile delinquency scale, negative stimuli scale, blocked opportunities scale, and a removal or positive stimuli scale. Regression analysis was used to test the proposed hypotheses utilizing SPSS (version 10.0). SPSS was used for cleaning the data, running frequencies, and for regression analysis.

Data

Data for this study are drawn from Wave one of the National Longitudinal Study of Adolescent Health, conducted between September 1994 and January 1996. This research only used Wave 1 because the same individuals were chosen to be in Wave 2 and they were no longer juveniles in the second wave.
Add Health is an ongoing study created in response to a mandate by Congress as part of the National Institute of Health Revitalization Act of 1993 (Blum and Rinehart, 1997). The data were collected by the Carolina Population Center at the University of North Carolina, Chapel Hill. The National Institute of Child Health and Human Development (NICHD) are the principle source of funding for the study. The Add Health data set is a nationally representative sample of adolescents in grades 7 through 12 in the United States. It incorporates extensive demographic, social, psychological, and behavioral attributes related to adolescents. These data were collected as part of an ongoing study which was designed to help illuminate the factors that affect adolescent health and their health related behaviors, with special emphasis on the physical, personal, familial, social, and community contexts of which the adolescent is an integral part. To date, there have been two waves completed in this ongoing study. Data from Wave 1 of the National Longitudinal Study of Adolescent Health was derived from in-school adolescent surveys, in-home adolescent and parent interviews, and a school administrator interview.

The complete data set for Wave 1 contains 5,800 variables and is divided into 40 sections that include demographic information, general health topics, psychological issues, juvenile delinquency, family relationships, and risk behaviors, as well as interviewer assessments and social desirability evaluations.

Sampling Procedures

Add Health used a clustered-correlated stratified research design (Bearman, Jones, & Udry, 1997). The main sampling frame for the study was a list of 26,666 high
schools in the U.S., obtained from Quality Education Data, Inc. (Udry & Bearman, 1998). Eligible high schools were sorted on the size of student enrollment, school type, geographic region, location (urban, suburban, rural), and percentage of white students, and then divided into groups for sampling (Chantala, 2001).

From this list, 80 high schools were randomly chosen with probability proportional to student enrollment size, while geographical region was considered to be the primary stratification variable. In addition, 52 feeder schools were randomly selected with probability proportional to the percent of the high school’s entering class coming from that feeder school (Chantala, 2001). Approximately 79% of the schools initially contacted agreed to participate (Udry & Bearman, 1998). Another school in the same sampling stratum replaced schools that refused to participate in the study. At a specific date, confidential in-school surveys were completed by 90% ($n = 90,118$) of the eligible enrolled students in grades 7 through 12.

From the roster of enrolled students at each school, a random sample of 16,000 students (core sample) was chosen to complete the in-home interview of Wave I, which took place between September 1994 and January of 1996. Approximately 200 students (17 students from each start) were selected from each school pair (high school and feeder school) for the core in-home sample, irrespective of school size (Udry & Bearman, 1998). This procedure resulted in a self-weighted sample.

The resulting data have been made available to researchers through the Add Health public-use database. This database consists of 6,503 respondents randomly drawn from two independent samples. Data for these respondents will be used for this study.
The first sample incorporates 50% of the core sample, which is nationally representative of adolescents in grades 7 through 12 in the United States. The second sample consists of 50% of the over-sampled, well-educated black students, which are those students who have at least one parent that completed a college degree.

The sample of respondents is composed of 2,922 males (48.3%) and 3,131 females (51.75%). In terms of race and ethnicity, the sample is composed 3,627 whites (59.9%), 1,430 blacks (23.6%), 669 Hispanics (11.1%), 213 Asians (3.5%), 54 American Indians (.8%), and 12 others (.10%) who either refused or did not know how to answer this questions. The ages of the respondents range from 11 years of age to 21 years of age. Ages 13-18 comprise the bulk of the ages with an N size of 5,568. There are 8 individuals included who are under 13 years of age and 406 who are over the age of 18.

Protection of Human Subjects

The database contains no personal or community identifiers that can link data to respondents. All users of Add Health data sign a consent form, which signifies compliance with the rules and regulations of AFDA and the Public Health Services Act. Use of the data is limited to statistical reporting, analysis, and teaching purposes. For purposes of this study, Add Health data use was approved by the University of North Texas Institutional Review Board.

Assumptions

There are three assumptions in this research. First, the data supplied by the National Longitudinal Study of Adolescent Health are complete and accurate. Various research studies (Blum & Rinehart, 1997; Bearman & Burns, 1998; Resnick, 1998;
Cleveland, 2001) all attest that Add Health data collection methods were properly conducted and that the data are useful for secondary data analysis. The data were collected by a team of specially trained researchers working for the Carolina Population Center. The Opinion Center researchers underwent intensive training to make sure data were complete and accurate. Second, the computer software used to analyze the data provides accurate results. The Statistical Package for the Social Sciences (SPSS) is a commonly used tool for performing regression analysis and will provide accurate results. Third, Agnew’s general strain theory can be empirically tested using individual level data. Past research performed by Agnew and White (1992) and Paternoster and Mazerolle (1994) indicate that GST can be empirically evaluated. All past empirical tests of GST also used individual level data such as the National Youth Survey or longitudinal data from the Rutgers Health and Human Development Project database (Agnew & White, 1992; Paternoster & Mazerolle, 1994).

Cleaning the Data

An examination of frequency distributions for the desired variables demonstrated the necessity of cleaning the Add Health data for this study. All missing answer outcomes were discarded since indexes and accumulated scores were used. Missing answers were eliminated because they were all coded as the numerical number nine which would have lead to an exaggerated sum outcome for each index when added. Some of the variables were also recoded for directionality purposes. It was necessary to get all of the scale item answer outcomes moving in the same direction for correct aggregation of each scale.
Operationalization of Dependent Variable

There are several scales used in this research study with various indicators of each. Juvenile delinquency is the dependent variable in this study and is defined as unlawful acts committed by youth under the age of 18. The juvenile delinquency scale is made up of several indicators selected from the Add Health Data, which include an index of eighteen domains that measure the extent of adolescents’ self reported engagement in delinquent behavior Appendix A. This scale was devised by the Add Health methodologists. The juvenile delinquency scale was shown to have good structural validity and internal consistency by Add Health methodologists, with a Cronbach's alpha score of 0.73.

The juvenile delinquency scale has a mean score of 5.07 with a 5.79 standard deviation and measures a juvenile’s level of committed violent crimes, property crimes and status offenses. The juvenile delinquency scale contains a total of sixteen items and can be found in Appendix A. There are four violent crime-related items included: “In the past year, how often did you hurt someone badly enough to need bandages or care from a doctor or nurse?” “In the past year, how often did you use or threaten to use a weapon to get something from someone?” “In the past year did you take part in a group fight where a group of your friends was against another group?” “In the past 12 months how often did you get into a serious physical fight?” Frequency counts for each of the violent crime items can be found in Appendix E.

The juvenile delinquency scale contains seven property crime items: “In the past 12 months, how often did you paint graffiti or signs on someone else’s property or in a
“In the past 12 months, how often did you deliberately damage property that didn’t belong to you?” “In the past 12 months, how often did you take something from a store without paying for it?” “In the past 12 months, how often did you drive a car without its owner’s permission?” “In the past 12 months, how often did you steal something worth more than $50?” “In the past 12 months, how often did you go into a house or building to steal something?” “In the past 12 months, how often did you steal something worth less than $50?” Appendix E exhibits the frequency counts for each property crime item.

The final six items concern miscellaneous juvenile offenses: “In the past 12 months, how often did you lie to your parents or guardians about where you had been or whom you were with?” “In the past 12 months, how often did you run away from home?” “In the past 12 months, how often did you sell marijuana or other drugs?” “In the past 12 months, how often were you loud, rowdy, or unruly in a public place?” and “In the past 12 months, how often have you carried a weapon to school”? “In the past 12 months, how often have you skipped school?” Appendix E exhibits the frequency counts for each of these miscellaneous juvenile offenses.

Operationalization of Independent Variables

Negative Stimuli Scale

The Negative Stimuli scale (Appendix B) has a mean of 14.07 and measures disapproving or harmful occurrences in an individual’s life. The scale was derived by selecting questions which conceptually related to Agnew’s negative stimuli scale from his GST. The Negative Stimuli scale was shown to have good structural validity and
internal consistency with a Cronbach’s alpha level of 0.76. The scale contains a total of 20 items which were derived from Agnew’s operationalization of negative stimuli (1992). The items chosen for the scale relate to negative physical altercations, negative feelings, and negative altercations in social interaction. The last three items found in Negative Stimuli scale were reverse coded in order to include them in the Negative Stimuli scale. This was done so that higher scores reflected greater perceptions of negative stimuli experienced by those included in the study. Appendix F exhibits the frequency counts for each item in the Negative Stimuli scale.

Loss of Positive Stimuli Scale

The Loss of Positive Stimuli scale contains items related to social interaction with authority figures, and social interaction with school. A sample item is, “Have your parents separated?” The Positive Stimuli scale was designed to measure an adolescent’s loss of positive variables in his or her environment. The scale has a mean of 25.82 and measures the taking of an item of value and/or encouragement away from an individual and is measured by using scale 3 (Agnew, 1994). Items were chosen based on the idea that if a negative response was given as an answer for each question then that individual has experienced loss of a valued object. The scale contains a total of 22 items. Items were derived by taking questions from the Add Health data set which related conceptually to Agnew’s original Positive Value scale. The loss of Positive Stimuli scale (Appendix C) has good structural validity and internal consistency with a Cronbach’s alpha score of 0.68. Frequency counts for each item in the loss of valued objects scale are found in Appendix G.
Failure to Achieve Expected Goals Scale

There are a total of 6 items in this scale which were derived from Agnew (1992). There are items related to conventional goals such as the ability to attend college, marriage, chances of getting AIDS, and on the chances of living to 25. A sample question from this scale is: “On a scale of 1 to 5, where 1 is low and 5 is high, how likely is it that you will go to college?” The failure to achieve goals scale measures the level of outside forces preventing an individual from achieving desired goals (Appendix H). The failure to achieve goals scale results indicate that this scale has good internal consistency and structural validity with a Cronbach’s alpha score of a 0.79. The scale has a mean of 10.90 and a standard deviation of 3.16. Items were derived by selecting questions from the Add Health data set which related conceptually to Agnew’s original Failure to Achieve Goals scale. Frequency counts for each item in the Failure to Achieve Goals scale can be found in Appendix H.

Control Variables

Control variables in this study are gender, age, and race. The control variable of gender simply indicates whether the respondent was male or female. This variable is important because previous research (Broidy & Agnew, 1997) indicates that there may be differences in how males and females handle strain, which in turn produces different forms of delinquency.

The control variables of age and race are also of interest in this study. Gottfredson and Hirschi argue that both age and race effects on juvenile delinquency are “invariant over time and space” (1990, p. 145). Agnew devised general strain theory to
explain why juveniles under the age of 18 resort to drug use as a response to experienced strain (1992). Eventually as youth mature a majority will age out of this self destructive practice in the process termed “aging out” (Agnew, 1992).

Race is also included as a control variable. Differences in juvenile delinquency rates exist in reference to social, cultural, and economic differences therefore this variable needs to be controlled for in order to ascertain any spurious relationship between strain and juvenile delinquency (Conklin, 2001).

Data Analysis

Multiple regression was utilized in the analysis phase of this study to determine the statistical relationship between the dependent variable of juvenile delinquency and each of the scales representing the independent variables. Scattergrams were run as the first step in the analysis to determine if a linear relationship existed between juvenile delinquency and each of the independent variables. Each scattergram indicated that a positive linear relationship existed between the variables. Multiple regression was utilized in this study to examine the correlations between the dependent variable of juvenile delinquency and each of the independent variables represented by scales. Regressed scales were utilized in this research instead of individual level variables in order to test Robert Agnew’s overall model in his theory. Regressing individual level variables upon the dependent variable of juvenile delinquency gets away from an overall test of general strain theory as a complete model. In addition Agnew also utilized multiple regression of scales upon a juvenile delinquency to measure complexity in operationalization of each proposition in his theory.
Study Limitations

There are several limitations that must be considered in this research. First, the results will only be generalizable to juveniles from grades 7 to 12. Age composition limits the generalizability of the findings beyond the Add Health target population. Second, the results will only be generalizable to juveniles within the United States as the Add Health survey only contains responses from juveniles within the United States. A third limitation is the results will only be generalizable to juveniles who are in school. The Add Health database does not include information from juveniles who have dropped out of school or who are otherwise not in school. Fourth, even though the Add Health survey was designed to ensure privacy and confidentiality when replying to sensitive questions such as juvenile delinquency behaviors, there is the possibility of under- or over-reporting due to social desirability and the desire to be considered psychologically healthy. Hence, the validity of the findings may be impacted. Furthermore, the instruments used in this study are all self-report measures; therefore, responses are limited by the extent to which adolescents were willing to divulge complete and accurate information. Fifth, non-involvement in the conceptualization, collection, and coding of the original survey data may influence interpretation of the results. Information on known errors in data collection and coding is available from the Add Health researchers and are listed in the codebooks. A sixth limitation concerns the validity of the strain measures following the conceptualization of Agnew for each. The content validity of each strain measure is limited in that it is confined to the frequency county of each item, which
previous studies tend to examine. Other dimensions of strain like length of duration, strength of duration, and recent duration could not be measured due to data limitations.

Summary

Wave 1 of the National Study of Longitudinal Health (Add Health) is a nationally representative study which provides a unique new avenue for testing Agnew’s general strain theory. By selecting key items from the Add Health data which conceptually related to Agnew’s General Strain scales a total of four original scales were devised in order to test Agnew’s hypotheses. Each scale has an N of 6,053 respondents. Multiple regression was utilized to look at the correlations between the independent variables and the dependent variable of juvenile delinquency. Even though the findings were weak they were still significant thereby making a significant contribution to the literature regarding strain theory. Chapter 4 will summarize the findings of this dissertation.
CHAPTER 4

FINDINGS

This chapter presents the findings for each of the proposed hypotheses in this study. Also, this chapter presents explanations for each finding as well as a discussion of the control variables used in this study.

Hypothesis 1

Hypothesis 1 states that the failure to achieve an individual’s goals increases the probability of juvenile delinquency. In order to test this hypothesis multiple regression was utilized to regress each of the predictor variables upon the dependent variable of juvenile delinquency. Table 2 shows the regression results.

Table 2

<table>
<thead>
<tr>
<th>Variables</th>
<th>Juvenile Delinquency</th>
<th>Unstandardized Beta</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chances---live to age 35</td>
<td>-.08**</td>
<td>-.921</td>
</tr>
<tr>
<td>Chances---marriage by age 25</td>
<td>-.32**</td>
<td>-.295</td>
</tr>
<tr>
<td>Chances---killed by age 21</td>
<td>.05**</td>
<td>.642</td>
</tr>
<tr>
<td>Chances---getting HIV Aids</td>
<td>.04**</td>
<td>.615</td>
</tr>
<tr>
<td>Want to Attend College</td>
<td>.03</td>
<td>.292</td>
</tr>
<tr>
<td>Likely to attend College</td>
<td>.18**</td>
<td>1.626</td>
</tr>
</tbody>
</table>

$R^2 = .07$

$F = 114.54^*$

Notes: Standardized effects are shown.

**p < .001  **p < .05
The correlations between the independent variables of “feeling lonely in the past week,” “feeling life not worth living,” “having a gun or knife pulled on you,” “having someone shoot you in past year,” “having someone stab you in the past year,” “getting into a physical fight in past year,” “getting jumped in the past year,” and “being happy living in your neighborhood” with the juvenile delinquency measure significant are small, and each are significant at the $p < .001$ level. One variable, “want to attend college” was significant at the $p < .05$ level. The variable with the strongest relationship to juvenile delinquency is “chance of marriage by age 25”, $r = -.32 \ (p < .001)$. It could be that if a youth does not believe they will be married by age 25 this belief creates strain and one of the possible reactions by youth to this strain is by engaging in law violating behavior.

The remaining measures were not significantly correlated with the dependent variable. Two of these variables are related to safety and happiness in one’s neighborhood. This lack of significance may be a function of either operationalization of the variables, or that the variables in fact not be indicators of juvenile delinquency at all. In addition, indicators of depression and loneliness were also not significantly related to delinquency. These factors may not serve as good indicators of the target concept in the hypothesis. In addition, it may be that persons who are depressed may exhibit aggression that is internalized (perhaps in terms of suicidal thoughts, self injury, or other self-directed behavior) rather than externalized in the form of juvenile delinquency. The overall $R^2$ for the model is .21. This indicates that the model explains only a moderate amount of variation in juvenile delinquency. Although the explained variation is moderate the overall model is statistically significant $F = 114.69, p < .001$. Taken as a
whole, the model indicates that as a juvenile’s failure to achieve goals increases, the level of juvenile delinquency also increases. Therefore hypothesis 1 is supported.

This finding is a contribution to existing literature in that previous researchers (Agnew, 1992; Paternoster & Mazzerolle, 1994) have not yet tested this proposition with juveniles. Past studies have used data sets which do not allow for the construction of a complete Failure to Achieve Goals scale. Agnew proposed in his revised general strain theory (1985) that blocked goals can be a source of juvenile delinquency at the individual level.

Hypothesis 2

Hypothesis 2 states that withdrawal or loss of positive stimuli increases the probability of juvenile delinquency. The variables contained in the Loss of Positive Stimuli scale were chosen to relate conceptually to those used in Agnew (1992). Table 3 shows the regression results.

Table 3

<table>
<thead>
<tr>
<th>Variable</th>
<th>Juvenile Delinquency</th>
<th>Unstandardized Beta</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adults care about you</td>
<td>.05*</td>
<td>.571</td>
</tr>
<tr>
<td>Teachers care about you</td>
<td>.04**</td>
<td>.396</td>
</tr>
<tr>
<td>Parents care about you</td>
<td>.03**</td>
<td>.538</td>
</tr>
<tr>
<td>Friends care about you</td>
<td>-.07</td>
<td>-.883</td>
</tr>
<tr>
<td>Family understands you</td>
<td>.07**</td>
<td>.691</td>
</tr>
<tr>
<td>Family has fun together</td>
<td>.09**</td>
<td>.921</td>
</tr>
<tr>
<td>Family pays attention to you</td>
<td>.01</td>
<td>.053</td>
</tr>
<tr>
<td>Received out of school suspension</td>
<td>.19**</td>
<td>4.259</td>
</tr>
<tr>
<td>Expelled from school</td>
<td>.13**</td>
<td>6.701</td>
</tr>
<tr>
<td>Trouble getting along with teachers</td>
<td>.14**</td>
<td>1.506</td>
</tr>
</tbody>
</table>

*(table continues)*
Table 3 (continued).

<table>
<thead>
<tr>
<th>Variable</th>
<th>Juvenile Delinquency</th>
<th>Unstandardized Beta</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trouble with other students</td>
<td>.03*</td>
<td>.316</td>
</tr>
<tr>
<td>Feel close to people at school</td>
<td>-.03</td>
<td>-.257</td>
</tr>
<tr>
<td>Feel part of your school</td>
<td>.08**</td>
<td>.840</td>
</tr>
<tr>
<td>Happy at your school</td>
<td>.05**</td>
<td>.476</td>
</tr>
</tbody>
</table>

$R^2 = .21$

$F = 115.569^*$

Notes: Standardized effects are shown.

*p < .001, **p < .05

The correlations between the independent variables “teachers care about you,” “parents care about you,” “family understands you,” “family has fun together,” “received out of school suspension,” “expelled from school,” “trouble getting along with teachers,” “feel part of your school,” and “happy with your school” and the Juvenile Delinquency scale were each weak, all were positive, and are all significant ($p < .01$). The three variables with the strongest relationship to juvenile delinquency are; “received out of school suspension” ($r = .19, p < .001$), “expelled from school” ($r = .13, p < .001$), and “trouble getting along with teachers” ($r = .14, p < .001$). Receiving a suspension and being expelled from school both represent loss of the positive atmosphere of education which has the potential for creating strain. Having trouble getting along with teachers has the potential for creating additional strain via the loss of positive role models. Removal of positive role models creates an aversive condition to which some youth respond with law violating behavior. All three correlations support Agnew’s theory that loss of positive stimuli creates a strain condition and eventually to juvenile delinquency. Two variables, “adults care about you” and “trouble with other students” had a modest
positive relationship with juvenile delinquency and were each significant \((p < .05)\). If juveniles believe that their parents do not care about them or if they are having trouble getting along with other students at school this has the potential for creating strain at the individual level. Some youth deal with strain by engaging in delinquent behavior in order to avert it which also supports Agnew’s theory. The variable with the strongest relationship to juvenile delinquency is chance of marriage by age 25, with \(r = -.32, p < .001\). The remaining measures were not significantly correlated with the dependent variable of juvenile delinquency. The lack of significance of these measures may be a function of either operationalization of the variables, or may be that they are simply not significantly related to juvenile delinquency at all. These factors may not serve as good indicators of the target concept in the hypothesis.

The overall \(R^2\) for the regression found in Table 3 is .21, indicating that the model explains a moderate amount of the variation in juvenile delinquency. The overall model is significant \((F = 115.69, p < .001)\). Taken as a whole the findings in this table indicate that as a juvenile experiences withdrawal or loss of valued objects there is a positive increase in juvenile delinquency among youth. Therefore, Hypothesis 2 is supported.

Agnew (1992) considered the loss of positively valued goals to be important in impacting the level of strain experienced by a youth. As a youth begins to experience the loss of positive goals his or her environment will become more stressing and adverse. In order to deal with this anomic condition some youth will engage in delinquency and or crime in order to avert the experience. There remains a lack of literature examining the connection between loss of positive goals and juvenile delinquency as proposed by
Robert Agnew. Previous literature tends to focus upon the impact of negative stimuli and peer groups (Agnew & White, 1992; Paternoster & Mazerolle, 1994) as opposed to the loss of positively valued stimuli. Paternoster and Mazerolle were interested in how negative life events, negative relations with parents, negative school events, and delinquent disposition were related to juvenile delinquency. Paternoster and Mazerolle found that these negative events have an effect on delinquency by weakening the social bond and increasing one’s involvement in a wide range of delinquent acts (1994). Due to limitations in their data, Agnew and White (1992) did not test the effects of the loss of positive goals on juvenile delinquency. Hence these findings represent an addition to previous literature, and also supports this aspect of Agnew’s theory when tested with juveniles.

Hypothesis 3

Hypothesis 3 states that introduction of stressful life events in social interaction will increase the probability of juvenile delinquency. As discussed by Agnew (1992) some youth will resort to norm violating behavior in order to avoid the experience of stressful events. The findings from the regression model are reported in Table 4.

Table 4

*Juvenile Delinquency Regressed on Individual Level Variables in the Introduction to Negative Stimuli Scale (N = 6,053)*

<table>
<thead>
<tr>
<th>Variable</th>
<th>Delinquency</th>
<th>Unstandardized Beta</th>
</tr>
</thead>
<tbody>
<tr>
<td>Past week felt depressed</td>
<td>.06*</td>
<td>.827</td>
</tr>
<tr>
<td>Past week felt life had been a failure</td>
<td>.03**</td>
<td>.638</td>
</tr>
<tr>
<td>Past week felt fearful</td>
<td>-.02</td>
<td>-.368</td>
</tr>
<tr>
<td>Past week felt lonely</td>
<td>.04*</td>
<td>.560</td>
</tr>
</tbody>
</table>

*(table continues)*
The correlations between the independent variables of “past week felt depressed,” “past week felt lonely,” “past week felt life not worth living,” “past week saw a shooting or stabbing of a person,” “past year someone shot you,” “past year someone stabbed you,” “past year got into a physical fight,” “past year were jumped,” and “how happy living in your neighborhood” and the juvenile delinquency measure were each modest, each were positive, and each were significant ($p < .001$). The variables with the strongest relationship to juvenile delinquency were “in the past week saw a shooting or stabbing of a person” ($r = .11, p < .001$), and “in the past year got into a physical fight” ($r = .21, p < .001$). Both of these represent the introduction of negative stimuli in the lives of youth. The variables of “past week felt fearful,” “past week felt sad,” “past week felt that people
disliked you,” “past week felt people were unfriendly to you,” “past year felt people were happy/unhappy to move,” and “felt safe in neighborhood” were not significantly related to juvenile delinquency. These factors may not serve as good indicators of the target concept in the hypothesis. Again this finding reinforces the notion that data collection is needed with the specific purpose of testing Agnew’s theory rather than relying on secondary data analysis.

The $R^2$ of .21 indicates that this model explains a moderate amount of variation in juvenile delinquency. The overall model is significant ($F = 96.47, p < .001$). Consistent with Paternoster and Mazerolle (1994), the introduction of negative life events was positively related to subsequent delinquency and also found to be significant. Thus hypothesis 3 is supported.

Paternoster and Mazerolle (1994) measured negative life events with questions such as “During the past year did you experience serious illness or someone’s death?” “Have you been unhappy in the past year?” and “Has your family moved in the past year?” The same operationalization was followed in this study. One difference between this study and Paternoster and Mazerolle (1994) is that they conceptualized experience of negative life events using a 13 item scale where the responses to the items were binary (yes, no) with a Cronbach’s alpha of .50. The original items used for this study allowed respondents to answer none, once, more than once, don’t know, or not applicable in regards to negative life events. As Agnew and White (1992) suggested, it might be necessary to look at the creation of an aversive environment for youth by not only asking if negative life events have occurred but by also asking in terms of degree or how many
times the negative life event has occurred. Duration and frequency of negative life events present in the life of a youth are both important in explaining juvenile delinquency. Some youth may be able to deal with negative events if they are not constantly reoccurring as compared to youth who experience repeated negative life events.

Hypothesis 4

Hypothesis 4 states that the interaction of measures of strain will have a positive effect on juvenile delinquency. Hypothesis four was devised to examine the combined effect of the three independent variables of failure to achieve goals, loss of valued objects, and the introduction to stressful life events with juvenile delinquency. The reason for examining this combined effect is to see if all three of the independent variables have more of an effect on juvenile delinquency than one of the independent variables alone.

As shown in Table 5 below, multiple regression models were constructed to test this hypothesis. Model 1 includes all of the indicators as outlined in Agnew’s theory. Model 2 includes said indicator variables as well as controls for the age, sex, and race of the respondents. All of the variables in Model 1 were significant at the $p < .001$ level; however, the $R^2$ value is only .163 (with an adjusted $R^2$ of .162), indicating that only 16.3% of the variation in juvenile delinquency is explained by the indicator variables. The independent variable of loss of valued objects has the strongest correlation ($r = .24, p < .001$) with the dependent variable of juvenile delinquency. This may be the effect of having questions available in the data which dealt directly with the loss of valued objects. Every question within the Loss of Positive Stimuli scale dealt with the positive stimuli
subject matter of family, friends, students and school. The Add Health Data allowed for
the inclusion of a range of questions related to each subject. For example, there were
three items which involved questions about family, “family cares about you,” “family
understands you,” and “family pays attention to you.” All three items were focused on the
subject matter of family and at the same time there is variation in the items which allows
for better analysis of loss of positive stimuli at the individual level.

Table 5

Multiple Regression Model of Combined Effects of Measures of Strain With Control
Variables (N = 6,053)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Model 1</th>
<th>Model 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Failure to Achieve Goals Scale</td>
<td>.08*</td>
<td>.07*</td>
</tr>
<tr>
<td>Loss of Valued Objects Scale</td>
<td>.25*</td>
<td>.24*</td>
</tr>
<tr>
<td>Introduction of Stressful Events Scale</td>
<td>.18*</td>
<td>.17*</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td>.07*</td>
</tr>
<tr>
<td>Race</td>
<td></td>
<td>.02**</td>
</tr>
<tr>
<td>Sex</td>
<td></td>
<td>-.08*</td>
</tr>
</tbody>
</table>

| $R^2$                                  | .16*    | .18*    |
| Adjusted $R^2$                          | .16*    | .17*    |

Notes: Standardized effects are shown
* $p < .001$, ** $p < .05$

The inclusion of the demographic variables of age, race, and sex does not
contribute substantively to the second model. While all control variables are significant at
the $p < .05$ level or more, the $R^2$ value is only increased to .175, with an adjusted $R^2$ of
.174. The hypothesis is supported, yet the findings are substantively weak.

In this study, the control variables of age, race and sex do not contribute to
differences in how individuals experience strain; however, this is an avenue for future
research. The control variable of sex offers the strongest negative correlation in Model 2 \( (r = -0.83, p < .001) \). This is one of the strongest correlations found in the entire study. Broidy and Agnew (1997) suggest that males are more likely to respond to strain with property or violent crime because of differences in social support, opportunities, and the disposition to engage in crime. Females are more likely to be accompanied by depression, anxiety, and guilt when experiencing strain. Female responses to strain are more likely to reduce the likelihood of aggressive crimes and increase the likelihood of self-destructive and escapist attempts such as drug abuse (Broidy & Agnew 1997). The variation in the Juvenile Delinquency scale is limited as drug use items are not included in this study due to lack of available subject items in the Add Health data set. Without items related to the use of drugs attaining a measurement of strain experienced and juvenile delinquency outcomes among females is limited.

One previous study by Agnew and White (1992) explored the effects of strain on juvenile delinquency controlling for age and sex, using the Rutgers Health and Human Development Project longitudinal study on alcohol and drug use. That study did not include the component of Agnew’s general strain theory of failure to achieve positively valued goals nor loss of positive valued stimuli due to a lack of data. While age and sex were significant to the model, both were of low substantive value. The authors note that there is a need for further research that specifically examines the influence of strain across demographic categories, such as age, race, ethnicity, and other subgroups. This again illustrates the issue of utilizing secondary data versus designing survey research specifically to test this model.
The hypothesis is supported, yet the findings are substantively weak. However, this study is a complete effort at testing all of Agnew’s general strain theory, which has not been found in previous literature on delinquency. As an example of the limitations of other studies of this nature, Agnew and White (1992) explored the effects of strain on juvenile delinquency controlling for age and sex, using Rutgers Health and Human Development Project longitudinal study on alcohol and drug use. This study failed to include the component of failure to achieve positively valued goals not the loss of positive valued stimuli due to lack of data. While age and sex were significant in their model the correlations between age, sex, and delinquency in their study were modest ($r = .02, r = .05$, respectively, $p < .001$). Agnew and White (1992) note that there is a need for further research that specifically examines the influence across demographic categories, such as age, race, ethnicity, and other subgroups. This again points out the limitations of using secondary data that were not designed to test Agnew’s theory.

**Summary**

The findings indicate that each of the four proposed hypotheses were supported. Taken together, the findings offer support for Agnew’s theory that juvenile delinquency is associated with failure to achieve goals, loss of valued objects, and introduction of stressful life events. The analysis also suggests, however, a number of avenues for additional research. Suggestions for future research are presented in the final chapter.
CHAPTER 5
SUMMARY AND CONCLUSIONS

The purpose of this study was to conduct an empirical test of Robert Agnew’s GST using Wave I of the National Longitudinal Study of Adolescent Health (Add Health). The research was guided by the overall question: Is juvenile delinquency caused by general strain? Agnew proposed that as youth experience negative social stimuli, blocked opportunities, and also have positive stimuli taken away from them that the level of juvenile delinquency increases. Under these strains youth commit delinquent acts in order to cope with their strain.

Four hypotheses were tested in this research. Data provided support for the general theory of delinquency. Strain measures of the type described in general strain theory have an effect on delinquency. There may be several reasons for the weak relationships. The relatively weak relationships found in this project could be the result of several limitations as previously proposed in this study. First, the content validity of each strain scale measure is limited to the magnitude dimension (number), which previous studies also tended to examine, because other dimensions like duration and consistency of strain could not be tapped due to data constraints. Agnew (1992, p. 64) argues that strain is “more influential to the extent when strain sources are (1) greater in magnitude or size, (2) recent, (3) of long duration, and (4) clustered in time. These needs should be met in testing general strain theory as much as possible.” Future research should collect original data meeting the needs of adequately testing general strain theory. While it is
plausible to hypothesize the positive effects of duration of any of the proposed measures of strain on the positive effect of delinquency or crime, it is also possible that duration might have the opposite effects as strained individuals simply adjust to strain of long duration.

Second, the low overall $R^2$ may be weak due to data limitations. The Add Health data set was not collected for the purpose of testing general strain theory. If a research study was able to collect original data for the specific purpose of testing Agnew’s theory then operationalizing the complex propositions would be more exact. Unfortunately, the National Study of Adolescent Health data set is not well suited for answering the tautological problem which may exist in Agnew’s general strain theory. The problem is which came first, strain or juvenile delinquency? In order to answer this question researchers need longitudinal data over the course of a juvenile’s first 18 years of life. Although there were several adequate indicators of strain and delinquency available in the Add Health data set, the analysis is cross sectional in nature. Time 1 strain is used to explain Time 1 delinquency. Respondents were asked about the extent of their delinquency over previous years in their lives. To some extent this research relied upon the present to explain the past. It might be argued that the relationship between strain and delinquency is not due to the effect of strain on delinquency, but to the effect of delinquency upon strain. The Add Health data set did not allow for information concerning time order between strain and deviant and/or criminal behavior on behalf of youth. Although tentative support is shown for general strain theory, the relationship between the sources of strain and delinquency might be tautological in nature. The Add
Health data set does not allow for exploration of this relationship. Future research should focus on longitudinal data that will allow for this relationship to be explored.

Third, the low overall $R^2$ might be due to the fact that strain alone might be a necessary cause of delinquency but it is not a sufficient cause (Paternoster & Mazerolle 1994). Just because a youth is experiencing strain does not mean that the youth is going to deal with his or her unfortunate situation by engaging in delinquency. Strain can create a social milieu for the generation of delinquency to occur but it is not sufficient in all accounts.

There were three rationales for conducting this research. First, as there is a limited body of literature which tests Agnew’s GST, a goal of this research was to contribute to that body of knowledge. This was accomplished using the ADD Health database to test all three propositions of Agnew’s GST. A second rationale for this project was to provide an original avenue for testing Agnew’s GST. This was also accomplished by developing composite scale measures of Agnew's conceptualized sources of strain which can be found at the end of this dissertation in the Appendices. The final goal for this study was to provide additional information about the nature of juvenile delinquency, which may have policy and planning implications for curtailing the social phenomenon. While this study does provide significant support for Agnew’s GST, the magnitude of the reported correlations was weak, suggesting that additional research should be done utilizing original source data which will allow for a more in-depth measure of Agnew’s theory avoiding the problems of tautology and content validity.
While all of the hypotheses in this study were supported by the data, the relationships were weak, suggesting other indicators of strain might contribute to better models. This research has some shortcomings in that the survey was not designed to test the model; rather, a secondary data set was used. However, it does offer modest support for all facets of Agnew’s theory of strain.

Implications

There are several implications of this research study. First, this research adds to the theoretical and empirical support of general strain theory. Each proposition tested was substantiated and supported thereby lending support to efforts at the continued development of this theory. Second, this study also has implications since it is one of the first to utilize a data set for the purpose of developing a more complete test of Robert Agnew’s propositions found within his theory, which is a significant contribution. Third, this study also demonstrates the need for improved operationalization of the variables outlined in the theory. While Agnew proposes general causes of strain, it is unclear as yet how those variables should best be measured, and what indicators best elucidate his theory. Hypothetically there are a number of different indicators that could be used; further research is needed to narrow that scope.

Conclusions and Suggestions for Future Research

A number of avenues for future research can be used to build from this study. For example, future researchers could focus on different sub-groups such as ethnicity, socio-economic status, or even gender in testing the various propositions of Agnew’s GST with respect to juvenile delinquency. It may be that the dynamics of juvenile delinquency
significantly differ across these proposed control variables. It may be that different types of strain are relevant to different subgroups. Hence, future studies should determine if there are age, sex, class, race, and other subgroup differences in the impact of strain. Also, future studies should focus on whether subgroup differences exist in terms of juvenile delinquency.

Future studies should also explore in detail the ways in which strain, delinquency, and differential association/social learning theories are related to one another. As Agnew (1992) points out, strain may lead to low social control and association with delinquent peers thus producing delinquency. Further, delinquent behavior may sometimes lead to strain among youth as well. It may be that the independent variables are reciprocally related to one another and to delinquency. Most variables may interact with one another in affecting delinquency. So one might also expect different forms of delinquency interact in their effect on strain among youth. The focus of this research was not on the exploration of these complex relationships. The focus was on simply establishing the validity of general strain theory, rather than on developing a new, integrated model of delinquency.

Another important avenue for future research would be to collect an original data set with the sole purpose of testing the propositions of Agnew’s general strain theory. The Add Health data set was collected for the purposes of gaining information concerning adolescent health at the national level which may pose skewed data results. Most data sets contain only a small portion of the types of strain as described in Robert Agnew’s GST. It is even more difficult to find a crime/delinquency data set with
effective measures of negative stimuli such as anger and depression. It would be important to see if Agnew’s propositions continue to be empirically supported utilizing an original data set with the sole purpose of testing his theory. A final avenue to future research would be disaggregating the measures of delinquency. It could be that the strain measures have different effects on different kinds of delinquency.

This dissertation set out to test and explore the effects upon juvenile delinquency of different measures such as experiencing positive stimuli taken away, the introduction of negative stimuli and the experience of block goals as proposed by Agnew. Although this research provides modest support for Agnew’s general strain theory for explaining juvenile delinquency the results both support and raise questions about GST and some of its extensions. The crux of Robert Agnew’s general strain theory is the claim that he has set forth a general theory for explaining juvenile delinquency among youth. In his view, strain measures of the type described in general strain theory have a relatively substantial effect on delinquency. The validity of Agnew’s claim is strengthened to the extent that his hypotheses can be empirically related to deviant behavior utilizing the Add Health data set as performed in this research. Juvenile delinquency tended to be statistically related to strains associated with measures of failure to achieve goals, loss of valued objects, and introduction of stressful events. These findings underline the importance of Agnew's argument for cumulative strain measures and their effect upon delinquency (1995). These findings also raise questions regarding the theoretical link between juvenile delinquency and each element found within the constructed measures which need to be addressed in future research. For example within the loss of valued stimuli measure it...
would be interesting to look at the direct correlation between each element and the dependent variable of juvenile delinquency such as "How much do you feel that adults care for you?" "How much do you feel that friends care for you?" or "How much do you feel parents care for you?".

Finally taken together, the propositions of general strain theory, cumulative measures of failure to achieve goals, loss of valued objects and introduction of stressful events are all statistically significant predictors of juvenile delinquency in this study. This is more supportive than past research using only one or two cumulative measures of general strain theory as proposed by Robert Agnew (Aseltine, Gore & Gordon, 2000; Mazerolle et al., 2003).
APPENDIX A

JUVENILE DELINQUENCY SCALE
1.) In the past 12 months, how often did you paint graffiti or signs on someone else’s property or in a public place?

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>0</td>
<td>Never</td>
</tr>
<tr>
<td>1</td>
<td>1 or 2 Times</td>
</tr>
<tr>
<td>2</td>
<td>3 or 4 Times</td>
</tr>
<tr>
<td>3</td>
<td>5 or More Times</td>
</tr>
<tr>
<td>6</td>
<td>Refused</td>
</tr>
</tbody>
</table>

2.) In the past 12 months, how often did you deliberately damage property that didn’t belong to you?

<p>| | |</p>
<table>
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<tbody>
<tr>
<td>0</td>
<td>Never</td>
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<tr>
<td>1</td>
<td>1 or 2 Times</td>
</tr>
<tr>
<td>2</td>
<td>3 or 4 Times</td>
</tr>
<tr>
<td>3</td>
<td>5 or More Times</td>
</tr>
<tr>
<td>6</td>
<td>Refused</td>
</tr>
</tbody>
</table>

3.) In the past 12 months, how often did you lie to your parents or guardians about where you had been or whom you were with?

<p>| | |</p>
<table>
<thead>
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</tr>
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<tbody>
<tr>
<td>0</td>
<td>Never</td>
</tr>
<tr>
<td>1</td>
<td>1 or 2 Times</td>
</tr>
<tr>
<td>2</td>
<td>3 or 4 Times</td>
</tr>
<tr>
<td>3</td>
<td>5 or More Times</td>
</tr>
<tr>
<td>6</td>
<td>Refused</td>
</tr>
</tbody>
</table>

4.) How often did you take something from a store without paying for it?

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>0</td>
<td>Never</td>
</tr>
<tr>
<td>1</td>
<td>1 or 2 Times</td>
</tr>
<tr>
<td>2</td>
<td>3 or 4 Times</td>
</tr>
<tr>
<td>3</td>
<td>5 or More Times</td>
</tr>
<tr>
<td>6</td>
<td>Refused</td>
</tr>
</tbody>
</table>

5.) How did you get into a serious physical fight?

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Never</td>
</tr>
</tbody>
</table>
6.) How often did you hurt someone badly enough to need bandages or care from a doctor or nurse?

0  Never  
1  1 or 2 Times  
2  3 or 4 Times  
3  5 or More Times  
6  Refused  

7.) How often did you run away from home?

0  Never  
1  1 or 2 Times  
2  3 or 4 Times  
3  5 or More Times  
6  Refused  

8.) How often did you drive a car without its owner’s permission?

0  Never  
1  1 or 2 Times  
2  3 or 4 Times  
3  5 or More Times  
6  Refused  

9.) In the past 12 months, how often did you steal something worth more than $50?

0  Never  
1  1 or 2 Times  
2  3 or 4 Times  
3  5 or More Times  
6  Refused  

10.) How often did you go into a house or building to steal something?

0  Never
11.) How often did you use or threaten to use a weapon to get something from someone?

0   Never
1   1 or 2 Times
2   3 or 4 Times
3   5 or More Times
6   Refused

12.) How often did you sell marijuana or other drugs?

0   Never
1   1 or 2 Times
2   3 or 4 Times
3   5 or More Times
6   Refused

13.) How often did you steal something worth less than $50?

0   Never
1   1 or 2 Times
2   3 or 4 Times
3   5 or More Times
6   Refused

14.) In the past 12 months, how often did you take part in a fight where a group of your friends was against another group?

0   Never
1   1 or 2 Times
2   3 or 4 Times
3   5 or More Times
6   Refused

15.) In the past year, how often have you skipped school?

0   Never
1   1 or 2 Times
2   3 or 4 Times
16.) In the past year, how often have you carried a weapon to school?

0   Never
1   1 or 2 Times
2   3 or 4 Times
3   5 or More Times
6   Refused

17.) How often were you loud, rowdy, or unruly in a public place?

0   Never
1   1 or 2 Times
2   3 or 4 Times
3   5 or More Times
6   Refused
APPENDIX B
NEGATIVE STIMULI SCALE
During the past 12 months, how often did each of the following things happen?

1.) You saw someone shoot or stab another person.

   0 Never
   1 Once
   2 More than once
   6 Refused
   8 Don’t know
   9 Not applicable

2.) Someone pulled a knife or gun on you.

   0 Never
   1 Once
   2 More than once
   6 Refused
   8 Don’t know
   9 Not applicable

3.) Someone shot you.

   0 Never
   1 Once
   2 More than once
   6 Refused
   8 Don’t know
   9 Not applicable

4.) Someone cut or stabbed you.

   0 Never
   1 Once
   2 More than once
   6 Refused
   8 Don’t know
   9 Not applicable
5.) You got into a physical fight.

0 Never
1 Once
2 More than once
6 Refused
8 Don’t know
9 Not applicable

6.) You were jumped.

0 Never
1 Once
2 More than once
6 Refused
8 Don’t know
9 Not applicable

7.) You know most of the people in your neighborhood.

1 True
2 False
6 Refused
8 Don’t know
9 Not applicable

8.) Do you feel safe in your neighborhood?

1 No
2 Yes
6 Refused
8 Don’t Know

9.) On a whole, how happy are you with living in your neighborhood?

1 Not at all
2 Very little
3 Somewhat
4 Quite a bit
5 Very much
6 Refused
8 Don’t know

10.) If, for any reason, you had to move from here to some other neighborhood, how happy or unhappy would you be?

1 Very unhappy
2 A little unhappy
3 Wouldn’t make any difference
4 A little happy
5 Very happy
6 Refused
8 Don’t know

11.) In the past week, you felt depressed

0 Never or rarely
1 Sometimes
2 A lot of the time
3 Most of the time or all of the time
6 Refused
8 Don’t know

12.) In the past week, you thought your life had been a failure.

0 Never or rarely
1 Sometimes
2 A lot of the time
3 Most of the time or all of the time
6 Refused
8 Don’t know

13.) In the past week, you felt fearful.

0 Never or rarely
1 Sometimes
2 A lot of the time
3 Most of the time or all of the time
14.) You were happy.

0 Never or rarely
1 Sometimes
2 A lot of the time
3 Most of the time or all of the time
6 Refused
8 Don’t know

15.) You felt lonely.

0 Never or rarely
1 Sometimes
2 A lot of the time
3 Most of the time or all of the time
6 Refused
8 Don’t know

16.) In the past week, you felt people were unfriendly to you.

0 Never or rarely
1 Sometimes
2 A lot of the time
3 Most of the time or all of the time
6 Refused
8 Don’t know

17.) In the past week, you enjoyed life.

0 Never or rarely
1 Sometimes
2 A lot of the time
3 Most of the time or all of the time
6 Refused
8 Don’t know
18.) In the past week, you felt sad.

0 Never or rarely
1 Sometimes
2 A lot of the time
3 Most of the time or all of the time
6 Refused
8 Don’t know

19.) In the past week, you felt that people disliked you.

0 Never or rarely
1 Sometimes
2 A lot of the time
3 Most of the time or all of the time
6 Refused
8 Don’t know

20.) In the past week, you felt life was not worth living.

0 Never or rarely
1 Sometimes
2 A lot of the time
3 Most of the time or all of the time
6 Refused
8 Don’t know
APPENDIX C
LOSS OF VALUED OBJECT SCALE
1.) How much do you feel that adults care about you?

1  Not at all
2  Very little
3  Somewhat
4  Quite a bit
5  Very much
6  Does not apply
7  Refused
8  Don’t know

2.) How much do you feel that your teachers care about you?

1  Not at all
2  Very little
3  Somewhat
4  Quite a bit
5  Does not apply
6  Refused
98 Don’t know

3.) How much do you feel that your parents care about you?

1  Not at all
2  Very little
3  Somewhat
4  Quite a bit
5  Does not apply
6  Refused
98 Don’t know
4.) How much do your friends care about you?

1  Not at all
2  Very little
3  Somewhat
4  Quite a bit
5  Very much
6  Does not apply
96 Refused
98 Don't know

5.) How much do you feel that people in your family understand you?

1  Not at all
2  Very little
3  Somewhat
4  Quite a bit
5  Very much
6  Does not apply
96 Refused
98 Don’t know

6.) How much do you feel that you and your family have fun together?

1  Not at all
2  Very little
3  Somewhat
4  Quite a bit
5  Very much
7.) How much do you feel that your family pays attention to you?

1 Not at all
2 Very little
3 Somewhat
4 Quite a bit
5 Very much
6 Does not apply
96 Refused
98 Don’t know

8.) Have you ever received an out-of-school suspension from school?

0 No
1 Yes
6 Refused
8 Don’t know
9 Missing

9.) Have you ever been expelled from school?

0 No
1 Yes
6 Refused
8 Don’t know
9 Missing
For the following questions:

[If School Year] Since school started this year, how often have you had trouble:

[If Summer] During the 1994-1995 school year, how often did you have trouble:

10.) Getting along with your teachers?

- 0 Never
- 1 Just a few times
- 2 About once a week
- 3 Almost everyday
- 4 Everyday
- 6 Refused
- 7 Legitimate skip
- 8 Don’t know

11.) Getting along with other students?

- 0 Never
- 1 Just a few times
- 2 About once a week
- 3 Almost everyday
- 4 Everyday
- 6 Refused
- 7 Legitimate skip
- 8 Don’t know
12.) How much do you agree or disagree with the following statements:
[If school year] You feel close to people at your school.
[If summer] Last year, you felt close to people at your school.

1 Strongly agree
2 Agree
3 Neither agree nor disagree
4 Disagree
5 Strongly disagree
6 Refused
7 Legitimate skip
8 Don’t know

13.) How much do you agree or disagree with the following:
[If school year] You felt you are part of your school.
[If summer] Last year, you felt you were part of your school.

1 Strongly agree
2 Agree
3 Neither agree nor disagree
4 Disagree
5 Strongly disagree
6 Refused
7 Legitimate skip
8 Don’t know
14.) How much do you agree or disagree with the following:
[If school year] You are happy to be at your school.
[If summer] Last year, you were happy to be at your school.

1 Strongly agree
2 Agree
3 Neither agree nor disagree
4 Disagree
5 Strongly disagree
6 Refused
7 Legitimate skip
8 Don’t know
APPENDIX D
BLOCKAGE OF GOAL(S) SCALE
1.) On a scale of 1 to 5, where 1 is low and 5 is high, how much do you want to go to college?

1 1
2 2
3 3
4 4
5 5
6 Refused
8 Don’t Know

2.) On a scale of 1 to 5, where 1 is low and 5 is high, how likely is it that you will go to college.

1 1
2 2
3 3
4 4
5 5
6 Refused
8 Don’t Know
9 Not applicable

3.) What are the chances of the following happening to you?
You will be killed by age 21.

1 Almost no chance
2 Some chance, but not probably
3 A 50-50 chance
4. What are the chances of the following happening to you?
You will get HIV or AIDS.

1 Almost no chance
2 Some chance, but not probably
3 A 50-50 chance
4 A good chance
5 Almost certain
6 Refused
8 Don’t know

5.) What are the chances that you will be married by age 25?

1 Almost no chance
2 Some chance, but not probably
3 A 50-50 chance
4 A good chance
5 Almost certain
6 Refused
8 Don’t know

6.) What are the chances that you will live to the age of 25?

1 Almost no chance
2 Some chance, but not probably
3 A 50-50 chance
4 A good chance
5 Almost certain
6 Refused
8 Don’t know
APPENDIX E

JUVENILE DELINQUENCY SCALE
### Distribution of Juvenile Delinquency Scale (N = 6,503) (Cronbach’s alpha = .73)

<table>
<thead>
<tr>
<th>Question</th>
<th>Not at All</th>
<th>1 or 2 Times</th>
<th>3 or 4 Times</th>
<th>5 or More Times</th>
</tr>
</thead>
<tbody>
<tr>
<td>In the past 12 months, how often did you hurt someone badly enough to need bandages or care from a doctor or nurse?</td>
<td>4,959</td>
<td>849</td>
<td>134</td>
<td>111</td>
</tr>
<tr>
<td>In the past 12 months, how often did you use or threaten to use a weapon to get something from someone?</td>
<td>5,817</td>
<td>215</td>
<td>65</td>
<td>143</td>
</tr>
<tr>
<td>In the past 12 months, how often did you take part in a fight where a group of your friends was against another group?</td>
<td>4,901</td>
<td>900</td>
<td>138</td>
<td>114</td>
</tr>
<tr>
<td>In the past twelve months how often did you get into a serious physical fight?</td>
<td>4,135</td>
<td>1,382</td>
<td>300</td>
<td>236</td>
</tr>
<tr>
<td>In the past 12 months, how often have you painted graffiti or a sign on someone else’s property or in a public place?</td>
<td>5,543</td>
<td>370</td>
<td>76</td>
<td>64</td>
</tr>
<tr>
<td>In the past 12 months, how often have you deliberately damaged property that didn’t belong to you?</td>
<td>4,985</td>
<td>847</td>
<td>129</td>
<td>92</td>
</tr>
<tr>
<td>In the past 12 months, how often did you lie to your parents or guardians about where you had been or whom you were with?</td>
<td>2,876</td>
<td>1,786</td>
<td>613</td>
<td>778</td>
</tr>
<tr>
<td>In the past 12 months, how often did you take something from a store without paying for it?</td>
<td>4,684</td>
<td>866</td>
<td>211</td>
<td>292</td>
</tr>
<tr>
<td>In the past 12 months how often did you drive a car without its owner’s permission?</td>
<td>5,470</td>
<td>387</td>
<td>57</td>
<td>41</td>
</tr>
<tr>
<td>In the past 12 months, how often did you steal something worth more than $50?</td>
<td>5,753</td>
<td>202</td>
<td>47</td>
<td>51</td>
</tr>
<tr>
<td>In the past 12 months, how often did you go into a house or building to steal something?</td>
<td>5,766</td>
<td>199</td>
<td>45</td>
<td>43</td>
</tr>
<tr>
<td>In the past 12 months, how often did you sell marijuana or other drugs?</td>
<td>5,630</td>
<td>215</td>
<td>65</td>
<td>143</td>
</tr>
<tr>
<td>In the past 12 months, how often did you steal something worth less than $50?</td>
<td>4,941</td>
<td>701</td>
<td>145</td>
<td>266</td>
</tr>
<tr>
<td>In the past 12 months, how often did you steal something worth less than $50?</td>
<td>4,941</td>
<td>701</td>
<td>145</td>
<td>266</td>
</tr>
<tr>
<td>Question</td>
<td>None</td>
<td>1 Day</td>
<td>2 or 3 Days</td>
<td>4 or 5 Days</td>
</tr>
<tr>
<td>------------------------------------------------------------------------</td>
<td>------</td>
<td>-------</td>
<td>-------------</td>
<td>-------------</td>
</tr>
<tr>
<td>In the past 12 months, how often did you lie to your parents or guardians about where you had been or whom you were with?</td>
<td>2,876</td>
<td>1,786</td>
<td>613</td>
<td>778</td>
</tr>
<tr>
<td>In the past 12 months, how often did you run away from home?</td>
<td>5,568</td>
<td>387</td>
<td>57</td>
<td>41</td>
</tr>
<tr>
<td>In the past 12 months, how often did you sell marijuana or other drugs?</td>
<td>5,630</td>
<td>215</td>
<td>65</td>
<td>143</td>
</tr>
<tr>
<td>In the past 12 months, how often were you loud, rowdy, or unruly in a public place?</td>
<td>3,201</td>
<td>1,954</td>
<td>471</td>
<td>427</td>
</tr>
<tr>
<td>In the past month, how often did you carry a weapon to school?</td>
<td>5,690</td>
<td>149</td>
<td>80</td>
<td>25</td>
</tr>
<tr>
<td>In the past 12 months, how often have you skipped school?</td>
<td>2,876</td>
<td>1,786</td>
<td>613</td>
<td>778</td>
</tr>
</tbody>
</table>
APPENDIX F

NEGATIVE STIMULI SCALE
### Negative Stimuli Scale (N = 6,503) (Cronbach’s alpha = 76)

<table>
<thead>
<tr>
<th>Question</th>
<th>Never</th>
<th>Once</th>
<th>More Than Once</th>
</tr>
</thead>
<tbody>
<tr>
<td>During the past 12 months, you saw someone shoot or stab another person</td>
<td>5,333</td>
<td>528</td>
<td>192</td>
</tr>
<tr>
<td>During the past 12 months, someone pulled a knife or gun on you.</td>
<td>5,302</td>
<td>602</td>
<td>149</td>
</tr>
<tr>
<td>During the past 12 months, someone shot you.</td>
<td>5,980</td>
<td>63</td>
<td>10</td>
</tr>
<tr>
<td>During the past 12 months, someone cut or stabbed you</td>
<td>5,764</td>
<td>253</td>
<td>35</td>
</tr>
<tr>
<td>During the past 12 months, you got into a physical fight.</td>
<td>4,154</td>
<td>1128</td>
<td>771</td>
</tr>
<tr>
<td>During the past 12 months, you were jumped.</td>
<td>5,400</td>
<td>506</td>
<td>147</td>
</tr>
<tr>
<td>Question</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>If for any reason, you had to move from here to some other neighborhood, how happy or unhappy would you be?</td>
<td>1,522</td>
<td>1,701</td>
<td>1,738</td>
</tr>
<tr>
<td>Question</td>
<td>Never or Rarely</td>
<td>Sometimes</td>
<td>A Lot of the Time</td>
</tr>
<tr>
<td>In the past week, you felt depressed</td>
<td>3,748</td>
<td>1,729</td>
<td>405</td>
</tr>
<tr>
<td>In the past week, you thought your life had been a failure</td>
<td>5,134</td>
<td>701</td>
<td>147</td>
</tr>
<tr>
<td>In the past week, you felt fearful</td>
<td>4,416</td>
<td>1,435</td>
<td>144</td>
</tr>
<tr>
<td>In the past week, you were happy</td>
<td>149</td>
<td>1,129</td>
<td>2,518</td>
</tr>
<tr>
<td>In the past week, you felt lonely</td>
<td>3,896</td>
<td>1,672</td>
<td>363</td>
</tr>
<tr>
<td>In the past week, you felt people were unfriendly to you</td>
<td>4,030</td>
<td>1,718</td>
<td>203</td>
</tr>
<tr>
<td>In the past week, you enjoyed life</td>
<td>229</td>
<td>941</td>
<td>1,905</td>
</tr>
<tr>
<td>In the past week, you felt sad</td>
<td>3,184</td>
<td>2,463</td>
<td>300</td>
</tr>
<tr>
<td>In the past week, you felt that people disliked you</td>
<td>3,982</td>
<td>1,731</td>
<td>245</td>
</tr>
<tr>
<td>In the past week, you felt life was not worth living</td>
<td>5,371</td>
<td>503</td>
<td>130</td>
</tr>
<tr>
<td>Question</td>
<td>True</td>
<td>False</td>
<td></td>
</tr>
<tr>
<td>You know most people in your neighborhood</td>
<td>4,477</td>
<td>1,576</td>
<td></td>
</tr>
<tr>
<td>Question</td>
<td>No</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Do you feel safe in your neighborhood?</td>
<td>606</td>
<td>5,447</td>
<td></td>
</tr>
<tr>
<td>Question</td>
<td>Not at all</td>
<td>Very Little</td>
<td>Somewhat</td>
</tr>
<tr>
<td>On a whole, how happy are you with living in your neighborhood?</td>
<td>178</td>
<td>335</td>
<td>1,281</td>
</tr>
</tbody>
</table>
APPENDIX G

LOSS OF POSITIVE STIMULI SCALE
### Loss of Positive Stimuli Scale (N = 6,503) (Cronbach’s alpha = .68)

<table>
<thead>
<tr>
<th>Question</th>
<th>Not at all</th>
<th>Very Little</th>
<th>Somewhat</th>
<th>Quite a bit</th>
<th>Very Much</th>
</tr>
</thead>
<tbody>
<tr>
<td>How much do you feel that adults care about you?</td>
<td>48</td>
<td>129</td>
<td>607</td>
<td>1,879</td>
<td>3,379</td>
</tr>
<tr>
<td>How much do you feel that your teachers care about you?</td>
<td>167</td>
<td>572</td>
<td>1,928</td>
<td>2,122</td>
<td>1,261</td>
</tr>
<tr>
<td>How much do you feel that your parents care about you?</td>
<td>34</td>
<td>114</td>
<td>760</td>
<td>2,532</td>
<td>2,607</td>
</tr>
<tr>
<td>How much do your friends care about you?</td>
<td>167</td>
<td>572</td>
<td>1,928</td>
<td>2,122</td>
<td>1,261</td>
</tr>
<tr>
<td>How much do you feel that people in your family understand you?</td>
<td>146</td>
<td>526</td>
<td>1,554</td>
<td>2,243</td>
<td>1,575</td>
</tr>
<tr>
<td>How much do you feel that you and your family have fun together?</td>
<td>73</td>
<td>351</td>
<td>1,305</td>
<td>2,466</td>
<td>1,850</td>
</tr>
<tr>
<td>How much do you feel that your family pays attention to you?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Question</th>
<th>No</th>
<th>Yes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Have you ever received an out-of-school suspension from school?</td>
<td>5,795</td>
<td>258</td>
</tr>
<tr>
<td>Have you ever been expelled from school?</td>
<td>5,780</td>
<td>273</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Question</th>
<th>Never</th>
<th>Just a Few Times</th>
<th>About Once a Week</th>
<th>Almost Everyday</th>
<th>Everyday</th>
</tr>
</thead>
<tbody>
<tr>
<td>[If School Year] Since school started this year, how often have you had trouble:</td>
<td>2,388</td>
<td>2,619</td>
<td>545</td>
<td>326</td>
<td>175</td>
</tr>
<tr>
<td>[If Summer] During the 1994-1995 school year, how often did you have trouble:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Getting along with your teachers?</td>
<td>2,387</td>
<td>2,708</td>
<td>489</td>
<td>277</td>
<td>191</td>
</tr>
<tr>
<td>Getting along with other students?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Question</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neither Agree nor Disagree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>How much do you agree or disagree with the following:</td>
<td>1,615</td>
<td>2,881</td>
<td>833</td>
<td>530</td>
<td>194</td>
</tr>
<tr>
<td>How much do you agree or disagree with the following:</td>
<td>1,517</td>
<td>2,500</td>
<td>1,027</td>
<td>657</td>
<td>352</td>
</tr>
</tbody>
</table>
APPENDIX H
FAILURE TO ACHIEVE GOALS SCALE
### Failure to Achieve Goals Scale (N = 6,503) (Cronbach’s Alpha = .79)

<table>
<thead>
<tr>
<th>Question</th>
<th>Low</th>
<th>Low Medium</th>
<th>Medium</th>
<th>Medium High</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>On a scale of 1 to 5, where 1 is low and 5 is high, how much do you want to go to college?</td>
<td>193</td>
<td>159</td>
<td>605</td>
<td>800</td>
<td>4,296</td>
</tr>
<tr>
<td>On a scale of 1 to 5, where 1 is low and 5 is high, how likely is it that you will go to college?</td>
<td>65</td>
<td>135</td>
<td>629</td>
<td>1,828</td>
<td>3,398</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Question</th>
<th>Almost no Chance</th>
<th>Some Chance, but not probably</th>
<th>A 50-50 Chance</th>
<th>A Good Chance</th>
<th>Almost Certain</th>
</tr>
</thead>
<tbody>
<tr>
<td>What are the chances you will be killed by age 21?</td>
<td>3,200</td>
<td>1,939</td>
<td>816</td>
<td>64</td>
<td>34</td>
</tr>
<tr>
<td>What are the chances that you will get HIV or AIDS?</td>
<td>3,779</td>
<td>1,638</td>
<td>572</td>
<td>43</td>
<td>21</td>
</tr>
<tr>
<td>What are the chances that you will be married by age 25?</td>
<td>549</td>
<td>135</td>
<td>2,104</td>
<td>1,802</td>
<td>730</td>
</tr>
<tr>
<td>What are the chances that you will live to age of 25?</td>
<td>65</td>
<td>135</td>
<td>629</td>
<td>1,828</td>
<td>3,398</td>
</tr>
</tbody>
</table>
APPENDIX I

DATA USE STATEMENT
This research uses data from Add Health, a program project designed by J. Richard Udry, Peter S. Bearman, and Kathleen Mullan Harris, and funded by a grant P01-HD31921 from the National Institute of Child Health and Human Development, with cooperative funding from 17 other agencies. Special acknowledgment is due Ronald R. Rindfuss and Barbara Entwisle for assistance in the original design. Persons interested in obtaining data files from Add Health should contact Add Health, Carolina Population Center, 123 W. Franklin Street, Chapel Hill, NC 27516-2524 (addhealth@unc.edu).

Signed data use agreement is on file with Dr Patti Hamilton, Director, Center for Nonlinear Science, Texas Woman’s University.
REFERENCES


