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HIGH SCHOOL AGGRESSION: A SOCIAL LEARNING ANALYSIS

A dissertation submitted to the
Division of Graduate Studies and Research
of the University of Cincinnati

in partial fulfillment of the
requirements for the degree of

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in the Division of Criminal Justice
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by

Stephen Michael Haas

B.A., Ohio State University, 1990

M.S., University of Cincinnati, 1993

Committee: Patricia Van Voorhis (Chair)
Francis T. Cullen
Paul Mazerolle
Joseph Zins
I, Stephen Michael Haas

hereby submit this as part of the requirements for the degree of:

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Approved by:

Patricia Van Veghel (chair)

Paul Myres

Joseph E. Zins

Francis T. Cullen
Abstract

High school aggression and violence has become one of the foremost problems facing school administrators and public officials in the United States. Yet, despite high levels of aggressive and violent behaviors in high schools, many school districts continue to rely on expensive short-term and poorly conceptualized policies and programs to address the problem of school violence. Using Albert Bandura's social learning theory of aggression as a framework, this study identifies and organizes the most pertinent empirical correlates of adolescent aggression and school violence in a manner useful for properly conceptualizing the problem of high school aggression and violence. The sample consists of 1,974 urban high school students across two school districts in central and southern California. A self-report questionnaire is used to measure the central concepts of social learning theory and empirically supported personality constructs using a combination of newly developed scales, pre-existing measures found in the National Youth Survey (NYS), and widely accepted measures of low-self control. Multivariate analysis is used to determine the significance of various social learning variables on self-reported school violence, school aggression, instrumental school aggression, and school vandalism and delinquency. The results indicate that a substantial percentage of high school students have participated in at least one aggressive, violent, and delinquent behavior in school during the past two years. Although a substantial percentage of students report some participation in acts of school violence, school aggression, and school vandalism and delinquency, most students engage in less serious forms of each school behavior and do so on a rather infrequent basis. In addition, the findings support Bandura's social learning theory of aggression as a valuable tool for identifying and explaining the specific learning, instigating, and maintaining mechanisms that are at work in high schools. Social learning theory accounted for more than thirty percent of the explained variation in school violence and school aggression and twenty-one percent of the explained variation in school vandalism and delinquency and sixteen percent in instrumental school aggression. The findings further indicate that personality offers a significant contribution to a social learning explanation of goal-oriented forms of school aggression and school vandalism and delinquency.
Acknowledgements

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Chapter 1

Introduction

Perhaps there is no greater problem facing our nation today than school violence. The recent tragedies experienced by the communities of Springfield, Oregon; Edinboro, Pennsylvania; Jonesboro, Arkansas; West Paducah, Kentucky; Pearl, Mississippi; Littleton, Colorado and others have brought the issue of school violence to the forefront of national discussions. Although these tragic events are rare, it is clear that schools are faced with a serious problem that has forced school administrators and policy-makers to refocus their attention on the issues of school crime and safety.

In 1994, serious injuries or deaths from violence at school occurred in 25 percent of the 700 American cities surveyed by the National League of Cities (NLC). The Northwest Educational Laboratory (1994) reports that school-related shootings or hostage situations occurred in 35 states and the District of Columbia. During the 1996-1997 school year, one in ten schools reported at least one serious violent crime (e.g., murder, rape or other type of sexual battery, suicide, physical attack or fight with a weapon, or robbery) to police or other law enforcement officials (U.S. Department of Education 1998). Moreover, nearly one-quarter of public school students (24%) were a victim of a violent act that occurred in or around school in 1998 (Harris and Associates 1999). Many of these more serious, but less prevalent episodes of violence tend to be a product of readily available weapons permeating American high schools. According to a survey sponsored by Metropolitan Life Insurance Company, one in eight students have admitted to carrying a weapon to school (Harris and Associates 1999). It is estimated that 270,000 guns go undetected to school everyday (Toch and Gest 1993).
Much more prevalent are acts of aggression typified by bullying, intimidation, and physical assaults. An estimated 190,000 physical attacks or fights without a weapon were reported for the 1996-1997 school year (U.S. Department of Education 1998). In 1998, nearly four in ten public school students (37%) admitted to pushing, shoving, grabbing or slapping someone else in or around school (Harris and Associates 1999). A recent nationwide survey conducted by the Centers for Disease Control and Prevention found that nearly fifteen percent of students had been in a physical fight on school property one or more times during the previous 12 months. According to Sheley, McGee, and Wright (1998), approximately twenty percent of inner-city school students have been assaulted in school and nearly half of those students assaulted have experienced multiple victimizations.

These acts of aggression tend to threaten the physical safety and psychological security of both teachers and students (Morrison, Furlong, and Morrison 1994). Meanwhile, these and other inappropriate behaviors seriously disturb the normal functioning of the classroom and the school (Kaufman, Chen, Choy, Chandler, Chapman, Rand, and Ringle 1998; U.S. Department of Education 1998). As Elliott, Hamburg, and Williams (1998:9) state:

The fear and trauma in the nation’s schools are having an impact on the entire school context and all students in these context: on teaching practices; children’s readiness and capacity for learning; hiring and retention of teachers, administrators, and other school staff; the openness and accessibility of the campus; student rights to privacy; the physical building and grounds; and the quality of the learning environment more generally.

As a consequence, it is clear that the actual level of school violence and the fear it produces has considerably changed the daily operation of schools (Price and Everett 1997). Many school districts have resorted to expensive short-term policies and strategies to curb the rate of student and teacher altercations. In some cases, countless dollars are being spent to
secure the safety of staff and students in our nation’s schools (Dodge 1992). Monetary resources that should be used for instructional materials, staff development, and other educational necessities are spent instead on: “get tough” or “zero tolerance” disciplinary policies (North Carolina Department Governor’s Crime Commission 1993; South Carolina Department of Education 1993) and enhanced security forces and technical devices (Bushweller 1994).

The prevalence of youth violence in both society and school has prompted professionals from various disciplines to critically re-examine the root causes of violence and to urge governmental policy-makers and school administrators to find and implement effective violence prevention programs (Hawkins, Farrington, and Catalano 1998). Although violence has traditionally been viewed as a problem for the justice system, the U.S. Surgeon General and the U.S. Public Health Service re-conceptualized violence as a “behavioral disease” in 1980 (Centers for Disease Control and Prevention 1985; Coben, Weiss, Mulvey, and Dearwater 1994; Hamburg 1998; U.S. Public Health Service 1980). As a result, many educators and administrators, recognizing the expense of many short-term solutions and acknowledging violence as a public health problem, are seeking knowledge from the behavioral sciences to address the problem of youth violence (Hamburg 1998; Rosenberg, O’Carroll, and Powell 1992; Satcher 1995).

School Violence: The Empirical Findings

When we examine the research on adolescent aggression, however, we note that, notwithstanding decades of research on adolescent aggression, extant knowledge is not entirely
beneficial to a thorough understanding of school aggression. The research yields an enormous amount of information regarding the acquisition, the instigation, and the maintenance of aggressive and violent behaviors (Andrews and Bonta 1994; 1999; Bandura 1973; Huesmann, Eron, Lefkowitz, and Walder 1984). However, few studies systematically apply this knowledge in a manner that promotes an enhanced empirical understanding of high school aggression.

**Adolescent Aggression and Violence**

Empirical research continues to generate multiple correlates or risk factors associated with the nature and cause of adolescent aggression, but not for the context of high schools. Macrolevel variables such as the accessibility of weapons, the availability and use of illegal drugs, violence in the media, and involvement with antisocial peers are often useful for understanding societal risk factors of youth violence (Eron, Gentry, and Schlegel 1994; Howell 1998; Howell, Krisberg, Hawkins, and Wilson 1995; Hawkins and Catalano 1993; Reiss and Roth 1993). Likewise, individual risk factors of adolescent aggression including the display of persistent antisocial behavior, academic failure, and the tendency to evaluate aggressive behaviors as having positive outcomes, provide a favorable microlevel rationale for adolescent aggression in general (Caspi, Moffitt, Silva, Stouthamer-Loeber, Krueger, and Schmutte 1994; Dodge and Coie 1987; Farrington 1989; Huesmann et al. 1984; Huizinga, Loeber, and Thornberry 1995; Loeber and Hay 1994; Loeber, Stouthamer-Loeber, Green 1991; Maguin and Loeber 1996; Perry, Perry, Rasmussen 1986; Yoshikawa 1994). Meanwhile, youth who are impulsive, show attention problems, have impaired social skills, have poor relationships with peers and adults, and experience academic failure, are often prone to generalized sources
of frustration and aggressive behavior (Loeber 1988; Loeber and Dishion 1983).

Empirical research clearly depicts aggression as a learned behavior that remains rather stable over time. Children whose parents are aggressive and who witness or are victims of violence in the home are more likely to become aggressive and violent themselves in adolescence and young adulthood (e.g., Huizinga, Loeber, and Thornberry 1995; Farrington 1991; McCord 1988; Patterson, Capaldi, and Bank 1991; Salzinger, Feldman, and Hammer 1993; Smith and Thornberry 1995). Farrington (1991) found that violent adult offenders are more likely than other adults to have experienced poor parental childrearing methods, poor supervision, physical abuse, neglect, and separations from their parents when they were children. While vital for identifying childhood precursors related to common adolescent aggression, these findings provide negligible insight into how these factors may come together to explain high school aggression. A disproportionate amount of aggression research carefully assesses pre-adolescent and childhood samples while neglecting youth and the high school setting (e.g., Coie and Kupersmidt 1983; Coie, Underwood, and Lochman 1991; Dodge 1983; Dodge and Crick 1990; Huesmann and Eron 1986; Olweus 1980; 1991; Shinn, Ramsey, Walker, and Stieber 1987). As a result, researchers must often speculate on the relative importance of many childhood precursors for understanding adolescent aggression, particularly in the context of high schools.² This research seeks to conceptualize adolescent aggression in a theoretical manner and to operationalize commonly accepted risk factors for the context of high schools.
Correlates of School Aggression and Violence

Studies of school aggression and violence rarely aspire to demonstrate the theoretical relevance of their findings. School violence research offers several factors presumed to be associated with in-school victimization, fear of victimization and the prevalence of school aggression and violence. Yet, most comprehensive studies on school violence have failed to go beyond mere description of the problem (see American School Health Association 1989; Bastian and Taylor 1991; Centers for Disease Control and Prevention 1991; 1998; Center to Prevent Handgun Violence 1990; Chandler et al. 1998; Kaufman et al. 1998; Harris and Associates 1999; National Institute of Education 1978; Sheley and Wright 1995; 1998; U.S. Department of Education 1998). These studies only present estimates of the incidence and the prevalence of weapon possession, student-teacher altercations, student-student assaults, and perceptions of fear among high school students.

Despite the lack of theoretical insight into the problem of school violence, between school and across community comparisons suggests some variability in prevalence rates. It appears that the surrounding community may exert a strong, independent influence on the prevalence of violence in high schools (Hellman and Beaton 1986). The societal and communal factors contributing to perceptions of victimization and rates of school violence include: a) living in economically disadvantaged and violent neighborhoods (Dodge 1992; Hellman and Beaton 1986; Laub and Lauritsen 1998); b) attending public rather than private schools (Bastian and Taylor 1991; Bureau of Justice Statistics 1992; Chandler, Chapman, Rand, and Taylor 1998; Kaufman, Chen, Choy, Chandler, Chapman, Rand, and Ringle 1998); and c) attending urban rather than suburban schools (Bastian and Taylor 1991; Bureau of
Justice Statistics 1992; National School Boards Association 1993). Likewise, students in schools where drugs are available are twice as likely to fear an attack at school than students where drugs are not available (Bastian and Taylor 1991; Bureau of Justice Statistics 1992). As a result, the theoretical explanations and empirical factors contributing to the nature and the extent of school violence may vary across school and community contexts.

Another body of research identifies such school characteristics as: a) a relatively high number of students occupying a limited amount of space, thereby, impairing the school’s capacity to avoid student confrontations; b) the imposition of rigid behavioral routines and conformity that contribute to feelings of anger, resentment, and rejection; and c) poor building design features which are associated with elevated levels of aggression, violence, and disruptive behavior (American Psychological Association 1993; Frude and Gault 1984; Pratt 1973; Stephenson and Smith 1989; Toby 1994). Gottfredson and Gottfredson (1985; 1989) postulate that school attributes (e.g., lack of community support, larger school size, physical features) and governance conditions (e.g., poor teacher-administrator cooperation, inactive administrations, autocratic rules, strict disciplinary procedures, an emphasis on grades versus mastery, limited curriculum options) are often associated with higher levels of school violence and school disorder.

At the microsocial level, many acts of school violence and aggression among youth appear to be precipitated by seemingly trivial incidents, such as petty insults, menacing looks, or minor scuffles (Lockwood 1997; Olweus 1991). Research indicates that violence typically takes place as the result of an argument, and the students involved tend to know each other (Lockwood 1997; National Institute of Education 1978). Not surprisingly, difficulty in peer relations at school is often found to increase the probability of adolescent violence (Dodge
1992). The Center to Prevent Handgun Violence (1990) found the following reasons for school gun violence: gang or drug disputes (18%); longstanding arguments (15%); romantic disagreements (12%); fights over possessions (10%); and accidents (13%).

Some individuals tend to be increasingly prone to use aggression and violence for solving disputes and for obtaining desired outcomes (Felson 1993; Felson and Tedeschi 1995). Hence, there appears to be an individual component to school aggression and other school behaviors. For instance, Welsh, Greene, and Jenkins (1999) recently found that individual student characteristics such as student effort, belief in rules, and positive peer associations exert stronger influences on school misconduct in middle schools than institutional and community level variables. Likewise, other studies on school delinquency and school misconduct have found age, gender, and race to be relevant factors behaviors (Gottfredson 1984; Kazdin 1987; and Lawrence 1998). Nonetheless, for school aggression and violence, students most likely to exhibit aggressive and violent behavior typically come from families with high levels of conflict, have difficulty with peer relationships, and have experienced academic failure (Huizinga, Loeber, and Thornberry 1995; Maguin and Loeber 1996; Patterson 1982; Patterson, Reid, and Dishion 1992). Aggressive students tend to have a history of antisocial behavior, be highly impulsive, and to attribute baseless hostile intentions to others (Dodge 1980; Dodge and Crick 1990). Some research suggest that students who display aggressive and other inappropriate behaviors may experience higher levels of generalized frustration than other students (Hutton 1985). Frustration may be a product of poor peer or teacher relations, family conflict, academic failure, or a host of other events important to adolescent students.
School Violence: Limitations of Research

Though useful for documenting the actual problem of school violence, these studies simply do not contribute to a theoretical understanding of high school aggression. Most researchers agree that the school plays an important role in the development of aggressive and violent behaviors (Elliott and Voss 1974; Farrington 1989; Griffin 1987; Hawkins, Lishner, Jenson, and Catalano 1987; Huizinga, Loeber, and Thornberry 1995; Kazdin 1985; Loeber 1985; Wahler and Dumas 1986). However, few studies provide a thorough theoretical explanation for the apparent relationship between the prevalence of high school aggression and differences among urban and suburban districts, school attributes, governance conditions, peer relations, and individual attributes. This shortage of theoretically-guided research has produced an array of correlates absent substantive meaning, thereby, promoting a flawed conceptual understanding of high school aggression. The end result, is the development of poorly designed, abstract, and speculative prevention and intervention efforts ill-equipped to counter school aggression and violence.

The application of theoretical paradigms is essential for a comprehensive understanding of aggressive and violent behavior (Hawkins, Farrington, and Catalano 1998). Theoretical models: 1) provide both professionals and practitioners with an important conceptual framework for developing effective school prevention programs; 2) they help isolate the pivotal variables that augment the performance of aggressive and violent acts; 3) they identify and present a rationale for why particular risk factors are important (i.e., show us how and why the risk factors are important); and 4) they help specify how these risk factors should be addressed in the context of school prevention and intervention programs. For example, proper
identification and conceptualization of risk factors present in the domain of high schools can enhance the effectiveness of school-based conflict resolution programs and violence prevention curricula. From a social learning perspective, for example, school-based sources of frustration, reinforcement contingencies, or student beliefs about aggression, and others may represent risk factors. Theoretically-derived research would provide program administrators with a clear rationale for why these school-based risk factors are important and how these correlates should be addressed in the high school setting.

The American Psychological Association (1993) has recommended the implementation of tested theoretical strategies to reduce risk factors leading to antisocial behavior. Likewise, in recognition of the dilemma that violence has created for both schools and communities, the Comprehensive Health Education Foundation (1994:11) states:

Because the problem is complex, because the solutions are complex, we believe that schools and communities need a theoretical model to provide a rationale for a wide range of activities, a theoretical model of a violence prevention program that is applicable on many different levels -- the school, the family, the youth-service agency, the media, and so on.

A theoretical model targeting school aggression must accurately conceptualize the problem and encompass the most current empirical findings to identify the mechanisms that contribute to the causation of high school aggression. As Haroutunian (1986: 120) explains, "the continuing dilemma of aggression in schools is attributable in large part to inadequate perspective and faulty conceptualization of the problem."
Social Learning and School Aggression

Based upon the empirical facts presented in this document, social learning theory appears to provide a valuable theoretical framework for identifying and organizing the factors associated with high school aggression and violence. As will be seen in a more detailed review (see Chapters 2 and 3), social learning theory allows for the examination of both person-oriented and situation-oriented contributors to aggression as well as the cognitive mechanisms that mediate this relationship.

In addition, social learning provides a theoretical understanding of those factors that contribute to the acquisition, instigation, and maintenance of aggressive behaviors (Bandura 1973; 1977). In a social learning paradigm, individuals learn to be aggressive through modeling influences provided by parents, peers, and subculture (Bandura and Ross 1963; 1996; Meichenbaum 1977; Straus, Gelles, and Steinmetz, 1980). Children who grow up in violent homes not only suffer frustration and deprivation but are continually exposed to the modeling of aggression as a "normal" behavior (Patterson 1982; Patterson, Reid, and Dishion 1992). Outside the family, a person's peers and immediate environment may contribute to the acquisition and maintenance of aggressive behavior (Bandura 1973; 1977; 1996; Domjan and Burkard 1986; Matsueda and Anderson 1998; Warr 1996; Warr and Stafford 1991).

Social learning theories maintain that the actual performance of aggressive behaviors is contingent on the presence of pertinent stimuli or instigators (Andrews and Bonta 1994; 1999; Bandura 1973; 1977). The instigation to act aggressively can be activated by aversive or frustration-inducing stimuli or by the capacity of human beings to foresee favorable consequences of aggression (Pepler and Slaby 1994; Slaby and Guerra 1988; Tedeschi and
Early perspectives on aggression recognized that both generalized (e.g., school failure and peer rejection) and specific (e.g., physical attacks and verbal insults) sources of frustration often precede aggressive and violent acts (Berkowitz 1962; Dollard, Doob, Miller, Mowrer, and Sears 1939). Yet, the motivation to perform aggressively can also be facilitated by an individual's cognitive interpretation of events in the environment or the anticipation of positive outcomes for the future (Bandura 1977; Felson 1996; Felson and Tedeschi 1995; Meichenbaum 1977; Tedeschi and Felson 1994). These two broad categories of motivators provide the mechanisms for which aggressive behaviors are activated and channeled. As a result, social learning theory grants an opportunity for researchers to identify and analyze the impact of both internal and external "facilitators" and "inhibitors" on the display of aggressive behavior.

Most individuals, according to social learning theory, act in a manner that provides maximum reinforcement for their behaviors (Bandura 1973; Megargee 1995; Moffitt 1993; Patterson, Reid, and Dishion 1992). A person can receive external reinforcements through gaining tangible rewards (e.g., money, food) and enhanced social status (e.g., peer acceptance) or internally through self-evaluative reinforcement mechanisms (e.g., feelings of accomplishment, achievement of desired goals) (Bandura 1973; Megargee 1982; 1995). Hence, a student may behave aggressively because such behavior is associated with obtaining desired goods, money, and peer acceptance or because it provides a source of self-reinforcement through emotional satisfaction and enhanced feelings of self-worth (Bandura 1973; Perry, Perry, and Rasmussen 1986). In addition, such factors as the availability of weapons or drugs and the presence or absence of bystanders can have an impact on the display of aggressive behavior through their stimulus enhancing effects (Berkowitz 1983; 1990; Berkowitz and
According to social learning theory, aggressive behaviors are often maintained by reinforcements and extinguished by punishments or the failure to earn desired rewards (Bandura 1963; 1973; 1977; Domjan and Burkhard 1986; Glaser 1971; Meichenbaum 1977). Many behaviors are conditioned through interaction with others who provide models for behavior and control the conditions of reinforcement and punishment. For adolescents, these models are often the peer group, the family, and the immediate environment that would include school teachers and school staff. Hence, a behavior is likely to be maintained as long as these groups positively reinforce it. In addition, a person's aggressive behavior can be maintained through vicarious observation of others being positively reinforced for their actions or through one's own self-reinforcement. Thus, a study of school aggression must examine the actual and perceived reinforcement contingencies working in the school environment.

While social learning theory points us in some important conceptual directions it is not entirely clear what specific learning, instigating, and maintaining mechanisms are at work in school aggression and violence (see Chapter 3). Most teachers and administrators would agree that the responsibilities, activities, and experiences associated with school can be a significant source of both general and specific frustration (instigation) for some students. Students who are highly impulsive, aggressive, or lack adequate social skills are often more likely to suffer from school failure and have poor relations with both students and teachers (Dodge 1983; Dodge and Crick 1990; Loeber 1985; Loeber and Hay 1994). Likewise, lack of cultural sensitivity, sexual and racial harassment, bigotry, and unfair treatment can serve as sources of generalized frustration. Meanwhile, petty teasing, joking, and bullying at school can induce high levels of specific frustration and sometimes result in retaliatory acts of aggression and violence (Hazler
1994; Lockwood 1997; Olweus 1991). Nonetheless, a search for formidable acquisition, instigation, and maintaining mechanisms as well as the cognitive and temperamental mediators of aggression cannot occur on a speculative level.

Social learning theory is likely to provide a valuable theoretical framework for identifying the pivotal mechanisms and mediators operating in high school aggression and violence. Hence, this study uses social learning theory for identifying and organizing specific acquisition, instigation, and maintenance factors associated with high school aggression. Yet, in the course of utilizing social learning theory as a framework for understanding school violence, this research also becomes a method for assessing the adequacy of social learning theory. In the strictest sense, this research stops short of being a test of social learning theory. However, the multivariate models that assess the combined effects of these risk factors support social learning theory as an effective vehicle for understanding high school aggression (see Chapters 5 – 7).

Research Questions

Upon the foundation of the empirical and theoretical issues discussed to this point, this study focuses on five primary concepts: (1) the acquisition of school aggression; (2) specific individual characteristics or person-oriented variables likely to be associated with school aggression (e.g., impulsivity, risk-taking behavior, and low empathy or self-centeredness); (3) situational “instigators” or “triggers” of school aggression; (4) the maintenance of school aggression; and (5) the ability of social learning theory to empirically advance current research on school aggression. Thus, the following research questions provide the empirical focus for
this study:

(1) How prevalent is self-report school aggression and violence in high schools?

(2) Is high school aggression and violence (and its explanation) invariant across school contexts?

(3) To what extent is aggression and violence acquired or learned among adolescent school children?

(4) What are the most predominant means of acquiring or learning aggression and violence among adolescent school children?

(5) Do such personality characteristics as impulsivity, risk-taking behavior, and low empathy or self-centeredness contribute to the overall strength of the social learning model?

(6) What real-life school situations do high school adolescents consider to be "instigators" or "triggers" of school aggression, violence, and delinquency?

(7) Controlling for individual characteristics, to what extent do situations trigger high school aggression, violence, and delinquency?

(8) What are the mechanisms that maintain or reinforce school-based adolescent aggression, violence and delinquency? Which mechanisms have the most important influence on each school behavior?

(9) Do these factors come together into a predictive model that is supportive of social learning theory as a vehicle for understanding school-based aggression, violence, and delinquency? If so, which of the two social learning models (e.g., a traditional formulation provided by Albert Bandura or a more contemporary model augmented by individual factors such as impulsivity and low empathy or self-centeredness) is the best for understanding and predicting high school aggression, violence, and delinquency?

Policy Implications

The problem of school violence has forced governmental decision-makers and school administrators to find innovative strategies for dealing with the issue. Many school administrators are compelled to engage in expensive preventive measures. Yet, many of these
prevention strategies have proven to be ineffective because of insufficient conceptualization, inadequate implementation strategies, and the short-term or "quick-fix" nature of these programs.

A New Approach to School Aggression

This research supports a policy agenda that recognizes the importance of developing programs that target long-term behavioral change through primary, secondary, and tertiary intervention strategies. However, the current initiative to examine violence in society as a "behavioral disease" must also be extended to high schools across the nation (Centers for Disease Control and Prevention 1985; Rosenberg, O'Carroll, and Powell 1992; Satcher 1995; U.S. Public Health Service 1980). Decisions at the policy level should take a public health or scientific approach for developing and implementing strategies to encounter school aggression and violence (Hamburg 1998; Koop and Lundberg 1992; Mercy 1993). Prevention and intervention strategies should target risk and need factors known to be empirically correlated with aggressive and violent youth (Hawkins, Farrington, and Catalano 1998). As noted above, "some violence prevention strategies do not work because they are poorly targeted, provide materials without implementation strategies, apply neighborhood methods to school settings, and project unrealistic notions about the social forces underlying violence" (Johnson and Johnson 1995:63). This research will correct for the limitations of past research by applying a theoretical framework to identify potential situational and personal risk factors associated with high school aggression, violence, and delinquency.

A theoretically derived study of school aggression may have far reaching implications for program and policy development in schools. School-based programs (e.g., conflict-
resolution, peer mediation, social skills, role playing, anti-bullying) could be improved by identifying the real-life school situations that high school adolescents consider to be "instigators" or "triggers" of school aggression. It is likely that the triggering events associated with high school aggression are very different from triggering events associated with different age groups and social contexts. Identifying actual high-risk situations that have significant meaning to students may enhance the problem-solving and decision-making skill components of some programs. Likewise, this information could provide teachers with the opportunity to become involved in instructing youth on how to recognize and handle their anger, cooperate with others, to negotiate, and to cope with frustrations (Prothrow-Stith 1987). According to Prothrow-Stith, Spivack, and Hausman (1987:67) "when violence is viewed as a learned response to environmental sources of stress, educational strategies can be used to change that response to a more positive one" (Prothrow-Stith, Spivak, and Hausman 1987:67).

Schools and Intervention

In providing research that strengthens the programming endeavors of high schools, this research may not only promote an environment conducive to academic learning but may encourage the socioemotional development of students as well (Linney and Seidman 1989). Most theories of crime, delinquency, and antisocial behavior view the school experience to be of crucial importance. Accordingly, significant relationships are consistently found between school performance and a variety of social maladjustment problems (e.g., teenage pregnancy, substance abuse, conduct problems), including juvenile delinquency (Dryfoos 1990; Fagan and Wexler 1987; Hawkins and Catalano 1993; Hawkins, Lishner, and Catalano 1985). Therefore, "school is not only a potential intervention site for curbing aggressive behavior, but for almost
every social problem affecting children” (Linney and Seidman 1989:336). Good and Wienie
(1986:1095) contend:

The competence at stake concerns not only intellectual gains but also the development of emotional, social, and moral capacities. School is a place where children develop or fail to develop a variety of social competencies that come to define self and ability, where friendships with peers are nurtured, and where the role of the community member is played out, all during a highly formative period of development. Thus, the building of self-esteem, interpersonal competence, social problem-solving skills, responsibility, and leadership becomes important both in its own right and as a critical underpinning of success in academic learning.

Hence, schools can perform a valuable function not only in academic learning, but also in the development of many protective factors identified with reductions in aggressive behavior and other forms of social maladjustment (Elliott, Hamburg, Williams 1998; Gottfredson 1997). Schools provide an available audience conducive to teaching youth alternatives to violence, effective conflict-resolution techniques, and pivotal decision-making skills (Dryfoos 1990; Johnson and Johnson 1995; Prothrow-Stith 1987).

Adolescence and Intervention

Finally, evidence supporting the stability of aggression over time suggests that targeting high school-aged youth is essential for curbing the likelihood of future aggression into adult years (Farrington 1979; Hawkins, Herrenkohl, Farrington, Brewer, Catalano, and Harachi 1998; Howell 1998; Huesmann et al. 1984; Loeber and Hay 1994; Thornberry, Huizinga, and Loeber 1995; Tolan and Thomas 1995). Contemporary research asserts that children who become antisocial tend to maintain or even accelerate their behaviors within the context of school where more opportunities to increase their behaviors are present (Fagan and Wexler
Adolescence, where the influence of the family declines and the peer group increases in relative importance in shaping and maintaining behavior, represents a crucial period for intervention efforts (Dishion, Patterson, Stoolmiller, and Skinner 1991; Dryfoos 1990). As a result, school-based intervention efforts increase in their importance for influencing adolescent aggression. In addition, adolescence has long been recognized as a psychologically turbulent age characterized by multiple social problems including high rates of violent behavior (Daly and Wilson 1988), criminal activity (Gottfredson and Hirschi 1990), alcohol and drug abuse (Johnson, O'Malley, and Bachman 1985; 1997) and other patterns of maladjustment. Thus, adolescence often represents the last real opportunity to affect the educational and personal trajectory for many youth (Jackson and Hornbeck 1989).

Theoretical Implications

In the process of examining high school aggression, this research seeks to determine whether the combined effects of empirical risk factors are supportive of social learning theory. Moreover, two social learning models are compared to assess which paradigm is most adequate for predicting high school aggression (see Chapter 3). Based on recent aggression research, contemporary social learning paradigms are beginning to recognize the predictive potential of common personality correlates of aggression (e.g., Andrews and Bonta 1994; 1999). This research determines whether the predictive utility of social learning theory is enhanced by the addition of specific personality constructs (e.g., impulsivity, risk-taking behavior, and low empathy or self-centeredness).
In addition, this study renders implications for the capacity of social learning to explain serious adolescent behavior in a specific social context (e.g., high school). Empirical research on social learning theory has disproportionately concentrated on minor forms of adolescent deviance (see Akers and Cochran 1985; Akers, Krohn, Lanza-Kaduce, and Radoevich 1979; Akers and Lee 1999; 1996; Krohn, Akers, Radoevich, and Lanza-Kaduce 1982; Krohn, Lanza-Kaduce, and Akers 1984; Krohn, Skinner, Massey, and Akers 1985; Lanza-Kaduce, Krohn, Akers, and Radoevich 1984; Lauer, Akers, Massey, and Clarke 1982; Matsueda 1988; Matsueda and Anderson 1998; Spear and Akers 1988). Moreover, few studies explore the utility of social learning theory for predicting adolescent aggression in the context of contemporary high schools. This study examines the adequacy of social learning theory to facilitate the prediction of serious adolescent behavior across different school contexts.

Organization of the Dissertation

The remainder of the dissertation is dedicated to advancing our empirical understanding of high school aggression, violence and delinquency. Chapter 2 begins with a detailed discussion regarding the nature and extent of school violence and adolescent aggression. This is followed by a comprehensive review of the empirical factors associated with adolescent aggression. Chapter 3 offers a theoretical and conceptual framework for understanding school aggression. Social learning theory is argued to be an important theoretical model for the conceptualization and the organization of factors understood to be empirically correlated with adolescent aggression. The methodology of this study is set out in Chapter 4.

Chapter 5 presents the bivariate and multivariate results regarding each social learning
mechanism and their relationship to self-reported school aggression, violence, and delinquency. The results of the bivariate analysis provide information regarding those acquisition, instigation, maintaining, and personality factors most strongly correlated with self-reported school violence, school aggression, instrumental aggression, and school vandalism and delinquency. In addition, Chapter 5 presents the results of multivariate regression analysis for each social learning mechanism. The multivariate analysis is used to determine how much variation is explained by each social learning mechanism separately and which variables remain significant at the multivariate level. Likewise, Chapter 6 presents the results of a multivariate analysis between personality and school aggression, school violence, instrumental aggression, and school vandalism and delinquency.

Chapter 7 begins with a review of the most significant findings from the previous chapters. Then a multivariate analysis is conducted to determine which models or combination of variables are most predictive of self-reported school violence, school aggression, and instrumental aggression. This study uses prior empirical research and social learning theory as a guide for examining the significance of each model, for forming inferences about causal direction, and for identifying those variables which contribute to a spurious relationship. First, an OLS model of Bandura's formulation of social learning theory is constructed and analyzed to determine whether the model is supported by the data. Second, a refined social learning model that incorporates personality is analyzed to determine whether knowledge of personality improves the ability of social learning theory to explain variation in school aggression, violence, and delinquency. Finally, using a data analysis strategy formulated by Akers, Krohn, Lanza-Kaduce, and Radosevich (1979), an additional multivariate analysis is conducted to further specify the amount of variation explained by the entire social learning model and the
relative contribution of each social learning mechanism, including personality. The multivariate
analysis utilizes ordinary least squares (OLS) regression. The OLS regression analyses are
carried out using SPSS 9.0 for windows. Chapter 8 concludes with a summary and discussion
of the major findings while offering recommendations for future studies and school-based
prevention and intervention strategies.
Notes

1 This study does not attempt to explain acts of violence such as school shootings. School shootings and school-related deaths do not occur at a frequency that is likely to yield accurate predictions (see Monahan 1981). Nonetheless, self-report violent behaviors including assaults on teachers, school officials, peers, gang fights, and sexual assault are examined.

2 The use of childhood precursors to explain adolescent aggression is often supported by recent life-course research (Loeber and Hay 1994). However, a large number of childhood correlates are not adequately studied using adolescent samples (e.g., peer rejection, family practices). This study includes childhood precursors found to be relevant to adolescent aggression in life-course research.

3 In essence, most studies on school violence and aggression do not examine the capacity of an entire theory to explain variation in high school behavior. Instead, theoretical and empirical factors found in the general adolescent aggression literature are often used in school-based prevention and intervention programs. Yet, few studies examine the explanatory power of an entire theory and whether the empirical factors identified in adolescent aggression research are helpful for understanding aggression and violence in the context of high schools. Although many school-based programs are designed for pre-adolescent children, several school prevention and intervention programs are rooted in sound theoretical principles and empirical research (for instance, Positive Adolescent Choices Training (PACT), Adolescent Transitions Program (ATP), Resolving Conflict Creatively (RCC) Second Step, and Viewpoints).

4 It is important to note that recent research on the influence of individual, institutional, and community factors on school disorder suggests that macrolevel factors may not be as important as individual level factors. Welsh, Green, and Jenkins (1998) discovered that individual-level variables accounted for a majority of the explained variation in school disorder compared to school-level and community-level factors. These researchers concluded that the assumption that “bad” communities often produce “bad” children or “bad” schools might be too simplistic.

5 A school violence measure is included as a dependent variable in this study. Upon examination of the dependent variables, it was apparent that most students reported little or no involvement in aggressive, violent, and delinquent acts in school. Thus, each dependent variable in this study was statistically transformed by taking the natural log of school violence, school aggression, instrumental school aggression, and school vandalism and delinquency. This procedure improved the distribution for each dependent variable (see Chapter 4).

6 Empirical research has found several individual factors to be associated with adolescent aggression (see Chapter 2). However, it is beyond the methodological scope of this study to determine the utility of every personality correlate for understanding high school aggression. Instead, this research focuses on specific individual factors (e.g., impulsivity, risk-taking behavior, and low empathy or self-centeredness) likely to provide insight into the nature of school aggression.
A National School Board Association (1991) survey, for example, indicated that of seven hundred and twenty districts sampled, seventy-eight percent used school suspensions, seventy percent worked with social agencies, and sixty percent trained their staffs in conflict resolution. Likewise, twenty-four percent of the districts relied on trained drug dogs, fifteen percent used metal detectors to search for weapons, and eleven percent used closed-circuit-television cameras on school buses. A more recent study conducted by the U.S. Department of Education (1998) found that two percent of public schools had stringent security (defined as a full-time guard and daily or random metal detector checks) while 11 percent had instituted moderate security measures (e.g., full time guard, or a part-time guard with restricted access to the school, or metal detectors with no guards), eighty-four percent of public schools reported having a low level of security-restricted access to their schools but no security guards or metal detectors (U.S. Department of Education 1998). According to the most recent Metropolitan Life Survey, twenty-three percent of public school teachers report the use of security guards or police in or around the school to stop or reduce violence (Harris and Associates 1999).

Most studies assess the utility of social learning theory for explaining minor forms of deviance and drug or alcohol-related behavior. This study seeks to determine the capacity of social learning theory for increasing our understanding of school violence and school aggression as well as school vandalism and delinquency. Moreover, this study examines the utility of social learning theory for understanding aggressive and violent behaviors across different school contexts. Few studies have systematically investigated the central concepts of social learning theory and their capacity to inform us about serious adolescent behaviors displayed in high schools (e.g., violence and aggression).

This study examines the utility of social learning theory for explaining school aggression, violence and delinquency across two California school districts. The central California school district is located in a city of 221,689 residents and the southern California school district is located in a city of 446,227 residents. See Chapter 4 for a detailed discussion regarding the demographic characteristics of the total sample and the two school districts included in this study.
Introduction

The subject of adolescent violence continues to be a high priority among behavioral scientists. Theoretical explanations range from macro descriptions of legal, political, and economic systems (David and Siegenthaler 1981) to micro interpretations describing "instinctual drives" (Freud 1923). Moreover, the study of aggression and violence can be found in a multitude of disciplines. Theories of aggression are derived from the points of view of biology, sociology, political science, and the various branches of psychology, such as physiological psychology, social psychology, and clinical psychology.

In recent years, interest in the study of adolescent aggression has grown due to the reports of violent offending among adolescents. After years of stability during the first half of the 1980's, the juvenile arrest rate for violent crimes climbed 71 percent between 1987 and 1994 (Snyder 1997). This dramatic increase after years of stability focused national attention on the problem of juvenile violent crime (Snyder 1997). In 1995, for the first year in nearly a decade, juvenile arrests for Violent Crime Index Offenses declined by 3 percent. However, even with this decline, the number of juvenile crime arrests remained 12 percent greater than 1991 figures and 67 percent above 1986 violent crime statistics (Snyder 1997). According to the most recent figures released by the Office of Juvenile Justice and Delinquency Prevention (OJJDP), the juvenile violent crime arrest rate continued to decline in 1996 and 1997. This resulted in a 23 percent reduction in juvenile violent crime arrests for the period from 1994 to 1997 (Snyder 1988). Nonetheless, in spite of the reported declines experienced in 1995, 1996,
and 1997, the 23 percent decline below the peak in 1994 is still 25 percent above 1988 levels. As a result, the substantial reduction in juvenile violent crime arrests between 1994 and 1997 accounted for only half of the increase experienced during the period between 1988-1994 (Snyder 1988). Hence, violent offenses committed by youth remains a pervasive problem in the United States.

American high schools have observed levels of violence that resemble the broader trends in society. Overall, school data appear to show some declines in school crime (1993-1996) and a reduction in the number of guns (1993-1997) being carried to school since the early 1990's (U.S. Department of Justice 1998). However, there is still a substantial amount of crime and violence directed at both teachers and students in American schools. Over the 5-year period from 1992-1996, teachers were victims of 1,581,000 nonfatal crimes at school, including 962,000 thefts and 619,000 violent crimes including rape or sexual assault, robbery, and aggravated and simple assault (Kaufman, Chen, Choy, Chandler, Chapman, Rand, and Ringle 1998). Likewise, in a comparison of 1989 and 1995 figures, students between 12 and 19 years of age where more likely to report that they had experienced violent victimization, could obtain drugs, and were aware of street gangs at school (Chandler, Chapman, Rand, and Taylor 1998).

This chapter reviews empirical findings regarding the magnitude of school violence, violent crime trends among youth, and the use of weapons in the adolescent population. In addition, this chapter discusses the most important empirical correlates found in adolescent aggression literature. In the course of examining the empirical factors most often associated with adolescent aggression, this chapter considers the nature of adolescent aggression including the stability of aggressive behavior over time and the relationship between aggression and other antisocial behaviors during adolescence. Of course, these findings affect the direction of the
present study. Therefore, this chapter ends with a discussion regarding the influence of previous research on this study, including a) a definitional framework for the examination of adolescent aggression and violence and b) implications of extant research for the present study.

The Magnitude of School Violence

School violence remains one of the foremost problems facing school administrators and public officials in the United States. The series of tragic violent incidents that occurred during the 1997-1998 school year has refocused the American public's attention on school crime and safety. Yet, prevalence and incident studies on school violence and victimization have produced a mixed picture regarding the current state of American schools. It is clear that school crime and violence is a pervasive problem in our schools. However, some studies indicate that school crime (1993-1996) and weapon carrying (1993-1997) at school may be on the decline (see U.S. Department of Education 1998). Others suggest that there have been few notable changes in the percentage of students reporting any (violent or property) victimization at school in recent years (see Chandler, Chapman, Rand, and Taylor 1998 and Kaufman, Chen, Choy, Chandler, Chapman, Rand, and Ringle 1998). However, the optimism produced by such reports is often overshadowed by studies showing increases in a variety of antisocial behaviors in school (e.g., drug use and gang activity). First, there is some evidence to suggest many schools may have multiple problems that tend to co-exist. Chandler, Chapman, Rand, and Taylor (1998) found that student reports of drug availability, street gang presence, and gun presence at school were all related to student victimization at school. Second, between the late 1980's and mid 1990's, more students were likely to indicate that they were a victim of violence at school, that drugs were readily available at school, and that the presence street gangs were more commonplace at school (Chandler, Chapman, Rand, and Taylor 1998). In
fact, the percentage of students reporting street gang presence at school nearly doubled between 1989-1995, increasing from fifteen to twenty-eight percent (Chandler, Chapman, Rand, and Taylor 1998). Finally, several studies indicate that – despite actual levels of school victimization – more students are likely to feel unsafe at school (or while traveling to and from school) and that more students and teachers believe that school violence has increased in recent years and will continue to increase in the future (Centers for Disease Control and Prevention 1998; Chandler, Chapman, Rand, and Taylor 1998; Harris and Associates 1999; U.S. Department of Justice 1998).

In terms of actual levels of school crime and violence, more than half of U.S. public schools reported experiencing at least one crime incident in school year 1996-1997. Moreover, one in ten schools reported at least one serious violent crime (e.g., murder, rape or other type of sexual battery, suicide, physical attack or fight with a weapon, or robbery) to police or other law enforcement officials (U.S. Department of Education 1998). According to the U.S. Department of Education (1998), of those incidents reported to police or other law enforcement officials, there were 4,000 incidents of rape or other type of sexual battery, 7,000 robberies, and 11,000 incidents of physical attacks or fights in which a weapon was used. Physical attacks or fights without a weapon led the list of reported crimes in public schools with about 190,000 such incidents reported for the 1996-1997 school year (U.S. Department of Education 1998). Similarly, Kaufman, Chen, Choy, Chandler, Chapman, Rand, and Ringle (1998) found that physical attacks and fights without a weapon were the most frequently reported incidents in middle schools and high schools with physical attacks occurring at a rate of 9 per 1,000 students and fights without a weapon occurring at a rate 8 per 1,000 students. The Centers for Disease Control and Prevention (1998) reported that nearly fifteen percent of students (grades 9–12) had been in a physical fight on school property one or more times during the previous
twelve months. Similar to most reports on school violence, the Centers for Disease Control and Prevention (1998) survey found that males (20.0%) were much more likely to report being in a physical fight on school property than females (8.6%).

Recent studies on school victimization further indicate that students in upper grades are more vulnerable to crime than are students in lower grades (U.S. Department of Education 1998). Moreover, students in higher grades are exposed to more serious forms of crime. Middle schools and high schools are consistently more likely to report incidents of crime and serious violent crime in their schools compared to elementary schools. During the 1996 - 1997 school year, about twenty-one percent of all public high schools and nineteen percent of all public middle schools reported at least one serious violent crime (e.g. murder, suicide, rape or sexual battery, physical attack or fight with a weapon, or robbery) to the police or other law enforcement representatives. Only four percent of elementary schools reported at least one serious violent crime to the police or other law enforcement representatives (U.S. Department of Education 1998).

Despite few notable changes in the percentage of students (ages 12 -19) reporting any (violent or property) victimization at school between 1989 and 1995, some studies report slight increases in violent victimization and threats of injury at school. Chandler, Chapman, Rand, and Taylor (1998), in a comparison 1989 and 1995 self-reported victimization at school (ages 12 – 19), found that there was a small increase in the percent of students reporting violent victimizations at school (3.4% compared to 4.2%). Likewise, Kaufman, Chen, Choy, Chandler, Chapman, Rand, and Ringle (1998) report a very slight overall upward trend in the percentage of 12th graders who report being threatened with injury (with or without a weapon) at school. Nonetheless, it appears that the possibility of school victimization and threats of injury at school continue to be significant. A 1998 survey sponsored by the Metropolitan Life
Insurance Company indicates that nearly one-quarter of students were the victim of a violent act that occurred in or around school and one in eight students had carried a weapon to school during the previous year (Harris and Associates 1999).

High school teachers are not excluded from the acts of violence occurring in their schools. In many cases, teachers become potential targets or victims of violence displayed by their students. Although most forms of student aggression in America's schools are directed toward other students, the National Association of School Psychologists reported that nine hundred American teachers were threatened with violence every working hour, and forty were assaulted each hour on school property in 1991. Similarly, nearly one out of five U.S. school teachers reported being verbally abused by students, eight percent reported being physically threatened, and two percent indicated they had been attacked by a student during the previous year (National Center for Education Statistics 1992). In a comparison of 1993 and 1998 figures, more public school teacher's have been a victim of a violent act that occurred in or around school (Harris and Associates 1999). According to the Metropolitan Life Survey, one in six public school teachers (16.0%) reported being a victim of a violent act that occurred in or around school in 1998 (Harris and Associates 1999). Moreover, of those public school teachers who report being a victim of a violent act in school, nine in ten (90.0%) of the teacher's report that the violent act was committed by a student (Harris and Associates 1999).

Despite the high levels of serious violent crime in our nation's schools, it is important to note that schools are relatively safe places for youth compared to their home environments and the surrounding community (Elliott, Hamburg, and Williamson 1998; Gottfredson and Gottfredson 1985). During the early 1990's, a variety of states have conducted research on the nature and extent of school crime (California Department of Education 1990; Florida Association of District School Superintendents and Florida Education Association United 1992;
North Carolina Governor's Crime Commission 1993; South Carolina Department of Education 1993; Virginia Department of Education 1992). Most of these studies found increases in the amount of gun possessions and assaults, but did not support the common media portrayal that school crime and violence has reached epidemic proportions. In many instances, a majority of the crime occurring in schools involved simple assaults, petty theft, and vandalism (Furlong and Morrison 1994). Likewise, in a re-analysis of National Institute of Education's Violent Schools - Safe Schools data (1978), Gottfredson and Gottfredson (1985) concluded that crime and violence in American schools occurs at far lower levels than other segments of society. Nonetheless, it is clear that serious violent crime at school far exceed acceptable levels for ensuring a quality academic environment. Several studies document that both actual and perceived levels of school violence have profoundly impacted the learning environments for students and the working environments for teachers (Elliott, Hamburg, and Williams 1998; Linney and Seidman 1989; Northwest Educational Laboratory 1994; Wienstein 1986).

As a result, the high level of violence in schools -- whether real or perceived -- has had a dramatic effect on the social climate and daily operation of schools (Elliott, Hamburg, and Williams 1998; Linney and Seidman 1989; Price and Everett 1997). A self report survey of ten urban high schools in the United States revealed that thirty eight percent of the students surveyed agreed that there was considerable violence in their schools (Sheley, McGee, and Wright 1992). Such concerns or perceptions regarding school violence has contributed to increased fear among both students and teachers (U.S. Department of Education 1998). Fifteen percent of the inner-city high school students (males and females alike) agreed that they were scared at school almost all of the time (Sheley, McGee, and Wright 1992). Between 1989 and 1995, the percentage of students ages 12 through 19 who avoided one or more places at school for fear of their own safety increased from five to nine percent (Chandler, Chapman, Rand,
and Taylor 1998). Similarly, the Metropolitan Life Insurance Company survey found that two percent of public school teachers had brought something to school with them for protection (Harris and Associates 1999). In spite of a variety of preventive measures actually in place in most schools (e.g., classes to talk about problems, safety or anti-violence programs, monitors in hallways), twenty-three percent of public school teachers report the use of security guards or police in or around the school to stop or reduce violence (Harris and Associates 1999). Thus, in response to both real as well as perceived levels of school violence, many urban and suburban school districts across the country are re-examining school violence policies, increasing school security, and implementing formal prevention programs.

Urban, Suburban, and Rural Rates of School Violence

For decades, empirical research has provided evidence of significant differences in rates of school violence across urban, suburban, and rural jurisdictions. According to an early victimization survey conducted by the National Institute of Education (1978), rates of violence in secondary schools are highest in school districts marked by higher general crime rates and more street fighting gangs. Hellman and Beaton (1986) found suspension rates resulting from aggressive behavior and school disruption to be higher in school districts with higher percentages of poor quality housing, higher population density, higher rates of population instability, and higher rates of reported crime in the community. In more recent victimization surveys, inner-city students continue to appear more vulnerable to serious violent crime and injury in schools. In 1996, students (ages 12–18) living in urban areas were more susceptible to serious violent crime than were students in suburban and rural areas both at and away from school (Kaufman, Chen, Choy, Chandler, Chapman, Rand, and Ringle 1998). In addition, some studies indicate that students in urban schools are at greater risk of violent death at school
compared to peers in suburban or rural schools. Based on the combined figures for 1992-1993 and 1994-1995 school years, Kaufman et al. (1998) contends that the estimated rate of school-associated violent death for students in urban schools was nine times greater than the rate for students in rural schools and two times greater that for students in suburban schools.

Thus, these findings are consistent with the arguments made by many researchers that school violence and school conduct problems are ultimately a reflection of the community (Dodge 1992; Gottfredson and Gottfredson 1985; Hellman and Beaton 1986; Laub and Lauritsen 1998; McDermott 1983; Menacker, Weldon, and Hurwitz 1990; National Institute of Education 1978; Sheley, McGee, and Wright 1995). In a study of ten inner-city public schools, Sheley, McGee, and Wright (1995) estimated that roughly twenty percent of inner-city school students have been assaulted in school by other students and about half of those assaulted have experienced multiple victimizations. Likewise, a recent report based on a collaborative effort by the Bureau of Justice Statistics and the National Center for Education Statistics, concluded that between 1992 to 1996 urban teachers (39 per 1,000) were more likely to be victims of violent crimes than suburban teachers (20 per 1,000) (Kaufman, Chen, Choy, Chandler, Chapman, Rand, and Ringle 1998). However, other evidence suggests that problems in school, including school violence may no longer be restricted to urban districts characterized by high crime rates, low socioeconomic status and high proportions of minority youth (Welsh, Greene, and Jenkins 1998).²

Across the nation, school-related violence is becoming much more common in smaller cities, suburbs, and rural areas. According to a survey of seven hundred cities and towns responding to a League of Cities questionnaire, concerns regarding school violence increased in suburban, rural, and urban areas during the late 1980's and early 1990's (National League of Cities 1994). In a comparison of urban and suburban school districts, the NSBA (1993)
found fifty-six percent of urban districts reported that they believed violence had increased significantly in the past five years, compared to thirty-four percent of suburban districts and twenty-four percent of rural districts. However, fifty-two percent of rural and forty-eight percent of suburban school districts reported that violence had increased "somewhat" in the past five years, compared to only thirty-nine percent of urban school districts. According to recent figures, these concerns regarding the spread of school violence to suburban and rural school districts may have some merit.

In a comparison of 1989 and 1995 figures from the School Crime Supplement (SCS) of the National Crime Victimization Survey (NCVS), Chandler et al. (1998) reports that students (ages 12-19) experienced similar levels of violent victimization at school – regardless of the school location. In 1995, 4.7 percent of students residing in central cities, 4.4 percent of those residing in suburbs, and 3.5 percent of students residing in non-metropolitan areas reported violent victimizations at school (Chandler et al 1998). In addition, the most recent Metropolitan Life survey indicated that public school students and teachers in both urban and non-urban schools are equally likely to be a victim of school violence (Harris and Associates 1999). In like manner, student self-reports indicate that rates of weapon carrying at school may be quite similar in both urban and non-urban school districts (Harris and Associates 1999). Although the rash of school shootings in 1997-1998 are not adequate measures for determining actual rates of school violence and weapon carrying among high school youth, it is worth noting that most of these school shootings took place in predominately suburban and rural communities. Thus, it is not entirely clear whether rates of self-reported school aggression and violence differ significantly across school context. Nonetheless, a comprehensive study of school violence and aggression cannot ignore the broader trends of youth violence.³ The following section discusses recent trends in adolescent violence and the role of weapons in facilitating
juvenile crime in society.

Violence and Violent Crime Trends among Youth

From the early 1980's to mid 1990's, America witnessed a substantial increase in all categories of violent crime committed by youth. Jones and Krisberg (1994) report that between 1982 and 1992 juvenile arrests for violence increased by 45 percent. From 1981 to 1990, the Federal Bureau of Investigation's Uniform Crime Reports revealed an overall violent crime increase of 29.1 percent for youths under the age of 18 years. This figure represented a 60.1 percent increase for murder and non-negligent manslaughter, a 28.2 percent increase for forcible rape, and a 56.5 percent increase in aggravated assault.

This substantial increase in the juvenile violent crime rate followed a fifteen-year period in which the number of violent crime arrests for youth tended to coincide with the changing size of the juvenile population. During the period from 1973 to 1988, the number of juvenile arrests for a Violent Crime Index offense (murder and non-negligent manslaughter, forcible rape, robbery and aggravated assault) remained fairly constant (Snyder 1995). However, between 1988 and 1992 the juvenile violent crime rate increased 38 percent resulting in levels that dramatically exceed comparable figures since the mid-1960's (Snyder 1995). In 1992, the Federal Bureau of Investigation (1992) estimated that just over 3,200 juveniles were arrested for homicides and approximately 130,000 were arrested for other violent crimes (Uniform Crime Reports 1992).

As a result, by the turn of the decade, the homicide rate among young males in the United States had become approximately 20 times higher than homicide rates in most other industrialized nations (Roper 1991). According to Roper (1991), homicide became the leading cause of death among black youth (males and females) and accounted for approximately 6,000
deaths each year. In 1992, homicide was the second leading cause of death among all teens, after suicide (National Center for Health Statistics 1992).

In 1995, the rate of juvenile violent crime declined for the first time in nearly a decade (Snyder 1997). According to official reports, juvenile arrests for Violent Crime Index Offenses -- murder, forcible rape, robbery, and aggravated assault -- declined 3 percent (Snyder 1997). The largest reductions were associated with juveniles under the age of 15. Those youth under the age of fifteen accounted for all of the decline in juvenile property crime, 70 percent of the decline in juvenile robbery arrests, 62 percent of the decline in aggravated assault arrests, and 67 percent of the decline in juvenile burglary arrests (Snyder 1997). Nonetheless, even with the 3 percent decline in juvenile arrests in 1995, the Office of Juvenile Justice and Delinquency Prevention (OJJDP), reports that the number of juvenile violent crime arrests was still 12 percent greater than the 1991 level and 67 percent above the 1986 level (Snyder 1997).

Moreover, it is important to note that juveniles continued to account for a greater proportion of violent crimes in 1994 and 1995 than in any of the last 20 years (Sickmund, Snyder, and Poe-Yamagata 1997). Thus, in spite of the recent reductions in juvenile arrests, crime and violence committed by youth remains a substantial concern for policy-makers in this country.

In fact, more than 86,000 juveniles were arrested in 1997 for serious violent crimes. While more than 60 percent of those youths were arrested for aggravated assault, approximately 1700 youths were arrested for murder and nearly 3800 for forcible rape (Federal Bureau of Investigation 1997). Sickmund, Snyder, and Poe-Yamagata (1997) calculate that approximately 1 in 7 juvenile arrests in 1995 was for a crime involving violence or the threat of violence. Similarly, Snyder (1988) estimates that juveniles were involved in nearly 1 in 5 arrests made by law enforcement agencies in 1997, 1 in 6 arrests for a violent crime, and 1 in 3 arrests for a property offense.
Nonetheless, these figures represent significant reductions in juvenile arrests for serious violent crimes when compared to 1993-1994 levels. In 1993, juveniles were responsible for serious violent crimes at a rate of 31 per 1,000 in 1997, down from 52 per 1,000 in 1993. Likewise, youth ages 12 – 17 were victims of serious violent crime at a rate of 27 crimes per 1,000 in 1997, down from 44 per 1,000 in 1993. According to Snyder (1998), the juvenile Violent Crime Index arrest rate dropped 23 percent between 1994 and 1997. Yet, even with this decline, the 1997 juvenile Violent Crime Index arrest rate was still approximately 30 percent greater than the average rate for the years between 1980 and 1988 (Snyder 1998). In other words, even with the reductions reported in the juvenile crime rate since 1994, juvenile arrests for violent crime continues to be substantially higher than the average rate for the years between 1980 and 1988. Not surprisingly, the availability and use of weapons and firearms have significantly contributed to the high rates of homicides among youth.

**Weapons and Youth Violence**

There is sufficient evidence to indicate that easy and quick access to firearms increases the potential for violent crime among juveniles. Moreover, research indicates that juveniles have greater access to firearms today than in previous decades and that the weapons youth have access to are more deadly than in the past. A Metropolitan Life Insurance Survey reports that fifty-three percent of schoolteachers, forty-seven percent of students, and fifty-one percent of law enforcement officers believe that students have easy access to handguns or other firearms (Harris and Associates 1999). According to Sheley and Wright (1998), fifty percent of the juveniles they surveyed reported that obtaining a gun would be “little” or “no” trouble if they desired one. As a consequence of the increased accessibility of guns, an examination of the Unified Crime Reports indicates that the number of juvenile arrests for weapons violations
increased by four hundred and thirty percent between 1960 and 1997. This figure includes a seventy percent increase in juvenile arrests for weapons violations between 1985 and 1997. This rise in juvenile weapon violations closely resembles the rise in youth violence, particularly since 1985 (Regoli and Hewitt 2000). In 1997, juveniles accounted for twenty-four percent of all persons arrested for weapons violations (Federal Bureau of Investigation 1998). In considering all age and sex groups, males at age 18 have the highest per capita arrest rates for weapons violations, followed by males at age 17 (Greenfield and Zawitz 1995). As a result, some researchers have argued that the single most important impact on youth violence in general and juvenile homicide specifically has been the availability of firearms (Jones and Krisberg 1990).

After nearly two decades of steady increases, gun-related crime peaked in the late 1980's and early 1990's. Throughout the 1980's, the homicide rate by firearms of young people aged 15 to 19 increased by sixty one percent, from 7 to 11 deaths per 100,000 population (Jones and Krisberg 1990). In fact, firearms accounted for the greatest proportion of homicides by juveniles from 1976 to 1991 (Blumstein 1994; OJJDP 1995). As a result, 7000 homicides with firearms were committed between 1980 and 1989 by high school aged youth (Department of Health and Human Services 1991). The National Coalition of State Juvenile Justice Advisory Groups (1993) notes a one hundred and forty-four percent increase in the total number of children killed by firearms between 1986 and 1992. Roper (1991) points out that at the beginning of the 1990's, firearms accounted for eighty-two percent of the homicide deaths among black males, ages 15 to 24. In fact, gun-related homicides have been the leading cause of death for African-American males ages 15 to 19 since 1969 (Snyder and Sickmund 1995). In the United States, teenage males in all racial and ethnic groups are more likely to die from gunshot wounds than all natural causes combined (Fingerhunt 1993; National Center for Health
Since the late 1980's and 1990's, the United States has witnessed a steady decline in gun-related violence for the total population. According to a 1999 report by the Office of Juvenile Justice and Delinquency Prevention (OJJDP), gun-related homicides have declined by thirty-three percent since 1993. This finding includes a thirty-five percent reduction in handgun violence. These reductions in gun-related violence appear to be continuing for the total population. However, gun-related homicides remain a significant problem for youth between the ages of 15 to 24. For adolescents, the firearm homicide rate for children under 15 years of age is 16 times higher in the United States than in 25 other industrialized countries combined. Among ages 15 to 24, the U.S. firearm homicide rate is 5 times higher than in neighboring Canada and 30 times higher than in Japan. Despite a nineteen percent reduction in gun-related homicides for those 25 and older from 1984 to 1993, the firearm homicide rate for the 15 - to 24-year-old age group increased one hundred and fifty-eight percent during the same time period (OJJDP 1999). Moreover, the number of youth who report carrying any weapons, including firearms continues to be a significant concern for policy-makers in the United States.

The Centers for Disease Control and Prevention (1998) reported that almost one fifth (18.3%) of students in grades 9 through 12 had carried a weapon (e.g., a gun, knife, or club) outside of school in the 30 days prior to completing the survey. In all, nearly twenty-eight (27.7%) percent of male students compared to only seven (7%) percent of female student reported carrying a weapon outside of school. The figures are equally salient when examining the number of youth who report carrying firearms. Nationwide, nearly six percent of students reported carrying a gun outside of school in the previous 30-day period. Again, male students compared to female students were significantly more likely to have carried a gun outside of school. Nearly ten percent (10%) of male students reported carrying a gun outside school.
compared to less than two percent (2%) of female students (Center for Disease Control and Prevention 1998). Overall, Hispanic and African American students were significantly more likely to report carrying any weapon or gun outside of school compared to non-minority students (Center for Disease Control and Prevention 1998). In a study involving 800 inner-city high school students, Sheley and Wright (1993) reported that twenty-two percent of male youth stated that they owned a firearm. Unfortunately, in many instances, the school context is somewhat vulnerable to the presence of weapons and levels of youth violence in society.

**Weapons and School Violence**

The school shootings during the 1997-1998 academic year raised the general public consciousness regarding the issue of weapons and school safety. Nonetheless, the actual use of weapons resulting in serious injury or death in school is quite rare. The Centers for Disease Control and Prevention estimates that the incidence of school-associated violent death is less than one in a million (Kaufman, Chandler, and Rand 1998). According to a study conducted by the National School Safety Center, violent deaths in school settings including suicides and homicides, declined twenty-seven percent between 1992-1993 and 1997-1998 school years (Donohue, Schiraldi, and Ziedenberg 1998). As a result, the 40 school shooting deaths in the 1997-1998 school year actually fall within the midrange of total annual incidents since the 1992-1993 school year (Donohue, Schiraldi, and Ziedenberg 1998). During the 1992-1993 school year, 55 deaths occurred on school property (student and adult deaths as well as suicides). In comparison, only 40 deaths occurred on school grounds during the 1997-1998 school year. Moreover, despite the fifteen fatalities experienced in Littleton, Colorado in the 1998-1999 school year, the number of school-related deaths this year are expected to be below the 40 deaths experienced 1997-1998. Thus, these figures underscore the fact that school
shootings resulting in the death of students on school property are exceedingly rare events.

Despite the rare occurrence of school shootings, research indicates that weapons are being carried into school on a rather frequent basis (Centers of Disease Control and Prevention 1990; Harris and Associates 1999; Kingery, Pruitt, and Heuberger 1996; Maguire and Pastore 1996). Although some recent findings show an overall decline in the percentage of students bringing guns to school (see Centers for Disease Control 1997 and Bachman, Johnston, and O’Malley 1997), the presence of weapons (including firearms) in school is well documented. Moreover, it is clear that weapon carrying is much higher in some schools than in others (Webster, Gainer, and Champion 1993). Various studies indicate many students are aware of others who have brought weapons to school (Centers for Disease Control and Prevention 1998; Chandler, Chapman, Rand, and Taylor 1998). Likewise, a substantial number of students report being a victim of weapon-related incidents at school (Harris and Associates 1999; Kaufman et al. 1998).

According to the 1992 Bureau of Statistics, California’s Public Schools experienced a twenty-one percent increase in weapons possessions between the 1987-1988 and 1988-1989 school years. In 1990, the Centers for Disease Control and Prevention estimated that 270,000 students carry guns to school one or more times each year. During the 1996-97 school year, 6,093 students were expelled for bringing a firearm to school in a population slightly above 51 million students between the ages of 5 to 17 years old. According to school level estimates, fifty-six percent of the expulsions consisted of students in high school, thirty-four percent consisted of junior high school students, and nine percent consisted of elementary school students (Sinclair, Hamilton, Gutmann, Draft, and Bolcik 1998). In 1995, over five percent of students (ages 12-19) reported seeing another student with a gun at school and nearly thirteen percent reported knowing another student who brought a gun to school (Chandler et al 1998).
Students in central cities were more likely to report knowing another student who brought a gun to school (15%) than were students from suburban areas (12.3%) or students from nonmetropolitan areas (11.1%). A similar pattern was present for those students who actually saw another student with a gun at school (Chandler, Chapman, Rand, and Taylor 1998).

In 1995, the Centers for Disease Control and Prevention found that ten percent of students (grades 9 – 12) had carried a weapon on school property. In a two-year period, this figure decreased slightly with approximately nine-percent of students saying that they had carried a weapon to school during the past thirty days. In both 1995 and 1997, the Center for Disease Control and Prevention found that males (12.5%) were significantly more likely than females (3.7%) to carry a weapon to school. Similar trends in the reduction of firearms being brought to school were reported by the Monitoring the Future survey for the period between 1993-1996. The survey found that the percentage of high school seniors who reported carrying a weapon to school on at least one day within the previous four weeks declined from eight percent in 1993 to six percent in 1996 (Bachman, Johnston, and O’Malley 1997). However, in a comparison of 1993 and 1998 figures, the most recent Metropolitan Life survey found that the rate of weapon-carrying at school remained constant (Harris and Associates 1999). As in 1993, one in eight public school students (12%) admitted to carrying a weapon to school at some point in time. Nonetheless, it is clear that weapons are present at schools and are often used to injure or threaten other students.

Based on a 1991 survey comprised of 1,653 students in 10 American urban high schools, Sheley, McGee, and Wright (1992) reported that twenty-one percent of the students had been threatened with a gun and twelve percent had been shot at. In a subsequent report on inner city high schools, Sheley, McGee, and Wright (1995) stated that one in five students (nearly one in three males) had been shot at, stabbed, or otherwise injured with a weapon at or
in transit to or from school in the past few years. These researchers further reported that a total of one in ten students had been victimized more than once at these schools (Sheley, McGee, and Wright 1995). In 1996, a report compiled by the Bureau of Justice Statistics and the National Center for Education Statistics, revealed that five percent of all 12th graders said that they had been injured with a weapon such as a knife, gun, or club during the past 12 months while at school (e.g., inside school, outside the school building or on the school bus) (Kaufman et al. 1998). In 1995, the Center for Disease Control and Prevention reported eight percent of high school students had been threatened or injured with a weapon on school property. Males (11.0%) were nearly twice as likely as females (6.0%) to be threatened in this manner on school property. Thus, research indicates that a fairly large percentage of weapon-carrying and weapon-related victimization is taking place in our nation’s schools.

Prevalence of School Violence and Aggression: Questions of Methodology and Interpretation

The preceding discussion provided an overview of the current state of school violence and victimization in the United States. On the whole, the information presented above provides a “reasonable” picture of the recent trends in adolescent violence and crime in society and schools. However, the current state of school violence and victimization research is often called into question by academic researchers and crime analysts. In 1997, the National Center for Education Statistics (NCES) released a report highlighting the status of data on crime and violence in schools (see U.S. Department of Education 1997). The NCES report examined data related to school crime and violence gathered from a variety of sources and provided an assessment of the quality of that information. Moreover, the report identified several limitations in some of the most recent data collected in schools and offered general...
recommendations for future data collection efforts. The following discussion provides a synopsis of the methodological limitations of current data sources on school violence. This study takes into account the limitations of previous research identified by the NCES and other academic researchers in an effort to provide a quality contribution to our present understanding of school aggression, violence, and delinquency.

For most researchers, there is considerable agreement that school violence is clearly above acceptable levels in the United States. However, citing questionable research methods and inaccurate interpretations, some researchers question the extent to which school violence is reported to occur (Gottfredson and Gottfredson 1985; Rubel 1978; Scherer and Stimson 1984; Wayson 1985). Thus, the National Center for Education Statistics and other researchers recommend caution when examining the significance of school violence data. Furlong and Morrison (1994:140) "strongly urge healthy skepticism when reviewing any set of statistics about school violence." In some instances, reviews of school violence research have uncovered various "sensationalistic portrayals... (and) a variety of data collection procedures, unanalyzed sample variation, and subtle, but potentially important, differences in how questions are asked" (Furlong and Morrison 1994:141). As a consequence, several researchers recommend a close examination of the methodological and statistical strategies used when assessing the magnitude of school violence.

The most common method for collecting data is through self-report surveys of student behaviors and victimization surveys. Some of the most recent and often cited large-scale databases used to assess levels of school violence and victimization include: the 1997 Monitoring the Future Survey; the 1994 Schools and Staffing Survey; the 1995 National Crime Victimization Survey and its School Crime Supplement; the 1997 Youth Risk Behavior Surveillance Survey; and the 1999 Metropolitan Life Survey of Teachers. Using the
information contained in these datasets, several reports mandated by Congress have been compiled to provide an overview of the scope of school crime and victimization. These reports include: the 1998 Annual Report on School Safety; the 1998 Indicators of School Crime and Safety; and the 1996-1997 Report on Violence and Discipline Problems in U.S. Public Schools.

Although these datasets provide comprehensive information on school victimization (i.e., the number or proportion of school members victimized by crime), they provide much less information regarding the prevalence of crime (i.e., school members' participation in crime). Likewise, these data sources offer virtually no information on the number of incidents of crime and violence on school property, including the number of people victimized and number of individuals participating in a particular event (U.S. Department of Education 1997). Moreover, while these datasets provide information on student participation in verbal insults, fights, possession or weapons on school property, and the use of drugs and alcohol, or tobacco, the NCES points out that these sources of data do not provide information on student or teacher participation in thefts, assaults, vandalism, and other disciplinary problems which contribute to an unsafe school environment. Thus, more information on student participation and the number of incidents could provide greater insight into both student and teacher contributions to the levels of violence in schools.

The procedures for collecting data on school crime vary considerably across different studies, including the data sources listed above. Subtle differences in the way self-report questions are phrased can lead to dramatic differences in research results and their interpretations (Furlong and Morrison 1994). In some cases, the results of many surveys may simply be unreliable. Items are often phrased in general terms and, therefore, are subject to wide interpretation. Moreover, self-report surveys that ask students, teachers, administrators,
or the general public about their perceptions regarding school violence consistently find higher levels of perceived violence than is found in victimization self-reports (Furlong and Morrison 1994:142). For instance, the survey sponsored by the Metropolitan Life Insurance company includes a variety of questions asking teachers, students, and law enforcement officials what they “think” or “believe” has taken place or will take place in the future. Although this type of information is useful as a “thermometer” for understanding general attitudes, beliefs, and perceptions and the general context of schools, this data should not be misinterpreted as actual rates of violence and victimization in schools. In addition, self-report methods that require respondents (e.g., teachers and students) to report on the number of personal victimizations for a given time frame can complicate comparisons between surveys. Studies that ask students to report on events during the past thirty days are likely to yield much different results than surveys that ask to students to report on behaviors over the past year.

This study uses a self-report survey to fill gaps in the current state of knowledge regarding high school aggression and violence. The self-report survey for this study is designed to minimize many of the limitations cited by the NCES and other researchers in the field. In response to the NCES recommendations, a primary objective of this research is to estimate the prevalence and severity of high school aggression, violence, and delinquency. The prevalence or participation of students (in school or on school property and outside of school) in behaviors including being in one-to-one fights, hitting a teacher, assault, threats and intimidation, and damaging school property is measured in this study. As a result, this study provides information regarding behaviors that often go unreported as well as serious forms of violence in schools. In doing so, this research helps fill the knowledge gap regarding the prevalence of particular behaviors in school and provides much needed information involving student participation in assaults, vandalism and other against-regulation activities that contribute to an
unsafe environment.

In addition, this study paid close attention to the construction of items and scales to measure each school behavior. This study avoids the use of general items that may carry wide interpretations by using widely accepted measures found in national surveys on general delinquency as a basis for the construction of items comprising the dependent variables (e.g., the National Youth Survey 1976-1983 and the 1994 Denver Youth Survey). As a result, the items that comprise the dependent variables for this study are designed to elicit information on only one type of school behavior. Moreover, this study asks respondents about their actual participation in each behavior rather than their perception about events. This should provide accurate information regarding the percentage of students who participate in various behaviors and the frequency in which the behaviors are performed in school. Thus, this study contributes to our current understanding of those school behaviors (e.g., school violence, school aggression, instrumental school aggression, school vandalism and delinquency) that impact the school environment and reduce school safety. Yet, before a comprehensive study can be conducted, one needs to understand the dynamics that contribute to school aggression, violence, and delinquency. Thus, the following section provides a discussion regarding the nature of aggression and violence and the empirical correlates most important for understanding aggressive and violent youth.

The Nature of Aggression and Violence

This study relies on decades of empirical research to accurately portray the nature of aggression and violence. Empirical research offers a basis for selecting age appropriate indicators for aggression and advancing conceptual clarity among different forms of deviance.

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Based on a review of the literature, the following section discusses the implications of life-course research and the relationship between aggression and other forms of offending for this study.

**Stability of Aggression over the Life Course**

Empirical research on the stability of aggression and antisocial behavior over the life-course is invaluable for illustrating the nature of aggression. Recent life course research suggests it is possible, at a very young age, to predict those individuals who are at a greater risk of engaging in aggressive and antisocial behavior later in life (Coie, Terry, Lenox, Lochman, and Hyman, 1998; Farrington 1986; 1995; Farrington and West 1990; Huesmann, Eron, Lefkowitz, and Walder 1984; Loeber and Dishion 1984; Loeber and Schmaling 1985; McCord and Ensminger 1995; Patterson 1992; Simons, Johnson, Conger, and Elder 1998; Stattin and Magnusson 1989). Life-course research finds a consistent pattern of early precursors to adolescent and adult aggression (Loeber and Hay 1994). For example, studies indicate the most aggressive and antisocial youth can be characterized by the early onset of antisocial behaviors, the frequency in the display of antisocial behaviors, the variety of antisocial behaviors exhibited, and the number of settings in which the behavior is displayed (Hawkins, Herrenkohl, Farrington, Brewer, Catalano, and Harachi 1998; Loeber 1990; Loeber and Stouthamer-Loeber 1998; Loeber, Stouthamer-Loeber, Green 1991; Thornberry, Huizinga, and Loeber 1995; Tolan and Thomas 1995).

Hence, the life course research implies that the knowledge gained about the correlates, predictors, and causes of childhood aggression is relevant to the explanation and prediction of teenage and adult violence (Loeber and Hay 1994). This study relies on life-course research for locating age appropriate indicators of adolescent aggression (specifically those located in the
child's learning environment), for identifying some childhood precursors relevant to adolescent aggression, and for stressing the importance of both pre-adolescent and adolescent intervention.

**Aggression and Antisocial Behavior**

Notwithstanding the ability of life course research to identify specific forms of aggressive criminal careers, considerable debate exists regarding the concept of aggression and its relationship to more general forms of antisocial behavior. In short, there appears to be a high degree of similarity between predictors of aggression and predictors of general antisocial behavior. This notion is supported by: 1) evidence indicating violent adolescents tend not to specialize in violence but are inclined to commit many nonviolent offenses, as well (West and Farrington 1973; Wolfgang, Figlio, and Sellin 1972); 2) research showing that violent behavior has many of the same predictors as general delinquency (Cairns, Cairns, and Neckerman 1989; Dryfoos 1990; Hawkins 1995; Yoshikawa 1994; Salts, Lindhlohm, Goddard, and Duncan 1995); and 3) studies finding early aggressiveness to be significantly related to countless social problems including criminal behavior, spouse abuse, traffic violations, and self-reported physical aggression (Huesmann et al. 1984; Loeber and Dishion 1984; Loeber and Hay 1994; Loeber and Schmaling 1985; Loeber, Stouthamer-Loeber, Green 1991; McCord 1983).

Recent longitudinal research suggest that, although there is a high degree of generality in violent offending, there is evidence that some specialization of violent offending may exist (LeBlanc 1996; Elliott 1994; LeBlanc, Cote, Loeber 1991; Loeber and Hay 1994; Loeber and LeBlanc 1990; Moffitt et al. 1989; Patterson, Dishion, and Bank 1984; Pulkinen 1982; Stattin and Magnusson 1989; Tolan and Loeber 1993). Moreover, some studies indicate that aggressive and nonaggressive behavior problems among children samples, although somewhat related, are distinct phenomenon (see Fergusson, Horwood, and Lysneky 1994; Frick, Lahey,
Loeber, Tennenbaum, Van Horn, Christ, Hart, and Hanson 1993; Loeber and Schmaling 1985). Nonetheless, the degree of specialization in violent offending appears to be greater for adults than adolescents, however, a general movement toward more serious delinquent acts often characterizes adolescent offending. Moreover, first-time offenders convicted of violent offenses are often found to be at greater risk for committing subsequent violent offenses than first-time property offenders.

This study recognizes the similarity among empirical factors associated with both serious adolescent antisocial and aggressive behavior. As a result, the knowledge acquired from well-designed studies on serious antisocial behavior is also considered to be important for an adequate understanding of adolescent aggression. This conclusion is based on the realization that much of what we know about violence is often derived from studies of general antisocial behavior (Andrews and Bonta 1999; Gottfredson and Hirschi 1990). Thus, this study incorporates variables found to be both theoretically and empirically important for understanding general patterns of antisocial behavior and adolescent aggression. Moreover, this study determines whether these same factors are predictive across distinct forms of school aggression and violence as well as school vandalism and delinquency. These variables include: peer rejection, school failure, familial conflict, anti-social peers, impulsivity, risk-taking behavior, and low empathy (Andrews and Bonta 1999).

**Correlates of Adolescent Aggression**

Most researchers and academics concede aggression and violence to be a product of various factors including inadequate socialization, deficits in neurophysiological functioning, personality and temperament, and environmental influences. To fully understand the determinants of aggression and violence, it is necessary to examine each of these factors in
turn. The following discussion provides an overview of empirical research regarding the nature of aggression and violence.

Peer Rejection. Peer rejection and negative peer status in childhood is predictive of a variety of maladaptive outcomes in adolescence and adulthood, including aggression (Bagwell, Newcomb, and Bukowski 1998; Coie, Terry, Lenox, Lochman, and Hyman 1998; Cowen, Pederson, Babigian, Izzo, and Trost 1973; Loeber 1982; Olweus 1980; 1992; 1994; Patterson 1992; Robins 1966; Roff, Sells, and Golden 1972). Although most peer rejection findings are based upon pre-adolescent samples, many scholars agree that persistent peer rejection is significantly related to adolescent antisocial and aggressive behavior (Farrington 1993; 1995; Ialongo, Vaden, and Kellam 1998; Loeber 1982; Magnusson and Bergman 1990; Olweus 1980; Patterson, Reid, and Dishion 1992).

Children who display frequent verbal and physically negative social behavior during social interaction with their peers are at increased risk of being socially rejected (Shinn, Ramsey, Walker, and Stieber 1987). High levels of antisocial behavior and bullying behavior displayed by children tends to interrupt peer relations to such an extent that they may eventually result in pervasive and persistent peer rejection (Coie and Kupersmidt 1983; Dodge 1983; Huesmann and Eron 1986; Olweus 1980; 1991). According to Olweus (1980), those children who are rated as “aggressive” by their peers at age 8, often suffer from peer rejection and consequently exhibit significantly higher levels of aggression as adults. However, the relationship between children’s behavior and peer rejection appears to be more complex.

Research indicates factors other than aggressiveness may contribute to social rejection among children and adolescents. Some researchers suggest deficits in social-processing skills may underlie the relationship between aggressiveness and peer rejection (Dodge 1980). Evidence indicates unpopular children (ages 7-8) are more likely to choose aggressive
strategies for solving interpersonal conflicts, engage in a process of cue distortion, and attribute hostile intentions to others (Asher and Renshaw 1981; Dodge 1980). Dodge (1980) postulates that a cyclical relationship between attributes, aggressive behavior, and social rejection may exist; thereby, providing a possible explanation for how aggressive behavior is maintained and strengthened.

The notion that social rejection may predispose children to aggression has resulted in the development of school-based interventions aimed at increasing the quality of children's social relations with their peers. Social learning theorists contend school and other conventional activities provide such minimal reinforcement for aggressive and socially rejected youth, there is a tendency for these youth to seek social settings that offer maximum reinforcement. As a consequence, teenagers often go “shopping” (Patterson, Reid, and Dishion 1992) or “foraging” (Domjan and Burkhard 1986) for groups of peers that are likely to reinforce their behaviors. However, these youth often display the same aggressive and antisocial behaviors exhibited by rejected youth. Dishion, Patterson, Stoolmiller, and Skinner (1991), as part of the Oregon Youth Study, found support for the notion that rejected youth tend to migrate toward antisocial peer groups. Those children socially rejected at age 10 were found to have greater involvement with delinquent peers at age 12. This is strongly upheld by a tradition of empirical research substantiating a significant relationship between antisocial peers and delinquent youth.

Anti-Social Peers. For decades, a large body of research focused on the relationship between delinquent associates and the deviant behaviors of youth. There is clearly a strong relationship between antisocial behavior and association with antisocial peer groups (Akers 1977; Battin-Pearson, Thornberry, Hawkins, and Krohn 1988; Dishion et al. 1991; Elliott 1994; Glueck and Glueck 1950; Heimer 1997; Matsueda and Anderson 1998; Moffitt 1993;
Elliott, Huizinga, and Ageton (1985:35) contend that "the primary deviant learning context is the adolescent peer group; the greatest variation in normative orientations, delinquent behavior patterns, and social reinforcements for delinquent behavior are found in this social context." Some research suggests the significance of peer influences on the development of antisocial behavior may even begin as early as preadolescence (Dishion, Patterson, Stoolmiller, and Skinner 1991).

Research reveals that exposure to antisocial peers takes a sharp increase in middle adolescence" (Dishion, Patterson, Stoolmiller, Skinner 1991). This increase in antisocial peer relations often coincides with an increase in problem or antisocial behavior (Elliott and Menard 1988). In the Carolina Longitudinal Study, Cairns, Cairns, Neckerman, Gest, and Gariepy (1988) concluded that boys with histories of aggressive behavior do participate in peer networks, however, these peer relationships were characterized by a high degree of instability. Moreover, antisocial youth and their peers tend to be less committed to conventional educational and occupational endeavors (Hirschi 1969). Since aggressive and antisocial youth receive minimal reinforcement for participating in conventional activities such as school, these same youth are often subjected to frustration spawned by academic failure (Patterson, Reid, and Dishion 1992).

**School Failure.** Poor academic performance or academic failure is repeatedly found to be a risk factor and significant predictor and of violent and aggressive behaviors in adolescents and adults (Farrington 1989; Griffin 1987; Hawkins, Lishner, Jenson, and Catalano 1987; Huizinga, Loeber, and Thornberry 1995; Maguin and Loeber 1996; Yoshikawa 1994). Moreover, there appears to be substantial links between antisocial behavior, school failure, disciplinary practices, and peer rejection (Dishion 1990). At-risk or antisocial children and youth are far more likely than other youth to experience major school adjustment problems in
areas of academic achievement and peer social relations (Denno 1990; Kazdin 1985; Loeber 1985; Wahler and Dumas 1986). For example, Dishion (1990) analyzed a sample of 10-year-old boys and discovered that the variables of academic failure and antisocial behavior were able to account for a significant portion of variance in peer rejection. More importantly, the data indicated that the child's academic performance and antisocial behavior mediated the effects of harsh and erratic disciplinary practices on peer rejection. As a result, poor school performance and a child's antisocial behavior are directly related to the probability of a child being rejected by their peers.

Some studies indicate antisocial and aggressive students spend significantly less time engaged in academic endeavors (Shinn, Ramsey, Walker, Steiber, and O'Neill 1987; Walker, Shinn, O'Neill, and Ramsey 1987). Walker, Shinn, O'Neill, and Ramsey (1987) analyzed longitudinal data consisting of 35 5th grade boys in order to study the school behavior of children identified as being at risk for aggression. Those students, identified by sociometrics, observational measures of antisocial behavior, and ratings by parents and teachers as being at risk spent less time academically engaged and were rated by teachers as having less skill in getting along with teachers and peers and working within the expectations of the classroom. These same at risk children were shown to display higher rates of aversive behavior when playing with other peers.

Childhood aversive or aggressive behavior, which often corresponds to peer rejection, is believed to flow from inept family practices (Dishion 1990; Patterson 1982). Inconsistent and ineffective parental discipline often results in high levels of antisocial child behavior, thereby, resulting in the child's' failure to develop the social and academic skills necessary for proper adolescent adjustment (Patterson 1982).
Family Practices. There is a long history of empirical studies that identify family variables as important for the prediction of childhood antisocial behavior and adolescent delinquency. In fact, family risk factors represent some of the most consistent and powerful predictors of aggression and antisocial behavior. The familial variables most often related to antisocial behavior and aggression include: harsh erratic discipline, parental conflict, lack of parental nurturance, physical abuse and neglect, poor supervision, and early separation of parents from children.

Most scholars concede antisocial and aggressive behaviors are highly influenced by the behaviors observed and experienced in the home. Research indicates those children directly or indirectly exposed to harsh erratic discipline and physical abuse are at much greater risk of becoming aggressive and violent themselves in adolescence and adulthood (Farrington 1991; Huizinga, Loeber, and Thornberry 1995; McCord 1988; Patterson, Capaldi, and Bank 1991; Salzinger, Feldman, and Hammer 1993; Smith and Thornberry 1995). Moreover, empirical research invariably finds a strong correlation between inadequate parenting skills and delinquency (Glueck and Glueck 1950; Gove and Crutchfield 1982; Kazdin 1985; Larzelere and Patterson 1990; Loeber and Dishion 1983; Loeber and Stouthamer-Loeber 1986; Nye 1958; Rutter and Giller 1983), even when other theoretically important predictors of delinquency are held constant (Laub and Sampson 1988; Van Voorhis, Cullen, Mathers, and Garner 1988).

Most efforts to interpret these findings focus on the nature of parent-child bonds, family modeling influences, and reinforcement contingencies in the home. Indeed, both direct and indirect exposure to aggressive models is strongly correlated with aggressive behavior among children and adolescents (Bandura, Ross, and Ross 1963; Belson 1978; Berkowitz 1965; Eron 1982; Eron and Huesmann 1987; Feshbach and Singer 1971; Kruttschnitt, Heath,
and Ward 1986; Short 1968; Wolfgang and Ferracuti 1967).

Furthermore, there is considerable support for the notion that noncontingent or inconsistent reinforcement patterns in the family serve to promote the development of aggressive and antisocial behaviors in both children and adolescents (Bandura 1973; Farrington 1989; Forehand, King, Peed, and Yoder 1975; Heimer 1997; Patterson 1982; Patterson and Dishion 1985; Patterson, DeBaryshe, and Ramsey 1989; Patterson and Stouthamer-Loeber 1984; Snyder 1977; Snyder and Patterson 1986; Wahler and Dumas 1984; Wells and Rankin 1988). In some families, family members often directly reinforce the coercive behaviors performed by the child (Patterson 1982; Snyder 1977; Snyder and Patterson 1986). This may evolve into a persistent pattern of parent-child coercive behavior in the home (Patterson 1982). If this coercive family process persists, the behavior of the child and other family members may escalate to high-amplitude behaviors such as hitting and physical attacks (Patterson, DeBaryshe, and Ramsey 1989).

Family and parent-child relationships tend to maintain their central importance even throughout older adolescence (Coleman 1980; Siddique and D'Arcy 1984). That is, the influence of the family remains a significant factor in the development of antisocial and aggressive styles of conduct (Kazdin 1985; Loeber 1985; McCord 1978; Patterson and Bank 1986; Robins 1966). For example, Loeber and Dishion (1983) found a strong predictive relationship between child-rearing environments in middle childhood and delinquent behavior in adolescence (Loeber and Dishion 1983). They found the best predictor of this relationship to be an abbreviated version of Glueck's composite measure for parental management (i.e., typically mother's discipline and supervision and family cohesiveness). Similarly, Loeber and Stouthamer-Loeber (1986) found parental involvement (attachment) and discipline, monitoring, and rejection to be the strongest family predictors of adolescent antisocial behavior. Hence,
familial variables have significant influence on both the behaviors of children and adolescents. Some scholars, however, contend that both children and other family members are independently predisposed to socialization difficulties by diverse personality constructs commonly correlated with antisocial and aggressive behavior (Farrington, 1989; Gottfredson and Hirschi 1990; Wilson and Herrnstein 1985).

**Personality.** Since the 1950's, empirical research has identified particular personality factors to be predictive of aggression and delinquency. For example, the Glueck's (1950) comparison of delinquent and non-delinquent samples observed delinquents to be more extroverted, hostile, impulsive, less controlled, less concerned about failure, and less conventional and responsive to authority. As a result, research on the prediction of aggression continues to include personality variables (e.g., Caspi and Bem 1990; Caspi, Moffitt, Silva, Stouthamer-Loeber, Krueger, and Schmutte 1994; Huesmann and Eron 1989; Lothstein and Jones 1978; McGue, Bacon, and Lykken 1993; Romney and Syverson 1984; Selby 1984), despite early researchers citing various methodological flaws in earlier personality studies (e.g., Schuessler and Cressay 1950; Tennenbaum 1977; Waldo and Dinitz 1967).

In addition, personality traits continue to inspire many theoretical explanations of crime (see Andrews and Bonta 1994; 1999; Gottfredson and Hirschi 1990; and Wilson and Herrnstein 1985). For instance, in the book *A General Theory of Crime*, Gottfredson and Hirschi (1990) discuss the concept of low-self control as consisting of six subscales, including impulsivity, simple tasks (i.e., a tendency to lack diligence, tenacity, or persistence), risk-seeking, physical activities (i.e., a preference for physical activities over cognitive or mental activities), self-centered, and a temper component (see Chapter 4). Although empirical findings are mixed, most studies indicate a low to moderate relationship between the composite measure of self-control and the dependent variable of interest (Arneklev, Grasmick, Tittle, and Bursik
In many studies, the subscales of low self-control (i.e., impulsivity, risk-seeking, low empathy) are found to be more strongly correlated with deviant behavior than the combined measure of low self-control (Arneklev, Grasmick, Tittle, and Bursik 1993; Wood, Pfefferbaum, and Arneklev 1993).

Farrington (1989) found the individual factors of low IQ, low school attainment, high impulsivity, and poor concentration to be related to childhood aggression and adult violence. In addition, studies have also determined deficits in interpersonal skills, such as assertion, self-control, and social anxiety to be connected to violent tendencies (Henderson 1989; Ross and Fabiano 1983). Similarly, research consistently identifies violent offenders as possessing the following characteristics (Farrington, 1989; Gottfredson and Hirschi 1990; Pepler and Slaby 1994; Wilson and Herrnstein 1985):

- hyperactivity-impulsivity-attention deficit
- restlessness
- poor concentration
- risks-taking behavior
- poor ability to defer gratification
- low empathy
- impulsivity

Andrews and Bonta (1994:232), after an extensive review of the literature and several meta-analysis, maintain that “temperamental and personality factors conducive to criminal activity include psychopathy, impulsivity, restless aggressive energy, egocentrism, below-average verbal intelligence, a taste for risk, and weak problem solving/self regulation skills.”

Impulsivity is another personality characteristic found to be highly related to adolescent aggression and violence (e.g., Farrington 1989; Loeber 1988b, Mak 1990; Magnusson 1988;
Mischel 1961; Quay 1965; Rosenquist and Megargee 1969; Ross 1974; Stumphauzer 1973). If children or adolescents display impulsivity or an inability to delay gratification while exhibiting conduct problems early in life there is high risk of antisocial behavior later in life (Caspi, Moffitt, Silva, Stouthamer-Loeber, Krueger, and Schmutte 1994; Loeber 1988b; Loeber and Hay 1994; Magnusson 1988). In a recent study, comparing samples from different countries, in different age cohorts, across gender, and across race, Caspi et al. (1994) found personality correlates of delinquency to be robust. According to Caspi et al. (1994), greater delinquent participation was associated with increased negative emotionality (i.e., the tendency to experience aversive affective states) and less constraint (i.e., difficulty in impulse control). In other words, delinquent individuals were more impulsive and more likely to experience aversive states such as anger, anxiety, and irritability (Watson and Clark 1984). This lead Caspi et al. (1994) to hypothesize that high levels of negative emotions may lead individuals to perceive more hostile intent of others in more everyday situations. Thus, when high levels of negative emotions are coupled with high levels of impulsivity, likelihood of an aggressive response will increase (see Chapter 3).

Psychopathy or antisocial personality disorder for adults and conduct disorder for children and youth are important constructs for differentiating between violent and nonviolent offenders. For both adults and juveniles, these diagnoses are highly predictive of aggressive and violent behavior (Grayson 1994; Hare 1991). Using the Psychopathy Checklist-Revised (PCL-R; Hare 1991), which measures individuals by such characteristics as the need for stimulation/proneness for boredom, lack of remorse guilt, poor behavior controls, early behavioral problems, impulsivity, and criminal versatility, several researchers have found PCL-R psychopaths to have higher incidence of violent convictions (Hare 1991; Kosson, Smith, and Newman 1990; Serin 1991), higher incidence of institutional violence (Hare and
McPherson 1984), greater use of instrumental violence and the use of weapons relative to nonpsychopaths (Serin 1991). In addition, the Psychopathy Checklist is often found to improve the prediction of violent recidivism even after controlling for criminal history (Harris, Rice, Cormier 1991).

Thus, empirical research demonstrates the importance of personality constructs for understanding adolescent aggression and violence. Moreover, recent theoretical models have recognized the utility of person-oriented factors such as: a) antisocial personality, b) impulsivity, c) self-control, d) extroversion, e) egocentrism, and f) psychopathy. Nonetheless, this study stops short of a detailed empirical study regarding the range of possible personality correlates of adolescent aggression. Such an inquiry raises several methodological issues that extend far beyond the scope of this study. This study seeks only to determine whether personality characteristics such as impulsivity, risk-taking behavior, and low empathy or self-centeredness improve the predictive merit of social learning models. As noted above, previous research has found these personality factors to be strong correlates of both general offending and adolescent aggression (Arneklev, Grasmick, Tittle, and Bursik 1993; Caspi, Moffitt, Silva, Stouthamer-Loeber, Farrington 1989; Krueger, and Schmutte 1994; Loeber 1988b; Magnusson 1988; Mak 1990; Wood, Pfefferbaum, and Arneklev 1993).

**Physiological and Biological Factors.** Most aggressive behavior reflects a learned way of responding to situations, however, some researchers and theorists of aggression argue that physiological, neurophysiological, and biological factors play a significant role (Denno 1990; Kandel and Mednick 1991; Moffitt 1990; Raine 1993; 1997). Although beyond the scope of the present study, violence may be a by-product of impulsivity, hyperactivity, or cognitive deficits that may be due to injury to the central nervous system. Similarly, violence may be a manifestation of differential hormonal effects, exposure to toxic agents, and minor physical
anomalies. Numerous studies examine how physiological processes within the nervous system may influence psychological characteristics such as temperament (emotional level, self-regulation), behavioral development (impulse control), and cognitive abilities (attention, learning, language, memory, reasoning) or all three.

These sources of aggression and violence support the argument that genetic factors perform a basic role in establishing temperament, hormonal influences, the effects of drugs and alcohol, and generalized levels of arousal. A substantial amount of research evidence indicates various personality characteristics may have physiological, neurological, and biological foundations (Reznick, Kagan, Snidman, Gersten, Baak, Rosenberg 1986; Kagan 1989). Moreover, as discussed in the following section, some differences in cognitive functioning are thought to be indicative of internal predispositions. Nonetheless, many scholars concede that these personality characteristics, as well as physiological, neurological, and biological factors comprise a meaningful source of individual variation (see Raine 1993; 1997; Wilson and Herrnstein 1985).

Cognition. A significant amount of empirical research and psychological theorizing focuses on cognitive mechanisms and their influence on aggression and antisocial behavior (Agnew 1994; Anderson, Dueser, and Deverve 1995; Andrews and Bonta 1994; 1999; Bandura 1973; Betancourt and Blair 1992; Conklin 1992; Guerra, Nucci, and Huessmann 1994; Markowitz and Felson 1998; Matza 1964; Minor 1980; Novaco 1979; Sykes and Matza 1957; Zillman 1978). Most scholars concede cognitive factors such as attitudes, beliefs, values, and techniques of neutralization are essential for a comprehensive understanding of aggressive, violent, and antisocial acts. However, the primary issue is the extent to which these cognitive factors mediate the background factors of individuals and the situations furnished by the environment (Andrews and Bonta 1994; 1999; Tedeschi and Felson 1994; Magnusson 1988;
Markowitz and Felson 1998). In essence, cognitions function as a mediating system between the background factors (e.g., weak socialization, limited parental supervision and disciplinary practices) of individuals and the immediate situation.

During the 1950's and subsequent decades, several criminologists found empirical support for cognitive variables (Glueck and Glueck 1950; Loewinger 1966; Reckless 1967; Reiss 1951; Singer 1955). Meanwhile, some of the most dominant theoretical paradigms recognized elements of cognition (Akers 1977; Bandura 1973; Hirschi 1969; Sykes and Matza 1957). Today, cognitive processes are a major focus of research in developmental and cognitive psychology, and there is no question that there are major individual differences among youths' attitudes, beliefs, and judgments regarding the appropriateness of antisocial and aggressive behaviors (Andrews and Bonta 1994; 1999; Elliott 1994; Ross and Fabiano 1985).

Cognitive effects continue to be empirically supported by recent research on aggression and violence. In most research, a significant source of variation is found in an individual's decision on the appropriateness of behaving in an aggressive or antisocial manner (see Bullis and Walker 1996). The decision-making processes of youth who hold attitudes, beliefs, values, and self-neutralization techniques supportive of aggression is likely to routinely endorse aggressive and violent responses in particular social situations (Slaby and Guerra 1988). Andrews and Bonta (1994:111) found that among six major sources of variation, four are cognitively-related: a) decisions influenced by characteristics of the immediate situation, b) the attitudes, values, beliefs, and rationalizations held by a person with regard to antisocial behavior, and c) social support for antisocial behavior, most often in the form of perceived support from others for that action, and d) self-management and problem-solving skills.

Empirical research offers considerable support for these sources of individual variation. For instance, studies find general belief systems and response-outcome expectancies
of children and youth to be significantly related to aggressive behavior (Felson 1993; Felson and Tedeschi 1995; Perry, Perry, and Rasmussen 1986; Slaby and Guerra 1988; Tedeschi and Felson 1994). Aggressive children and delinquent youth convey antisocial attitudes and beliefs supportive of aggression and antisocial behavior (Andrews, Wormith, and Kiessling 1985; Elliott 1994; Glueck and Glueck 1950; Mak 1990; Perry, Perry, and Rasmussen 1986). Aggressive children often anticipate the use of aggression to yield positive outcomes, reduce or terminate aversive treatment, and generate few adverse consequences (Felson 1993; Guerra 1989; Guerra and Slaby 1989; Parke and Slaby 1983; Perry, Perry, and Rasmussen 1986; Tedeschi and Felson 1994). Moreover, empirical research indicates antisocial and aggressive children and youth tend to define social problems in hostile ways, adopt hostile goals, seek fewer social cues, generate fewer alternative solutions, and choose fewer “best” and “second best” effective solutions to interpersonal conflicts than their nonaggressive peers (Dodge 1980; Dodge and Newman 1981; Dodge and Somberg 1987; Dodge, Price and Bachorowski 1990; Nachshon and Rotenberg 1977; Richard and Dodge 1982; Spivack and Shure 1974).

These findings submit indisputable implications to the study of aggression and violence. Cognitive mechanisms offer invaluable insight for understanding the instigation and maintenance processes linked to aggressive and violent behavior over time and across situations (see Chapter 3). A person’s cognitions and perceptions of the external world (including self-perceptions), their way of processing information, their attitudes, and their values and beliefs help to determine the performance of aggressive behaviors (Magnusson 1988; Pearson and Toby 1991). Yet, the focus of empirical research on cognitive mediators is primarily based on elementary-school children and adults rather than adolescents (Slaby and Guerra 1988). For a complete understanding of the nature and causes of aggression and violence, future research must focus on the cognitive processes operating on aggressive and violent adolescents.
Implications of Extant Research for the Present Study

This study offers a variety of implications for extant research. First, known correlates of antisocial behavior and adolescent aggression are placed in a theoretical framework that provides a meaningful explanation for high school aggression. This process is likely to enhance both researchers and practitioners' conceptual understanding of aggressive and violent acts in high schools. Second, this study represents a research endeavor that recognizes the importance of including both personal and situational factors in a comprehensive analysis of high school aggression. Most studies on adolescent aggression fail to consider the impact of situation-oriented variables on the performance of aggressive behavior and neglect to explain the importance of situational correlates in a theoretical manner (Baron and Byrne 1987; Fagan and Wilkinson 1998; Gibbons 1979; Goldstein 1975; Lewis 1990; Luckenbill and Doyle 1989; Petersen 1977; Reiss and Roth 1993). Placing the primary correlates of high school aggression in an empirically supported theoretical model helps both researchers and practitioners make sense out of research findings and enrich our understanding of why specific factors are important. Finally, this study appreciates the inherent complexity of aggressive behavior by acknowledging the different origins, motivations, intentions, and patterns of aggressive behavior (Eron, Gentry, and Schlegel 1994; Howell 1998; Howell, Krisberg, Hawkins, and Wilson 1995; Loeber and Farrington 1998; Reiss and Roth 1993). Using some of the best theoretical inquiries in the area of aggression and violence, an operational definition that emphasizes basic conceptual properties among distinct patterns of aggressive behavior is utilized.
Definition

Operational definitions are important for studying aggression and violence. As noted above, much of the research on school violence only relates to the extreme forms of aggression such as those that cause significant harm to victims. Much more prevalent are acts of aggression typified by bullying, intimidation, and physical assaults (American School Health Association 1988; Kaufman et al. 1998; U.S. Department of Education 1998). This study is primarily concerned with understanding the mechanisms that operate to produce the more prevalent forms of aggression. Although not as harmful to their victims, these more frequent minor forms of aggression nevertheless circumvent the physical safety and psychological security of both teachers and students (Chandler et al. 1998; Elliott, Hamburg, and Williams 1998; Harris and Associates 1999; Morrison, Furlong, and Morrison 1994).

A number of theoretical and conceptual issues occur in an attempt to define violence and aggression (Baron 1977; Buss 1961; Hunt 1993; Megargee 1969; 1982). However, many scholars concede that aggression is a behavior directed at injuring a person (Dollard, Miller, Doob, Mowrer, and Sears 1939). For most theorists, violence is conceptualized as a severe form of aggression. Megargee (1984:527) states "the term violence is reserved for those extreme forms of aggression likely to cause serious injuries or to threaten human life." In this study, the term violence is used to indicate the most serious forms of aggression (e.g., those that result in serious physical injury to the victim).

The operational definition of aggression used in this study is not limited to behavior that aspires to cause physical injury to the victim. A major limitation of such a definition of aggression is that it assumes that aggression serves only a single purpose, namely, to inflict injury (Bandura 1973). In many cases, aggressive acts are performed for other reasons than to
produce injury (e.g., to enhance social status, gain control, secure material resources). Thus, distinct types of aggression can be identified by the underlying roots of the behavior, and the goals or rewards they offer the perpetrator (Berkowitz 1962; Buss 1966; Fagan and Wilkinson 1998; Felson 1993; Hunt 1993; Tedeschi and Felson 1994). Moreover, different patterns of aggression are likely to have distinct origins, different treatment implications, and may require unique preventive measures as an individual progresses through the life-course (Moffitt 1993).

For these reasons, aggression should be viewed as a multifaceted concept typified by a variety of motivations, intentions, consequences, and outcomes. Thus, for purposes of this study, aggression is operationalized in a manner that accounts for level of intensity or harm produced by such behavior and the underlying motives that often precede aggressive acts. Four dependent variables are used for this study: school violence, school aggression, instrumental school aggression, and school vandalism and delinquency (see Chapter 4). School violence is reserved for the most severe forms of aggression (e.g., aggravated assault, gang fights, and sexual assault), while school aggression represents the less serious or harmful behaviors (e.g., verbal insults, threats, and intimidation). Likewise, instrumental school aggression is characterized by less serious forms of behavior; however, it is a form of aggression motivated by personal desires or goals. In general, aggression is defined as the intentional infliction of some type of harm upon others (Baron 1977). The harm may be in the form of psychological devaluation or degradation (e.g., threats, and intimidation) as well as physical and may be motivated by a desire or result in some personal gain for the harmdoer (Bandura 1973). A school vandalism and delinquency variable is included in this study to examine whether the empirical correlates and theoretical explanations for each distinct form aggression and violence are unique compared to general patterns of delinquency.
Pre-Adolescent Research and Adolescent Aggression

Our current understanding of the nature and causes of adolescent aggression and violence is the product of several decades of empirical research. Yet, some of the most notable research predominately relies upon samples of pre-adolescents or children to forecast the likelihood of future offending (e.g., peer rejection, bullying, and school failure) (see Shinn, Ramsey, Walker, and Stieber 1987; Huesmann and Eron 1986). Thus, there remains a compelling need for more empirical research that targets the factors associated with aggression and violence among adolescents. It is reasonable to expect that the instigators and self-regulatory mechanisms operating in adolescence are distinct from pre-adolescent children. Empirical research must focus on the most theoretically important risk factors for adolescent aggression, delineate the meaningful sources of frustration for youth, identify the cognitive mediators of adolescent aggression, and discern the most omnipotent reinforcements regulating adolescent aggression, violence, and delinquency (see Chapter 3).

School Aggression: Directions for the Present Study

There are few empirical studies that strive to understand adolescent aggression, violence, and delinquency in the context of schools. Most studies regard the school context as being an important construct in a model of relevant predictors for “at risk” children and youth. Yet, few studies school violence studies target theoretically meaningful variables known to be related to adolescent aggression and violence. Likewise, research focusing on school aggression and violence is highly empirical and rarely aspires to demonstrate the relevance of significant findings in a theoretical manner (see American School Health Association 1989; Bastian and Taylor 1991; Centers for Disease Control and Prevention 1991; 1998; Center to
Prevent Handgun Violence 1990; Chandler et al. 1998; Kaufman et al. 1998; Harris and Associates 1999; National Institute of Education 1978; Sheley and Wright 1995; 1998; U.S. Department of Education 1998). As a result, there are many unanswered questions regarding the mechanisms operating in the high school setting. No research has determined in a systematic manner the relevant learning, instigating, and maintaining mechanisms that result in self-reported high school aggression, violence, and delinquency. Likewise, no research has examined the nature and extent to which these mechanisms are similar or different across school contexts (see Chapter 3).

As noted in Chapter 1, the use of theoretical paradigms are essential for isolating the pivotal variables that augment the performance of aggressive and violent acts. In addition, theoretical models provide both professionals and practitioners with an important conceptual framework for developing effective school prevention programs. Noting the importance of employing theory to guide research, this study uses social learning theory as a theoretical paradigm for exploring aggression and violence within the context of high schools. Moreover, it will be seen that many of the known correlates of adolescent aggression come together in social learning theory. Chapter 3 offers a comprehensive discussion of the relevant precursors, concepts, and principles embodied in social learning theory.
It is important to note that there are differences in the level of school-related crimes and violence depending on whether official arrest data or self-reported student data are examined. Many nonfatal forms of aggression and "minor" types of aggression resulting in injury in school often do not get reported to school officials or law enforcement authorities. Thus, self-report data regarding the level of nonfatal victimization's in school tends to be much higher than official estimates (Elliott, Hamburg, and Williams 1998; Furlong and Morrison 1994; Miller 1994).

As discussed in Chapter 3, this study emphasis the role of the social context and situational instigators for explaining the acquisition, instigation, and maintenance of aggressive, violent, and delinquent behaviors. Thus, a primary objective of this study is to determine whether between-district differences in self-reported school aggression can be explained by the means in which aggressive behavior is learned, instigated, and reinforced. Using a formula developed by Clogg, Petkova, and Haritou (1995), this study examines whether the independent regression coefficients for predicting school aggression differ across school districts (see Chapter 5).

In the early to mid 1990's, the growth in juvenile homicide was most pronounced in large cities with populations of more than one-quarter million people (Snyder 1995). However, juvenile arrests for violent crime including murder, forcible rape, robbery, and aggravated assault increased for both suburban and rural communities during the early 1990's (Federal Bureau of Investigation 1991).

The previous discussion regarding the prevalence of school violence and school aggression utilized all of the currently available sources for data recommended by the National Center for Education Statistics for obtaining an accurate picture of the nature and extent of school violence.

Despite the potential limitations of self-report surveys and gaps in knowledge inherent in existing datasets, self-report surveys are essential for tapping into a variety of incidents that do not get reported. Many school crimes simply go unreported and are often handled informally, resulting in equally invalid official school records. Less conspicuous offenses (e.g., minor theft, bullying, insults, threats, and other forms of verbal harassment), which are of primary importance for this study, are often overlooked in current recording practices, even though such offenses have substantial detrimental effects on the educational climate of our schools (Miller 1994). In addition, official reports do not address the secondary effects of school violence (e.g., insecurity, fear, avoidance) that arise both from direct and indirect exposure (e.g., witnessing, being told about violent events).

Furlong and Morrison (1994) offer a detailed discussion of methodological caveats to consider when interpreting the "reality" of school violence. While the authors agree that school violence is a problem, they identify several data collection methods and statistical strategies that often inflate its actual prevalence including unanalyzed sample variation and subtle differences in they way self-report questions are phrased.
As a result of these findings, this survey asks students to report on the amount of aggression and violence they have personally witnessed or been subjected to in their own neighborhood, school, and family. The concern with using self-report “opinion” surveys is that they may actually be measuring a student's general level of concern for school violence and not actual acts that have occurred. Some surveys ask students to indicate their perception of school violence in “other” schools, but not necessarily in their own school (see Furlong and Morrison 1994). This survey asks students to report on their own experience regarding acts of aggression and violence.

Coie and Kupersmidt (1983) found that rejected boys (ages 9-11) were more often rated by peers as being the most likely to start fights. Yet, the boys identified as average, as opposed to neglected, rejected, or popular, by their peers were observed engaging in physically aggressive behavior equally as often as the rejected boys. Moreover, rejected children tend to regain their poor social status quickly, even when confronted with totally new situations. This suggests other biases may be guiding the children's perceptions and appraisals of their peers.

Other social skills may be important for future aggression research. The types of goals adolescents aspire to achieve in social situations, teenagers' confidence in their interpersonal skills, and such concepts as “relevance”, “responsiveness”, and having “a process view” of social situations are often identified (see Dodge et al. 1992; Putallaz 1981).

Typically, school-based interventions consist of programs such as social problem solving, positive play training, group entry skills training, and dealing effectively with strong negative feelings (Coie et al. 1991). Such programs tend to be only marginally successful in changing the behaviors of aggressive-rejected children. Nonetheless, it is critically important for interventions to recognize the impact social rejection may have on children as they progress into adolescence.

Some research indicates that during adolescence the influence of the family declines and the peer group increases in its relative importance (Hawkins and Weis 1979; Patterson et al. 1989; Reid 1993; Fagan and Wexler 1987). Nonetheless, most scholars support the notion that parent-child relationships and parental monitoring remains a significant factor on a youth's association with delinquent peers (Snyder, Dishion, and Patterson 1986). Moreover, research finds parental monitoring and discipline practices in middle childhood to be significantly correlated with involvement with antisocial peers at ages 10 and 12 (Dishion, Patterson, Stoolmiller, and Skinner 1991).

A variety of personality inventories and subscales are used to differentiate offenders from nonoffenders and sociopaths from non sociopaths. Some of the most predictive scales and inventories include the Psychopathy Checklist (Hare 1980; PCL), the Psychopathy Checklist-Revised (Hare 1991; PCL-R), the Socialization Scale (So) from the California Personality Inventory (CPI), the Psychopathic Deviate (Pd) scale from the Minnesota Multiphasic Personality Inventory (Megargee and Bohn 1979; MMPI).

Current methods for measuring many personality constructs, particularly psychopathy and antisocial personality disorder, do not coincide with the research methods employed in this
study. The most common instruments require lengthy self-report responses, interview schedules, clinical interpretations, licensor agreements, and/or are normed for inappropriate age groups.

Although a variety of neuropsychological, physiological, and other biological factors are found to be significant factors in the study of aggression and violence, the sample and methods implemented in this research is not conducive to the examination of biological factors and their relationship to school aggression. The author, however, recognizes biological and neurological factors are likely to underlie the personality and cognitive factors examined in this study (see Eysenck 1977; 1983; Megargee 1966; Quay 1965; Raine 1993; 1997).
Chapter 2 discussed the nature of adolescent aggression and its empirical correlates or risk factors. The empirical correlates important for an adequate explanation of adolescent aggression and violence include: biological and physiological factors, peer rejection, school failure, temperament or personality, cognition, family practices, and involvement with antisocial peers. However, these empirical correlates, by themselves, are insufficient for a comprehensive understanding of how aggressive behaviors are channeled and regulated. Instead, a complete explanation of the nature and causes adolescent aggression and violence requires the unifying capacity of theory.

Theoretical paradigms serve as important guides to empirical research on aggression and violence. Theories organize empirical knowledge in a rational manner and assist in the search for a new empirical understanding of a particular behavior (Andrews and Bonta 1994; 1999). Absent theory, empirical correlates of adolescent aggression are reduced to an assortment of descriptive facts. Simply put, empirical correlates are unable to answer the essential questions of why particular risk factors are important and how they can be combined for a complete explanation of adolescent aggression and violence. However, the application of theory provides a backdrop for understanding precisely why the empirical correlates of adolescent aggression and violence are relevant. In essence, theory pulls together previously unrelated bodies of knowledge or empirical correlates and offers a rationale for why particular risk factors are important. Moreover, theoretical models help to isolate the pivotal risk factors necessary for effective prevention and intervention efforts.
A theoretical model useful for unifying the vast array of empirical correlates of adolescent aggression and violence is social learning theory. Social learning theory embraces the empirical correlates and demonstrates how they operate to produce aggressive and violent behavior in youth. Indeed, few other theoretical models are able to account for the diverse scope of risk factors related to adolescent aggression and violence. A satisfactory explanation of adolescent aggression and violence must account for relevant cognitions (e.g., beliefs, expectations, neutralizations), personality constructs (e.g., impulsiveness, risk-seeking behavior, low empathy), personal background factors (e.g., family abuse, antisocial peers), and situational conditions (e.g., "triggers" or instigators, inhibitors). Most theoretical paradigms fail to account for significant personality correlates, cognitive factors, and, most importantly, situational correlates of adolescent aggression (Baron and Byrne 1987; Fagan and Wilkinson 1998; Gibbons 1979; Goldstein 1975; Lewis 1990; Luckenbill and Doyle 1989; Petersen 1977; Reiss and Roth 1993).

Social learning theory offers an internally coherent paradigm for studying situational correlates of adolescent aggression and violence. Most scholars concede that the performance of aggressive and violent acts are often elicited or inhibited by both actual and perceived environmental conditions (Averill 1983; Baron and Byrne 1986; Berkowitz 1986; Fagan and Wilkinson 1998; Felson and Steadman 1983; Felson and Tedeschi 1995; Megargee 1993). Moreover, personal background factors and cognitive-behavioral mechanisms further shape the occurrence of aggressive and violent behaviors. Individual variations in the degree to which aggressive behaviors are reinforced and mediated by cognitively based values, beliefs, or neutralizations affect the likelihood of aggressive and violent acts (Felson 1993; Guerra and Slaby 1989; Pepler and Slaby 1994; Slaby and Guerra 1988). Although most scholars support the notion that both person-oriented and situation-oriented variables contribute to aggression.
and violence, there is considerable debate on the relative importance of these factors.

The following sections discuss the person-situation debate and the pertinent role of cognitions. As noted below, social learning theory combines personal background factors, situations, and cognitions into a cohesive model that is presented in later sections of this chapter.

**Person-Situation Interaction**

**Introduction**

Of great theoretical and practical importance is the notion that both person-oriented variables and situation-oriented variables may interact in idiosyncratic ways to produce acts of aggression and violence. It is generally recognized by behavioral scientists from several disciplines that any attempt to accurately predict or explain human behavior requires the consideration of numerous factors varying in both deterministic origin (e.g., internal versus external) and unit or level of analysis (e.g., macro versus micro) (Eron, Gentry, and Schlegel 1994; Howell, Krisberg, Hawkins, and Wilson 1995; Loeber and Farrington 1998; Patterson, Reid, and Dishion 1992; Reiss and Roth 1993). As a consequence, researchers must consider whether the cause of human behavior is a function of internal factors such as individual dispositions or a function of external factors specific to situational and environmental conditions.

Meanwhile, in conjunction with the deterministic origin of a particular behavior, an explanation of human behavior must consider macrosocial, microsocial, psychosocial, and biological levels of analysis. Reiss and Roth (1993: 299) point out that "a major problem in
understanding violence is to describe the probability distributions of predisposing factors, situational elements, and triggering events at the biological, psychosocial, microsocial, and macrosocial levels.” These considerations form the theoretical basis for examining both person-oriented and situation-oriented variables and their relative contribution to the performance of aggressive and violent behavior.

**Person-Situation Debate**

Within the past few decades a number of major writings dispute the relative influence of person-oriented and situation-oriented variables in predicting and understanding human behavior (e.g., Bern and Funder 1978; Kenrick and Dantchik 1983; Loeber and Hay 1994; Magnusson and Endler 1977; Mischel 1984; Patterson 1982; Pepler and Slaby 1994; Snyder and Ickes 1985). This inquiry spawned considerable discussion among behavioral scientists and produced what many scholars identify as the person-situation controversy or debate. This debate typically concentrates on the relative contribution of individual personality traits and dimensions of personality traits versus specific situational factors that act as cues or as triggers within the environment. That is, to what extent is a youth’s behavior in a given situation a function of the nature of that setting and to what extent is it a function of the behavioral history and predispositions the youth brings to the situation? In the area of antisocial behavior, this debate is focused on the question of whether adolescent aggression is situation specific or characterized by trait-like qualities or high degrees of stability (see Loeber and Hay 1997; Mischel 1984; Patterson 1982; Pepler and Slaby 1994).

Today, the person-situation debate is considered to offer minimal theoretical insight into the nature and the causes of adolescent aggression and violence. Recent developments in both criminological theory and empirical research support the importance of both internal
predispositions and external factors for understanding adolescent antisocial behavior (see Andrews and Bonta 1994; 1999; Elliott, Huizinga, and Ageton 1985; Gottfredson and Hirschi 1990; 1994; Patterson 1992; Patterson, Reid and Dishion 1992; Wilson and Herrnstein 1985). Innate predispositions or personality traits are insufficient for a comprehensive understanding of adolescent aggression and violence. Goldstein and Keller (1987) note just as with personality theory in general, theoretical considerations of aggression are moving away from exclusively person-oriented models to person-situation interaction models. As a result, modern formulations in social learning theory acknowledge the importance of individual differences or individual predispositions in the form or personality traits and situational instigators (Andrews and Bonta 1994; 1999; Patterson, Reid and Dishion). Most scholars concede that both personality traits and situational contingencies bring about the actual display of aggression and violence (Eron, Gentry, and Schlegel 1994; Hawkins and Catalano 1993; Loeber and Farrington 1998; Loeber and Stouthamer-Loeber 1998; Pepler and Slaby 1994; Reiss and Roth 1993; Tedeschi and Felson 1994).

To explore the relative impact of external factors on the occurrence of adolescent aggressive and violent behavior, the defining principles of the “situation” must be understood. As discussed below, the situation is a rather dynamic concept. The situation can be expressed by conditions embedded in the immediate environment (e.g., immediate sources of frustration) or in more distal properties influenced by learning factors (e.g., learned responses in similar situations) and cognitive processes (e.g., retrospection and forethought). The following section depicts the dynamic attributes firmly rooted in the meaning of the “situation.”

A Definition of the Situation

Past, present, and future properties represent situational influences on aggressive
behavior. In social psychological research, considerable attention is given to the immediate situation -- those factors in the immediate environment that either facilitate or inhibit aggressive reactions to particular events (Andrews and Bonta 1994; 1999; Berkowitz 1974; Felson and Steadman 1983; Felson and Tedeschi 1995). In this study, the immediate situation represents an instigation mechanism facilitating the performance of high school aggression. However, the impact of a given situation is often confounded by previously learned or reinforced responses to similar events. Moreover, cognitive-based judgment processes involved in the appraisal of immediate circumstances and the estimation of future outcomes often mediate situations (Felson and Steadman 1983; Felson 1993; Felson and Tedeschi 1995). Thus, any truly comprehensive analysis of situational influences on aggressive behavior must give serious attention to the role of prior learning experiences and cognitive processes (Berkowitz 1986).

In actual physical terms, a situation can be defined as that part of the environment that is accessible for sensory perception at a particular episode (Magnusson 1981). Yet, this definition fails to recognize the cognitive processes involved in the deliberation of past experiences and the processing of future expectations. Instead, Stebbins (1981) offers a broad definition of the situation as a physical, temporal, and psychological frame of reference determined by external conditions on a specific occasion. Applying this definition, it is possible to consider situations in terms of past, present, and future events. More specific, this definition allows for the examination of subjective cognitive processes immersed in the interpretation of immediate situational conditions while considering the influence of previous personal experiences and prospective expectations. Hence, in the analysis of situations, an important operational distinction may exist between the subjective situation as defined or perceived by the individual and the objective situation as defined by the actual physical and social characteristics of the surrounding environment.
Thus, situations can be prospective, retrospective, subjective and even vicarious in nature (Stebbins 1981). A prospective definition refers to a situation in which the observer attaches meaning based on what they may face in the future (Znaniecki 1952). The cognitive ability of humans to foresee the range of possible future outcomes permits individuals to alter their responses in the present (Bandura 1973; 1977; 1986; Huesmann and Eron 1984; Slaby and Guerra 1988; Tedeschi and Felson 1994; Welsh and Gordon 1991). Thus, an adolescent can evaluate the immediate situation in terms of what they perceive will occur in the future. For example, a high school student may respond aggressively to an insult today in anticipation that this action is likely to deter future insults.

A retrospective definition is dependent on reference to similar situations that occurred in the past. In this instance, the notion of reinforcement contingencies is of particular significance. The prior learning experiences and reinforcement received for a given response in previous similar situations are prone to influence an individual's behavior in the present (Akers 1977; Bandura 1973; 1977; Bandura and Walters 1963; Patterson 1982; Patterson, Reid, and Dishion 1992)). Thus, a high school student is likely to base their response to the current situation in light of what occurred in the past.

Finally, a vicarious definition refers to other's situations whether they are based upon present, past, or future circumstances (Stebbins 1981). A student's response to a particular situation may be conditioned by the consequences or rewards received by others they have observed or are observing (Akers 1977; 1985; Andrews and Bonta 1994; 1999; American Psychological Association 1993; Bandura 1977; Bandura and Huston 1961; Bandura, Ross, and Ross 1963; Berkowitz 1986; Centerwall 1992; Chaffee 1972; Eron and Huesmann 1987; Huesmann 1982; Liebert, Sprafkin, and Davidson 1982; Walters and Grusec 1977). This involves the cognitive appraisal of events experienced by others in relation to similar
circumstances encountered by the observer (Bandura 1977; 1986; Stebbins 1981). In this instance, an adolescent may vicariously condition their response based on the functional value or reward received or thought to be received by others in similar situations (Megargee 1993; 1995; Moffitt 1993; Perry, Perry, and Rasmussen 1986). Hence, a student can cognitively evaluate an event and base his or her response on information derived from the observation of others exposed to similar circumstances (Bandura 1973; 1986).

These conceptual distinctions hold direct implications for this study. The empirical correlates related to adolescent aggression and violence are likely to influence the role of situational factors on aggressive behavior (see Chapter 2). For instance, high school students often attach meaning to situations in terms of past experiences (e.g., noncontingent reinforcement, harsh-erratic punishment), present frustrations (e.g., school failure, peer rejection, verbal insults), and the anticipation of future events (e.g., elimination of future bullying, peer approval). Thus, a comprehensive analysis of situational factors must consider the impact of prior learning variables and cognitive factors (Berkowitz 1986). A student's definition of a situation often changes from one situation to another through both direct and indirect experience and knowledge gained from prior situations (Stebbins 1981). Moreover, the presence of particular situational factors often interacts with personal background factors, personality dimensions, and cognitive mechanisms to produce aggression (Andrews and Bonta 1994; 1999; Pepler and Slaby 1994). As noted below, situational factors can elicit or inhibit the performance of high school aggression (Felson and Steadman 1983).

The Situation as a Precursor to School Aggression

Aggression and violence does not usually take place in a social or situational vacuum. While instances in which a person attacks one or several others totally at random do occur,
they appear to be the exception, not the rule. Much more often, aggression tends to develop from specific social or situational factors which pave the way for its occurrence and lead aggressors to choose specific victims (Andrews and Bonta 1994; 1999; Baron and Byrne 1987; Berkowitz 1974; Felson and Steadman 1983; Felson and Tedeschi 1995). As a result, personal background factors, personality traits, and cognitive processes are strongly influenced by the presence or absence of situational "instigators" and "inhibitors" (Agnew and Peters 1986; Felson and Steadman 1983; Piquero and Tibbetts 1996; Reiss and Roth 1993). Therefore, it is important for studies that seek to predict or explain aggressive behavior to examine the role of situational variables.

Situations often include "triggers" or "instigators" that act as catalyst for aggressive and violent acts. A triggering event can be represented at macrosocial, microsocial, psychosocial, and biological levels. By definition, macrosocial factors can indirectly increase the number of microsocial and psychosocial "triggers" and "inhibitors" in a particular environment. Macrosocial conditions, such as societal and communal factors, are often correlated with perceptions of school victimization and rates of school violence (Gottfredson and Gottfredson 1985; Hellman and Beaton 1986; Laub and Lauritsen 1998; Sheley, McGee, and Wright 1995). For instance, Dodge (1992) found that economically disadvantaged and violent neighborhoods report higher prevalence rates of school violence. Likewise, higher rates of school violence are often found in public and urban schools rather than private and suburban schools (Bastian and Taylor 1991; Bureau of Justice Statistics 1992; Kaufman et al. 1998; National School Boards Association 1993). Moreover, fear of school victimization is often reported to be highest in those schools where drugs are readily available (Bastian and Taylor 1991; Bureau of Justice Statistics 1992).

The situational context of a high school including the architectural design and size, the
distribution and use of illicit drugs, the prevalence of lethal weapons, the ratio of student-gang involvement, or the type of leadership and governance, can promote or foster the presence of activating or instigating events (Bastian and Taylor 1991; Bureau of Justice Statistics 1992; Gottfredson and Gottfredson 1985; Laub and Lauritsen 1998; Sheley, McGee, and Wright 1995). School attributes such as a relatively high number of students occupying a limited amount of space, rigid governance policies, and poor building design features are often correlated with high levels of school aggression and violence (American Psychological Association 1993; Harootunian 1986; Toby 1994). Gottfredson and Gottfredson (1985) report that particular school attributes (e.g., lack of community support, larger school size, physical features) and governance conditions (autocratic rules, strict disciplinary procedures, an emphasis on grades versus mastery, limited curriculum options) tend to be correlated with higher levels of school violence and disruption.

At the microsocial level, triggering events are often found in interpersonal communication patterns or lack of communication with others. This is supported by evidence indicating that most aggressive and violent acts in school are instigated by seemingly trivial events, such as petty insults, menacing looks, or minor scuffles (Lockwood 1997; Olweus 1991). As noted below, aversive events through their inherent nature can provoke an immediate aggressive response (Bandura 1973; Luckenbill and Doyle 1989; Tedeschi and Felson 1994). According to social learning theory, aversive treatment by others such as physical assaults, verbal threats, and insults often facilitate the performance of aggression (Bandura 1973; 1977). Similarly, triggering events are frequently found in the absence of responsible monitors, with few or many bystanders, or in the availability or presence of weapons (Decker 1996; Felson 1982; Tedeschi and Felson 1994; Reiss and Roth 1993). The most prevalent reasons cited for school gun violence include gang or drug disputes,
longstanding arguments, romantic disagreements, fights over possessions, and accidents (Center to Prevent Handgun Violence 1990).

At the individual psychosocial level, lack of impulse control or the recognition of ample opportunity to commit a violent act exacerbates the activating or instigating event. These triggering events are represented by factors such as accumulated emotion or frustration, anger, stress, fear, and alcohol or drug consumption (Reiss and Roth 1993; Roth 1994; Tedeschi and Felson 1994). As noted in Chapter 2, those students most likely to exhibit aggressive and violent behavior typically come from families with high levels of conflict, have difficulty with peer relationships, and have experienced academic failure (Eron, Gentry, and Schlegel 1994; Howell, Krisberg, Hawkins, and Wilson 1995; Loeber and Farrington 1998; Patterson 1982; Patterson, Reid, and Dishion 1992). Moreover, aggressive students frequently have a history of antisocial behavior, tend to be highly impulsive, and to attribute baseless hostile intentions to others (Andrews and Bonta 1994; 1999; Dodge 1980; Farrington 1989; 1991; Loeber, Stouthamer-Loeber, and Green 1991; Stattin and Magnusson 1989). As noted below, some research indicates that students who display aggressive and other inappropriate behaviors may experience higher levels of generalized frustration than other students (Hutton 1985). Frustration may be a product of poor peer or teacher relations, family conflict, academic failure, or a host of other events important to adolescent students (see discussion on aversive instigators later in this chapter).

In sum, situational variables represent a significant source of variation for high school aggression and violence. However, the distinctive influence of situational factors must be understood in relation to other empirical correlates including personal background factors, personality, and cognitive processes (Andrews and Bonta 1994; 1999; Berkowitz 1986). According to Reiss and Roth (1993:298), "a violent event requires the conjunction of a person

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with some (high or low) predisposing potential for violent behavior, a situation with elements that create some risk of violent events, and usually a triggering event.”

Simply put, a theoretical model for adolescent school aggression must not only account for the empirical correlates identified in Chapter 2, but must also give serious attention to the role of situational conditions. The remainder of this chapter is dedicated to establishing social learning theory as a primarily vehicle for studying high school aggression and violence. Social learning theory yields a framework useful for analyzing the person-oriented, situation-oriented, and cognitive factors empirically correlated with adolescent aggression and violence. Most importantly, social learning theory underscores the importance of prior learning experiences and their influence on the interpretation of situational conditions, while accounting for the cognitive processes that mediate the instigation and maintenance of adolescent aggressive and violent behaviors.

**The Social Learning Model**

Chapter 2 portrayed adolescent aggression and violence to be the product of individual predispositions, family practices, antisocial associates, peer rejection, school failure, and antisocial attitudes, values, and beliefs. This chapter introduced the empirical and theoretical significance of situational or environmental conditions on adolescent aggression and violence. These empirical factors, when combined, represent the most consistent and persuasive empirical correlates of adolescent aggression and violence. The remainder of this chapter illustrates the potential of social learning theory to offer an internally coherent theoretical paradigm for unifying these factors for an improved understanding of high school aggression and violence.
Although social learning theory is regularly used to examine a diverse range of contexts and behaviors including adolescent marijuana use (Akers 1985), prison violence (Veno and Davidson 1977), gang involvement (Esbensen and Huizinga 1993; Winfree, Backstrom, Mays 1994), and sexual aggression (Miller and Iovanni 1994; Sermabeikian and Martinez 1994), few studies have systematically applied principles of social learning theory to the problem of high school aggression. This is despite claims that social learning theory may be one of the most frequently tested models in criminology (Stitt and Giacopassi 1992). In addition, extant research has failed to adequately conceptualize youth aggression in the context of high schools, thereby, limiting our understanding of school aggression and our ability to design meaningful school-based intervention programs. Social learning theory provides a valuable tool for conceptualizing the problem of high school aggression and violence.

The central proposition of traditional social learning theory asserts that adolescent aggression and violence is learned and regulated through conditions of reinforcement (Akers 1977; Bandura 1973; 1977; Bandura and Walters 1963; Meichenbaum 1977; Patterson 1982). However, recent formulations of social learning theory incorporate more distal personality factors found in empirical research including those noted in Chapter 2 to be empirical correlates of adolescent aggression and violence (Andrews and Bonta 1999). In a social learning framework, these personality factors are stable predispositions that underlie or govern the interaction of an individual with the external environment (Andrews and Bonta 1999). Thus, this discussion accounts for both traditional and contemporary formulations of social learning theory. These include: Social Learning Theory: Mechanisms of Aggression as formulated by Albert Bandura (1973) and the Personal, Interpersonal and Community-Reinforcement (PIC-R) Perspective on criminal conduct as developed by Donald Andrews and James Bonta (1994; 1999).4
Albert Bandura: Mechanisms of Aggression

Albert Bandura's social learning theory offers an explanation for how aggressive behaviors are acquired, performed, and maintained. Aggressive behaviors are acquired primarily through direct and indirect exposure to aggressive models (Bandura 1963; 1973; 1983; 1985; 1996; Domjan and Burkhard 1986; Meichenbaum 1977; Rosekrans and Hartup 1967). High levels of exposure to aggressive models in the community or among family and peers increases the probability that aggressive behavior patterns will be acquired or learned (Bandura 1996). Harsh erratic discipline, parental conflict, physical abuse and neglect, and aggressive peers all represent empirical correlates of adolescent aggression and violence (see Chapter 2).

The acquisition of aggressive behavior represents a significant risk factor for the performance of future aggressive behavior (Bandura 1973; 1977; 1996; Eron, Walder, and Lefkowitz 1971; Miller and Iovanni 1994; Sermabeikian and Martinez 1994; Winfree, Backstrom, and Mays 1994). However, social learning theory heeds an important distinction between the acquisition and instigation of aggressive behavior (Bandura 1973; 1977). The performance of aggressive behavior is often dependent on exposure to aversive instigators, generalized sources of frustration, and incentive inducements (Felson 1993; Guerra 1989; Guerra and Slaby 1989; Megargee 1982; 1995; Parke and Slaby 1983; Perry, Perry, and Rasmussen 1986; Tedeschi and Felson 1994; Megargee 1982; 1995; Warr 1996). Such factors as peer rejection, school failure, and other facilitators and inhibitors in the immediate environment often provide the necessary motivation for the display of aggressive behavior.

Lastly, social learning theory provides a theoretical framework for exploring the maintenance of aggressive behavior. Aggressive behavior is regulated (continued or

**Acquisition Mechanisms**

According to Bandura's social learning theory, the acquisition of aggressive behavior is primarily realized by way of direct and indirect exposure to aggressive models (Bandura 1973; 1977; 1996; Bandura and Ross 1963; Bandura, Ross, and Ross 1963; Skoler, Bandura, Ross, Ross, and Baron 1994). Models of aggressive behavior are found in virtually every segment of society including the popular media, community institutions, and among family and friends. As noted in Chapter 2, there is considerable empirical support for the impact of modeling influences on subsequent aggressive behavior in children and youth (Bandura, Ross, and Ross
Thus, most scholars concede aggression and violence is more likely to be a part of a person's behavior repertoire when the "appropriate learning conditions" are present (Eron, Walder, and Lefkowitz, 1971; Lefkowitz, Eron, Walder, and Huesmann 1977). These "appropriate learning conditions" include having many opportunities to observe aggression, having been or seeing other's reinforced for aggression, and being the target of aggression (Berkowitz 1990; Farrington 1991; McCord 1988). According to social learning theory, the environmental models and contingencies to which individuals are exposed, particularly children and adolescents, are predominately provided by family members and peer groups (Akers 1977; 1996; Akers, Krohn, Lanza-Kanduce, and Radoosevich, 1979; Bandura 1973; Domjan and Burkhard 1986; Elliott and Menard 1991; Matsueda and Anderson 1998; Nietzel 1979; Patterson 1982). However, the influence of these models is contingent on numerous factors including the degree of model-observer identification and the nature of observed consequences or reinforcements (Bandura 1973; 1996).

Aggressive behavior is frequently learned through observation. As noted in Chapter 2, those youth physically abused or subjected to harsh parental discipline as children are at increased risk of antisocial and violent behavior (Alfaro 1978; California Commission on Crime Control and Violence Prevention 1981; Farrington 1978; 1991; Huizinga, Loeber, and Thornberry 1995; McCord 1988; Patterson, Capaldi, and Bank 1991; Rhoades and Parker 1981; Salzinger, Feldman, and Hammer 1993; Sears, Maccoby, and Levin 1957; Smith and Thornberry 1995). This finding is especially true when physical discipline is supplemented by high parental permissiveness toward aggression (Patterson 1982; Patterson, Reid and Dishion 1992).
The relative influence of aggressive models on subsequent behavior may shift in importance for different stages of development. It is often hypothesized the role of the family and parent-child relationships maintains its central importance even throughout older adolescence (e.g., Coleman 1980; Siddique and D'Arcy 1984). However, some research indicates that the adolescent peer group is the primarily learning context for adolescent antisocial behavior (Elliott, Huizinga, and Ageton 1985; Fagan and Wexler 1987; Matsueda and Anderson 1998; Warr and Stafford 1991). In fact, Dishion, Patterson, Stoolmiller, and Skinner (1991) found that the significant influence of peers on the development of antisocial behavior might begin as early as preadolescence.

Fagan and Wexler (1987) found teenage delinquency to be shaped and reinforced primarily by environmental influences outside the home. According to Fagan and Wexler (1987), the dominant modeling, reinforcement, and learning conditions for youth are located on the street and in the school. Yet, Fagan and Wexler (1987) note the central importance of the family in early development of antisocial behavior. It appears “processes learned and reinforced by families in early childhood are further shaped and refined through learning experiences in school, among peers, and perhaps elsewhere in the community” (Fagan and Wexler 1987:664). Hence, the significant relationships between self-reported delinquency and repeated exposure to crime and violence in the home, in peer groups, and in violent schools, suggest that violence develops as part of a social learning process (Fagan and Wexler 1987). Nonetheless, most scholars agree that both family and peers contribute to the development of both antisocial and aggressive behaviors (see Chapter 2).

For many scholars, the observation of aggressive behavior promotes a standard of conduct that makes aggression an acceptable response in certain situations (Bandura 1973; Berkowitz 1962; Eron, Walder, Lefkowitz 1971; Huesmann et al. 1984; Parke and Slaby
Thus, it is equally important to understand the situational factors that may elicit or inhibit the performance of aggressive behavior in high schools.

**Instigation Mechanisms**

Social learning theory forms a conceptual distinction between the acquisition and performance of aggressive behaviors (Bandura 1973; 1977). This separation between what is learned and what is performed facilitates the study of situational factors related to high school aggression and violence. A person can learn aggressive behaviors and include them as part of their behavior repertoire, however, the actual use of aggressive behavior is often dependent on situational factors (Baron 1971; Berkowitz 1978; 1983; Felson and Steadman 1983; Megargee 1983; 1995). Hence, social learning theory offers a meaningful framework for examining the type of situational factors that elicit and inhibit the performance of high school aggression.

**Aversive Instigators.** Aggressive behavior is activated and channeled through a variety of situational motivations and provocations (Bandura 1973; Baron and Byrne 1986; Berkowitz 1962; Buss 1966; Felson and Steadman 1983; Feshback 1964; Megargee 1993; 1995). Most notably, the decision to aggress is often precipitated by both instrumental and hostile or angry intentions (Berkowitz 1962; Buss 1966; Feshback 1964). Hostile-aggressive responses are often in reaction to anger or frustration-inducing conditions, such as insults, physical attacks, or personal failures (Averill 1983; Baron 1971; Berkowitz 1990; Ferguson and Rule 1983; Geen 1968; Mueller 1983; Ohbuchi and Ogura 1984; Selby 1984; Tedeschi and Felson 1994).

For decades, social psychological research viewed aggression to be a consequence of frustration-inducing situations (Dollard, Doob, Miller, Mowrer, and Sears 1939). This frustration-aggression link has brought forth significant contributions to social psychological research on adolescent aggression (Berkowitz 1962; Dollard et al. 1939; Megargee 1982;
Aversive treatment by others such as physical assaults, verbal threats, and insults often facilitate the performance of aggression (Bandura 1973; 1996; Baron 1971; Felson and Steadman 1983; Geen 1968; Kremer and Stephens 1983). As noted above, many aggressive and violent acts in schools are likely to be instigated by aversive treatment, such as petty insults, menacing looks, or minor scuffles (Lockwood 1997; Olweus 1991). Moreover, there is considerable evidence that direct physical provocations often lead to aggressive responses (Dengerink, Schnedler, and Covey 1978; Ohbuchi and Ogura 1984). In fact, the mere perception of frustration or pain as intentionally caused by others often increases the intensity of a victims' aggressive responses (Averill 1983; Bandura 1973; 1983; Dodge and Crick 1990; Feshbach 1984; Greenwell and Dengerink 1973; Weiner 1985).

Social learning theory asserts that high levels of exposure to generalized sources of frustration can also elicit the performance of aggression (Bandura 1977; 1996; Berkowitz 1962; Skoler, Bandura, Ross, Ross, and Baron 1994; Hutton 1985). As noted in Chapter 2, persistent peer rejection and poor school performance are predictive of subsequent antisocial and aggressive behavior (Bagwell, Newcomb, and Bukowski 1998; Coie, Terry, Lenox, Lochman, and Hyman 1998; Cowen, Pederson, Babigian, Izzo, and Trost 1973; Farrington 1989; Griffin 1987; Hawkins, Lishner, Jenson, Catalano 1987; Huizinga, Loeber, and Thornberry 1995; Loeber 1982; Maguin and Loeber 1996; Olweus 1980; 1994; Patterson 1992; Robins 1966; Roff, Sells, and Golden 1972; Yoshikawa 1994). In a social learning paradigm, peer rejection and school failure represent significant sources of generalized frustration for both children and adolescents.

According to social learning theory, aversive reductions in conditions of life and the thwarting of goal-directed behavior can also produce heightened levels of generalized
frustration (Bandura 1973; 1983; Skoler, Bandura, Ross, Ross, and Baron 1994). “After individuals have come to expect their actions to be rewarded at a certain level, withdrawal or reduction of positive reinforcement serves as an aversive event” (Bandura 1973:163). Likewise, the blockage of positively valued goals for adolescents, such as being accepted by peers, obtaining good grades, and doing well in social activities is likely to produce high levels of frustration or anger (Agnew 1985; 1992; Berkowitz 1990). Social learning theory asserts that these sources of frustration, whether actual or cognitively perceived, heighten the emotional arousal of adolescents and increase the likelihood of aggression and violence (Bandura 1973; 1977; 1996; Nietzel 1979). The blockage of desired goals, the withdrawal of positive reinforcement, and exposure to negative life events is often found to produce general levels of frustration or strain, thereby, resulting in aggressive and delinquent behavior (Agnew 1985; 1989; 1992; Agnew and White 1992; Bandura 1973; Brezina 1996; Cohen 1955; Cloward and Ohlin 1960; Merton 1938; Paternoster and Mazerolle 1994).

Incentive Instigators. Although the frustration-aggression hypothesis made significant contributions to our theoretical understanding of aggression, it is simply unable to account for other motivational factors empirically correlated with adolescent aggression and violence (Andrews and Bonta 1999; Bandura 1973; 1977; Tedeschi and Felson 1994). The cognitive capacity of human beings to learn from past behavior, self-evaluate present behavior, and foresee future circumstances forced scholars to search for collateral facilitators of aggression (Huesmann and Eron 1984; Slaby and Guerra 1988; Tedeschi and Felson 1994; Welsh and Gordon 1991). Social learning theory extends the frustration-aggression hypothesis to include cognitive processes that instigate adolescent aggressive behavior (Andrews and Bonta 1994; 1999; Bandura 1973; 1977; Megargee 1982; 1995). Such cognitive processes function as mediators between the person and the immediate situation (Ajzen and Fishbein 1980; Dodge

Most cognitive theories of aggression, including recent formulations of social learning theory, contend that even the most provocative or arousing situations are accompanied and mediated by cognitive interpretation to some degree (Bandura 1973; 1986; Novaco 1979; 1986; Tedeschi and Felson 1994; Felson 1993; Felson and Tedeschi 1995; Tedeschi and Felson 1994; Zillman 1978). As Magnusson (1988: 34) notes “it is a person’s cognitions and conceptions of the external world (including self-perceptions), their way of processing information, their emotions, and their goals and values that determine which behaviors are likely to be performed.” This cognitive mediating system determines which situations individuals seek and which they avoid (as far as they have options), how they appraise a given situation, and how they formulate the decision to act in an aggressive manner (Guerra and Slaby 1989; Magnusson 1988; Pepler and Slaby 1994; Slaby and Guerra 1988). In a social learning paradigm, situations can represent significant sources of motivation by offering potential rewards or few consequences for the use of aggression (Bandura 1973; Skoler, Bandura, Ross, Ross, and Baron 1994).

According to social learning theory, the performance of aggression is conditioned by the cognitive ability of humans to formulate incentives or motivations (Bandura 1973; 1977; Perry, Perry, and Rasmussen 1986). Most scholars concede aggression is often precipitated by subjective intentions such as personal desires and aspirations (Felson and Tedeschi 1995; Megargee 1993; Moffitt 1993). As noted in Chapter 2, empirical research indicates aggressive children and adolescents may consider aggression to be an acceptable means for obtaining tangible rewards and reducing future aversive situations (Moffitt 1993; Perry, Perry, Rasmussen 1986). Moffitt (1993) found empirical evidence that indicates adolescent-limited
delinquents (i.e., those adolescents who tend not to continue offending into adulthood) maintain control over their antisocial behavior and use antisocial behavior only in situations where it may serve an instrumental function. Youth tend to perform those behaviors that offer maximum satisfaction and minimum dissatisfaction in a given situation (Megargee 1995). Thus, the decision to behave in an antisocial or aggressive manner is often subject to a cognitive assessment on the functional utility of behaving in an aggressive manner (Guerra and Slaby 1989; 1990; Slaby and Guerra 1988; Slaby and Roedell 1982; Tedeschi and Felson 1994).

Social learning theory clarifies the effect of cognitive mediators and devotes serious attention to empirically correlated learning factors of adolescent aggression and violence. A comprehensive study of situational influences on aggressive behavior must consider prior learning experiences (Berkowitz 1986). As noted above, the definition of a situation entails the contemplation of past events and the estimation of future outcomes (Stebbins 1981; Znaniecki 1952). Both prior reinforcements and the anticipation of future events and consequences influence the decision to behave in an aggressive manner (Bandura 1977; 1983; Moffitt 1993; Parke and Slaby 1983; Perry, Perry, and Rasmussen 1986).

Thus, aggressive behaviors are often facilitated by the “anticipation of positive consequences” or discouraged by the possibility of experiencing “social reprisals” for particular actions (Bandura 1977; 1996; Hutchinson, Azrin, and Hunt 1968; Rosekrans and Hartup 1967; Snyder 1977; Snyder and Patterson 1986). Moreover, as a result of prior socialization, many aggressive children and youth expect the use of aggression to yield positive outcomes, reduce or terminate aversive treatment, and generate few adverse consequences (Felson 1993; Felson and Tedeschi 1995; Slaby and Guerra 1988; Parke and Slaby 1983; Perry, Perry, and Rasmussen 1986). Situational instigators present in the context of high schools are likely to render significant precursors to the performance of aggressive behavior.
Instigating mechanisms may be typified by general sources of frustration (e.g., school failure, peer rejection), specific triggering events (e.g., absence of responsible monitors, physical assaults, and few or many bystanders), and incentive inducements (e.g., recognition of ample opportunity, anticipation of positive outcomes).

Social learning theory provides a unique opportunity for investigating situational instigators in the school context. Despite their significant theoretical importance, little is known about the situations that facilitate and inhibit the display of school-based aggression. Social learning theory points us to a variety of potential variables; however, the lack of empirical research forces researchers to speculate on the true importance of specific situational events. The following section reviews how responses to situational instigators are often reinforced in a manner that encourages the regulation or maintenance of aggressive behavior.

Maintaining Mechanisms

Aggressive behaviors can be acquired and performed on occasion, however, may not be maintained over time. Instead, the regulation or maintenance of adolescent aggression is contingent on conditions of reinforcement (Bandura 1973; 1977; Bandura and Ross 1963; Berkowitz 1974; 1990; Burgess and Akers 1966; Glaser 1971; Hutchinson, Azrin, and Hunt 1968; Nietzel 1979; Slaby and Roedell 1982; Skinner 1969; Stumphauzer 1973). That is, adolescent aggressive behavior is primarily regulated or maintained by its consequences (Bandura 1973; 1977). According to Bandura (1976:219), “aggressive modes of response, like other forms of social behavior, can be induced, eliminated, and reinstated by altering the effects they produce.” Therefore, rewarded behaviors tend to be repeated, whereas unrewarded or punished behaviors are often discarded (Bandura 1973; 1977; 1996; Berkowitz 1990; Skoler, Bandura, Ross, Ross, and Baron 1994). Social learning theory offers an essential
guide for a thorough analysis of the mechanisms that maintain or reinforce school-based aggression.

**Direct Reinforcement.** As noted in Chapter 2, both noncontingent reinforcement patterns in the family and social reinforcement from adolescent peer groups are significant predictors of antisocial and aggressive behavior (Bandura 1973; Elliott, Huizinga, and Ageton 1985; Forehand, King, Peed, and Yoder 1975; Heimer 1997; Matsueda and Anderson 1998; Moffitt 1993; Patterson 1982; Patterson and Dishion 1985; Patterson, DeBaryshe, and Ramsey 1989; Snyder 1977; Snyder and Patterson 1986; Wahler and Dumas 1984; Warr 1996; Warr and Stafford 1991; Wells and Rankin 1988). For social learning theory, the family and peers represent a valuable source of reinforcement in an adolescent's life (Akers 1977; 1996; Akers, Krohn, Lanza-Kaduce, and Radosevich 1979; Andrews and Bonta 1999; Matsueda and Anderson 1998; Patterson 1982; Patterson, Reid, and Dishion 1992). The conditions of reinforcement found within the family and other social groups provide the basis for the regulation or deregulation of aggressive behavior (Bandura 1973; 1977).

Antisocial and aggressive behavior is often reinforced by social status rewards such as peer acceptance and approval (Akers 1977; Andrews and Bonta 1999; Bandura 1973; 1977; Nietzel 1979; Patterson 1982; Patterson, Reid, and Dishion 1992). In some peer groups, particularly adolescent gangs, physical prowess and aggressive tactics often promote popularity, status, and recognition (Guerra, Nucci, and Huesmann 1994; Guerra and Slaby 1990; Short 1968). As noted in Chapter 2, aggressive and antisocial peers exert a significant influence on the behavior of youth (Battin-Pearson, Thornberry, Hawkins, and Krohn 1988; Coleman 1980; Dishion, Patterson, Stoolmiller, Skinner 1991; Elliott and Menard 1991; Matsueda and Anderson 1998; Warr and Stafford 1991). Thus, aggressive and antisocial associates are likely to provide positive reinforcement for aggressive behavior in high school.
Hence, aggression represents a style of conduct that can deliver both tangible and social reinforcement.

In addition, the alleviation of aversive treatment and signs of suffering in victims often reinforce aggressive behavior (Baron 1971). The alleviation of aversive treatment represents the operant conditioning principle of negative reinforcement (Skinner 1969). Aggressive behavior is reinforced and maintained if it is successful in eliminating or reducing painful stimuli or negative events in an adolescent’s life.

For some, signs of suffering in the victim may reinforce aggressive behavior (Baron 1971; Perry, Perry, and Rasmussen 1988). Though evidence is mixed, recent research indicates that aggressive children are more likely to expect or anticipate aggression to enhance self-esteem (Bandura 1973; Bornstein, Bellack, and Hersen 1980; Short 1968). According to Perry, Perry, and Rasmussen (1986), as children get older, they become increasingly likely to say that behaving aggressively makes them feel good, thereby, taking pride in their aggressive actions. As a consequence, aggressive behavior is often maintained by self-reinforcing feelings of self-worth (Bandura 1973; 1977).

**Vicarious Reinforcement.** According to social learning theory, aggressive behavior is often maintained or regulated by vicariously deriving satisfaction from observing the consequences of others’ actions (Akers 1977; 1985; Andrews and Bonta 1994; 1999; Bandura 1973; 1977; Bandura and Ross 1963; Glaser 1971; Patterson 1982; Patterson, Reid, and Dishion 1992). Vicarious reinforcement is defined as “a change in the behavior of observers as a function of witnessing the reinforcement contingencies accompanying the reinforcement of others” (Glaser 1971:11). Vicarious reinforcement is based on the premise that people observe the behaviors of others as the behavior is either rewarded, ignored, or punished, and this observation influences the effect of reinforcers on behavior (Akers 1977; Bandura 1973; 1977;
The observation of others’ rewards and punishments function in much the same way as consequences that are directly experienced by individuals (Bandura 1971; 1985; Bandura and Ross 1963; Bandura, Ross, and Ross 1963; Kanfer 1965; Snyder and Patterson 1986).

In general, seeing aggression rewarded in others increases the tendency to behave in similar fashion, while seeing others punished decreases the likelihood of the behavior being repeated (Bandura 1965; 1973; Bandura, Ross, and Ross 1963; Glaser 1971; Slaby and Roedell 1982). Moreover, the consistency at which the observer witnesses the aggressor rewarded or punished, the more likely the behavior will be repeated or terminated, respectively (Glaser 1971; Rosekrans and Hartup 1967; Patterson 1982; Patterson, Reid, and Dishion 1992). There is considerable support for a relationship between observational or vicarious learning and aggressive behavior in children, adolescents, and adults (American Psychological Association 1993; Bandura and Huston 1961; Bandura, Ross, and Ross 1963; Berkowitz 1986; 1974; Centerwall 1992; Chaffee 1972; Eron and Huesmann 1987; Huesmann 1982; Liebert, Sprafkin, and Davidson 1982; Walters and Grusec 1977).

**Self-reinforcement.** Aggressive behavior is further maintained and regulated through mechanisms of self-reinforcement. According to Bandura (1971:229), “behavior can be self-regulated, not only by anticipated social and external consequences (i.e., instigating factors), but also by self-evaluative responses to one’s own behavior.” Glaser (1971:11) notes that through a process of self-evaluation “an individual can evaluate the consequences of his or her own actions as these consequences are made apparent by reinforcement contingencies.” As noted above, aggressive children often self-reinforce their behaviors through enhanced feelings of self-worth from physical conquest (Bandura and Walters 1959; Perry, Perry, and Rasmussen 1986; Toch 1969). On the other hand, self-punishment (i.e., guilt, anxiety) serves
as a deterrent or inhibitor of aggressive behavior (Bandura 1973; 1977; Guerra 1989; Slaby and Roedell 1982). As a result, “people do things that give them self-satisfaction and a feeling of self-worth, and refrain from behaving in ways that result in self-criticism and other self-devaluative consequences” (Bandura 1976:224; Megargee 1995; Moffitt 1993). Internal mechanisms of self-control are a common focus of psychological and criminological empirical research on criminal behavior (Berkowitz 1990; Eysenck 1977; Milgram 1977; Reckless, Dinitz, Kay 1957; Reiss 1951; Nye 1958; Hirschi 1969).


Personal, Interpersonal and Community-Reinforcement Perspective (PIC-R)

One objective of this study is to assess whether a personality measure contributes to the
capacity of social learning theory to understand and predict high school aggression and violence. In recent years, modern social learning theories have extended traditional formulations to include personality variables (Andrews and Bonta 1994; 1999). As noted in chapter 2, many personality correlates are found in aggression and violence research (Caspi et al. 1994; Farrington 1989; Loeber 1988b; Magnusson 1988). However, this study is only interested in determining whether the addition of one empirically supported personality correlate of aggression can improve the utility of social learning theory for understanding high school aggression and violence.

Personality is defined as a combination of relatively stable or enduring traits that influence behavior in a variety of situations (Baron and Byrne 1987). Thus, the notion of personality suggests a high degree of stability in behavior across situations and over the life course. Though considerable debate exists, most empirical research supports the stability of personality traits across situations and over time (Epstein and O'Brian 1985; Eron and Huessmann 1984; Caspi and Bem 1990). Moreover, most scholars support the importance of both internal predispositions and external factors for understanding adolescent aggression and violence (see Person-Situation Interaction). Thus, the inclusion of a person-oriented correlate of aggression is essential for a comprehensive understanding of adolescent aggression and violence.

The person-situation debate produced a great deal of controversy in the field of social psychology. As noted above, the controversy focused on the relative contribution of personality traits in relation to situational conditions (see Bem and Funder 1978; Epstein and O’Brien 1985; Magnusson and Endler 1977). Although this debate was a principal issue in the field of psychology, criminological theories and empirical research failed to recognize personality as relevant to crime causation (Andrews and Wormith 1989). Early criminological research on
personality and crime rejected personality as an important crime correlate (Schuessler and Cressey 1950; Tennenbaum 1977; Vold and Bernard 1979; Waldo and Dinitz 1967). However, recent emphasis on general theories of crime (e.g., Andrews and Bonta 1999; Elliott, Huizinga, and Ageton 1985; Gottfredson and Hirschi 1990; Patterson, Reid, and Dishion 1992; Wilson and Herrnstein 1985) and empirical findings (e.g., Caspi, Moffitt, Silva, Stouthamer-Loeber, Krueger, Schmutte 1994; Farrington 1991; Loeber 1988b; Magnusson 1988) has reinforced the significance of personality for explaining criminal behavior. As noted in Chapter 2, personality characteristics are consistently found to be related to adolescent aggression and violence (Caspi, Moffitt, Silva, Stouthamer-Loeber, Krueger, Schmutte 1994; Farrington 1989; Glueck and Glueck 1950; Loeber 1988b). As a result, criminological theory and empirical research is devoting serious attention to the role of personality-based correlates.

Andrews and Bonta (1994) merge learning theory and decades of empirical research into a social learning model called the Personal, Interpersonal, and Community-Reinforcement (PIC-R) theory of criminal conduct. Andrews and Bonta (1994) acknowledge personality as a strong empirical predictor of antisocial behavior. According to Andrews and Bonta (1994), the best risk factors for criminal conduct are antisocial cognitions, antisocial associates, a history of antisocial behavior, and personality. In a recent meta-analysis of the psychological and sociological crime causation studies, Andrews and Bonta (1999) found that among six major correlates or risk factors of crime, four are personality-related: a) indicators of antisocial personality which include restless energy, adventuresomeness, impulsiveness, low verbal intelligence, poor problem solving skills, hostility, and a callous disregard for others; b) antisocial attitudes, values, and beliefs; c) family practices that produce low levels of affection, empathy, and concern for others; and d) low levels of self-efficacy. As a consequence, Andrews and Bonta (1999) encourage the inclusion of personality correlates into social learning.
explanations of criminal behavior.

The Personal, Interpersonal, and Community-Reinforcement (PIC-R) theory of criminal conduct includes the traditional principles of social learning theory. For instance, the learning of antisocial or aggressive behavior is conditioned by antecedent (e.g., prior reinforcement) and consequent (e.g., anticipation of future outcomes) control. Moreover, any variation in antisocial or aggressive behavior is considered to be the result of signaled reward and costs and their density (Andrews and Bonta 1994; 1999). Yet, Andrews and Bonta (1994:115) extend traditional social learning theory to place particular emphasis on personality and other constitutional factors:

The controlling properties of antecedents and consequences are acquired through the interaction of the person with the environment. The principles governing the acquisition, maintenance and modification of the controlling properties of stimulus conditions include those of genetic and constitutional dispositions and capability; biophysical functioning; cognitive functioning; human development; behavioral repertoire; state conditions; and respondent and operant conditioning, including observational learning, rule learning, symbolic control and role enactment.

Hence, the acquisition of aggressive behavior remains a product of person-situation interaction, however, personality correlates and other constitutional factors mediate the process.

As with other social learning theorists, Andrews and Bonta (1994) underscore the importance of antisocial attitudes and antisocial associates in the acquisition and maintenance of criminal conduct. As noted in Chapter 2, there is a strong relationship between antisocial attitudes, values, beliefs, and rationalizations and criminal behavior (Andrews, Wormith, and Kiessling 1985; Mak 1990; Perry, Perry, and Rasmussen 1986; Slaby and Guerra 1988). Moreover, association with antisocial peer groups is an impressive predictor of subsequent antisocial behavior (Akers 1977; 1985; Glueck and Glueck 1950; Dishion et al. 1991; Matsueda and Anderson 1998; Moffitt 1993; Warr and Stafford 1991). The emphasis on
cognitive-based attitudes and antisocial peers is consistent with traditional models of social learning theory and illustrates the significant role of cognition and reinforcement in the acquisition and regulation of antisocial behavior.

Hence, Andrew and Bonta's (1994) Personal, Interpersonal, and Community-Reinforcement (PIC-R) theory offers a meaningful contribution to the development of a social learning perspective on antisocial behavior. Andrews and Bonta (1994; 1999) extend traditional formulations of social learning theory to include more distal personality correlates of crime. Traditional social learning paradigms downplayed the role of individual differences in shaping patterns of aggressive behavior (Bandura 1973; 1977). For instance, Bandura (1977:201) proposed that "the specific forms that aggressive behavior takes, the frequency with which it is expressed, the situation in which it is displayed, and the specific targets selected for attack are largely determined by social learning factors" rather than dispositional factors. However, a decade of research has consistently found specific personality variables (i.e., impulsivity, risk-taking behavior, low empathy, and so forth) to be predictive of aggressive behavior (see Chapter 2).

As a consequence, this study examines the relative contribution of three personality constructs - impulsivity, risk-taking behavior, and low empathy - to a social learning analysis of high school aggression. This study is not considering every personality construct found to be a significant predictor of adolescent aggression because the aim is only to determine whether personality can make an important contribution to a social learning paradigm. Impulsivity, risk-taking behavior, and low empathy were chosen because they each represent consistent and powerful predictors of antisocial and aggressive behavior (Farrington 1989; Feshbach 1984; Loeber 1988b; Mak 1990; Magnusson 1988; Miller and Eisenberg 1988). As discussed in later chapters, the inclusion of impulsivity, risk-taking behavior, and low empathy variables make a
significant contribution to the capacity of social learning theory to explain high school aggression, violence and delinquency.

Conclusion

Although social learning theory points us in a meaningful direction toward identifying acquiring, instigating, and maintaining mechanisms of school violence and aggression, research has not progressed to the point of identifying and organizing the specific mechanisms operating in the context of high schools. Meanwhile, empirical research on correlates of adolescent aggression and violence offers a foundation for locating the most relevant factors, but does not test the link of these factors to relevant theory. Hence, one could propose the application of a theoretical model for understanding school violence, but the links between empirical factors and theoretical concepts remain to be shown. Moreover, in some instances, additional relevant factors are suggested by theory, but not validated as important correlates of school aggression and violence. This approach for organizing the empirical correlates and theoretical concepts of social learning is presented in figure 3.1.

Thus, this study offers an empirical and theoretical basis for the investigation of school aggression, violence, and delinquency. In the course of utilizing social learning theory as a framework for studying school aggression, this research also represents a vehicle for assessing the adequacy of social learning theory. This study seeks to establish whether the factors contributing to high school aggression come together to form a predictive model supportive of social learning theory. That is, this research explores the social learning mechanisms by which aggressive behavior patterns are learned, then performed, and consequently maintained.
Table 3.1. Empirical Correlates and Theoretical Concepts for Understanding School Violence Research

<table>
<thead>
<tr>
<th>Empirical Correlates of School Aggression</th>
<th>Social Learning Mechanisms</th>
<th>Theoretical Concepts Not Examined in Current School Violence Research</th>
</tr>
</thead>
<tbody>
<tr>
<td>Modeled Aggression</td>
<td>Acquisition</td>
<td>Specific forms of modeled aggression</td>
</tr>
<tr>
<td>Community, media, Family, peers</td>
<td>Mechanisms</td>
<td></td>
</tr>
<tr>
<td>School performance</td>
<td>Instigation</td>
<td>Specific modeling instigators</td>
</tr>
<tr>
<td>Peer rejection</td>
<td>Mechanisms</td>
<td>Specific aversive instigators or sources of frustration</td>
</tr>
<tr>
<td>Availability of drugs</td>
<td></td>
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<tr>
<td>Availability of Weapons</td>
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<tr>
<td>Ratio of student/gang Involvement</td>
<td></td>
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<tr>
<td>School governance</td>
<td></td>
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<tr>
<td>Conditions</td>
<td></td>
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<tr>
<td>Interpersonal patterns of communication</td>
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<tr>
<td>Physical assault</td>
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<tr>
<td>Verbal threats</td>
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<tr>
<td>Absence of Responsible Monitors</td>
<td></td>
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<tr>
<td>Few or many Bystanders</td>
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<tr>
<td>Lack of impulse Control</td>
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<tr>
<td>Recognition of Ample opportunity</td>
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<tr>
<td>Alcohol/drug Consumption</td>
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<tr>
<td>Accumulated Frustration</td>
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<tr>
<td>Anticipation of Positive outcomes</td>
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<td></td>
</tr>
<tr>
<td>Alleviation of Aversive stimuli</td>
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</tr>
</tbody>
</table>

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Table 3.1. Empirical Correlates and Theoretical Concepts for Understanding School Violence Research (Continued)

<table>
<thead>
<tr>
<th>Empirical Correlates of School Aggression</th>
<th>Social Learning Mechanisms</th>
<th>Theoretical Concepts Not Examined in Current School Violence Research</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attitudes, values, Beliefs toward aggression Neutralizations Perceived social Support Few consequences for Aggressive behavior</td>
<td>Maintaining Mechanisms</td>
<td>Specific forms of reinforcement</td>
</tr>
<tr>
<td>Psychopathy Impulsivity Low empathy Inability to delay Gratification Low frustration Tolerance Risk-taking behavior</td>
<td>Personality</td>
<td>Contribution of specific personality constructs</td>
</tr>
</tbody>
</table>

Hence, this study represents a significant effort to assess the empirical adequacy of social learning theory. Chapter 4 describes the methodology used in the present study.
Notes

1 Of equal importance, but not a focus of this study, is the recognition that the immediate situation is embedded in a larger environment with meaningful physical, social and cultural properties (Fagan and Wilkinson 1998; Magnusson 1981; Pervin 1978; Takala 1984). These physical, social and cultural effects are operating both directly and indirectly at all levels of the person-situation interaction (Barker 1965; Bronfenbrenner 1977; 1979; Fagan and Wilkinson 1998; Jessor 1981; Magnusson 1981; Pervin 1978; Takala 1984). Thus, an individual's subculture or community may be exerting an independent effect on the individual who is confronted with a particular situation.

2 A primary objective of this study is to explore whether self-reported differences in school aggression, violence, and delinquency across districts are influenced by the presence or absence of situational factors found in the immediate environment and school context. Moreover, this research seeks to determine whether differences in learning mechanisms and conditions of reinforcement correspond with levels of self-reported aggression in urban and suburban high schools.

3 In a recent study using in-depth interviews with 110 middle and high schools students, Lockwood (1997) found that the largest proportion of violent incidents in school involved minor altercations that progressed into more serious incidents. Moreover, this research found that the most commonly cited goal for the use of violence in schools among public middle and high school students was retribution. Using the justifications and excuses offered by the students, Lockwood (1997) concluded that this goal-oriented use of aggression reflected a well-developed value system that was deemed acceptable by others.

4 The author acknowledges the importance of Social Learning Theory or Differential-Reinforcement Theory as formulated by Ronald L. Akers (1973). However, the fundamental principles and concepts of Akers' Social Learning Theory are heavily influenced by the work of Albert Bandura and Edwin Sutherland. Moreover, the theoretical principles identified by Akers' are recognized and addressed by both Bandura (1973) and Andrews and Bonta (1994).

5 Many scholars cited circular arguments and other methodological limitations associated with personality. See Arbuthnot, Gordon, and Jurkovic 1987; Schuessler and Cressey 1950; Tennenbaum 1977; Vold and Bernard 1979; and Waldo and Dinitz 1967.

6 Andrews and Bonta (1994) are not the first learning theorists to recognize the importance of personality for understanding antisocial and criminal behavior. Many learning theorists argue that individual predispositions such as temperament and impulsivity interferes with an individual's perception of contingencies and stimuli (Quay 1965; Eysenck 1983). Moreover, Wilson and Herrnstein (1985) assert that individual predispositions effect the ratio of rewards of noncrime to the rewards of crime. They identify impulsivity, psychopathy, internalized inhibitions, sensitivity to economic and social inequities, obsessive tendencies, and subcultural values as important sources of individual variation.
Traditional formulations of social learning theory recognize that biological factors may constrain the type of aggressive response, the rate of learning, and may predispose individuals to learn specific features that pertain to their environment. However, the cognitive capabilities of humans are thought to make humans less constrained by these factors and make humans less constrained to biological predispositions than other species (Pepler and Slaby 1994). Thus, social learning theory emphasizes the role of environmental influences, learned cognitive factors, and self-regulatory influences rather than biologically-based predispositions.
This study implements a primary data collection strategy in an effort to make a significant contribution to the current theoretical and empirical understanding of high school violence. A self-report questionnaire was administered to 1,974 male and female adolescents attending grades 10 through 12 in central and southern California. The sample represents two school districts, a central California school district located in a metropolitan area of approximately 386,417 residents and a southern California school district located in a large, urban county that exceeds nine million residents. The students who participated in this study were selected from a selection of general education courses in each high school. The self-report instrument measured the central concepts of Bandura's social learning theory (i.e., acquisition, instigation, and maintaining mechanisms) and empirically supported personality constructs (i.e., impulsivity, risk-seeking behavior, and low empathy) using a combination of original social learning items, pre-existing measures found in the National Youth Survey 1976-1983, and widely accepted measures of low self-control (see Grasmick, Tittle, Bursik, Arneklev 1993). Most items and scales are measured in a Likert format requiring students to indicate their level of agreement or disagreement with various statements.

Sample

The data used in this analysis are based on a sample of two high school districts in central and southern California. As noted below, the sample was assembled from four high schools in central California and one high school in southern California and weighted to
represent the school population parameters for gender, ethnicity, grade level, and the district size of each school district. The central California school district is located in a city of 221,689 residents and the southern California school district is located in a city of 446,227 residents.\(^1\) According to 1997-1998 school year figures, the central California high school district reported 15,146 students enrolled in grades 10-12 while the southern California high school district reported 14,878 students. The central California high school district consists of thirteen comprehensive high schools.\(^2\) The southern California school district represents a unified (K - 12) school district of nine regular or comprehensive high schools. The total sample selected for this study consists of 1,974 male and female high school students.\(^3\)

It is important to note that the population figures for each city conceal some important differences between the two school districts. The southern California sample was collected from a city near Los Angeles with twice the population size as the central California city. Thus, the two school districts are in geographical areas that differ substantially in terms of population density and economic functions of the regions. The southern California city represents a full function city with a major commercial port and is embedded in a large, urban context with no room for expansion except for the redevelopment of its own land. The city is surrounded by other large urban cities (including Los Angeles) and is located in a one of the most populated counties in the United States. Thus, the southern California district is part of a region that represents the second largest metropolitan area in the United States. In contrast, the central California school district is located in a predominately agricultural setting with no major cities in the surrounding area. According to 1998 estimates provided by the California State Department of Finance's Demographic Unit, the total metropolitan population (approximately 420 square miles) for the central California region is estimated at only 386,417 residents while the total county population is estimated at only 639,798 residents. These contextual differences...
underscore the fact that the two school districts are likely to be unique in theoretically important ways for understanding the nature of high school aggression and violence.

A common practice in survey sampling is to use information about the population to compensate for the over- and under-representation of particular strata (see Kalton 1983; Kish 1965). This study used supplemental information about the population of each school district to construct a weight to improve sample estimators. Population or district estimates of gender, ethnicity, grade level, and district size were used to construct a weight to obtain a stratified sample proportionate to the population size of both school districts. In essence, this involves creating a single new variable – using population estimates – that adjusts for the probability of selection for each individual case in the sample. The population estimates of gender, ethnicity, grade level, and district size are used to establish a weight to adjust the proportions in the sample so that they equal the population proportions. This results in a sample that approximates the entire population of 10-12 graders in each school on the demographic characteristics of gender, ethnicity, grade level, and total district size. The technique of proportionate stratification improves sample estimators at the analysis stage and helps to insure that demographic characteristics are adequately and equally represented (Kalton 1983). Thus, the weighted sociodemographic characteristics for the total sample and each school district are presented in Tables 4.1 and 4.2.

In terms of the total sample, the age distribution of students extended from 14 to 19 years of age with a majority (69.6%) falling between the ages of 16 to 17 years old. The sample represents grades 10 through 12 with a higher percentage of students in the tenth grade (37.1%) and a gradual decline for eleventh (33.2%) and twelfth (29.7%) graders. Ninth graders are excluded from the analysis because the dependent variables for this study ask
Table 4.1. Weighted Frequencies and Percentages of Total Sample (N = 1,974)

<table>
<thead>
<tr>
<th>Sociodemographic Variables</th>
<th>N</th>
<th>%</th>
<th>Sociodemographic Variables</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age:</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>1</td>
<td>.0</td>
<td>Living Arrangements:</td>
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<tr>
<td>15</td>
<td>303</td>
<td>15.4</td>
<td>Mother and Father</td>
<td>1139</td>
<td>57.8</td>
</tr>
<tr>
<td>16</td>
<td>740</td>
<td>37.6</td>
<td>Father and Stepmother</td>
<td>46</td>
<td>2.3</td>
</tr>
<tr>
<td>17</td>
<td>630</td>
<td>32.0</td>
<td>Mother Only</td>
<td>364</td>
<td>18.5</td>
</tr>
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<td>18</td>
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<td></td>
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<tr>
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<td>.4</td>
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<tr>
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<td>100.0</td>
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students to report on behaviors over the past two years. By limiting the analysis to 10-12
graders this study is able to report on behaviors performed while in high school. Female and
male students are equally represented in the sample, 50.4% and 49.6%, respectively. In terms
of ethnicity, over seventy percent of the sample consists of Anglo-American (37.5%) and
Hispanic (34.0%) students. Asian students represent approximately eleven percent while
African-American students constitute nearly fourteen percent of the sample. Most students tend
to be living with their mother and father (57.8%), mother only (18.5%), or mother and
stepfather (10.4%).

In general, most students in this sample report few difficulties achieving at least
average grades and never failing a grade in school. A vast majority of the students report they
have never failed a grade in school (89.8%) while a substantial proportion of students report
obtaining mostly B’s and C’s or above. This is explained by the fact that general education
courses rather than vocational courses or study halls were sampled and students doing poorly
may already have dropped out of high school. In the southern California high school district it
also reflects the school’s good record for student academic achievement. Nonetheless, the
distribution of grades appears to be skewed toward higher scores on average. To correct for
effects of the skewed grade distribution and other differences between each district, an effort
will be made to assess the impact of district influences and whether or not there is a need to
control for district differences at the analysis stage.

Few students report significant interest or involvement in gang activity. In terms of
gang affiliation, a greater percentage of students report once having an interest in joining a
gang (14.7%) than ever having been in a gang (6.6%). Furthermore, only a small percentage
of students report that they are currently active in a gang (2.4%).
<table>
<thead>
<tr>
<th>Sociodemographic Characteristics</th>
<th>Central California School District (N = 995)</th>
<th>Southern California School District (N = 979)</th>
</tr>
</thead>
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<td>15</td>
<td>171</td>
<td>132</td>
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<td>16</td>
<td>377</td>
<td>363</td>
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<tr>
<td>17</td>
<td>305</td>
<td>325</td>
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<tr>
<td>18</td>
<td>129</td>
<td>154</td>
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<tr>
<td>19</td>
<td>6</td>
<td>3</td>
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<td>11</td>
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<td>332</td>
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<td>12</td>
<td>293</td>
<td>294</td>
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<tr>
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</tr>
<tr>
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<td>497</td>
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<tr>
<td>Total</td>
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<td>979</td>
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<tr>
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<tr>
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<td>190</td>
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<td>Other</td>
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<tr>
<td>Failed Grade:</td>
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<td>909</td>
</tr>
<tr>
<td>Once</td>
<td>131</td>
<td>62</td>
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<td>7</td>
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<tr>
<td>Total</td>
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<td>978</td>
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Table 4.2. Weighted Frequencies and Percentages by High School District (N = 1,974) (Continued)

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<thead>
<tr>
<th>Sociodemographic Characteristics</th>
<th>Central California School District (N = 995)</th>
<th>Southern California School District (N = 979)</th>
</tr>
</thead>
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<tr>
<td>Living Arrangements:</td>
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<td>Mother and Father</td>
<td>527 53.0</td>
<td>613 62.7</td>
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<td>Father and Stepmother</td>
<td>28 2.8</td>
<td>18 1.8</td>
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<tr>
<td>Mother Only</td>
<td>189 19.1</td>
<td>175 17.9</td>
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<tr>
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<td>3 .3</td>
<td>0 .0</td>
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<tr>
<td>Father Only</td>
<td>32 3.3</td>
<td>27 2.7</td>
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<td>Mother and Stepfather</td>
<td>128 12.9</td>
<td>76 7.8</td>
</tr>
<tr>
<td>Grandparent(s)</td>
<td>21 2.1</td>
<td>16 1.6</td>
</tr>
<tr>
<td>Other</td>
<td>64 6.5</td>
<td>53 5.5</td>
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<td>Total</td>
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<td>977 100.0</td>
</tr>
<tr>
<td>Grades:</td>
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<td></td>
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<tr>
<td>Mostly A's</td>
<td>105 10.8</td>
<td>109 11.4</td>
</tr>
<tr>
<td>Mostly A's &amp; B's</td>
<td>265 27.1</td>
<td>324 33.7</td>
</tr>
<tr>
<td>Mostly B's</td>
<td>89 9.0</td>
<td>119 12.3</td>
</tr>
<tr>
<td>Mostly B's &amp; C's</td>
<td>314 32.1</td>
<td>266 27.7</td>
</tr>
<tr>
<td>Mostly C's</td>
<td>82 8.4</td>
<td>64 6.6</td>
</tr>
<tr>
<td>Mostly C's &amp; D's</td>
<td>100 10.2</td>
<td>68 7.1</td>
</tr>
<tr>
<td>Mostly D's</td>
<td>14 1.5</td>
<td>4 .5</td>
</tr>
<tr>
<td>Mostly D's &amp; F's</td>
<td>9 1.0</td>
<td>6 .7</td>
</tr>
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<td>960 100.0</td>
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<tr>
<td>Ever Interested in Joining Gang:</td>
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<tr>
<td>Yes</td>
<td>136 13.7</td>
<td>154 15.8</td>
</tr>
<tr>
<td>No</td>
<td>855 86.3</td>
<td>821 84.2</td>
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<td>975 100.0</td>
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<tr>
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<td>57 5.8</td>
<td>72 7.4</td>
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<td>935 94.2</td>
<td>901 92.6</td>
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<td>973 100.0</td>
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<tr>
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<td></td>
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<tr>
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<td>29 2.9</td>
<td>18 1.8</td>
</tr>
<tr>
<td>No</td>
<td>965 97.1</td>
<td>954 98.2</td>
</tr>
<tr>
<td>Total</td>
<td>994 100.0</td>
<td>972 100.0</td>
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</table>
As shown in Table 4.2, the two districts are similar across several demographic characteristics, but do display important differences worth consideration. The southern California sample appears to be older, more ethnically diverse, and to do better in school. About forty-nine percent of the southern California sample is seventeen or eighteen years of age as opposed to forty-four percent of the central California sample. The ethnic groups in the southern California sample appears to be more evenly distributed. For instance, in the southern California sample, ninety-three percent of the sample is distributed over four ethnic groups (e.g., Anglo-American, African-American, Hispanic and Asian) as opposed to the central California sample where eighty-seven percent of the sample is represented by two ethnic groups (e.g., Anglo-American and Hispanic). For both samples, Hispanics represent approximately one-third of the students; however, the southern California sample contains far fewer Anglo-American students and a greater percentage of Asian and African-American students.6

In terms of school performance, the southern California sample appears to do better in school. Although both districts report a high percentage of students who do well in school, the southern California sample reports a greater percentage of students obtaining mostly A's and B's (45.1%) as opposed to the central California sample (37.9%). Moreover, fewer students in the southern California sample report obtaining mostly C's and D's and ever failing a grade in school.

Finally, a greater percentage of students in the southern California sample report living with their biological mothers and fathers (62.7%) compared to the central California sample (53.0%). The following discussion details the data collection strategy utilized for this study.

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Data Collection

The atheoretical nature of previous school aggression research had direct implications for the present study. The failure of many scholars to base their research upon reputable theoretical constructs restricted the methodological options available for this study. In many instances, secondary data sets can provide a cost effective and time efficient method for examining a particular phenomenon. However, data collection efforts in the area of school aggression and violence have failed to include measures of predominant theoretical paradigms, including social learning theory.

Previous studies on school violence rarely go beyond mere description of the problem (see American School Health Association 1989; Bastian and Taylor 1991; Centers for Disease Control and Prevention 1991; 1998; Center to Prevent Handgun Violence 1990; Chandler et al. 1998; Kaufman et al. 1998; Harris and Associates 1999; National Institute of Education 1978; Sheley and Wright 1995; 1998; U.S. Department of Education 1998). These studies only produce estimates of the incidence and the prevalence of weapon possession, student-teacher altercations, student-student assaults, and perceptions of fear among high school students. Likewise, the most recent school violence research funded by the National Institute of Justice disproportionately focuses on type and frequency of incidents and the type and location of “opening moves” in violent school incidents (see Lockwood 1997). At best, this research resembles an inductive approach to determine the justifications and excuses for school violence utilized by youth. This study also does not link the findings to existing literature on school violence and adolescent aggression nor does it explain the findings using a widely accepted theoretical paradigm.

Likewise, the search for available data sets uncovered numerous studies targeting
samples of youth (see National Youth Survey 1976-1983; National Longitudinal Survey of Youth 1979-1996; Monitoring the Future 1975-1997; the 1995 National Crime Victimization Survey and its School Crime Supplement; and the 1997 Youth Risk Behavior Surveillance Survey). However, none of these data sources are able to adequately manage the goals and objectives of this study. These sources cannot account for social learning theory; specifically, they neglect to consider situational instigators critical for understanding the context of high schools. Thus, data collection efforts designed for purposes other than examining social learning theory as it relates to contemporary high school aggression are likely to be inadequate for satisfying the objectives of this study.

Moreover, data collected some time in the past is likely to be subject to cohort or period effects limiting its utility for understanding contemporary school aggression (see Sampson and Laub 1993). This study must operationalize social learning theory in a manner that is both relevant to contemporary high school youth and intrinsic to the environment of high schools in the late 1990's. It is reasonable to infer that recent increases in school violence have corresponded with shifts in the mechanisms operating in the context of high schools. The infiltration of deadly weapons, addictive drugs, and organized gangs are certain to have impacted the nature of interpersonal interaction among high school students. Thus, original data that identify the risk factors currently impacting the lives of high school youth is imperative for an accurate conceptual understanding of modern school aggression and violence.

Most research on aggression and violence, by the nature of violence, incurs a base rate problem (Monahan 1981). It is difficult to predict aggression and violence if the base rates in a given population are low (Monahan 1981). The variable most likely to incur a base rate problem in most studies is the measure tapping actual acts of violence. Recently, Monahan and Steadmen (1994) have recommended several strategies for limiting problems associated with
low base rates, including the use of self-report measures and the use of multiple measures of outcome. This research utilizes those recommendations by (1) using self-reported indices of aggression and violence rather than official measures, and (2) providing multiple measures of violence and aggression.7

In addition, a self-report method of data collection was selected as a result of both practical constraints imposed by school officials and the extensive use and acceptance of self-report methods for studying violence and delinquency. In order to gain access to high schools, it is often necessary for researchers to use methods that minimize any disruption to the normal operation of the school. Although the administration of a self-report questionnaire is disruptive to the normal classroom environment, restricting the survey to one 50-minute classroom period limited the amount of disruption that might be caused by other methods (i.e., face-to-face interviews). Moreover, self-reports surveys are regularly used to examine adolescent aggression and violence and are widely supported among social science researchers (Huizinga 1990; Monahan and Steadman 1994; Riggs, O’Leary, and Breslin 1990; Steadman and Felson 1984).

The self-report questionnaire was administered to students selected from a sample of general education courses (e.g., English, Government, Economics, History).8 Passive parental consent forms detailing the specifics of the study were sent home to parent’s two weeks prior to conducting the survey. Students were instructed not to take part in the survey if their parents/guardians had not actually received and read the parental notification form, if they knew their parents/guardians would disapprove, if they believed that their parents/guardians would not approve of or consent to their participation in the study, or if the they (student) did not consent to participate in the study.9 The attrition for this parental permission procedure was not great. Very few students (less than 2 percent) refused to participate and no parents declined.
to allow their child to take part in the research.10

The self-report instrument used in this study tapped specific instigation mechanisms identified by Albert Bandura’s formulation of social learning theory and used pre-existing measures found in the National Youth Survey 1976-1983 as a guide for constructing dependent measures of school aggression, violence, and delinquency.11 Since the major instigation mechanism identified by Albert Bandura’s social learning theory have not been explored in a self-report format (for the purposes of measuring high school aggression and violence), construction of the research instrument represented an effort on the part of the researcher to develop original items that adequately measure the central constructs of the theory. Likewise, since few studies have systematically examined the involvement of situational instigators in high school aggression and violence, the self-report questionnaire contains several items necessary to conduct an exploratory analysis of situational instigators likely to be operating in the context of high schools. Additional independent variables represent other fundamental principles of social learning theory. The main concepts to be examined are acquisition mechanisms, instigation mechanisms, maintaining mechanisms, and personality. These concepts are operationalized by a set of items measuring different aspects of each central social learning mechanism. Most items and scales are measured in a Likert format requiring students to indicate their level of agreement or disagreement with various statements.

Elliott and Huizinga’s (1983) Crimes Against Persons Scale provided the initial items for the dependent variables. However, this study modified the original items to: a) better estimate a high school setting, b) extend the range of the dependent variables to include minor acts of aggression, and c) divide the dependent variables into three distinct categories of school violence and aggression (e.g., school violence, school aggression, and instrumental aggression). Moreover, for comparative purposes, a school vandalism and delinquency scale is

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included in this study.

The following is a discussion regarding the measurement of the dependent variables and theoretical constructs used to examine the influence of the various social learning mechanisms on high school aggression, violence and delinquency. Specific items used to measure each dependent variable and all theoretical constructs in this analysis are reported in Appendix A.

Measurement

Dependent Variables

Several items comprise three scales measuring school violence, school aggression, and instrumental school aggression. As noted above, items comprising these three scales are modifications of Elliott and Huizinga's (1983) Crimes Against Persons Scale. The items acquired from Elliott and Huizinga's (1983) Crimes Against Persons Scale have been modified in three fundamental ways. First, the items comprising the original scale are adjusted in an effort to more closely measure the school context and those behaviors most relevant for the school setting. Second, the range of behaviors depicted in the original scale are extended to include more frequent, minor acts of aggression including verbal threats and intimidation. The inclusion of more frequent acts of aggression is expected to increase the variation of one of the dependent variables while minimizing the probability of obtaining a low base rate. Third, the single-item measures adopted from the original scale are divided into distinct categories of aggression and violence. An additional scale was included to assess school vandalism and delinquency.
The definition of aggression and violence used in this study recognizes the importance of constructing operationally and conceptually distinct measures of aggression and violence (see Chapter 2). Hence, the dependent variables are designed to account for the varying degrees of severity or harm produced by aggressive acts as well as the different motives and intentions that coexist with aggressive behavior. This strategy is consistent with Bandura’s social learning theory of aggression. Each dependent variable is scored on a frequency scale obtained from the Denver Youth Survey (DYS). The frequency scale ranges from 1 (never committed the act) to 6 (committed the act every day). A high score on this scale indicates that over the previous two years the student has frequently engaged in the particular behavior. For bivariate and multivariate analysis, each scale was statistically transformed by taking the natural log of school violence, school aggression, instrumental school aggression, and school vandalism (see Data Analysis). Table 4.3 displays the weighted means, standard deviations, sample sizes, and the range for each dependent variable.12

Table 4.3. Weighted Descriptive Statistics for Dependent Measures (N = 1, 974)

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<th>St</th>
<th>Min.</th>
<th>Max.</th>
<th>$\alpha$</th>
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<td>1933</td>
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<td>School Vandalism and Delinquency</td>
<td>1.52</td>
<td>.57</td>
<td>.57</td>
<td>1.00</td>
<td>6.00</td>
<td>.81</td>
<td>1921</td>
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</table>

School Violence. Measured on a seven-item scale, school violence, represents the most serious forms of aggression. This scale includes aggressive behaviors such as throwing a punch at another student, hitting a teacher, being involved in a group fight, and sexual assault (Cronbach’s alpha = .86).
School Aggression. The dependent variable school aggression is characterized by less serious or harmful behaviors such as verbal threats, insults, and intimidation. This eight-item scale determines the self-reported frequency in which the student has threatened to hit teachers, parents, or other students; insulted teachers or other students; and “pressured a student in a sexual manner at school” (Cronbach’s alpha = .83).

Instrumental School Aggression. Aggressive behaviors motivated by a desire to obtain tangible objects, social status, or other rewards are indicative of instrumental school aggression. Instrumental school aggression recognizes that some acts of aggression can be a function of goal-directed behavior rather than precipitated by sources of frustration. Measured by a three-item scale, instrumental school aggression depicts the frequency in which students used intimidation to get money or things from other people at school; spread lies to make themselves look good; “picked on” or “made fun of” another student to look good in front of their friends (Cronbach’s alpha = .72).

School Vandalism and Delinquency. Measured on a six-item scale, school vandalism depicts such behaviors as painting graffiti, breaking or damaging school property, stealing something at school, such as someone’s coat from a classroom, locker, or cafeteria, or a book from the library (Cronbach’s alpha = .81). As noted above, specific items used to measure each dependent variable and all theoretical constructs considered in this study are reported in Appendix A.

Independent Variables

The selections of independent variables in this survey are primarily a product of past aggression research and concepts identified by social learning theory. However, as this study developed, it became increasing apparent that the selection of independent variables would be
complicated by the limitations of both past research and traditional formulations of social learning theory. Two factors complicated the selection of independent variables. First, past aggression research — particularly in the context of high schools — neglected the role of situational instigators or triggers for the performance of behavior. Thus, previous research can only provide partial direction for the identification of possible instigators. As a result, an exploratory component was added to this research in an effort to identify the instigation mechanisms operating on high school youth. Second, Bandura’s social learning theory provided the initial framework for the selection of most independent variables in this study. However, Bandura’s (1973) formulation of social learning theory could not account for more recent empirical findings on personality (see Chapter 2). Thus, personality measures (i.e., impulsivity and low empathy or self-centeredness) are incorporated in this study in an effort to accommodate recent formulations of social learning theory (Andrews and Bonta 1994; 1999).

Therefore, the inclusion of independent variables is based on the following criteria: First, theoretical constructs found in Bandura’s social learning theory of aggression. Second, variables found in past research to be related to adolescent aggression and relevant to social learning theory (e.g., peer rejection, school failure, antisocial peers, family practices). Third, personality correlates of aggression referred to in more recent accounts of social learning theory. Fourth, an exploratory search — guided by the primary constructs of social learning theory — to identify instigation mechanisms operating within the school context. The end result is a study emphasizing the importance of research rooted in the most recent empirical findings and theoretical paradigms in the field. The descriptive statistics for all the independent variables in the total sample are presented in Table 4.4.
Table 4.4. Weighted Descriptive Statistics for all Independent Measures (N = 1, 974)\textsuperscript{13}

<table>
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<th>Independent Variables</th>
<th>( \bar{X} )</th>
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<th>S2</th>
<th>Min.</th>
<th>Max.</th>
<th>( \alpha )</th>
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<td></td>
<td></td>
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<tr>
<td><strong>Parent(s) or Guardian(s)</strong></td>
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<td>5.00</td>
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Table 4.4 Weighted Descriptive Statistics for all Independent Variables (Continued)

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<th>Max.</th>
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<td>Observation of Positive Reinforcement</td>
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<td>5.00</td>
<td>.65</td>
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<tr>
<td>Observation of Few Consequences</td>
<td>2.68</td>
<td>.80</td>
<td>.63</td>
<td>1.00</td>
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<td>Unjust Reward or Punishment</td>
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<td>1.04</td>
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<td>General Approval for Violence</td>
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<td>Appeal to Higher Loyalties</td>
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<td>.93</td>
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<td>.92</td>
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<td>5.00</td>
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<td>1907</td>
</tr>
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<td>Personality</td>
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<td></td>
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<tr>
<td>Impulsivity</td>
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<td>.64</td>
<td>.41</td>
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<td>.63</td>
<td>1805</td>
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<tr>
<td>Self-Centeredness or Low Empathy</td>
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<td>.48</td>
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<td>4.00</td>
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<td>Risk-Seeking Behavior</td>
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<td>.66</td>
<td>1.00</td>
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Social learning theory depicts four principal domains that further direct the selection of independent variables. These include: 1) acquisition or learning mechanisms; 2) instigation or triggering mechanisms; 3) maintaining mechanisms - including reinforcement and the neutralization of self-punishment; and 4) individual predispositions or personality traits. The following is a discussion of the theoretical constructs used to examine the influence of each mechanism on high school aggression and violence.
Acquisition Measures

The modeling of aggressive behavior is consistently correlated with higher levels of aggression among children and youth (Bandura, Ross, and Ross 1963; Belson 1978; Berkowitz 1965; Eron 1982; Eron and Huesmann 1987; Feshbach and Singer 1971; Kruttschnitt, Heath, and Ward 1986; Short 1968; Wolfgang and Ferracuti 1967). Models for aggressive behavior are found in popular media, neighborhoods, community institutions and among family and peers. However, the relative significance or influence of a particular model may be conditioned by factors other than simple observation of models. The extent to which the observer identifies with an aggressive model may further alter the degree to which the behavior is learned (Andrews 1980; Andrews and Bonta 1994; 1999; Bandura 1973). Thus, measures are incorporated to identify potential models (i.e., parents, siblings, peers, neighborhood, school and media) as well as the degree to which each youth identifies with his or her parents, siblings, and peers to accurately analyze the significance of observational learning on subsequent behavior.

Modeled Parental Aggression. Those students who report high levels of modeled aggression by parents are expected to report higher levels of involvement in school violence, aggression and delinquency. A two-item scale measures the degree to which aggression is modeled by parents. High scores on this two-item scale connote greater levels of modeled aggression by parent(s) or guardian(s).

Modeled Parental Attitudes. A two-item scale measures the significance of parental attitudes toward aggression. Those students with at least one parent(s) or guardian(s) who models attitudes favorable to the use of aggression are likely to report higher levels of aggressive behavior in school. A high score on this scale indicates that parents themselves do
not disapprove of the use of aggressive tactics to resolve conflicts and are not likely to punish their youth at home for fighting in school.

**Modeled Sibling Aggression.** A two-item scale measures aggressive behavior modeled by siblings. The two-item scale identifies those youth with siblings who often take advantage of others and threaten others when angry. A high score on this scale indicates that siblings offer a significant source of modeled aggression.

**Modeled Sibling Attitudes.** A single-item is used to measure the degree to which a student’s siblings encourage aggressive behavior. Students who report a high score on this item agree that at least one of their brothers or sisters would expect them to stand up to others if bullied in school.

**Modeled Peer Aggression.** Modeled peer aggression is measured by five items that inquire about the degree to which the youth’s friends have engaged in aggressive acts such as threatening teachers or other students and physically hurting others in school. The items are scored on a five-point Likert scale ranging from strongly agree (5) to strongly disagree (1). High scores on this scale indicate that the student has some friends who disrespect and threaten other students, use physical force to get what they want, and have physically hurt other people while in school (Cronbach’s alpha = .70). It is anticipated that those students who report having friends who model aggressive behavior are likely to engage in higher levels of aggressive behavior in school.

**Modeled Peer Attitudes.** The degree to which student’s peers accept the use of aggressive behavior in school is used to measure the influence of peer attitudes on behavior. Using a five-point Likert scale, a high score on this item indicates that the youth’s peers would disapprove of his or her threatening of another student without any reason in school. Those students who believe that their peers would be supportive or, at minimum, accept aggressive
behavior on their part are anticipated to have higher levels of self-reported aggressive behavior in school.

**Parent, Sibling, and Peer Identification.** Parent, sibling, and peer identification measures are used to analyze whether or not the degree to which student identification with these models further influences the significance of modeled aggression. Those students who strongly agree or agree that they respect at least one of their parent(s) or guardian(s) and siblings are examined to determine the relative impact of model-observer identification. Likewise, a measure adopted from the National Youth Survey (NYS) is used to determine the degree to which students respect what their best friends do and say. Six dummy variables are developed to analyze whether the identification with models is important for assessing the impact of modeled behavior on school aggression and violence. Those students who identify with aggressive parents, siblings, or peers are assigned a 1. According to social learning theory, those students who report a strong identification with parents, siblings, and peers who model aggressive behavior or provide attitudes favorable toward the use aggressive behavior are likely to report high levels of school violence, aggression, and delinquency.

**Macrosocial Modeled Aggression.** To obtain a measure of the amount of aggression exhibited in a respondent's environment requires students to offer their perception of the amount of violence in their neighborhood, school, and the media. First, using a single-item measure, each student is asked to indicate the degree to which they see fighting in their neighborhood. High scores on this item suggest that the student is often a witness to fighting in their neighborhood. Second, a two-item scale measures the extent to which students see fighting and others threatened in their school. A high score on this scale indicates that the student observes a great deal of fighting in their school and notices many students being threatened by others in school.
The survey instrument also attempts to measure the amount of aggression each student observes through the popular media. Each student is asked to identify the characteristics of television programs that are most important for keeping them interested in watching the program. Using a list of program characteristics, each student is asked to rate the program characteristics that are very important (4), somewhat important (3), not too important (2), and not important at all (1) for maintaining their interest in a particular program. A four-item scale that depicts aggressive or violent program characteristics including “shoot-outs” between cops and robbers, violent action scenes, martial arts fighting scenes, and combat or war scenes is used to measure media exposure and its relationship to school violence, aggression, and delinquency (Cronbach’s alpha = .87). Those students who rank these program characteristics as being “very important” or “somewhat important” are likely to be exposed to higher levels of media aggression and violence. The primary objective of measuring neighborhood, school, and media influences is to determine the amount of aggression each student perceives on a macrosocial level.

Instigation Measures

One of the most powerful and intriguing aspects of social learning theory is its ability to account for the motivations often necessary for the performance of aggressive behavior. For this study, motivational instigators are primarily derived from social learning theory and empirical correlates found in previous aggression research. However, little is known about situational instigators of high school aggression. Thus, this study is used to explore the range of possible instigators operating in the context of high schools (see General High School Instigators p. 133). The following is a discussion of the instigation measures used in the study.
Aversive Instigators

Peer Isolation. A combination of original items and items from the National Youth Survey (NYS) were used to measure the influence of peer rejection on high school aggression. It is hypothesized that those students who feel it is important to spend time and do things with friends, but feel that they are isolated from their peers will be more likely to feel high levels of frustration. To measure student isolation, students were asked first to indicate how important it was for them to spend time and do things with friends. Second, a three-item scale assessed the degree to which students felt they were isolated from significant peer groups (Cronbach's alpha = .66). Students who report that they don't have enough friends, don't get invited to enough parties or social activities, and feel that they don’t fit in well with their friends are represented by higher scores on the peer isolation scale. The importance item and the isolation scale are combined into a dichotomous or dummy variable in an effort to isolate those students who both identify and feel isolated from their peers. Those students who report high scores on the peer isolation scale and strongly agree or agree that it is important to spend time and do things with friends equal 1.

Peer Rejection. Peer rejection is measured by several items that inquire about the social relationships of each student. These items focus on how each student perceives his or her relationship with friends, students, and members of the opposite sex. Adapted from the National Youth Survey (NYS), students are first asked to indicate how important it is for them to spend time and do things with students who seem to “have it together.” The item is scored on a five-point Likert scale ranging from very important (5) to not important (1). High scores on this item indicate that the student feels it is very important to spend time with students who seem to “have it together.” Then each student is asked to report on a three-item peer rejection
scale the degree to which they feel rejected by many of the “model” or “ideal” students at school and in dating relationships (Cronbach’s alpha = .64). Students who report high scores on the peer rejection scale indicate that they generally feel rejected by all students at school. Likewise, these students further report feeling rejected by many of the “model” or “ideal” students (e.g., those who get good grades, are respected by teachers, or seem to have a good future) in general and in dating relationships. Similar to the peer isolation measure, the importance item and the three-item peer rejection scale are combined into a dummy variable in an effort to isolate those students who feel it is important to be with students who “have it together,” but feel rejected. Those students who score high on the peer rejection measure and indicate that it is important to be involved with those peers who “have it together” are assigned a 1.

School Failure. School failure is measured in a similar manner as peer isolation and peer rejection. However, school failure is divided into two categories: a) school failure as it relates to schoolwork and b) school failure as it relates to school activities. First, one item borrowed from the National Youth Survey measures the relative importance each student attaches to his or her schoolwork. The item is measured on a five-point Likert scale with a high score signifying the student feels that schoolwork is very important to him or her. Second, a four-item school failure scale assesses the relative success that the student believes they are having at getting others to think of them as a good student and how well they are doing at getting good grades (Cronbach’s alpha = .75). High scores on the school failure scale indicate that the student feels it is important to be a good student and do well in school. The importance item and the school failure scale are combined into a dummy variable isolating those students who feel it is important to do well in school, but feel they are unsuccessful in school. Those students who feel school is important, but are having difficulty are given a 1. Those students
who indicate school is very important, but report that they have minimal success in school are likely to be exposed to higher levels of generalized frustration.

Similarly, school failure as it relates to school activities is examined to provide a greater understanding of the relationship between school variables and school aggression and violence. First, students are asked to indicate how important it is for them to participate in school activities. Second, a single indicator assesses the degree to which students wish they were doing better in school activities that are really important to them. Again, these measures are combined into a dummy variable to isolate those students who feel school activities are important, but feel that they are not a successful as they would like to be in school activities. Those students who indicate that school activities are important, but wish they were doing better in school activities are assigned a 1. Those students who report that school activities are pretty important, but wish they were doing better are more likely to experience higher levels of frustration. Hence, it is anticipated that these same students will indicate high self-reported rates of school aggression, violence, and delinquency.

**Physical Assaults.** One item measures the extent to which each student is exposed to physical assaults. Measured on a five-point Likert scale, students are asked to indicate the extent to which they are exposed to physical assaults in school. High scores on this item indicate the student is often physically threatened in school. It is anticipated that those students who report often being physically threatened in school are more likely to report higher levels of self-reported aggression in school.

**Verbal Threats and Insults.** One item measures the extent to which other students in school tease a student. Measured on a five-point Likert scale, students are asked to report whether other students in school often tease them. High scores on this item indicate that the student is often subjected to teasing by other students in school. Those students who report that
they are often teased in school are anticipated to report a greater frequency of self-reported aggression, violence, and delinquency.

**Aversive Reductions in Conditions of Life.** To measure aversive reductions in conditions of life, one item measures whether a student feels that they are much less happy now that they are in high school. High scores on this item indicate that the student is much less happy now that they are in high school. Those students finding themselves less happy now that they are in high school are presumed to be under higher levels of generalized frustration. It is likely that these same students will report higher levels of self-reported school aggression, violence, and delinquency.

**Thwarting of Goal-Directed Behavior.** A two-item scale that measures the extent to which each student views the school as providing few opportunities for them to succeed estimates thwarting of goal-directed behavior. High scores on the two-item thwarting scale indicate that the student believes that the school provides few opportunities for them to succeed and that they are often not rewarded for their best efforts in school. Those students who perceive the school provides few opportunities and rewards for their efforts are likely to be subjected to higher levels of generalized frustration in school. These same students are expected to indicate high levels of self-reported school aggression, violence, and delinquency.

**General High School Instigators.** In order to further determine real life school situations that serve as "instigators" or "triggers" to school aggression, an exploratory component of this study asked students to rate a set of potential instigators and then to respond to a series of open-ended questions regarding what aspects of family, school, and relationships with peers represent likely sources of frustration. Two measures attempt to identify the type of people and situations that may or may not make a high school student angry. Moreover, to explore the aspects of adolescent life not identified by the survey, three open-ended questions
ask students to list those qualities of their family, school, and relationships with peers they find to be frustrating.

A) Interpersonal Instigators. Students are asked to choose and rate those people who are very likely (4), somewhat likely (3), not too likely (2), or very unlikely (1) to make them feel frustrated. The types of people include students who bring weapons to school, students who push others around, students who gossip, students who sell drugs, and so forth. Each will be analyzed in a series of bivariate relationships to determine the specific sources of frustration that translate into aggression and violence in high schools. Second, eleven of fourteen items are then combined into a scale that represents a general indicator for levels of frustration experienced by each student. This interpersonal instigator scale is used to determine the impact of general levels of frustration on school violence, aggression, and delinquency (Cronbach's alpha = .77). Those students who score high on the interpersonal instigator scale are exposed to greater levels of generalized frustration.

B) Situational Instigators. Students are asked to choose and rate those situations that are very likely (4), somewhat likely (3), not too likely (2), or very unlikely (1) to make them the most frustrated. The types of situations include: being insulted with other students watching, being pushed by another person, being teased by another student, and so forth. Those items rated as “very likely” to make them angry are considered to be the most powerful instigators for that student. These measures should provide us with a better understanding of the specific situations adolescents identify as sources of frustration. Similar to the interpersonal instigator scale described above, all nine items are then combined into a scale that measures general frustration produced by a variety of situations. The situational instigator scale measures the extent to which a student is exposed to situational sources of frustration (Cronbach’s alpha = .85). Those students who score high on this scale are exposed to higher levels of generalized frustration.
frustration produced by situational factors.

**Incentive Instigators**

*Anticipated Outcomes.* Four items comprise a scale that measures the nature of anticipated outcomes for aggressive behavior. The anticipated outcome scale measures the degree to which students feel that the consequences for aggressive behavior in school will be either positive or negative. Those students who subscribe to the belief that aggressive behavior can yield positive outcomes (e.g., reduce the number of problems they have in school, increase their social status with peers) or — at a minimum — result in few negative consequences (e.g., not getting suspended or expelled from school) are presumed to be more likely to use aggression in social situations; thereby, reporting higher levels of self-reported school aggression. High scores on the anticipated outcome scale indicate that the student believes that those who fight in school will probably be subjected to few consequences and are likely to have fewer problems in school (Cronbach's alpha = .61).

*Modeling Instigators.* Two items measure the impact of modeling influences on the performance of behavior. Modeling instigators can influence a person’s behavior by heightening emotional arousal to a state of readiness. Thus, those students who report that “A good fight can be exciting” or that “It does not make them nervous to see other students intimidate a teacher” are less likely to feel emotional discomfort (e.g., anxiety, nervousness) when aggressive behavior is displayed. These students are further thought to be more influenced by the modeling of aggressive behavior and having fewer inhibitions for behaving in an aggressive manner. High scores on the modeling instigator scale indicate that the student is more likely to see fights as exciting and less likely to feel nervous when a teacher is threatened. It is anticipated that these students will be more likely to report higher levels of school
Instructional Instigators. Two separate two-item scales were developed to measure the degree to which instructional instigators are operating on youth in the school context. Measured on a five-point Likert scale, instructional instigators measure the extent to which each student feels that their behavior is guided by pressure from a peer group or simply accepted by their friends. The two-item peer coercion instructional instigator scale measures the degree to which the respondent feels certain students can get them acting tougher than they really are and the extent to which they feel pressure from friends to help them out if they get into a fight. Likewise, the peer acceptance instructional instigator scale measures the level to which their friends encourage them to treat others with disrespect and accept them if they were to get into a fight. High scores on this scale indicate that the individual is strongly influenced by instructional instigators. Thus, those students who score high on one or both of the instructional instigator scales are likely to be subjected to significant sources of pressure to engage in aggressive behavior. Moreover, these students are expected to report higher levels of involvement in high school violence, aggression, and delinquency.

Perception of Alternatives. A single item measures each student’s perception of available alternatives. It is hypothesized that those students who see fewer appropriate alternatives for resolving conflict are more likely to see violence as more plausible solution. Students are asked to assess whether they could get help from school authorities if another student in school threatened them. A high score on this item indicates that the student feels they could not get help from school authorities, thereby feeling there are few alternatives to the use of aggression and violence when threatened by other students in their school. Those students who perceive little help from authorities in school when conflict arises are presumed to be more likely to take matters in their own hands, thereby, making them more susceptible to
aggressive behavior.

Maintaining Mechanisms

An objective of this research is to identify those factors that maintain or reinforce school-based aggression. According to social learning theory, aggressive behavior is extensively regulated or maintained by its consequences (Bandura 1973). The consequences for aggression can come from a variety of sources including vicarious observations (i.e., observation of reinforcement contingencies) and self-regulatory processes (i.e., self-reinforcement strategies and cognitive neutralizations of behavior). This research investigates the consequences or reinforcements that maintain aggressive behaviors in school. The following is a discussion of the maintaining mechanisms used in this study.

Vicarious Reinforcement

Observation of Positive Reinforcement. To adequately measure the impact of vicarious positive reinforcement on the behavior of high school students, a four-item scale assesses the extent to which students perceive rewards associated with the use of aggressive behavior in school (Cronbach's alpha = .65). Measured on a five-point Likert scale, each student is asked to indicate the extent to which they agree or disagree with each item. A high score on the scale indicates that the student perceives the use of aggression to be useful for getting things they want, gaining peer approval, and discouraging other students from bothering them in the future. Those individuals who view aggression as a successful means for obtaining tangible rewards, social status, and for eliminating aversive circumstances are likely to report higher levels of self-reported school violence, aggression, and delinquency.

Observation of Few Consequences. Those students who believe that most students do
not get punished for aggressive behavior in school are likely to be less inhibited to use aggression, thereby reporting higher levels of aggression and violence in school. A three-item scale measures the extent to which students observe few consequences for aggressive behavior in school (Cronbach’s alpha = .58). High scores on this scale indicate that the student perceives few consequences for aggressive behavior in school.

**Unjust Reward or Punishment.** The observation of unfair or inequitable reinforcement contingencies may foster resentment or dissatisfaction and decrease the legitimacy of school authorities (Bandura 1973; 1977). According to Bandura (1977:224), “when social agents misuse their power to reward and punish, they undermine the legitimacy of their authority and arouse opposition.” One item measures the extent to which students observe inequitable treatment of students by school authorities. Measured on a five-point Likert scale, students are asked to indicate the degree to which they agree or disagree with the statement “Some students get punished more severely than others for fighting in school.” A high score on this item indicates that the student perceives unfair or inequitable treatment by school authorities.

**Self-Reinforcement**

**Self-Reward for Aggression.** The notions of self-evaluation and internal mechanisms of control are common components in psychological and criminological theorizing and empirical research on criminal behavior (Bandura 1973; Eysenck 1977; Hirschi 1969; Milgram 1977; Nye 1958; Reckless, Dinitz, and Kay 1957; Reiss 1951). Self-reinforcement is a critical factor in the maintenance of aggressive acts. The extent to which students cognitively reward themselves for aggressive behavior is measured by the item “I take pride in knowing I can physically take care of myself.” Those students who agree or strongly agree with the above statement are likely to reward themselves for aggressive behavior in school. A high score on
this item indicates that the student takes pride in their physical prowess and is anticipated to report higher levels of aggression, violence, and delinquency in school.

**Self-Punishment for Aggression.** Similar to self-reward mechanisms, through cognitive self-evaluations or self-judgment processes, people can be punished by heightened feelings of self-reproach or negative self-reactions for behaving in an aggressive manner (Bandura 1973). Thus, those students who feel emotional discomfort for engaging in behaviors that hurt others are less likely to engage in aggressive or violent behaviors. On the other hand, those student who experience minimal emotional discomfort for the hurting of others are presumed to be less constrained by internal standards conduct; thereby, encouraging the use of aggression. According to social learning theory, these students are expected to report higher levels of self-reported school aggression. A single-item measure assesses the extent to which students “feel bad” for hurting others by their actions. A high score on this scale indicates that the student feels little emotional discomfort for hurting others. These students are anticipated to report higher levels of school aggression, violence, and delinquency.

**Neutralization of Self-Punishment**

A tradition of psychological and criminological theorizing has focused on the neutralization of aggressive and criminal behavior (Bandura 1973; Matza 1964; Minor 1980; Conklin 1992; Sykes and Matza 1957). Neutralizations are essentially cognitively derived justifications or rationalizations for those behaviors that conflict with one’s own personal standards of conduct (Bandura 1973; Sykes and Matza 1957). For Bandura (1986:225), neutralizations of self-punishment are part of an individual’s self-regulatory system -- those “cognitive structures that provide the referential standards against which behavior is judged, and a set of subfunctions for the perception, evaluation, and regulation of action.”

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Neutralizations obstruct the impact of self-punishment and result in the self-regulation of behaviors that often contradict an individual's internal standards. Thus, the work of Sykes and Matza (1957) and Bandura (1973) provide the theoretical foundation for the measurement of neutralization techniques. Sykes and Matza (1957) described five neutralization techniques used by youth to justify delinquent behavior. These include condemning the condemnor, an appeal to higher loyalties, denial of responsibility, denial of injury, and denial of victim. Guided by traditional theoretical constructs, this survey examined the extent to which neutralization mechanisms regulate school aggression and violence.

**General Approval for Violence.** According to Agnew (1994:563), "many studies, in particular, do not distinguish the acceptance of neutralizations from the general approval of violence." Many students may accept a particular technique of neutralization, but also approve of violence in general. To accurately measure the relationship between neutralization techniques and delinquency or aggression, a researcher must control for the general approval of violence (Agnew 1994; Austin 1977; Minor 1981; Thurman 1984).

First, this research examines whether neutralizations are necessary for the committing acts of school aggression and violence. Each student is asked to indicate their level of agreement or disagreement with the statement: "It is wrong for someone your age to hit or threaten to hit someone regardless of the reason." This item is measured on a five-point Likert scale with high scores indicating that the student strongly believes it is wrong for someone their age to hit or threaten to hit someone regardless of the reason. Neutralizations are thought to be necessary if few students generally approve of violence and a large proportion of students accept neutralization techniques. Second, this study examines whether neutralizations are important for explaining high school aggression and violence. The school violence and aggression variables are regressed on each neutralization scale. Similar to Agnew (1994), a
composite neutralization measure will be used to construct a neutralization \times approval for violence interaction term to determine whether neutralization of violence is conditioned by the general approval of violence. Neutralizations are expected to have the largest effect on school violence and aggression when approval of violence is low.

**Appeal to Higher Loyalties.** A two-item scale identifies those students who feel that “standing up for friends” and “upholding their honor” is an appropriate justification for the use of aggression. A high score on this item indicates that the student feels it is sometimes necessary to fight in order to uphold honor and standing up for friends is more important than the punishment for fighting in school.

**Denial of Responsibility.** A common technique of neutralization is to deny any responsibility for the use of aggressive behavior. Using a single-item measure, those students who indicate that “the fights many students get into are often not their fault” are more likely to externalize blame or deny responsibility for their own aggressive behavior in school. A high score on this item indicates that the student is more likely to deny responsibility for aggressive behavior in school.

**Denial of Injury.** Those students who believe fights rarely result in the hurting of others are more likely to use aggressive and violent behavior. A single-item measure, “fighting in school isn’t really a big deal because most of the time nobody gets hurt” is used to assess the technique of neutralization, denial of injury. A high score on this item indicates that the student is more likely to believe that fighting in school results in few injuries.

**Denial of Victim.** The dehumanization or denial of a victim may reduce a student’s inhibitions toward the use of aggression and violence in school. Those students, who disprove of aggressive and violent behavior, may neutralize their behavior by claiming that some students deserve to be beaten up. Using a three-item scale, denial of victim is measured by
determining the extent to which students believe certain students (i.e., gang members, and gay
students) deserve to be beaten up. A high score on this scale indicates that students are more
likely to use the denial of a victim to neutralize their own aggressive and violent behavior in
school.

Personality

Personality represents a fundamental component in some contemporary social learning
paradigms (see Andrews and Bonta 1999). Thus, a primary objective of this study is to
determine whether personality (i.e., impulsivity, risk-seeking behavior, and low empathy or
self-centeredness) contributes to social learning theory for a better understanding of high school
aggression. As noted in Chapter 2, impulsivity, risk-taking behavior, and low empathy
represent three personality constructs highly correlated with adolescent antisocial and
aggressive behavior. Using three measures developed by Grasmick, Tittle, Bursik, and
Arneklev (1993), this study determines whether impulsivity, risk-taking behavior, and low
empathy or self-centeredness makes a significant contribution to the capacity of social learning
theory to explain high school aggression.17 The three scales used for this study were originally
developed for a test of Gottfredson and Hirschi’s (1990) concept of low-self control.18

Impulsivity. A four-item scale is used to measure impulsivity (Cronbach’s alpha =
.63). Using a four-point Likert scale, students are asked to indicate whether they strongly agree
(4), agree somewhat (3), disagree somewhat (2), or strongly disagree (1) with statements like
“I often act on the spur of the moment.” A high score on this scale indicates that students are
highly impulsive.

Self-centeredness or low empathy. It is anticipated that those students who are highly
self-centered and lack empathy for others will report greater levels of self-reported aggression

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and violence. Similar to the impulsivity scale, four items are used to construct a scale measuring degree of self-centeredness (Cronbach's alpha = .72). A high score on this scale indicates that students are more likely to look out for themselves and are less sympathetic to other people when they are having problems.

**Risk-seeking behavior.** Those students who self-report higher levels of school aggression, violence, and delinquency are likely to indicate a need for excitement by engaging in risk-taking behaviors. A four-item scale comprised of statements like “sometimes I will take a risk just for the fun of it” is used to measure risk-seeking behavior (Cronbach's alpha = .83). A high score on this scale indicates that the student has a substantial need for taking risk for excitement.

**Research Design**

A self-report survey is used to examine a cross-section of 1,974 male and female high school students in central and southern California. This cross-sectional research design and method of data collection allows for the exploration and examination of the link between social learning theory and empirical correlates of adolescent aggression for a comprehensive understanding of high school aggression and violence. Moreover, this research strategy encourages an understanding of the social context and the nature of interpersonal relations that lead to acts of aggression in high schools. Nonetheless, there are methodological limitations to conducting a study in this manner. A cross-sectional research design limits our ability to establish causal relationships and delineate patterns of process and change over-time (Singleton, Straits, and Straits 1993). Instead, theory must be used to guide inferences about causal direction and logical relationships among variables (Asher 1983; Singleton, Straits, and Straits...
For this study, social learning theory informs our inferences regarding the causal relationship of individual variables and central mechanisms operating to produce high school aggression.

As noted above, a self-report instrument specifically designed to examine the utility of social learning theory for understanding high school aggression was developed for this study. Critics of self-report methods often cite problems of accurate recall, forward and backward telescoping, and deliberate falsification to question the reliability and validity of self-report instruments (see Elliott and Ageton 1980). Yet, available research suggests these potential threats do not appear to be serious (Clark and Tifft 1966; Dentler and Monroe 1961; Elliott and Huizinga 1983; Elliott and Voss 1974; Erickson and Empey 1963; Farrington 1973; Gold 1966; Hardt and Peterson-Hardt 1977; Hindelang, Hirschi, and Weis 1981; Hirschi 1969; Nye and Short 1956).

Moreover, the use of self-report methods does not appear to pose any special problems for the study of aggression and violence. According to Huizinga (1990), although self-reports appear to be rather imperfect measures of aggression and violence, they remain one of the most promising approaches for identifying the correlates, risk factors, explanations, and the causes of violent behavior. Likewise, some researchers recommend the use of self-report measures of aggression and violence because of their potential to reduce the number of false negatives in prediction studies (Monahan and Steadman 1994). Thus, self-report studies may increase the ability of researchers to identify aggressive and violent youth who have not been determined to be aggressive and violent in other data collection methods (e.g., official records). Meanwhile, other researchers argue that self-reports provide direct measures of behavior, unbiased by system or official responses and can reach populations having little or no contact with the criminal justice system (Hirschi, Hindelang and Weis 1980; Huizinga 1990). As a result, self-
report data continue to be widely accepted and used in aggression and violence research (Campbell 1986; Elliott 1994; Huizinga 1990; Riggs, O’Leary, and Breslin 1990; Steadman and Felson 1984).

Some speculation exists regarding the relationship between thoughts, attitudes, and beliefs and actual acts of aggression and violence. This study requires respondents to report their own perception of occurrences in both the home and school. However, some of the most frequently analyzed adolescent data sets incorporate self-report measures requiring youth to disclose their perception of events or speculate on the reaction and participation of others in various activities (see National Institute of Education 1978; National Youth Survey 1976-1983; National Longitudinal Survey of Youth 1979-1996; Monitoring the Future 1975-1997). Moreover, decades of research routinely demonstrates a significant relationship between perceptions, attitudes, and beliefs and a diversified range of antisocial behaviors (Andrews, Wormith, and Kiessling 1985; Dodge and Newman 1981; Glueck and Glueck 1950; Guerra 1989; Guerra and Slaby 1989; Magnusson 1988; Perry, Perry, and Rasmussen 1986; Richard and Dodge 1982; Slaby and Guerra 1988; Sykes and Matza 1957). The following section sets forth an analytical strategy for examining the research questions for this study (see Chapter 1).

Data Analysis

This chapter described the data collection strategy and theoretical measures used in this study. Many of the independent variables consist of composite scales that sum the values for single items. An item analysis was conducted to determine whether the construction of scales or the use of single-item measures was most appropriate for measuring the central concepts and individual variables of social learning theory. When appropriate, scales were constructed to
obtain a better overall representation of each social learning concept and the internal consistency of these scales were assessed using Cronbach's alpha (Cronbach 1951).

As noted above, research on aggression and violence often incurs a base rate problem and requires modifications in research strategies or statistical adjustments before data analysis. Thus, a critical examination of the measures of central tendency and dispersion for each dependent variable was conducted to determine the distribution and structure of the data (see Table 4.2). Upon examination of the dependent variables, it was apparent that most students reported little or no involvement in aggressive and violent acts in school. As shown by table 4.3, the mean value for each dependent is relatively close to the minimum value of each scale. In other words, most responses were clustered around the minimum values for each dependent variable indicating that most students do not engage in school aggression and violence in a frequent manner.

In addition, to determine whether the regression assumption of independence, linearity, normality, and constant variance were satisfied, the residuals from several regression models were examined. The regression assumptions were met in all regression models. However, the infrequent occurrence of aggressive and violent acts in school implied that it might be useful to further explore possible methods for improving the estimation of various regression models. A common strategy for improving the distribution of dependent variables is to take the natural log of each dependent variable. Table 4.5 displays the kurtosis and skewness statistics for the four dependent variables before and after the log transformation. As shown in Table 4.5, transforming the dependent variables by taking their natural log brings them more into agreement with the assumptions of normality required for dependent variables in ordinary least squares regression.
Table 4.5. Kurtosis and Skewness Statistics for Four Dependent Variables Before and After Logistic Transformation

<table>
<thead>
<tr>
<th></th>
<th>Kurtosis</th>
<th>Skewness</th>
</tr>
</thead>
<tbody>
<tr>
<td>School Violence</td>
<td>28.688</td>
<td>4.176</td>
</tr>
<tr>
<td>(Logged)</td>
<td>4.958</td>
<td>1.990</td>
</tr>
<tr>
<td>School Aggression</td>
<td>13.779</td>
<td>2.954</td>
</tr>
<tr>
<td>(Logged)</td>
<td>2.240</td>
<td>1.465</td>
</tr>
<tr>
<td>Instrumental School Aggression</td>
<td>15.396</td>
<td>3.368</td>
</tr>
<tr>
<td>(Logged)</td>
<td>3.102</td>
<td>1.759</td>
</tr>
<tr>
<td>School Vandalism and Delinquency</td>
<td>9.133</td>
<td>2.416</td>
</tr>
<tr>
<td>(Logged)</td>
<td>1.163</td>
<td>1.018</td>
</tr>
</tbody>
</table>

Standard error for kurtosis = .111
Standard error for skewness = .056

In addition, by taking the natural log of the dependent variables, a researcher can improve the distribution of data and acquire a better "goodness of fit" between the variables in the model. Thus, various models were analyzed with and without taking the natural log of the dependent variables in an effort to determine the "best fit" for the data. In most cases, the R square ($R^2$) values for the model substantially increased when the log of the dependent variables were applied indicating a better fit than the linear model absent the log transformation. Once the logs of the dependent variable were applied, the variables tended to remain normally distributed with a constant variance. Thus, the assumptions necessary for regression analysis appeared to remain satisfied. Moreover, it is important to note that ordinary least squares regression is quite robust to violations of normality when large samples are employed (Fox 1991). As a result, the dependent variables in this study represent the natural log of school violence, school aggression, instrumental school aggression, and school vandalism and delinquency.
Conclusion

This chapter set forth a comprehensive research strategy for assessing the capacity of social learning theory to be a valuable framework for understanding high school aggression, violence, and delinquency. This research is designed to provide scholars and practitioners with an enhanced theoretical understanding of the nature and extent of high school aggression and violence. Using a primary data collection strategy, this research assesses the utility of social learning theory for organizing the empirical factors correlated with high school violence and adolescent aggression, violence, and delinquency.

Despite some methodological concerns, the use of a self-report survey and a primary data collection strategy poses a number of benefits for achieving the objectives of this study. The use of a self-report survey and an original data collection strategy circumvents many problems often associated with other methods of data collection, including secondary data analysis. A primary data collection effort assures a sample of youth representative of the immediate context, thereby, limiting the possibility of time-specific cohort or period biases. Moreover, this study assembles data specifically designed to investigate the problem of aggression in the context of contemporary high schools.

Finally, the significance of this study is further underscored by the empirical implications it contains for social learning theory. This data collection method exceeds previous research strategies by operationalizing a widely recognized and empirically supported theoretical model. As a result, this study represents a significant contribution toward an enhanced theoretical understanding of contemporary high school aggression, violence, and delinquency. The following chapters provide support for the capacity of social learning theory
to promote a conceptual understanding of how prior learning experiences, cognitive processes, and environmental conditions come together for a concise analysis of high school aggression and violence. Chapter 5 presents the bivariate and multivariate results regarding each social learning mechanism and their relationship to self-reported school aggression, violence, and delinquency.
Notes

1 These figures are January 1, 1998 estimates for each city. The estimates are based on the California State Department of Finance Demographic Research Unit population estimates 1990-1998.

2 Upon the recommendation of the Director for Research for the central California school district, three high schools were excluded from the total enrollment figures for the central California school district. These schools are geographically located in small, rural agricultural communities and represent outliers on some key demographic characteristics from the remainder of the school district. Moreover, these enrollment figures exclude alternative schools, adult schools, and other special education programs and schools in each district.

3 Application of the statistical weight for gender, ethnicity, grade level, and district size reduced the total sample from 2,041 to 1,974. A weight could not be constructed for those cases with missing items on any of the variables representing gender, ethnicity, grade level, and district size. These cases are regarded as missing cases and do not enter into any statistical calculation.

4 The southern California school ranks number one in southern California and among the top 10 schools in the U.S. in the number of students taking and passing advanced placement college tests. Moreover, although there is no admission criteria to get into the southern California school, the school is considered "impacted" (i.e., there is little room for new students and there is a waiting list for students to attend the school) resulting in greater competition for individual students to be enrolled in that particular school. Thus, the difficulty of getting into the school may provide an incentive for students to do well so they can continue to attend a school in close proximity to their residents.

5 Each school district calculated a GPA score (i.e., total number of classes given an equal value) and an academic GPA score (i.e., all non-academic classes excluded). Thus, no weight was applied to correct for the skewed distribution of letter grades since the researcher was unable to accurately measure the ratio of academic versus non-academic courses taken by each student in the sample.

6 For the ethnicity variable, the "other" category represented different ethnic groups for each sample. The "other" category for the southern California sample represented Filipino and Pacific Islander students. The "other" category for the central California included Middle Eastern, Cuban, Filipino, and Pacific Islander students.

7 Ideally, this study would have included the most serious forms of violence such as school shootings. Extreme forms of school violence are of great importance to the general public and school officials. However, school shootings are extremely rare and do not lend themselves to prediction. Thus, more frequent minor acts of aggression are also included in this study.
Although the sample used in this study is not a probability sample in the strictest sense, this sample is well suited for fulfilling the objectives of this study since the primary objective is to examine the utility of social learning theory for explaining high school aggression and violence rather than obtaining estimates of national trends.

Moreover, the University of Cincinnati Human Subjects Committee approved the content and procedures for obtaining parental permission through passive parental consent forms.

School authorities or the research staff satisfactorily addressed all concerns raised by parents. Six parents contacted the principal investigator of this study with questions regarding the overall purpose of the study and specific questions contained in the survey instrument. Some parents may have contacted school authorities; however, no parent refused to provide consent for their child to participate in the survey. Thirty-six students either refused to participate in the survey or began the survey and then decided to discontinue their participation. A total of one hundred sixty-four students did not finish the survey. Forty-three surveys were excluded based on encoder evaluations that the student did not take the survey seriously. Those students who flagrantly misrepresented their age, grade level, gender, or indicated engaging in all items comprising the dependent variable on an everyday basis were excluded.

Prior to conducting the survey, the survey instrument was piloted on a sample of thirty high school students attending general education classes at a high school. Twenty-nine of the thirty students completed the survey with no difficulty during the designated 50-minute period. No students had difficulty reading or understanding the content of the questions/statements, no questions/statements were systematically skipped or unanswered; adequate variation was obtained on all single-item measures; and the scales for the dependent variables produced sufficient alpha reliability scores. In some instances, the pilot study pointed to areas of the survey requiring minor modifications.

All independent and dependent measures were divided by the number of items comprising each scale in order to reduce the range or variation of each scale.

A Cronbach's alpha is calculated for all scales comprised of three or more items. However, an alpha reliability score is not reported for two-item scales since the alpha is a function of the average interitem correlation and the number of items in a scale (Nunnally 1978; Carmines and Zeller 1979). As a consequence, the value of alpha will increase as the number of items comprising a scale increase - even when the interitem correlation remains the same. It is thus unusual to obtain a high alpha with a small number of items, even though measurement error may be low. Hence, a low alpha may reflect the number of items in a scale as well as the intercorrelation or internal consistency among items.

The two measures attempt to explore interpersonal instigators and situational instigators. The items used attempt to focus on the specific "sources" of the frustration. The interpersonal or people instigators attempt to focus on specific "people" who do or represent certain patterns and the situational or event instigators focus on specific "events" or scenarios that might occur in particular situations.
Three items - students who bring weapons to school, a student who pushes others around, and a student drug-dealer - were excluded from the interpersonal instigator scale. These items depict aggressive and delinquent acts and do not represent significant sources of frustration and are inversely related to school aggression and delinquency. Since the purpose of the interpersonal instigator scale is to assess the importance of frustration school aggression and violence only those measures that represent sources of frustration were included in the interpersonal instigator scale.


The original alpha reliability scores used by Grasmick et al. (1993) were as follows: impulsivity (.68), self-centeredness (.74), and risk-seeking behavior (.74).

The original composite measure of low self-control developed by Grasmick et al. (1993) was comprised of six individual scales. Those scales included: physical activities, impulsivity, self-centeredness, risk-taking, simple task, and a temper component. Since this study is only interested in determining the relative contribution of personality to social learning theory, only the individual scales used for measuring impulsivity, self-centeredness, and risk-seeking behavior are adopted for this study.
Chapter 5

Estimating the Prevalence of School Behaviors and Assessing the Social Learning Mechanisms of Aggression

The previous chapter set forth a comprehensive research strategy for assessing the capacity of social learning theory to be a valuable framework for understanding high school aggression and violence. Using the research strategy described in Chapter 4, this chapter presents the results of the initial efforts to address the research questions for this study (see Chapter 1). Thus, this chapter estimates the prevalence of high school aggression and violence for the total sample and across the two school districts. In addition, this chapter presents the bivariate and multivariate results regarding each social learning mechanism and its relationship to self-reported school aggression, violence, and delinquency. The bivariate analysis provides a preliminary exploration of the impact of specific acquisition, instigation, and maintaining factors on self-reported school behaviors and is useful for detecting potential problems of multicollinearity. The multivariate analysis highlights the most important social learning factors for prediction of school violence and helps to determine the amount of variation explained by each social learning mechanism. Finally, this chapter explores whether the explanation of high school aggression is invariant across two school districts located in central and southern California. The following section assesses the extent to which aggression, violence, and vandalism and delinquency occurs in the high schools sampled for this research.

Prevalence of High School Aggression and Violence

The results shown in Table 5.1 indicate that during the past two years a substantial percentage of high school students have engaged in at least one aggressive, violent, and delinquent behavior while in school. For the total sample, a greater percentage of youth report
involvement in acts of school aggression and school vandalism and delinquency opposed to acts of school violence and instrumental school aggression.⁴ Seventy percent of the total sample

Table 5.1. Percentage of Students Reporting Involvement in School Violence, School Aggression, Instrumental School Aggression, and School Vandalism and Delinquency for the Total Sample, Central California School District, and Southern California School District

<table>
<thead>
<tr>
<th></th>
<th>Total Sample (N = 1,974)</th>
<th>Central California District (N = 995)</th>
<th>Southern California District (N = 979)</th>
</tr>
</thead>
<tbody>
<tr>
<td>School Violence</td>
<td>47.0</td>
<td>48.1</td>
<td>44.8</td>
</tr>
<tr>
<td>School Aggression</td>
<td>70.4</td>
<td>71.6</td>
<td>69.0</td>
</tr>
<tr>
<td>Instrumental School Aggression</td>
<td>44.1</td>
<td>44.8</td>
<td>43.5</td>
</tr>
<tr>
<td>School Vandalism and Delinquency</td>
<td>80.0</td>
<td>82.4</td>
<td>77.4</td>
</tr>
</tbody>
</table>

Note: The central California school district represents the smaller city located in predominantly an agricultural area. The southern California school district is located in a large, inner city jurisdiction.

School Violence — thrown one punch at another student, been involved in one-to-one fight, hit a teacher, hit any other adult while in school, sexual assault, been involved in a group fight, pushed or shoved another student.

School Aggression — threatened to hit a teacher, threatened to hit any other adult while in school, threatened to hit another student in school, verbally insulted a teacher in school, verbally insulted other students in school, verbally insulted any other adult while in school, verbally pressured a student in a sexual manner, carried a hidden weapon into school.

Instrumental School Aggression — used verbal threats or intimidation to get money or things from other people in school, spread lies about other students to make yourself look good, "picked on" or "made fun of" another student to look good in front of your friends.

School Vandalism and Delinquency — drawn or painted graffiti on school buildings or walls, broke or damaged school property on purpose, cheated on school tests, stolen (or tried to steal) something at school, skipped classes, been suspended from school.

report engaging in acts of school aggression and eighty percent of the students report being involved in school vandalism and delinquency. Meanwhile, nearly half of all high school students in the sample report some participation in school violence (47.0%) and instrumental school aggression (44.1%). Despite a high proportion of students who have engaged in some form of aggressive and delinquent behavior in school, an analysis of each scale shows that most students are not participating in the most serious forms of behavior that comprise each dependent variable. Thus, in most cases, the minor or less serious behaviors that comprise each
scale are able to explain the high proportion of students who report involvement in each school behavior. For instance, most students represented in the school violence scale report pushing other students in school (38.6%), throwing a punch at another student in school (23.9%), participating in group fights (15.8%), and being involved in a one-on-one fight in school (15.4%). In contrast, few students are report hitting teachers (1.3%) or other adults in school (2.0%) and engaging in sexual assault (6.9%). In terms of school aggression, most students are verbally insulting other students (65.9%), threatening to hit other students (38.7%), and verbally insulting teachers (23.2%) opposed to verbally insulting other adults in school (11.6%), threatening to hit teachers (4.1%), and threatening to hit other adults in school (3.4%).

A similar pattern emerges for both instrumental school aggression and school vandalism and delinquency. For instrumental school aggression, most students report “picking on” students to look good in front of their friends (39.1%) while fewer students report spreading lies about other students to look good (12.2%) and using threats and intimidation practices to get money from other students in school (8.5%). Likewise, greater proportions of students report participating in minor forms of delinquency rather than acts of school vandalism. For instance, a high percentage of students accounted for by the school vandalism and delinquency measure have cheated on tests (62.9%) and skipped classes (63.6%). However, far fewer students report painting graffiti on school buildings or walls (11.8%) and breaking or damaging school property (8.4%). Hence, most students are reporting involvement in less serious forms of aggression, violence, and delinquency in high schools.

Most students do not engage in aggressive and violent acts on a frequent basis. Table 5.2 provides the measures of central tendency and dispersion useful for examining the distribution of each school behavior for the total sample and both school districts. As noted in Chapter 4, each dependent variable is scored on a frequency scale that ranges from 1 (never
Table 5.2. Mean, Median, Standard Deviation, and Variance of School Violence, School Aggression, Instrumental School Aggression, and School Vandalism and Delinquency for Total Sample, Central California District, and Southern California District

<table>
<thead>
<tr>
<th></th>
<th>Total Sample (N = 1,974)</th>
<th>Central California District (N = 995)</th>
<th>Southern California District (N = 979)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>X</td>
<td>Md</td>
<td>Sd</td>
</tr>
<tr>
<td>School Violence</td>
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<td>1.00</td>
<td>.46</td>
</tr>
<tr>
<td>School Aggression</td>
<td>1.39</td>
<td>1.25</td>
<td>.55</td>
</tr>
<tr>
<td>Instrumental School Aggression</td>
<td>1.36</td>
<td>1.00</td>
<td>.67</td>
</tr>
<tr>
<td>School Vandalism and Delinquency</td>
<td>1.52</td>
<td>1.33</td>
<td>.57</td>
</tr>
</tbody>
</table>

Note: The central California school district represents the smaller city located in predominately an agricultural area. The southern California school district is located in a large, inner city jurisdiction.

School Violence – thrown one punch at another student, been involved in one-to-one fight, hit a teacher, hit any other adult while in school, sexual assault, been involved in a group fight, pushed or shoved another student.

School Aggression – threatened to hit a teacher, threatened to hit any other adult while in school, threatened to hit another student in school, verbally insulted a teacher in school, verbally insulted other students in school, verbally insulted any other adult while in school, verbally pressured a student in a sexual manner, carried a hidden weapon into school.

Instrumental School Aggression – used verbal threats or intimidation to get money or things from other people in school, spread lies about other students to make yourself look good, “picked on” or “made fun of” another student to look good in front of your friends.

School Vandalism and Delinquency – drawn or painted graffiti on school buildings or walls, broke or damaged school property on purpose, cheated on school tests, stolen (or tried to steal) something at school, skipped classes, been suspended from school.

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committed the act) to 6 (committed the act every day). A high score on this scale indicates that over the previous two years the student has frequently engaged in the particular behavior. As shown in Table 5.2, the mean level of involvement in acts of school aggression, violence, and delinquency is quite low. For each school behavior, the mean level of involvement ranges from 1.25 for school violence to 1.52 for school vandalism and delinquency for the total sample. Likewise, when examining exclusively those students who report some involvement in school violence during the past two years, the mean frequency of involvement in school violence slightly increases to 1.53. These results clearly suggest that acts of school violence, school aggression, and school vandalism and delinquency are rather infrequent behaviors. Moreover, there appears to be minimal variation in the frequency of each behavior in high school. The standard deviation and variance statistics shown in Table 5.2 indicate that there are only minor departures from the mean. These findings support research that questions the frequency to which many school behaviors are reported to occur (Furlong and Morrison 1994; Gottfredson and Gottfredson 1985).

Comparing the Prevalence of School Violence, Aggression, and Vandalism and Delinquency across School Districts

Despite the infrequent occurrence of aggressive and violent behaviors in high school, an important aspect of this study is to determine whether the prevalence of these behaviors significantly varies across school districts. In recent years, some research points to the plausibility that school-related violence is becoming more common in smaller cities, suburbs, and rural areas (National League of Cities 1994; National School Board Association 1993). As described in Chapter 4, the central California school district is located in a city that is smaller than the southern California school district and differs considerably in both the economic functions and population size from the southern California district.

Tables 5.1 and 5.2 display the mean level of involvement and percentage of high school
students involved in each behavior are relatively equal across both school districts. However, the central California sample reports a slightly higher percentage of students with some involvement in each school behavior. Similar to the results for the total sample, the most frequently reported behaviors are for acts of school aggression and school vandalism and delinquency in both school districts. Likewise, nearly half of the students in each school district report involvement in school violence and instrumental school aggression during the past two years. Despite the largest mean differences in the frequency of each behavior between school districts are found for acts of school aggression and instrumental school aggression (see Table 5.2), there is no significant mean difference in each behavior between the central California and southern California school districts. The results of the independent samples t-tests presented in Table 5.3 fail to reject the null hypothesis that the two population means are equal. Hence, it can be safely argued that the prevalence rates for each school behavior are relatively equal and -- at minimum -- comparable across the two school districts. These findings support previous research indicating that the prevalence of aberrant behaviors in high schools is becoming more common in districts located in smaller, more suburban settings.

In sum, a considerable proportion of students are involved in acts of aggression, violence, and delinquency in the context of high schools. Yet, the frequency at which students perform each behavior in school appears to be low -- regardless of the school district. Moreover, an analysis of the scales that comprise the dependent variables reveals that most students report involvement in some of the least serious forms of school behavior. Although, the mean level of involvement in each behavior is slightly higher for the central California school district, the differences in mean levels for the two school districts are not significant. In addition to exploring the prevalence of aggression and violence in high schools and the similarities of prevalence rates across school districts, another purpose of this chapter is to examine whether there are significant differences in the predictors or explanations of school
Table 5.3. T-test for the Equality of Means of School Violence, School Aggression, School Instrumental Aggression, and School Vandalism and Delinquency by School District

<table>
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<tr>
<th></th>
<th>Mean Difference</th>
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<td>1931</td>
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<td>.0304</td>
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<td>School Vandalism and Delinquency</td>
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<td>.0262</td>
<td>1919</td>
<td>1.47</td>
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</table>

*The Levene tests for equality of variances indicates that the variances may not be equal in the two school districts. The figures presented in the table assume the two population variances are not equal.

School Violence – thrown one punch at another student, been involved in one-to-one fight, hit a teacher, hit any other adult while in school, sexual assault, been involved in a group fight, pushed or shoved another student.

School Aggression – threatened to hit a teacher, threatened to hit any other adult while in school, threatened to hit another student in school, verbally insulted a teacher in school, verbally insulted other students in school, verbally insulted any other adult while in school, verbally pressured a student in a sexual manner, carried a hidden weapon into school.

Instrumental School Aggression* – used verbal threats or intimidation to get money or things from other people in school, spread lies about other students to make yourself look good, “picked on” or “made fun of” another student to look good in front of your friends.

School Vandalism and Delinquency – drawn or painted graffiti on school buildings or walls, broke or damaged school property on purpose, cheated on school tests, stolen (or tried to steal) something at school, skipped classes, been suspended from school.

aggression, violence, and delinquency across school districts. Later in this chapter I will return to the issue of whether the explanations of high school aggression are invariant across school context.

The subsequent section introduces the analysis regarding the specific acquisition, instigation, and maintaining mechanisms associated with aggressive, violent, and delinquent behaviors in high schools. The following bivariate and multivariate analysis assess: a) the most predominant means of acquiring or learning aggression, violence, and delinquency among high school youth; b) the most important aversive and incentive instigation mechanisms that influence the performance of each behavior in high school; c) the real-life school situations that high school adolescents consider to be aversive instigators that “trigger” the performance of
each behavior; and d) the mechanism most important for maintaining or reinforcing each behavior in the school context.

Assessing the Impact of Acquisition Mechanisms

Tables 5.4 through 5.7 present the bivariate and multivariate results regarding the relationship between social learning acquisition mechanisms and high school aggression, violence, and vandalism and delinquency. As discussed in Chapter 4, the relative impact of various acquisition mechanisms are estimated by examining the strength and predictive utility of individual modeling influences with and without accounting for model-observer identification. According to social learning theory, those students who report a strong identification with: a) parents, siblings, and peers who model aggressive behavior or b) parents, siblings, or peers that provide attitudes favorable toward the use of aggressive behavior are likely to report higher levels of school violence, aggression, and delinquency than those who do not identify with such models.

On the whole, the bivariate and multivariate results point to a strong and significant relationship between various modeling influences and high school aggression, violence, and delinquency. The correlation coefficients, means, and standard deviations for the relationships between the primary acquisition mechanisms identified by social learning theory and each school behavior are shown in Table 5.4. Most zero-order correlations between modeling influences and each school behavior are significant. Yet, modeling influences are less related to instrumental school aggression than to other forms of school behavior. Nonetheless, it is apparent that modeled peer aggression and peer attitudes are particularly strong correlates of each school behavior. The largest correlation coefficients are reported between modeled peer aggression and school violence ($r = .44$) and school aggression ($r = .41$). Furthermore, media
Table 5.4. Pearson Correlation Matrix, Means, and Standard Deviations for Social Learning Acquisition (Modeling) Mechanisms

<table>
<thead>
<tr>
<th></th>
<th>X1</th>
<th>X2</th>
<th>X3</th>
<th>X4</th>
<th>X5</th>
<th>X6</th>
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<th>X8</th>
<th>X9</th>
<th>X10</th>
<th>X11</th>
<th>X12</th>
<th>X13</th>
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<td>.31**</td>
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<td>.16**</td>
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<td>.12**</td>
<td>.13**</td>
<td>.24**</td>
<td>.50**</td>
<td>.56**</td>
<td>.47**</td>
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</table>

\[ \bar{X} = 1.60, \quad 2.09, \quad 2.76, \quad 3.90, \quad 2.37, \quad 2.64, \quad 2.08, \quad 2.95, \quad 2.25, \quad .18, \quad .27, \quad .24, \quad .36 \]

\[ \text{Sd} = .91, \quad .96, \quad 1.09, \quad 1.10, \quad .80, \quad 1.34, \quad 1.21, \quad .86, \quad .95, \quad .27, \quad .30, \quad .35, \quad .31 \]

\( p < .05^{*} \quad p < .01^{**} \)

Note: All scales are scored in a positive direction where high scores indicate an increase in the presence of each construct.
Table 5.5. Regression of Self-Reported School Aggression, School Violence and School Vandalism and Delinquency on Social Learning Acquisition (Modeling) Mechanisms

<table>
<thead>
<tr>
<th>Acquisition Mechanisms</th>
<th>Type of School Behavior</th>
<th>School Violence</th>
<th>School Aggression</th>
<th>Instrumental School Aggression</th>
<th>School Vandalism and Delinquency</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>B</td>
<td>Beta</td>
<td>T-Ratio</td>
<td>B</td>
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<tr>
<td>Modeled Parental</td>
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</tr>
<tr>
<td>Aggression</td>
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<td>.011</td>
<td>.033</td>
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<td>3.20***</td>
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<td>.041</td>
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<tr>
<td>Modeled Sibling</td>
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p < .05*  p < .01**  p < .001***

Note: All scales are scored in a positive direction where high scores indicate an increase in the presence of each construct.
influences are significantly associated with each school behavior, particularly school violence and school aggression. Surprisingly, a weak relationship was found between both modeled parental aggression and sibling attitudes and acts of aggression, violence, and delinquency in high schools. Similarly, a weak to moderate relationships was found for such macrosocial factors as exposure to neighborhood and school violence and levels of each behavior reported in high schools.

The multivariate analysis reveals that modeling variables explain a substantial amount of variation in each school behavior, especially school violence and school aggression (see Table 5.5). The $R^2$ values for all four equations are significant at $p < .001$ and range from .13 for instrumental school aggression to .30 for school violence. Although the $R^2$ value for the equation predicting instrumental school aggression is significant, the amount of variation explained is modest. Nonetheless, modeled sibling and peer aggression, peer attitudes, and media influences are significant predictors for each school behavior. In particular, modeled peer aggression and media influences are particularly strong predictors of each school behavior. These findings are consistent with the bivariate results. Despite the importance of modeled sibling aggression, the findings indicate that sibling attitudes are not important for the prediction of school behaviors. Moreover, it is evident that modeled peer aggression and peer attitudes are notably more predictive of each behavior in high school compared to parental influences.

Since social learning theory suggests that the impact of models on behavior is likely to be contingent on the degree of model-observer identification, this research examined whether a strong attachments to aggressive models coincide with an increases in the importance of aggressive models for understanding school aggression, violence, and delinquency. Parent, sibling, and peer identification measures were developed to determine if the degree to which a student identifies with aggressive models increases the relative impact of modeled aggression.
(see Chapter 4). The bivariate and multivariate results are reported Table 5.6 and Table 5.7, respectively.

From these results, it seems clear that the degree of model-observer identification contributes very little to the impact of aggressive models in school-related behaviors. In fact, in comparison to the results without the contribution of observer identification (Table 5.4), various zero-order correlations between acquisition measures and dependent variables are reduced. Perhaps the importance of model identification is circumvented by the fact that these models (e.g., parents, siblings, and peers) are likely to be central features of an adolescent’s life — whether youth consciously “respects” or “identifies” with their family members or closest friends; thereby, making the issue of model identification less important for those models that constitute the daily lives of most adolescents. Nonetheless, in terms of parent, sibling, and peer models, peer influences remain the strongest correlates for each school behavior.

Similarly, the R² values for all four multivariate equations shown in Table 5.7 remain significant at p < .001, but are somewhat smaller than when observer identification is not taken into account. Moreover, in comparisons between Tables 5.5 and 5.7, it appears that family and peer models become less predictive while the macrosocial measures of neighborhood and school modeled aggression somewhat more predictive when identification is incorporated in the regression model. For instance, modeled sibling aggression is no longer a significant predictor for school violence and instrumental school aggression and peer attitudes is no longer important for predicting school vandalism and delinquency. However, modeled aggression at the neighborhood and school levels become important predictors for each school behavior. Modeled neighborhood aggression remains an important predictor of school violence and becomes important for predicting school aggression and school vandalism and delinquency. Similarly, modeled school aggression develops into a significant predictor of each school behavior at p < .001. Nevertheless, these findings imply that the degree of observer
Table 5.6. Pearson Correlation Matrix, Means, and Standard Deviations for Social Learning Acquisition (Modeling) Mechanisms with Identification

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

Note: All scales are scored in a positive direction where high scores indicate an increase in the presence of each construct.
Table 5.7. Regression Self-Reported School Aggression, School Violence and School Vandalism and Delinquency on Social Learning Acquisition (Modeling) Mechanisms with Identification

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<th>Beta</th>
<th>T-Ratio</th>
<th>B</th>
<th>Beta</th>
<th>T-Ratio</th>
<th>B</th>
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<td>-.012</td>
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<td>-.077</td>
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<td>.042</td>
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R²          | .24  |       | .19  |       | .09  |       | .11    |
F           | 68.74*** | 49.58*** | 20.25*** | 24.76*** |
S.E.        | .23  | .27  | .33  | .29  |
N           | 1936 | 1926 | 1938 | 1914 |

p<.05*  p<.01**  p<.001***

Note: All scales are scored in a positive direction where high scores indicate an increase in the presence of each construct.
identification with a model may not be necessary for models to have a tremendous impact on the behavior of youth. As a consequence, it appears simple exposure to aggressive models is sufficient for explaining levels of school-related aggression, violence, and delinquency in high schools.

Assessing the Impact of Instigation Mechanisms

Perhaps the most compelling aspects of social learning theory is its' ability to account for the motivations that influence the performance of aggressive behavior. The following bivariate and multivariate analysis examine the role of motivations or instigation mechanisms on the occurrence of aggression and violence in high schools. In general, the findings reported in this study indicate that both aversive conditions and incentive inducements are operating as instigators for high school aggression, violence, and delinquency. Specifically, the analysis of instigation mechanisms suggest three distinct patterns: a) sources of peer frustration such as peer isolation and peer rejection are not significant predictors of school related behaviors and in some instances are inversely related to school aggression, violence, and delinquency; b) a variety of real-life school experiences may represent situational and interpersonal sources of frustration that translate into each school behavior; and c) incentive inducements are more strongly associated with each high school behavior compared to aversive instigators. The following section examines the impact of aversive instigators and generalized sources of frustration on aggression, violence, and delinquency in the context of high schools. The influence of incentive inducements is considered subsequent to the discussion on aversive instigators.
Assessing the Impact of Aversive Instigators

The bivariate results from the analysis of aversive instigators are displayed in Table 5.8. From these findings, it is apparent that peer isolation, peer rejection, and failure in extracurricular school activities are not highly associated with each school behavior. Yet, academic school failure, verbal threats and insults, and the thwarting of goal-directed behaviors translate into higher levels of school violence, aggression, and delinquency. Those students who indicate that their schoolwork is important, but are having difficulties, are much more likely to be involved in school violence and school vandalism and delinquency. Likewise, the blockage of goals is strongly associated with most of the school behaviors, but does not appear to be a correlated with instrumental school aggression. As a consequence, those students who perceive few opportunities or few rewards in school for their efforts in school are more likely to report higher levels of involvement in school violence, school aggression, and school vandalism and delinquency. Finally, those students who are routinely exposed to physical threats and verbal threats and insults in school report higher involvement in school violence and instrumental school aggression, respectively.

Those aversive instigators associated with inadequate peer relationships do not appear to represent significant sources of frustration that translate into high school aggression, violence, and delinquency. As noted in Chapter 2, peer rejection is most often associated with aggressive and violent behaviors in pre-adolescent samples (Cowen, Pederson, Babigian, Izzo, and Trost 1973; Loeber 1982; Olweus 1980; Patterson 1992; Robins 1966; Roff, Sells, and Golden 1972). Thus, the bivariate correlations for peer rejection and peer isolation tend to be weak and in some cases are inversely related to school behaviors. This also appears to be the case for failure in school related activities. Nevertheless, most of the zero-order correlations indicate only weak to moderate relationships between aversive instigators and each school behavior. Similar patterns are found in the multivariate results presented in Table 5.9.
Table 5.8. Pearson Correlation Matrix, Means, and Standard Deviations for Aversive Instigation Measures

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

Note: All scales are scored in a positive direction where high scores indicate an increase in the presence of each construct.
Table 5.9. Regression of Self-Reported School Aggression, School Violence and School Vandalism and Delinquency on Social Learning Aversive Instigators

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<th>Type of School Behavior</th>
<th>Aversive Instigators</th>
<th>School Violence</th>
<th>School Aggression</th>
<th>Instrumental School Aggression</th>
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<td>-.061</td>
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<td>-.051</td>
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<td>-.058</td>
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<tr>
<td>School Failure</td>
<td>.057</td>
<td>.108</td>
<td>4.77***</td>
<td>.026</td>
<td>.043</td>
</tr>
<tr>
<td>Failure in School Activities</td>
<td>.009</td>
<td>.015</td>
<td>.68</td>
<td>-.008</td>
<td>-.013</td>
</tr>
<tr>
<td>Physical Assaults</td>
<td>.023</td>
<td>.111</td>
<td>4.95***</td>
<td>.008</td>
<td>.032</td>
</tr>
<tr>
<td>Verbal Threats and Insults</td>
<td>.011</td>
<td>.052</td>
<td>2.32*</td>
<td>.015</td>
<td>.061</td>
</tr>
<tr>
<td>Aversive Reductions in Conditions of Life</td>
<td>-.005</td>
<td>-.022</td>
<td>-.95</td>
<td>-.002</td>
<td>-.008</td>
</tr>
<tr>
<td>Thwarting of Goal Directed Behavior</td>
<td>.035</td>
<td>.136</td>
<td>5.68***</td>
<td>.041</td>
<td>.136</td>
</tr>
<tr>
<td>Constant</td>
<td>.005</td>
<td>.135</td>
<td></td>
<td></td>
<td>.123</td>
</tr>
<tr>
<td>R^2</td>
<td>.07</td>
<td>.135</td>
<td>.04</td>
<td>.02</td>
<td>.123</td>
</tr>
<tr>
<td>F</td>
<td>17.306***</td>
<td>9.27***</td>
<td>.02</td>
<td>5.526***</td>
<td>12.290***</td>
</tr>
<tr>
<td>S.E.</td>
<td>.26</td>
<td>.30</td>
<td>.34</td>
<td>.30</td>
<td>.30</td>
</tr>
<tr>
<td>N</td>
<td>1920</td>
<td>1911</td>
<td>1922</td>
<td>1898</td>
<td></td>
</tr>
</tbody>
</table>

*p < .05  p < .01  p < .001

Note: All scales are scored in a positive direction where high scores indicate an increase in the presence of each construct.
The initial multivariate analysis assesses the relative impact of the aversive instigators identified by Bandura’s social learning theory and likely sources of frustration found in the adolescent and pre-adolescent aggression literature (see Table 5.9). The \( R^2 \) values for all four regression equations are significant, but low. The largest \( R^2 \) values of .07 and .05 were found for school violence and school vandalism and delinquency, respectively. Although physical assaults is predictive of school violence (beta = .11; \( p < .001 \)), school failure, thwarting goal-directed behavior, and verbal threats and insults represent the most uniform predictors across all four equations. The thwarting of goal directed behavior is predictive of three behaviors – school violence, school aggression, and school vandalism and delinquency – at \( p < .001 \). In like manner, school failure is predictive of school violence, instrumental school aggression, and school vandalism and delinquency whereas verbal threats and insults is predictive of school aggression and instrumental school aggression at \( p < .001 \). Again, peer variables do not appear to be significant predictors of each high school behavior. Similar to the bivariate results, an inverse relationship remains between peer isolation, peer rejection, and failure in school-related activities and most school behaviors. A significant negative relationship appears between peer isolation and school violence and school aggression while peer rejection is inversely related to school aggression and school vandalism and delinquency. Regardless, the four equations do not explain much variation in each school behavior.

An Exploratory Analysis of Aversive Instigators

As noted in Chapter 4, this study includes a variety of situational and interpersonal factors in an effort to explore possible sources of frustration for youth that result in aggressive, violent, and delinquent behaviors in high schools. Social learning theory proposes that both specific and generalized levels of frustration may represent aversive instigators for aggression and violence. The following bivariate analysis explores some real-life school situations and
interpersonal factors that may represent specific and generalized sources of frustration.

Situational Sources of Frustration

Table 5.10 presents the results of the bivariate analysis of situational instigators and each type of school behavior. The results provide information regarding the nature of specific situational instigators among high school youth. In general, a variety of situational instigators are present among many youth and appear to be contributing to aggressive behavior in high schools. The items most strongly correlated with school aggression and violence include being accidentally knocked down and students “hitting on” a significant other. Yet, some factors that might be expected to produce high levels of frustration are not associated with school aggression and violence. For instance, being insulted while other students are watching, being teased, having friends insulted, and peer pressure to fight are not strongly correlated with school violence and aggression. In fact, the pressure from friends to fight is inversely related to all school behaviors. The only situational factor related to instrumental school aggression is if the person was knocked down but not on purpose.

In general, situational sources of frustration appear to be more strongly associated with school vandalism and delinquency. Seven situational instigators are related to school vandalism and delinquency with correlation coefficients of .10 or larger. Those situations that involve being physically pushed appear to be particularly strong. For instance, being pushed by a person of another race, being knocked down but not on purpose, and simply being pushed by another student are associated with school vandalism and delinquency. Moreover, being insulted, having friends insulted, being teased by other students, and having someone “hit on” a significant other are similarly related to school vandalism and delinquency. Thus, situational factors may connote levels of frustration that lead to acts of vandalism and delinquency in the school context.
Table 5.10. Pearson Correlation Coefficients, Means, and Standard Deviations of Situational Instigators

<table>
<thead>
<tr>
<th>Situational Instigators</th>
<th>School Violence</th>
<th>School Aggression</th>
<th>Instrumental School Aggression</th>
<th>School Vandalism and Delinquency</th>
</tr>
</thead>
<tbody>
<tr>
<td>If I Was Insulted</td>
<td>.075**</td>
<td>.021</td>
<td>-.029</td>
<td>.107**</td>
</tr>
<tr>
<td>Being Insulted With Other Students Watching</td>
<td>.002</td>
<td>.007</td>
<td>-.035</td>
<td>.098</td>
</tr>
<tr>
<td>If I Was Pushed By a Person of Another Race</td>
<td>.091**</td>
<td>.075**</td>
<td>.045</td>
<td>.183**</td>
</tr>
<tr>
<td>If I Was Pushed By Any Other Person</td>
<td>.072**</td>
<td>.062**</td>
<td>.056*</td>
<td>.187**</td>
</tr>
<tr>
<td>If I was Knocked Down, But Not on Purpose</td>
<td>.190**</td>
<td>.163**</td>
<td>.117**</td>
<td>.225**</td>
</tr>
<tr>
<td>A Student Was &quot;Hitting On&quot; My Girlfriend/Boyfriend</td>
<td>.110**</td>
<td>.118**</td>
<td>.051*</td>
<td>.130**</td>
</tr>
<tr>
<td>If Someone Insulted a Friend of Mine</td>
<td>.057*</td>
<td>.052*</td>
<td>-.010</td>
<td>.111**</td>
</tr>
<tr>
<td>If I Was Being Teased By Another Person</td>
<td>.057*</td>
<td>.040</td>
<td>.047*</td>
<td>.100**</td>
</tr>
<tr>
<td>If My Friends Thought I Should Fight</td>
<td>-.050*</td>
<td>-.098**</td>
<td>-.023</td>
<td>-.038</td>
</tr>
<tr>
<td>School Violence</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>School Aggression</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Instrumental School Aggression</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>School Vandalism and Delinquency</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p < .05*  *p < .01**
Surprisingly, many sources of frustration do not translate into acts of school aggression, violence, and delinquency. As shown in Table 5.10, the means for many items suggest that various situations represent sources of frustration, but do not necessarily result in aggression and violence in school. The means for items such as being insulted, being insulted while others are watching, having a friend insulted, and being pushed by another person seem to indicate that these situations represent substantial sources of frustration for many youth. Nonetheless, these sources of frustration may manifest themselves in behaviors other than school-related aggression, violence, and delinquency. Those situations that appear to have more personal consequences or challenge personal biases such as having other students “hit on” their significant other and being knocked down tend to produce frustrations that translate into aggressive and violent behaviors. Several situations including being pushed by a person of another race, being pushed by any other person, as well as having other students “hit on” their significant other and being teased by another person are particularly strong indicators for school vandalism and delinquency. Despite these observations, situational factors do not exert as much influence over the behavior of youth as many interpersonal factors or biases. The following section discusses the impact of interpersonal sources of frustration on school behavior.

Interpersonal Sources of Frustration

The descriptive statistics and bivariate results for interpersonal instigators are reported in Table 5.11. These results produce an interesting picture regarding the nature of interpersonal instigators and school behavior. Three significant patterns emerge from the bivariate analysis presented in Table 5.11. First, perhaps some determinants of frustration are intimately linked with such factors as race and class divisions as well as inequitable treatment among students in school. Interpersonal sources of frustration that depict unjust or unfair treatment and race and class differences are particularly strong across all school behaviors. A student of another race, a
rich or wealthy student, and a teacher's pet are highly correlated with school violence. In addition, these interpersonal factors are also associated with school aggression, instrumental aggression, and school vandalism and delinquency. Likewise, teachers who are unfair is associated with school aggression and school vandalism and delinquency whereas students witnessing others receiving things that they may not deserve is related to higher levels of school aggression, instrumental aggression, and school vandalism and delinquency.

Second, the results from the bivariate analysis suggest, to some extent, that youth are frustrated by authority figures such as teachers and parents. Similar to the bivariate results of situational instigators, an explicit review of the mean levels of frustration for the items pertaining to teachers and parents suggests that both teachers and parents comprise a great source of frustration for youth. However, consistent with situational sources of frustration, these high levels of frustration do not necessarily translate into acts of aggression, violence, and delinquency in high schools. For instance, teachers who talk down to students and parents who do not listen to kids generate high mean scores for frustration, but do not translate into school-related behaviors. Likewise, students who are arrogant or think that they "know it all" represent a substantial source of frustration for many youth. Nonetheless, frustrations produced by authority figures such as teachers and parents that do not translate directly into aggressive behaviors may manifest themselves in other forms of problem behavior.

Finally, some interpersonal sources of frustration appear to be inversely related to school violence, aggression, and delinquency (see Table 5.11). Those interpersonal factors that depict antisocial behaviors (e.g., student drug-dealers, weapon-carrying students, and aggressive students) are inversely related to each school behavior and; thereby, do not represent instigators. Aggressive and violent students are more likely to indicate that student drug-dealers, students who bring weapons to school, and students who push others around are not a major source of concern. Instead, aggressive and violent students appear to identify with other
Table 5.11. Pearson Correlation Coefficients, Means, and Standard Deviations of Interpersonal Instigators

<table>
<thead>
<tr>
<th>Type of School Behavior</th>
<th>School Violence</th>
<th>School Aggression</th>
<th>Instrumental School Aggression</th>
<th>School Vandalism and Delinquency</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Interpersonal Instigators</strong></td>
<td><strong>r</strong></td>
<td><strong>r</strong></td>
<td><strong>r</strong></td>
<td><strong>r</strong></td>
</tr>
<tr>
<td>A Student of the Opposite Sex</td>
<td>.044</td>
<td>.036</td>
<td>.027</td>
<td>.098**</td>
</tr>
<tr>
<td>A Student Who Gets Things He or She Doesn't Deserve</td>
<td>.052*</td>
<td>.155**</td>
<td>.108**</td>
<td>.129**</td>
</tr>
<tr>
<td>A Student of Another Race</td>
<td>.224**</td>
<td>.132**</td>
<td>.138**</td>
<td>.139**</td>
</tr>
<tr>
<td>A Teacher Who Talks Down To Students</td>
<td>-.064**</td>
<td>.072**</td>
<td>.010</td>
<td>.047*</td>
</tr>
<tr>
<td>Parents Who Don’t Listen to Kids</td>
<td>-.049*</td>
<td>.056*</td>
<td>-.006</td>
<td>.023</td>
</tr>
<tr>
<td>Students Who Gossip</td>
<td>.001</td>
<td>-.011</td>
<td>-.005</td>
<td>.059*</td>
</tr>
<tr>
<td>Students Who Bring Weapons to School</td>
<td>-.140**</td>
<td>-.181**</td>
<td>-.105**</td>
<td>-.136**</td>
</tr>
<tr>
<td>A Rich or Wealthy Student</td>
<td>.149**</td>
<td>.103**</td>
<td>.104**</td>
<td>.118**</td>
</tr>
<tr>
<td>Students Who Think They Know it All</td>
<td>.023</td>
<td>.051*</td>
<td>.038</td>
<td>.118**</td>
</tr>
<tr>
<td>A Student Who Pushes Others Around</td>
<td>-.131**</td>
<td>-.101**</td>
<td>-.073*</td>
<td>-.040*</td>
</tr>
<tr>
<td>A Teacher Who is Unfair</td>
<td>.039</td>
<td>.133**</td>
<td>.076**</td>
<td>.108**</td>
</tr>
<tr>
<td>A Teachers’ Pet</td>
<td>.158**</td>
<td>.148**</td>
<td>.147**</td>
<td>.166**</td>
</tr>
<tr>
<td>A Student That “Hits On” Your Girlfriend or Boyfriend</td>
<td>.025</td>
<td>.067**</td>
<td>.009</td>
<td>.084**</td>
</tr>
<tr>
<td>A Student Drug-Dealer</td>
<td>-.170**</td>
<td>-.222**</td>
<td>-.164**</td>
<td>-.249**</td>
</tr>
</tbody>
</table>

School Violence: .18 .27
School Aggression: .27 .30
Instrumental School Aggression: .24 .35
School Vandalism and Delinquency: .36 .31

p < .05*  p < .01**
aggressive and violent students. This finding is anticipated by social learning theory. According to social learning theory, students who engage in aggressive, violent, and delinquent activities in school are more likely to identify and associate with others who behave in this manner. This is consistent with the strong inverse relationships (p < .01) reported in Table 5.11.

Since a variety of interpersonal and situational sources of frustration translate into school-related aggression, violence, and vandalism and delinquency, it was of interest to determine whether these sources of frustration contributed to the explained variation in school behaviors. Using the results from the exploratory bivariate analysis of situational and interpersonal sources of frustration (see Tables S.10 and 5.11), summary measures were developed to assess the explanatory power of situational and interpersonal sources of frustration on each school behavior. Situational and interpersonal items most strongly correlated with each behavior at the bivariate level were combined into a summary measure or individual scales and placed in a multivariate model. In essence, this involved adding those items together with r values of .10 or higher for each school behavior. This process may be extremely important for shaping an accurate assessment regarding the role of frustration as an aversive instigator predictive of school behaviors. The low levels of explained variance (R^2 values) that are reported in Table 5.9 might be the consequence of excluding factors that symbolize actual sources of frustration for youth. Moreover, this process provides a better understanding of the role of generalized sources of frustration on the occurrence of high school aggression, violence, and delinquency.

Table 5.12 reports the multivariate regression results of aversive instigators with the inclusion of situational and interpersonal sources of frustration. As Table 5.12 indicates, the inclusion of situational and interpersonal factors — exemplifying actual sources of frustration for youth — results in significant increases in explained variance of each model. Although most of the aversive instigators remain significant as presented in Table 5.9, the scales...
Table 5.12: Regression of Self-Reported School Aggression, School Violence and School Vandalism and Delinquency on Social Learning Aversive Instigators and Situational and Interpersonal Sources of Frustration

<table>
<thead>
<tr>
<th>Type of School Behavior</th>
<th>Aversive Instigators</th>
<th>School Violence</th>
<th>School Violence</th>
<th>Instrumental School Aggression</th>
<th>Instrumental School Aggression</th>
<th>School Vandalism and Delinquency</th>
<th>School Vandalism and Delinquency</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Beta</td>
<td>T-Ratio</td>
<td>Beta</td>
<td>T-Ratio</td>
<td>Beta</td>
<td>T-Ratio</td>
<td>T-Ratio</td>
</tr>
<tr>
<td>Peer Isolation</td>
<td>-.019</td>
<td>-.036</td>
<td>-.019</td>
<td>-.031</td>
<td>-.019</td>
<td>-.031</td>
<td>-.017</td>
</tr>
<tr>
<td>Peer Rejection</td>
<td>-.010</td>
<td>-.016</td>
<td>-.063</td>
<td>-.090</td>
<td>-.090</td>
<td>-.090</td>
<td>-.090</td>
</tr>
<tr>
<td>School Failure</td>
<td>.052</td>
<td>.098</td>
<td>.021</td>
<td>.035</td>
<td>.044</td>
<td>.066</td>
<td>.095</td>
</tr>
<tr>
<td>Failure in School</td>
<td>.014</td>
<td>.025</td>
<td>.000</td>
<td>.002</td>
<td>-.009</td>
<td>-.013</td>
<td>-.015</td>
</tr>
<tr>
<td>Activities</td>
<td>.020</td>
<td>.095</td>
<td>.008</td>
<td>.034</td>
<td>.006</td>
<td>.023</td>
<td>-.007</td>
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<tr>
<td>Physical Assualts</td>
<td>.011</td>
<td>.051</td>
<td>.014</td>
<td>.057</td>
<td>.023</td>
<td>.083</td>
<td>-.010</td>
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<tr>
<td>Aversive Reducetion</td>
<td>.000</td>
<td>-.003</td>
<td>-.002</td>
<td>-.006</td>
<td>-.006</td>
<td>-.019</td>
<td>-.011</td>
</tr>
<tr>
<td>Thwarting of Goal</td>
<td>.032</td>
<td>.123</td>
<td>.040</td>
<td>.136</td>
<td>.016</td>
<td>.049</td>
<td>.024</td>
</tr>
<tr>
<td>Directed Behavior</td>
<td>.043</td>
<td>.127</td>
<td>.053</td>
<td>.140</td>
<td>.028</td>
<td>.087</td>
<td>.130</td>
</tr>
<tr>
<td>Interpersonal Instigator</td>
<td>.068</td>
<td>.182</td>
<td>.092</td>
<td>.181</td>
<td>.086</td>
<td>.165</td>
<td>.161</td>
</tr>
<tr>
<td>Constant</td>
<td>-.254</td>
<td>-.238</td>
<td>-.130</td>
<td>-.063</td>
<td>-.130</td>
<td>-.063</td>
<td>-.130</td>
</tr>
</tbody>
</table>

R²: .13
F: 25.110***
S.E.: .25
N: 1720

Note: All scales are scored in a positive direction where high scores indicate an increase in the presence of each construct.
measuring actual situational and interpersonal sources of frustration are significant predictors in all four models at p < .001. In addition, the amount of variation explained doubles for school vandalism and delinquency, nearly doubles for school violence, and more than doubles for school aggression and instrumental school aggression. In a comparison of Tables 5.9 and 5.12, this represents significant (p < .001) $R^2$ increases of .06, .07, .04, and .06 for school violence, school aggression, instrumental school aggression, and school vandalism and delinquency, respectively. These $R^2$ increase for each regression equation is significant at p < .001. Hence, the utility of aversive instigators to explain the occurrence of high school behavior may rest in identifying those specific or actual situations and interpersonal factors that represent significant sources of frustration for youth. Although the $R^2$ values for each equation remain rather low, the inclusion of actual situational and interpersonal sources of frustration may improve the capacity of aversive instigation mechanisms to explain variation in high school behavior. In like manner, the instigation of aggressive and violent behaviors in high school may further be explained by the presence of incentive inducements. The following section estimates the impact of incentive instigators on high school aggression, violence, and vandalism and delinquency.

Assessing the Impact of Incentive Instigators

Incentive inducements appear to be of particular importance for explaining high school behavior. The results of the bivariate analysis between incentive instigation and each school behavior are reported in Table 5.13. In comparison to aversive instigators, the zero-order correlations for incentive inducements appear to be considerably stronger. Those students who feel coerced or pressured to fight in school, anticipate positive outcomes for violence in school, and who get excited about the prospects of confrontation in school are significantly more likely to be involved in aggressive and violent behaviors. The instructional instigation of peer
Table 5.13. Pearson Correlation Matrix, Means, and Standard Deviations for Incentive Instigation Measures

<table>
<thead>
<tr>
<th></th>
<th>$X_1$</th>
<th>$X_2$</th>
<th>$X_3$</th>
<th>$X_4$</th>
<th>$X_5$</th>
<th>$X_6$</th>
<th>$X_7$</th>
<th>$X_8$</th>
<th>$X_9$</th>
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</thead>
<tbody>
<tr>
<td>Anticipated Outcomes</td>
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<tr>
<td>School Aggression</td>
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<td>Aggression</td>
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<tr>
<td>School Vandalism and</td>
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<td>Delinquency</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| $X$ | 2.30 | 2.99 | 2.70 | 2.87 | 2.51 | .18  | .27  | .24  | .36  |
| Sd  | .68  | .98  | .94  | .89  | 1.14 | .27  | .30  | .35  | .31  |

$p < .05^*$  $p < .01^{**}$

Note: All scales are scored in a positive direction where high scores indicate an increase in the presence of each construct.
coercion and modeling instigators appear to be particularly strong for predicting all four behaviors in high school. Thus, those students who find fights to be exciting and feel little emotional discomfort when a teacher is threatened are significantly more likely to report higher levels of involvement in school violence and all other dependent variables. Likewise, those students who indicate that certain students can get them acting tougher than they really are and feel pressured by friends to help them out when they get into a fight are more likely to report higher levels of all school-related behaviors. Interestingly, the peer acceptance instructional instigator is less correlated with each behavior than the peer coercion instructional instigator. This suggests that instructional instigators that are active rather than passive may exert greater influence on youth's behaviors. The instructional instigator of peer coercion is a more pervasive form of influence that includes actively encouraging the student to treat others with disrespect and friends placing pressure on the student to participate in fights. Thus, instructional instigators that actively coerce students to behave in a particular manner may be more useful predictors for school-related behaviors.

At the bivariate level, the anticipation of positive outcomes is related to each school behavior. Those students who anticipate few consequences for the use of aggression and perceive benefits for the use of aggression tend to report higher levels of involvement. However, the anticipation of positive outcomes is most strongly associated with school aggression (r = .24, p < .01). The perception of few alternatives to aggression is not related to most school behaviors and is only slightly related to levels of school vandalism and delinquency. Nonetheless, some incentive instigators appear to be important for explaining high school behavior at the bivariate level. The results of the multivariate analysis of incentive instigators on self-reported school behaviors are reported in Table 5.14.

The multivariate results regarding incentive instigators appear to mirror the findings at the bivariate level. As expected, the anticipation of positive outcomes, modeling instigators,
Table 5.14. Regression of Self-Reported School Aggression, School Violence and School Vandalism and Delinquency on Social Learning Incentive Instigators

<table>
<thead>
<tr>
<th>Incentive Instigators</th>
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<tbody>
<tr>
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<td>School Violence</td>
<td>School Aggression</td>
<td>Instrumental School Aggression</td>
<td>School Vandalism and Delinquency</td>
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<td>.081</td>
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<td>.065</td>
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<td>6.39***</td>
<td>.039</td>
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<td>3.19***</td>
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<td>.040</td>
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<td>Modeling Instigators</td>
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<td>.264</td>
<td>11.21***</td>
<td>.099</td>
<td>.320</td>
<td>13.92***</td>
<td>.064</td>
<td>.181</td>
<td>7.49***</td>
<td>.092</td>
<td>.291</td>
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<td>Instructional Instigators</td>
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<td>.228</td>
<td>10.30***</td>
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<td>94.606***</td>
<td>47.539***</td>
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<td>N</td>
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<td>1863</td>
<td>1874</td>
<td>1850</td>
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p < .05*  p < .01**  p < .001***

Note: All scales are scored in a positive direction where high scores indicate an increase in the presence of each construct.
and the instructional instigator of peer coercion are significant predictors in all four equations, with the exception the anticipation of positive outcomes not being predictive of school vandalism and delinquency. The $R^2$ values for all four equations are significant at $p < .001$. Although the $R^2$ values appear modest for school violence, instrumental school aggression, and school vandalism and delinquency, incentive instigators appear to explain a substantial amount of variation in school aggression ($R^2 = .20$). Nonetheless, incentive instigators appear to explain more variation in each school behavior than aversive instigators. In comparing the multivariate results for aversive instigators in Table 5.12, the amount of variation explained for all four equations is greater for incentive instigators. This suggests that incentives -- opposed to frustrations -- may contribute to a greater understanding of aggressive, violent, and delinquent behaviors in high schools. The following discussion delineates the impact of maintaining mechanisms on high school behaviors.

Assessing the Impact of Maintaining Mechanisms

Social learning theory provides an important guide for assessing the role of various reinforcements contingencies and cognitive neutralizations on the regulation or maintenance of aggressive and violent behaviors in high schools. The reinforcements for aggression can come from a variety of sources including vicarious observations (e.g., observation of reinforcement contingencies), self-regulatory processes (e.g., self-reinforcement strategies), and cognitive processes (e.g., neutralizations of self-punishment). The following discussion examines the importance of maintaining mechanisms for explaining the occurrence of high school aggression and violence. On the whole, the findings indicate that the presence of particular vicarious reinforcements, self-reinforcements, and neutralizations are important for understanding high school behavior.
Table 5.15 displays the correlation coefficients, means, and standard deviations for the relationship between vicarious and self-reinforcements and each school behavior. The observation of positive reinforcements, self-rewards, and self-punishments appear to be particularly strong correlates. Surprisingly, the observation of few consequences and the perception of unjust treatment do not appear to be strong indicators of most school behaviors, except for school aggression. Nonetheless, the observation of rewards appears to be considerably more important for explaining each school behavior than the observation of few consequences. The correlation coefficients between the observation of positive reinforcements and school violence and school aggression represent some of the strongest relationships in this study. The Pearson correlation coefficients between the observation of positive reinforcements and school violence and school aggression are .38 and .36, respectively. Likewise, self-reinforcement mechanisms appear to be moderately correlated with instrumental school aggression and school vandalism and delinquency, but most strongly related to school violence and school aggression. Those students who self-reward themselves for aggressive behaviors and do not engage in self-punishment are more likely to be involved in aggressive and violent behaviors in school. As a consequence, students who indicate that they take pride in their physical prowess and do not feel bad when they hurt others are more likely to report greater involvement in each school behavior, particularly school violence and school aggression. Hence, both vicarious reinforcements and self-reinforcements appear to be important correlates of aggression, violence, and delinquency in high schools at the bivariate level.

At the multivariate level, the observation of positive reinforcement and both self-reinforcement mechanisms are predictive of each school behavior (see Table 5.16). With the exception of self-rewards not being predictive of instrumental school aggression, the observation of positive reinforcements and both self-reinforcement mechanisms are significant
Table 5.15. Pearson Correlation Matrix, Means, and Standard Deviations for Vicarious and Self-Reinforcement Measures

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<th>$X_7$</th>
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$X_1$ 1.00
$X_2$ .15** 1.00
$X_3$ .13** .04 1.00
$X_4$ .25** -.05* .27** 1.00
$X_5$ .29** .18** -.10** .07** 1.00
$X_6$ .38** .05* .09** .20** .27** 1.00
$X_7$ .36** .12** .15** .22** .26** .68** 1.00
$X_8$ .23** .03 .11** .12** .17** .43** .50** 1.00
$X_9$ .28** .01 .07** .19** .17** .50** .56** .47** 1.00

| $\bar{X}$ | 2.55 | 2.68 | 3.66 | 3.69 | 2.34 | .18  | .27  | .24  | .36  |
| Sd        | .80  | .80  | 1.04 | 1.05 | 1.11 | .27  | .30  | .35  | .31  |

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

Note: All scales, except of self-punishment for aggression, are scored in a positive direction where high scores indicate an increase in the presence of each construct. High scores on self-punishment for aggression indicate that the person does not engage in self-punishing behaviors for the use of aggression.
Table 5.16. Regression of Self-Reported School Aggression, School Violence and School Vandalism and Delinquency on Social Learning Vicarious and Self-Reinforcements

<table>
<thead>
<tr>
<th>Vicarious and Self-Reinforcements</th>
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<td>.303</td>
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<td>.099</td>
<td>.258</td>
<td>11.30***</td>
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<td>T-Ratio</td>
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<td>-.021</td>
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<td>.050</td>
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<tr>
<td>Unjust Reward or Punishment</td>
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<td>.044</td>
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<td>.030</td>
<td>.101</td>
<td>4.59***</td>
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<td>.185</td>
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R² | .19  | .19  | .08  | .11  |
F  | 87.246*** | 84.406*** | 33.466*** | 43.067*** |
S.E. | .24  | .28  | .33  | .30  |
N   | 1869 | 1861 | 1871 | 1847 |

p < .05  p < .01  p < .001

Note: All scales, except of self-punishment for aggression, are scored in a positive direction where high scores indicate an increase in the presence of each construct. High scores on self-punishment for aggression indicate that the person does not engage in self-punishing behaviors for the use of aggression.
in all four equations at \( p < .001 \). For school violence, school aggression, and school vandalism and delinquency, the perception of unjust rewards or punishments in school is significant at \( p < .05 \). As a consequence, those students who feel that some students get punished more severely than others for fighting in school are significantly more likely to engage these behaviors. Nonetheless, the most consistent vicarious and self-reinforcement predictors for each school behavior appear to be the observation of positive reinforcements for aggression, the self-reward for aggression, and minimal self-punishment for aggressive, violent, and delinquent acts in high school. The \( R^2 \) for all four equations are significant at \( p > .001 \). However, vicarious and self-reinforcements are particularly useful for explaining aggressive and violent acts in high school. The bivariate and multivariate results of another maintaining mechanism recognized by social learning theory – the neutralization of self-punishment – are reported in the ensuing discussion.

**Neutralization of Self-Punishment**

As discovered in the assessment of self-reinforcements, students who do not engage in a process of self-punishment (e.g., feel bad or guilty) when their actions hurt others in school tend to report higher levels of involvement in high school aggression, violence, vandalism and delinquency. In some instances, it is likely that students who ordinarily disapprove of the use of aggression and violence may rationalize their bad feelings through the use of neutralizations. In turn, students who commonly approve of the use of violence may not require neutralizations to engage in aggressive and violent acts in school (Agnew 1994; Bandura 1973; Matza 1964; Minor 1980; Conklin 1992; Sykes and Matza 1957). Thus, the general approval for violence and various neutralization strategies are examined in the subsequent analysis.

From the bivariate results presented in Table 5.17, the neutralization of self-punishment seems to represent an important factor for understanding the occurrence of high school
Table 5.17. Pearson Correlation Matrix, Means, and Standard Deviations for the General Approval of Violence and Neutralization Measures

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<th>X3</th>
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<td>.27</td>
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<td>.36</td>
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<tr>
<td>Sd</td>
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<td>1.04</td>
<td>1.05</td>
<td>.96</td>
<td>1.18</td>
<td>.27</td>
<td>.30</td>
<td>.35</td>
<td>.31</td>
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</table>

p < .05*  p < .01**

Note: All scales are scored in a positive direction where high scores indicate an increase in the presence of each construct.
aggression, violence, and delinquency. Low to moderate zero-order correlations are found between neutralization variables and each school behavior. In particular, strong correlations are present between the appeal to higher loyalties and denial of victim and each school behavior. Pearson correlation coefficients of .36, .31, .18, and .32 are reported for the relationship between appeal to higher loyalties and school violence, school aggression, instrumental school aggression, and school vandalism and delinquency, respectively. Similar strong correlations are reported for the relationship between denial of victim and each school behavior. As a result, students who justify aggressive and violent behaviors by appealing to higher loyalties such as honor and "standing up" for friends or deny the presence of victims because they believe some people deserve to be beaten up are more likely to be involved in school aggression and violence. Likewise, the general approval of violence appears to be correlated with each school behavior. As a consequence, students who generally approve of the use of violence are more likely to report involvement in each school behavior. The general approval of violence appears to be less associated with instrumental school aggression.

Tables 5.18 and 5.19 display the results of the regression of each high school behavior on neutralization mechanisms. Table 5.18 examines the multivariate results of neutralization mechanisms without controlling for general approval of violence. The $R^2$ values for all four equations are significant at $p < .001$. Neutralization strategies appear to be particularly useful for explaining variation in acts of school violence in high schools. The $R^2$ value for school violence is .17 compared to .12, .06, .12, respectively, for school aggression, instrumental school aggression, and school vandalism and delinquency. Consistent with the bivariate findings, appeal to higher loyalties and denial of victim are particularly strong predictors of each school behavior. Both appeal to higher loyalties and denial of victim predict each school behavior at $p < .001$. Likewise, denial of injury is a strong predictor of each school behavior, except school violence. As a result, those students who feel that fighting is no big deal because
Table 5.18. Regression of Self-Reported School Aggression, School Violence and School Vandalism and Delinquency on Social Learning Neutralizations of Self-Reinforcement

<table>
<thead>
<tr>
<th>Neutralizations of Self-Reinforcements</th>
<th>School Violence</th>
<th>School Aggression</th>
<th>Instrumental School Aggression</th>
<th>School Vandalism and Delinquency</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Beta</td>
<td>T-Ratio</td>
<td>B</td>
</tr>
<tr>
<td>Appeal to Higher Loyalties</td>
<td>.068</td>
<td>.247</td>
<td>10.11***</td>
<td>.074</td>
</tr>
<tr>
<td>Denial of Responsibility</td>
<td>.003</td>
<td>.010</td>
<td>.43</td>
<td>-.010</td>
</tr>
<tr>
<td>Denial of Injury</td>
<td>.006</td>
<td>.023</td>
<td>.99</td>
<td>.023</td>
</tr>
<tr>
<td>Denial of Victim</td>
<td>.063</td>
<td>.227</td>
<td>9.36***</td>
<td>.045</td>
</tr>
<tr>
<td>Constant</td>
<td>-.211</td>
<td>-.089</td>
<td>-.046</td>
<td>-.046</td>
</tr>
<tr>
<td>R²</td>
<td>.17</td>
<td>.12</td>
<td>.06</td>
<td>.12</td>
</tr>
<tr>
<td>F</td>
<td>96.02***</td>
<td>62.40***</td>
<td>29.49***</td>
<td>63.51***</td>
</tr>
<tr>
<td>S.E.</td>
<td>.24</td>
<td>.29</td>
<td>.34</td>
<td>.29</td>
</tr>
<tr>
<td>N</td>
<td>1866</td>
<td>1866</td>
<td>1866</td>
<td>1843</td>
</tr>
</tbody>
</table>

p < .05*  p < .01**  p < .001***

Note: All scales are scored in a positive direction where high scores indicate an increase in the presence of each construct.
Table 5.19. Regression of Self-Reported School Aggression, School Violence and School Vandalism and Delinquency on Social Learning Neutralizations of Self-Reinforcement Controlling for Approval of Violence

<table>
<thead>
<tr>
<th>Type of School Behavior</th>
<th>Neutralizations of Self-Reinforcements</th>
<th>School Violence</th>
<th>School Aggression</th>
<th>Instrumental School Aggression</th>
<th>School Vandalism and Delinquency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appeal to Higher Loyalties</td>
<td>.064</td>
<td>.230</td>
<td>9.41***</td>
<td>.066</td>
<td>.209</td>
</tr>
<tr>
<td>Denial of Responsibility</td>
<td>.004</td>
<td>.014</td>
<td>.62</td>
<td>-.008</td>
<td>-.028</td>
</tr>
<tr>
<td>Denial of Injury</td>
<td>.000</td>
<td>.002</td>
<td>.09</td>
<td>.012</td>
<td>.043</td>
</tr>
<tr>
<td>Denial of Victim</td>
<td>.060</td>
<td>.216</td>
<td>8.92***</td>
<td>.039</td>
<td>.124</td>
</tr>
<tr>
<td>Approval of Violence</td>
<td>.026</td>
<td>.116</td>
<td>5.29***</td>
<td>.048</td>
<td>.189</td>
</tr>
<tr>
<td>Constant</td>
<td>-.245</td>
<td>-.151</td>
<td>-.15</td>
<td>-.080</td>
<td>-.080</td>
</tr>
<tr>
<td>R²</td>
<td>.18</td>
<td></td>
<td>.15</td>
<td></td>
<td>.07</td>
</tr>
<tr>
<td>F</td>
<td>83.51***</td>
<td></td>
<td>65.85***</td>
<td></td>
<td>26.91***</td>
</tr>
<tr>
<td>S.E.</td>
<td>.24</td>
<td></td>
<td>.28</td>
<td></td>
<td>.34</td>
</tr>
<tr>
<td>N</td>
<td>1866</td>
<td></td>
<td>1866</td>
<td></td>
<td>1867</td>
</tr>
</tbody>
</table>

p<.05*  p<.01**  p<.001***

Note: All scales are scored in a positive direction where high scores indicate an increase in the presence of each construct.
most of the time nobody gets hurt report higher levels of school aggression, instrumental school aggression, and school vandalism and delinquency. However, these findings represent the relationship between neutralizations and school behavior without controlling for approval of violence. The failure to control for general approval of violence may confound the effect of neutralizations on school behavior. Thus, Table 5.19 assesses the impact of neutralization while controlling for general approval of violence.

Not surprisingly, a positive relationship exist between general approval of violence and self-reported levels of school violence, school aggression, instrumental school aggression, and school vandalism and delinquency. Although approval for violence is significant at $p < .001$ for all four equations, controlling for approval of violence has little impact on the significance of other predictors in each equation with the exception of denial of injury. Appeal to higher loyalties and denial of victim remain significant at the $p < .001$, but denial of injury is no longer predictive of school aggression. Likewise, little change occurs in the amount of variation explained when approval for violence is included in the model. The largest increase in explained variation is for school aggression ($R^2$ change .03). Despite the slight increases in the amount of actual variation explained in each equation, the increases in explained variation are significant at $p < .001$. Nonetheless, the results indicate that both approval for violence and various techniques of neutralization are positively associated with increased levels of school aggression, violence, and vandalism and delinquency. As a consequence, several researchers have argued that general approval of violence may condition the effect of neutralization techniques on behaviors such as aggression and violence (Agnew 1994; Austin 1977; Minor 1981; Thurman 1984). Despite small changes in explained variation when controlling for general approval of violence, an interaction analysis was conducted to assess the whether an interaction effect conditions the relationship between the neutralizations of self-punishment on school behavior.
The presence of an interaction effect would suggest that the relationship between neutralizations of self-punishment and school behavior is *moderated* by the degree to which students approve of violent behavior. As a result, when approval for violence is minimal, neutralization techniques will exert a more pronounced effect on school aggression and violence. In turn, when approval for violence is high, the influence of neutralizations on school aggression and violence will be much less. To test for the presence of an interaction effect, a summary measure of neutralization is developed to simplify the analysis of interactions. The standardized results presented in Table 5.20 were calculated by using the procedure recommended by Aiken and West (1991) and recently applied by Agnew (1994). The neutralization and approval of violence variables were standardized and then multiplied together to create an interaction term. The interaction term was not standardized. Standardizing or centering the variables prior to forming the multiplicative term tends to result in low correlations between the product term and the component parts of the term; thereby reducing the threat of multicollinearity (Aiken and West 1991; Cronbach 1987; Jaccard, Turrisi, and Wan 1990). In this study, standardizing the variables prior to analysis reduced the threat of multicollinearity. The interactions explain very little of the variances in the dependent variables and were not significant in all regression equations, except for instrumental school aggression. For each of the regressions, the square root of the variance inflation factor (VIF) is 1.01 suggesting little or no impact on the precision of parameter estimates (Fox 1991: 10-13).

There is no significant interaction effect present for school violence, school aggression, and school vandalism and delinquency (see Table 5.20). There is virtually no $R^2$ change when the interaction term is added to each regression equation. For instance, the inclusion of the interaction term in the regression equation raises the $R^2$ for school violence from 18.5% to 18.6%. There is no change in the $R^2$ value for school aggression or school vandalism and delinquency. However, the interaction term for instrumental school aggression is significant.
but appears to be weak. The inclusion of the interaction term into the equation resulted in a slight increase in explained variation ($R^2$ change .005) for the model. Thus, the inclusion of the interaction term in the regression equation raises the $R^2$ for instrumental school aggression from 6.4% to 7.0%. Nonetheless, these findings continue to indicate that the use of neutralizations and the general approval of violence are important for explaining aggressive and violent behaviors in high school. The results reported in Table 5.20, indicate that both neutralizations of self-punishment and approval of violence are significant at $p < .001$ for each school behavior.
Comparing Social Learning Predictors of School Aggression across School Districts

An important aspect of this study is to assess whether the explanation of school aggression is invariant across school contexts. The analysis up to this point has focused exclusively on the relationships between school-related behaviors and various social learning variables for the total sample. The findings do not determine whether the independent coefficients that predict or explain these school behaviors differ across school districts. Thus, using a formula developed by Clogg, Petkova, and Haritou (1995) and recently utilized by Mazerolle (1998), this study examines whether the independent regression coefficients predicting school aggression differ across school districts. As ascertained at the start of this chapter, no significant differences were found in the mean prevalence rates of each school behavior between the central California and southern California school districts. Yet, the greatest mean differences in prevalence rates were found for school aggression. Therefore, the following discussion centers on the variation between the two California school districts in the predictors or the explanations of school aggression. The results suggest that there is variation in the regression coefficients predicting school aggression across school districts. However, the variations in regression coefficients do not translate in significant differences in the variables important for predicting each school behavior. In other words, the predictors appear to remain fairly stable across school districts. Nonetheless, the findings imply that more variation in school aggression is explained by each social learning mechanism in the central California school district opposed to the southern California school district. Table 5.21 presents the effects of all social learning variables on school aggression and the differences in regression coefficients across each school district.

The modeling predictors of school aggression for the central California and southern California school district are both similar and different. Modeled sibling aggression, modeled peer aggression, and media influences are significant predictors at $p < .001$ for school
Table 5.21. Effects of Social Learning Variables on School Aggression, Central and Southern California School Districts

<table>
<thead>
<tr>
<th>Acquisition Mechanisms</th>
<th>Central California School District</th>
<th>Southern California School District</th>
<th>T-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Beta</td>
<td>B</td>
</tr>
<tr>
<td>Modeled Parental Aggression</td>
<td>.018</td>
<td>(.050)</td>
<td>.005</td>
</tr>
<tr>
<td>Parental Attitudes</td>
<td>.023</td>
<td>(.070)*</td>
<td>.007</td>
</tr>
<tr>
<td>Modeled Sibling Aggression</td>
<td>.037</td>
<td>(.138)**</td>
<td>.045</td>
</tr>
<tr>
<td>Sibling Attitudes</td>
<td>-.003</td>
<td>(.010)</td>
<td>.021</td>
</tr>
<tr>
<td>Modeled Peer Aggression</td>
<td>.079</td>
<td>(.217)***</td>
<td>.078</td>
</tr>
<tr>
<td>Peer Attitudes</td>
<td>.040</td>
<td>(.177)***</td>
<td>.016</td>
</tr>
<tr>
<td>Neighborhood</td>
<td>.021</td>
<td>(.086)**</td>
<td>-.011</td>
</tr>
<tr>
<td>School</td>
<td>.015</td>
<td>(.043)</td>
<td>.034</td>
</tr>
<tr>
<td>Media</td>
<td>.052</td>
<td>(.160)***</td>
<td>.088</td>
</tr>
<tr>
<td>R²</td>
<td></td>
<td>.32</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>901</td>
<td></td>
<td>870</td>
</tr>
</tbody>
</table>

Aversive Instigators

<table>
<thead>
<tr>
<th></th>
<th>Central California School District</th>
<th>Southern California School District</th>
<th>T-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Beta</td>
<td>B</td>
</tr>
<tr>
<td>Peer Isolation</td>
<td>-.039</td>
<td>(-.063)</td>
<td>-.006</td>
</tr>
<tr>
<td>Peer Rejection</td>
<td>-.077</td>
<td>(-.100)**</td>
<td>-.048</td>
</tr>
<tr>
<td>School Failure</td>
<td>.048</td>
<td>(.078)*</td>
<td>-.005</td>
</tr>
<tr>
<td>Failure in School Activities</td>
<td>.011</td>
<td>(.017)</td>
<td>-.013</td>
</tr>
<tr>
<td>Physical Assaults</td>
<td>.013</td>
<td>(.053)</td>
<td>.002</td>
</tr>
<tr>
<td>Verbal Threats and Insults</td>
<td>.028</td>
<td>(.112)***</td>
<td>-.002</td>
</tr>
<tr>
<td>Aversive Reductions in Conditions of Life</td>
<td>.000</td>
<td>(.001)</td>
<td>-.010</td>
</tr>
<tr>
<td>Thwarting of Goal Directed Behavior</td>
<td>.042</td>
<td>(.140)***</td>
<td>.041</td>
</tr>
<tr>
<td>Situational Instigator Scale</td>
<td>.070</td>
<td>(.172)***</td>
<td>.038</td>
</tr>
<tr>
<td>Interpersonal Instigator Scale</td>
<td>.071</td>
<td>(.136)***</td>
<td>.113</td>
</tr>
<tr>
<td>R²</td>
<td></td>
<td>.14</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>843</td>
<td></td>
<td>839</td>
</tr>
</tbody>
</table>

Incentive Instigators

<table>
<thead>
<tr>
<th></th>
<th>Central California School District</th>
<th>Southern California School District</th>
<th>T-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Beta</td>
<td>B</td>
</tr>
<tr>
<td>Anticipated Outcomes</td>
<td>.066</td>
<td>(.147)***</td>
<td>.063</td>
</tr>
<tr>
<td>Modeling Instigators</td>
<td>.082</td>
<td>(.264)***</td>
<td>.112</td>
</tr>
<tr>
<td>Instructional Instigators</td>
<td>Peer Coercion</td>
<td>.068</td>
<td>(.203)***</td>
</tr>
<tr>
<td></td>
<td>Peer Acceptance</td>
<td>.025</td>
<td>(.068)</td>
</tr>
<tr>
<td></td>
<td>Perception of Alternatives</td>
<td>.019</td>
<td>(.066)</td>
</tr>
<tr>
<td>R²</td>
<td></td>
<td>.23</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>934</td>
<td></td>
<td>926</td>
</tr>
</tbody>
</table>

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Table 5.21. Effects of Social Learning Variables on School Aggression, Central and Southern California School Districts (Continued)

<table>
<thead>
<tr>
<th></th>
<th>Central California School District</th>
<th>Southern California School District</th>
<th>T-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Beta</td>
<td>B</td>
</tr>
<tr>
<td>Vicarious and Self-Reinforcements</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Observation of Positive Reinforcement</td>
<td>.101 (.256)***</td>
<td>.096 (.255)***</td>
<td>.28</td>
</tr>
<tr>
<td>Observation of Few Consequences</td>
<td>.033 (.089)**</td>
<td>.008 (.021)</td>
<td>1.54</td>
</tr>
<tr>
<td>Unjust Reward or Punishment</td>
<td>.018 (.061)*</td>
<td>.039 (.135)***</td>
<td>1.65</td>
</tr>
<tr>
<td>Self-Reward for Aggression</td>
<td>.038 (.128)***</td>
<td>.031 (.111)***</td>
<td>.55</td>
</tr>
<tr>
<td>Self-Punishment for Aggression</td>
<td>.064 (.222)***</td>
<td>.034 (.129)***</td>
<td>2.36*</td>
</tr>
<tr>
<td>R²</td>
<td>.23</td>
<td>.15</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>933</td>
<td>925</td>
<td></td>
</tr>
<tr>
<td>Neutralizations of Self-Punishment</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Appeal to Higher Loyalties</td>
<td>.082 (.270)***</td>
<td>.049 (.151)***</td>
<td>2.12*</td>
</tr>
<tr>
<td>Denial of Responsibility</td>
<td>-.004 (-.015)</td>
<td>-.010 (-.034)</td>
<td>.42</td>
</tr>
<tr>
<td>Denial of Injury</td>
<td>.005 (.016)</td>
<td>.020 (.069)*</td>
<td>1.06</td>
</tr>
<tr>
<td>Denial of Victim</td>
<td>.034 (.111)**</td>
<td>.043 (.132)***</td>
<td>.58</td>
</tr>
<tr>
<td>Approval of Violence</td>
<td>.040 (.153)***</td>
<td>.055 (.216)***</td>
<td>1.33</td>
</tr>
<tr>
<td>R²</td>
<td>.17</td>
<td>.14</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>930</td>
<td>923</td>
<td></td>
</tr>
</tbody>
</table>

* p < .05; ** p < .01; *** p < .001
Notes: Standardized effects are shown in parentheses. The formula for computing this t-value can be found in Clogg, Petkova, and Haritou (1995).
The central California school district represents the smaller city located in predominantly an agricultural area. The southern California school district is located in a large, inner city jurisdiction.
All scales are scored in a positive direction where high scores indicate an increase in the presence of each construct.

aggression in both school districts. However, parental attitudes and neighborhood aggression are significant predictors of school aggression for the central California sample whereas sibling attitudes toward aggression and school influences are predictive of school aggression for the southern California district. Significant differences in the sample slopes for sibling attitudes, neighborhood factors, and media influences were found across the two school districts.

Although the presence of media influences is a significant predictor of school aggression for
each school district, the standardized regression coefficient for media influences (beta = .28, p < .001) in the southern California school district indicates a much greater impact on school aggression. Likewise, neighborhood influences appear to be particularly important in the central California school district while sibling attitudes fail to be a significant predictor of school aggression. Perhaps the strong effects of neighborhood factors and peer attitudes for the central California sample reduce the importance of sibling attitudes toward aggression. In general, social learning acquisition mechanisms are able to account for more explained variation in school aggression for the central California sample (R² = .32) compared to the southern California sample (R² = .27).

In regard to aversive instigators, the thwarting of goal-directed behavior and situational and interpersonal sources of frustration are significant predictors of school aggression for both school districts. Despite the significance situational and interpersonal instigators for both school districts, situational sources of frustration (beta = .17, p < .001) appear to be more meaningful for the central California school district whereas interpersonal sources of frustration (beta = .23, p < .001) are particularly important for the southern California school district. Likewise, school failure and verbal threats and insults are predictors of school aggression for the central California school district, but are not significant for the southern California school district. A significant slope difference is found between the two districts for only verbal threats and insults. Similar to the findings regarding acquisition mechanisms, the R² value for aversive instigators is greater for the central California school district than the southern California school district. Although the differences in explained variation for school aggression are modest, aversive instigators are able to explain 4.0% more variation in the central California sample.

Consistent with the results of the bivariate and multivariate analysis for the total sample, incentive inducements are able to explain more variation in school aggression than aversive instigators. Likewise, more variation in school aggression is explained in the central
California school district by incentive instigators. Twenty-three percent of the variation in school aggression is explained in the central California school district opposed to twenty percent in the southern California sample. With the exception of peer acceptance, there is considerable consistency in incentive instigators that predict school aggression within each district. The instructional instigator of peer acceptance is predictive of school aggression only for the central California school district. The significant predictors for both districts include the anticipation of positive outcomes, the instructional instigator of peer coercion, the perception of few alternatives to aggression, and modeling instigators.

There are significant differences in the regression coefficients across districts for the instructional instigator of peer acceptance and the perception of few alternatives. The differences in sample slopes for the instructional instigator of peer acceptance and the perception of few alternatives is partially explained by the inverse relationship between school aggression and these two variables for the southern California sample. For the southern California sample, the inverse relationship between the perception of alternatives and school aggression suggests that despite the fact that students feel school authorities are available if ever threatened in school, they remain more likely to resort to aggressive acts in school.

Similar to incentive instigators, there is considerable consistency among the predictors of school aggression within each school district for vicarious and self-reinforcements. The observation of positive reinforcement, the perception of unjust rewards or punishments, and self-reinforcements are significant predictors of school aggression for both school districts. However, the observation of few consequences is a significant predictor of school aggression for the central California school district, but not for the southern California sample. As a result, vicarious reinforcements appear to be particularly strong predictors for school aggression in the central California school district. Those students who perceive both positive rewards and few consequences for the use of aggression are significantly more likely to be involved in school
aggression in the central California sample. The failure to engage in practices of self-punishment for aggression represents the only significant slope difference between the two school districts. Although the lack of self-punishment for behaviors that hurt others is predictive of school aggression for both school districts, the standardized regression coefficient (beta = .22, p < .001) is much stronger for the central California sample. Likewise, the slopes for the two school districts are significantly different. Nevertheless, there are substantial differences in ability of vicarious and self-reinforcement mechanisms to explain variation in school aggression across the two school districts. Vicarious and self-reinforcement mechanisms explain 23% of variation in school aggression for the central California school district compared to 15% of the variation in the southern California school district.

For neutralizations of self-punishment, there are few differences between the central California and southern California school districts on predictors of school aggression. Again, consistent with the bivariate and multivariate results for the total sample, those students who appeal to higher loyalties and deny the presence of a victim are significantly more likely to engage in aggressive behavior in high schools. The strength of the relationship between the appeal to high loyalties and school aggression for the central California sample suggests that the use of aggression in school for purposes of standing up for friends and upholding honor is particularly important for those students. In contrast, the denial of injury is a significant predictor of school aggression for the southern California school district, but not for the central California sample. As expected, the general approval of violence represents a significant predictor of school aggression for both school districts. Techniques of neutralization explain 17% of the variation in school aggression for the central California sample compared to 14% of the variation for the southern California school district.

In sum, significant differences were present when measures of social learning theory were compared across school districts. However, despite the differences in sample slopes across
school districts, there is unusual consistency in the variables that are useful for predicting or explaining school behaviors. In many instances, sample slopes differed across school districts, but the same variables were important for predicting school aggression, violence, and delinquency across districts. Overall these findings suggest that subtle differences in the explanation of school behaviors may exist across school districts, yet most social learning variables are remarkably stable predictors of school aggression, violence, and delinquency between school districts. In each regression model, social learning variables accounted for a significant amount of explained variation in both school districts. However, social learning theory appeared to be more useful for explaining school aggression, violence, and delinquency in the central California school district compared to the southern California sample.

Conclusion

This chapter found that a substantial proportion of high school students self-report involvement in each behavior during the past two years. Most students report involvement in acts of school aggression and school vandalism and delinquency opposed to school violence and instrumental school violence. Despite a large proportion of high school students reporting involvement in each behavior over the past two years, most students do not engage in these behaviors on a frequent basis. Moreover, most of the behaviors reported in high schools appear to represent minor forms of aggression, violence, and delinquency. These findings appear to remain consistent across the central California and southern California school districts. Although the central California sample reports higher prevalence rates for each school behavior, these differences are not statistically significant. These findings contradict research suggesting that aggressive, violent, and delinquent behaviors are more prevalent in large urban school districts.

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In addition, the initial bivariate and multivariate results indicate that social learning theory may point us in a meaningful direction toward identifying the factors most important for understanding school violence, school aggression, instrumental school aggression, and school vandalism and delinquency. From these results, it is apparent that each mechanism of aggression identified by social learning theory – acquisition, instigation, and maintaining – provides valuable individual constructs that aid in the identification and prediction of high school behaviors. A variety of modeling influences, aversive instigators, incentive instigators, vicarious and self-reinforcements, and neutralization were found to be predictive of each school behavior. In future chapters, this study will determine whether these factors come together into a predictive model that is supportive of social learning theory as a vehicle for understanding school aggression, violence and delinquency. Nevertheless, using bivariate and multivariate techniques, Chapter 6 examines the contribution of personality factors for understanding high school aggression, violence, and delinquency.
Notes:

1 A more accurate picture of the contributions of each mechanism is shown in Chapter 7, where multivariate analysis compares the effects of the mechanisms in full models containing all three mechanisms.

2 As noted in Chapter 4, the total sample and each district sample is weighted to represent the respective population figures for gender, ethnicity, grade level, and district size. The weighting procedure improves sample estimators at the analysis stage and insures that gender, ethnicity, grade level, and district size categories are adequately represented. This improves the likelihood of obtaining accurate estimates of the actual prevalence rates for each school behavior in the total sample and across both school districts.

3 The primary purpose of this study is to examine high school aggression and violence. A measure of high school vandalism and delinquency is included in the analysis in an effort to determine whether the explanations for minor acts of deviance (e.g., skipping classes, cheating on test, damaging school property) are substantially distinct from more serious forms of school behavior.

4 It is important to remind the reader that the data have been transformed by taking the natural log of the dependent variables. As a result, the descriptive statistics (means and standard deviations) reported in Table 5.2 and subsequent tables do not coincide.

5 Missing cases were present for the modeled media aggression variable (381 cases). As noted on Chapter 4, modeled media aggression was measured on a four point Likert scale which asked students to rate program characteristics that were important for maintaining their interest in a particular program. A high score on this scale indicated that the particular program characteristic was very important for keeping the student interested. To correct for the impact of case attrition, missing cases were coded to represent a not important (1) value. This procedure corrects for the impact of missing cases and produced a more conservative estimate of the relationship between media violence and school behavior. A similar result for the regression analysis was obtained before and after the adjustment was made for missing cases.

6 These results must be interpreted with caution. The weak findings may be due to the construction of the variables measuring model-observer identification. This process involved creating dummy variables that partitioned the distribution of variables in a manner that isolated students indicating high levels of modeled aggression and model identification. Although this technique represents a common strategy in the social sciences for isolating groups of interest, it is entirely possible that this methodology was unable to accurately assess the importance of model identification on school behaviors.

7 A central purpose of this research is to simply explore possible real-life situations that may represent sources of frustration for youth and translate into school aggression, violence, and delinquency. Thus, the exploratory analysis of situational and interpersonal instigators is strictly a bivariate analysis and does not attempt to include each item in a single regression model. Therefore, for presentation purposes, the intercorrelations are not reported in these tables.
In an effort not to confuse statistical significance with practical significance, this study is primarily interested in zero-order correlation coefficients of .10 or greater. This large sample size of this study makes it much easier to obtain statistical significance (Blalock 1979).

The maximum score possible for both the situational instigator and interpersonal instigator items is 4.0. Thus, items with a mean score of 3.0 or greater are likely to connote relatively high levels of frustration. The range possible for all scales and items is reported in Appendix A.

The equation for the summary measure of the situational instigator scale for each school behavior is as follows: school violence and school aggression: knocked down, but not on purpose + student “hitting on” significant other; interpersonal school aggression is a single item knocked down, but not on purpose; school vandalism and delinquency: if I was insulted + pushed by person of another race + pushed by any other person + knocked down, but not on purpose + student “hitting on” significant other + insulted friend + being teased by another person. The equation for the summary measure of the interpersonal instigator scale for each school behavior is as follows: school violence: student of another race + rich or wealthy student + teachers pet; school aggression: student gets things not deserved + student of another race + rich or wealthy student + unfair teacher + teachers pet; instrumental school aggression: student gets things not deserved + student of another race + rich or wealthy student + teachers pet; school vandalism and delinquency: student gets things not deserved + student of another race + rich or wealthy student + students who know it all + unfair teacher + teachers pet.

As noted in Chapter 4, items combined into the summary measures were divided by the number items included the composite measure to restrict the variable to the original range of the item. This process was repeated for the summary measures of situational and interpersonal sources of frustration. Cronbach’s alpha reliability was calculated for the interpersonal instigators scale (alpha = .77) and situational instigators scale (alpha = .85).

The inclusion of the interpersonal and situational instigator variables did not result in multicollinearity. In this instance, the presence of high intercorrelations among the predictors was unlikely since the composite measures of interpersonal and situational frustrations were formed using items or variables not previously included in the regression model. Nonetheless, an examination of a zero-order correlation matrix revealed no intercorrelations of .70 or higher. Likewise, the square root of the variance inflation factor (VIF) scores did not exceed 1.12 for any of the regression equations. This suggests little or no impact on the precision of parameter estimates (Fox 1991).

The F-test for the R² change was significant at p < .001 for all four equations.

As shown by the zero-order correlation matrix presented in Table 5.17, a positive relationship exists between neutralizations and general approval of violence. This finding is not entirely unforeseen. Other researchers have reported a positive relationship between the use of neutralizations and general approval of deviance (Agnew and Peters 1986; Austin 1977; Thurman 1984). Previous scholars suggest that the positive relationship may indicate that use of neutralizations reflects a degree of unconventional commitment rather than conventional commitment (see Austin 1977) or that the acceptance of neutralizations may gradually weaken the commitment to conventional beliefs causing the individual to be indifferent to or approving of delinquency (see Minor 1984).
The summary neutralization measure was developed by adding together the individual neutralization variables significant at the multivariate level for each school behavior. Once the composite measure was developed, it was divided by the number of individual neutralization variables added together to form the composite measure. This process restricts the range of each variable to its original size, making each neutralization variable more comparable. The equation for the summary measure of neutralization to predict each school behavior is as follows: school violence and school aggression: appeal to higher loyalties - denial of victim; instrumental school aggression and school vandalism and delinquency: appeal to higher loyalties + denial of injury + denial of victim.

Prior to standardizing the independent variables, zero-order correlations and the square root of the variance inflation factor indicated the presence of multicollinearity. Once the variables were standardized using the procedure recommended by Aiken and West (1991), multicollinearity no longer posed a problem in the regressions.

This procedure provides a method for comparing regression coefficients across models when linear regression models are used. This method is useful for determining whether the coefficients that describe the relationship between independent and dependent variables are stable across school districts. This formula involves taking the slope differences for each district and dividing by the square root of the sum of the squared standard errors for each district. The formula for computing this t-value can be found in Clogg, Petkova, and Haritou (1995). See Paternoster, Brame, Mazerolle, and Piquero (1998) for a further discussion of the correct statistical test for determining the equality of regression coefficients.

This discussion focuses on preliminary distinctions in the explanation of school aggression across the school districts. Chapter 7 presents a more complete picture of the differences between school districts using multivariate techniques that compare the contribution of each social learning mechanism. Minor slope differences among individual social learning variables may not impact the summed social learning explanation of school aggression across school districts.

For presentation purposes the results of each regression analysis are reported in a single table.
Chapter 6

Personality and High School Aggression

This chapter examines the relationship between personality and high school aggression, violence, and delinquency. As in Chapter 5, this chapter represents an initial inquiry into a primary research question for this study. In essence, this chapter seeks to determine whether personality attributes commonly found in the adolescent aggression and violence literature are also important for understanding why aggression and violence occurs in high schools. In recent years, a variety of general theories of crime (e.g., Andrews and Bonta 1994; 1999; Gottfredson and Hirschi 1990; Wilson and Herrnstein 1985) and empirical findings (e.g., Caspi, Moffitt, Silva, Stouthamer-Loeber, Krueger, Schmutte 1994; Farrington 1991; Loeber 1988b; Magnusson 1988) have promoted a renewed interest in understanding the relative contribution of personality to individual behaviors, including youth aggression and violence. In addition, personality characteristics are becoming more common in social learning explanations of a variety of antisocial behaviors, including aggression and violence (Andrews and Bonta 1994; 1999; Patterson, Reid, and Dishion 1992). As a result, several studies have identified a diverse range of personality constructs that are correlated with adolescent aggression and violence (Caspi, Moffitt, Silva, Stouthamer-Loeber, Krueger, Schmutte 1994; Farrington 1989; Glueck and Glueck 1950; Loeber 1988b). Using this empirical research as a guide, this chapter assesses the contribution of three personality traits that represent some of the most powerful and consistent predictors of youth aggression and violence – impulsivity, self-centeredness or low empathy, and risk-taking behavior.

In this chapter, bivariate and multivariate analysis are presented for each personality characteristic and four school behaviors – school violence, school aggression, instrumental school aggression, and school vandalism and delinquency. The bivariate analysis explores
whether personality characteristics are related to each school behavior and highlights any potential sources of multicollinearity. The multivariate analysis identifies the most important personality variables necessary for the prediction of school aggression, violence, and delinquency. In addition, this research determines whether the potential for personality variables to explain high school aggression and violence is invariant across school contexts. In all, it is anticipated that individual differences in impulse control, levels of empathy, and the need to engage in risk-taking behavior will aid in the prediction of school behaviors and contribute to the development of a comprehensive explanation of high school aggression, violence, and delinquency. The following section presents the bivariate and multivariate results for the total sample.

Assessing the Impact of Personality

Table 6.1 displays a zero-order correlation matrix of personality and each school behavior. All three personality variables—impulsivity, self-centeredness or low empathy, and risk-seeking behavior—are significantly related to each school behavior at the $p < .01$ probability level. In particular, personality appears to be most strongly associated with school violence, school aggression, and school vandalism and delinquency. Nonetheless, all three personality characteristics are strongly correlated with each school behavior. However, risk-seeking behavior and low empathy represent the strongest correlates for each type of school behavior and appear to be exceptionally strong predictors of school aggression and violence. The Pearson correlation coefficients for the relations between risk-seeking behavior, low empathy, and each school behavior all exceed .30. Likewise, risk-seeking behavior appears to be a particularly strong predictor of school aggression ($r = .37$) and school vandalism and delinquency ($r = .39$).
Table 6.1. Pearson Correlation Matrix, Means, and Standard Deviations for Personality

<table>
<thead>
<tr>
<th></th>
<th>( X_1 )</th>
<th>( X_2 )</th>
<th>( X_3 )</th>
<th>( X_4 )</th>
<th>( X_5 )</th>
<th>( X_6 )</th>
<th>( X_7 )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impulsivity</td>
<td></td>
<td></td>
<td></td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-Centeredness or</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low Empathy</td>
<td>( X_2 )</td>
<td>0.50**</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Risk-Seeking Behavior</td>
<td>( X_3 )</td>
<td>0.41**</td>
<td>0.43**</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>School Violence</td>
<td>( X_4 )</td>
<td>0.29**</td>
<td>0.34**</td>
<td>0.32**</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>School Aggression</td>
<td>( X_5 )</td>
<td>0.22**</td>
<td>0.30**</td>
<td>0.37**</td>
<td>0.68**</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>Instrumental School</td>
<td>( X_6 )</td>
<td>0.18**</td>
<td>0.25**</td>
<td>0.25**</td>
<td>0.43**</td>
<td>0.50**</td>
<td>1.00</td>
</tr>
<tr>
<td>Aggression</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>School Vandalism and</td>
<td>( X_7 )</td>
<td>0.25**</td>
<td>0.29**</td>
<td>0.39**</td>
<td>0.50**</td>
<td>0.56**</td>
<td>0.47**</td>
</tr>
<tr>
<td>Delinquency</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1.00</td>
</tr>
</tbody>
</table>

\( \bar{X} \) | 2.35 | 2.07 | 2.36 | 1.8 | 2.7 | 2.4 | 0.36 |

\( \text{Sd} \) | 0.64 | 0.69 | 0.81 | 0.27 | 0.30 | 0.35 | 0.31 |

\( p < .05^* \) \( p < .01^{**} \)

Note: All scales are scored in a positive direction where high scores indicate an increase in the presence of each construct.

School Violence — thrown one punch at another student, been involved in one-to-one fight, hit a teacher, hit any other adult while in school, sexual assault, been involved in a group fight, pushed or shoved another student.

School Aggression — threatened to hit a teacher, threatened to hit any other adult while in school, threatened to hit another student in school, verbally insulted a teacher in school, verbally insulted other students in school, verbally insulted any other adult while in school, verbally pressured a student in a sexual manner, carried a hidden weapon into school.

Instrumental School Aggression — used verbal threats or intimidation to get money or things from other people in school, spread lies about other students to make yourself look good, "picked on" or "made fun of" another student to look good in front of your friends.

School Vandalism and Delinquency — drew or painted graffiti on school buildings or walls, broke or damaged school property on purpose, cheated on school tests, stolen (or tried to steal) something at school, skipped classes, been suspended from school.

Overall, these findings suggest that the personality characteristics are closely linked to levels of high school aggression, violence, and delinquency.

The correlation matrix also reveals a relatively high degree of association between individual personality indices. The strongest intercorrelation among personality indices is between impulsivity and self-centeredness or low empathy (\( r = .50 \)). Nonetheless, the association between these variables was not strong enough to produce sizable levels of multicollinearity. In the multivariate analysis presented below, the variance inflation factor (VIF) scores for each regression equation did not exceed 1.21, which suggests little impact on
Table 6.2. Regression of Self-Reported School Aggression, School Violence and School Vandalism and Delinquency on Personality

<table>
<thead>
<tr>
<th>Personality Scales</th>
<th>School Violence</th>
<th>School Aggression</th>
<th>Instrumental School Aggression</th>
<th>School Vandalism and Delinquency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impulsivity</td>
<td>.040</td>
<td>.097</td>
<td>3.705***</td>
<td>.007</td>
</tr>
<tr>
<td>Self-Centeredness or Low Empathy</td>
<td>.082</td>
<td>.217</td>
<td>8.243***</td>
<td>.073</td>
</tr>
<tr>
<td>Risk-Seeking Behavior</td>
<td>.061</td>
<td>.189</td>
<td>7.539***</td>
<td>.107</td>
</tr>
<tr>
<td>Constant</td>
<td>-.235</td>
<td>-.148</td>
<td>-.128</td>
<td></td>
</tr>
<tr>
<td>R²</td>
<td>.16</td>
<td></td>
<td>-.128</td>
<td></td>
</tr>
<tr>
<td>F</td>
<td>113.49***</td>
<td>112.53***</td>
<td>57.71***</td>
<td></td>
</tr>
<tr>
<td>S.E.</td>
<td>.24</td>
<td>.27</td>
<td>.32</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>1748</td>
<td>1739</td>
<td>1750</td>
<td></td>
</tr>
</tbody>
</table>

p < .05*  p < .01**  p < .001***

Note: All scales are scored in a positive direction where high scores indicate an increase in the presence of each construct.

*School Violence* -- thrown one punch at another student, been involved in one-to-one fight, hit a teacher, hit any other adult while in school, sexual assault, been involved in a group fight, pushed or shoved another student.

*School Aggression* -- threatened to hit a teacher, threatened to hit any other adult while in school, threatened to hit another student in school, verbally insulted a teacher in school, verbally insulted other students in school, verbally insulted any other adult while in school, verbally pressured a student in a sexual manner, carried a hidden weapon into school.

*Instrumental School Aggression* -- used verbal threats or intimidation to get money or things from other people in school, spread lies about other students to make yourself look good, "picked on" or "made fun of" another student to look good in front of your friends.

*School Vandalism and Delinquency* -- drawn or painted graffiti on school buildings or walls, broke or damaged school property on purpose, cheated on school tests, stolen (or tried to steal) something at school, skipped classes, been suspended from school.
the precision of estimates (Fox 1991). Thus, all three personality indices were included in the regression equations for each school behavior. Table 6.2 presents the multivariate results for all four equations.

As in the case of the bivariate analysis, two patterns are evident in Table 6.2 a) personality variables are best able to explain variation in school violence, school aggression, and school vandalism and delinquency opposed to instrumental school aggression and b) the indices measuring self-centeredness or low empathy and risk-seeking behavior are stronger predictors of each school behavior than the impulsivity scale. Although the $R^2$ values for all four equations shown in Table 6.2 are significant, the personality predictors explain nearly twice the amount of variation in school violence ($R^2 = .16$), school aggression ($R^2 = .16$), and school vandalism and delinquency ($R^2 = .17$) than in instrumental school aggression ($R^2 = .09$). Moreover, it appears that two variables – self-centeredness or low empathy and risk-seeking behavior – are responsible for explaining most of the variation in each school behavior. The standardized regression coefficients are invariably stronger for low empathy and risk-seeking behavior across all four regression equations. In fact, it is important to note that risk-seeking behavior appears to be a particularly strong predictor of school aggression (beta = .29, $p < .001$) and school vandalism and delinquency (beta = .31, $p < .001$). Nonetheless, low empathy and risk-taking behaviors are significant predictors for all school behaviors at $p < .001$. Although impulsivity is a significant predictor of school violence, it is not predictive of school aggression, instrumental school aggression, and school vandalism and delinquency.²

Comparing Personality Predictors of School Aggression across School Districts

As noted in Chapter 5, an important aspect of this study is to assess whether the explanation of school aggression is invariant across substantially different school contexts. Table 6.3 displays the regression of self-reported school behaviors on each personality measure.
and the differences in regression coefficients across the central California and southern California school districts. Similar to the findings regarding social learning mechanism (see Chapter 5), personality variables are able to account for slightly more explained variation in school aggression for the central California sample ($R^2 = .19$) compared to the southern California sample ($R^2 = .13$). Moreover, there is substantial consistency among the predictors of school aggression within each school district. As expected, impulsivity is not predictive of school aggression while self-centeredness or low empathy and risk-seeking behavior are both highly predictive of school aggression in each school district. Likewise, risk-seeking behavior appears to be a particularly strong predictor of school aggression for both the central California school district ($\beta = .31, p < .001$) and southern California school district ($\beta = .27, p < .001$). Thus, similar patterns emerge among the predictors within each school district compared to the results for the total sample (see Table 6.2).

In addition, the results presented in Table 6.3 indicate that there are no notable differences in regression coefficients for personality across the two school districts. The standardized regression coefficients for each personality construct are slightly stronger for the

<table>
<thead>
<tr>
<th>Personality</th>
<th>Central California School District ($n = 869$)</th>
<th>Southern California School District ($n = 869$)</th>
<th>$T$-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impulsivity</td>
<td>.013 (.028)</td>
<td>.002 (.004)</td>
<td>.44</td>
</tr>
<tr>
<td>Self-Centeredness or Low Empathy</td>
<td>.076 (.181)***</td>
<td>.070 (.158)***</td>
<td>.26</td>
</tr>
<tr>
<td>Risk-Seeking Behavior</td>
<td>.113 (.305)***</td>
<td>.100 (.273)***</td>
<td>.68</td>
</tr>
<tr>
<td>$R^2$</td>
<td>.19</td>
<td>.13</td>
<td></td>
</tr>
</tbody>
</table>

Notes: Standardized effects are shown in parentheses. The formula for computing this $t$-value can be found in Clogg, Petkova, and Haritou (1995). The central California school district represents the smaller city located in predominately an agricultural area. The southern California school district is located in a large, inner city jurisdiction. All scales are scored in a positive direction where high scores indicate an increase in the presence of each construct.
central California sample; however, there are no significant slope differences between the two school districts. As a consequence, these findings suggest that only minor differences in the explanation of high school aggression may exist across highly diverse school districts.

Conclusion

The intent of this chapter was to examine the influence of three personality characteristics – impulsivity, low empathy, and risk-seeking behavior on school aggression, violence, and delinquency. Recent criminological theories, including social learning theory, recognize the significance of individual differences in personality for understanding a variety of antisocial and deviant behaviors. Likewise, research on adolescent aggression and violence has pointed to specific personality constructs likely to be important for understanding aggressive and violent youth. In accord with these trends, this chapter assessed the potential for specific personality constructs to help explain and predict the occurrence of high school aggression, violence, and delinquency.

The bivariate and multivariate results presented in this chapter suggests that personality characteristics are able to account for a modest amount of explained variation in school behaviors. In particular, personality characteristics such as low empathy and risk-seeking behavior opposed to impulsivity are especially strong predictors of each school behavior. Moreover, these findings appear to remain fairly stable across school districts. Although some variation is present in regression coefficients across districts, the impact of these differences are minimal. In all, similar patterns emerge among predictors within each school district and only minor variation is present across school districts. In general, the results of the bivariate and multivariate analysis indicate that personality factors may have potential for offering a meaningful contribution to our understanding of high school aggression, violence, and
delinquency. Yet, to gain a more accurate assessment of the importance of personality it is necessary to examine personality in conjunction with other empirical correlates of aggression and violence. Chapter 7 examines whether such personality characteristics as impulsivity, risk-taking behavior, and low empathy contribute to the overall strength of a social learning model to explain high school aggression, violence, and delinquency.
Notes:

1 This chapter simply seeks to determine the importance of personality at the bivariate level and identify the personality characteristics most important for predicting school behaviors at the multivariate level. A more accurate picture of the relative contribution of personality to all other social learning mechanisms will be examined using full multivariate models in Chapter 7.

2 It is important to note that the reliability score for the impulsivity scale is low compared to the other personality indices (alpha = .63). Low reliability coefficients are likely to introduce more error into the statistical analysis; thereby, attenuating research findings (Carmines and Zeller 1979). The introduction of more error into the statistical analysis results in a more conservative estimate of the effects of impulsivity on school behaviors.
Chapter 7
Assessing a Social Learning Explanation of High School Aggression

This chapter utilizes the research findings of Chapters 4, 5, and 6 to further assess the capacity of social learning theory to provide a valuable framework for understanding high school aggression, violence, and delinquency. The bivariate and multivariate analyses conducted in previous chapters offer valuable empirical information regarding the nature and prevalence of aggression, violence, and delinquency in high schools. More importantly, the previous chapters provide a strong foundation useful for testing the explanatory power and predictive strength of a full social learning model.

This chapter investigates the predictive capacity of two social learning paradigms: a) the traditional social learning theory of aggression proposed by Albert Bandura; and b) a more contemporary social learning model that considers the role of personality (see Chapter 3). Hence, a subsequent focus of this chapter is to establish whether personality strengthens the ability of a social learning paradigm to predict and explain the occurrence of aggressive, violent, and delinquent acts in high schools.

After assessing the adequacy of social learning theory and the relative contribution of personality, this chapter examines whether a social learning explanation of school aggression is likely to vary across unique school contexts. An analysis is conducted to determine whether the independent regression coefficients predicting school aggression differ between the central California and southern California school district. This chapter begins with an initial examination of the bivariate relationship between the independent, dependent, and control variables used in this study. Then an ordinary least squares (OLS) regression analysis is conducted to assess the power of the full social learning model and the relative predictive value of each social learning mechanism, including personality. Subsequent to the OLS regression
analysis, a separate multivariate technique is applied to further delineate the independent contributions of each social learning mechanism and personality to the full social learning model. This chapter concludes with a between-district comparison of the full social learning model including personality and its capacity to predict and explain high school aggression. But first, this chapter begins within an overview of the most important findings of Chapters 4, 5 and 6.

Overview of the Main Findings: Chapters 4, 5, and 6

Chapters 4, 5, and 6 revealed information regarding both the prevalence of school behaviors and the specific social learning factors likely to contribute to a better understanding of high school aggression, violence, and delinquency. Some of the information obtained from previous chapters is used as a foundation for the multivariate analysis of the full social learning models presented in this chapter. In particular, the most significant predictors of school aggression, violence, and delinquency are used to construct composite measures that represent the central constructs of social learning theory and personality (see Table 7.1). Nonetheless, this chapter begins with a comprehensive review of all the empirical findings of Chapters 4, 5, and 6. The most notable findings are summarized below:

• A substantial percentage of high school students reported participation in at least one aggressive, violent, and delinquent behavior in school during the past two years. Nearly one-half of high school students reported acts of school violence and instrumental school aggression and approximately three-fourths of the students reported acts of school aggression and school vandalism and delinquency.
• Of the high school students who report involvement in any act of school aggression, violence, and delinquency, most students engage in rather minor or less serious forms of each school behavior.
• Acts of school violence, school aggression, and school vandalism and delinquency are rather infrequent behaviors. The mean level of involvement is quite low and appears to be highest for acts of school aggression and school vandalism and delinquency.
• The prevalence rates for school violence, aggression, and delinquency are comparable across the central California (small, agricultural) and southern California (large, urban) school districts.
• There is little variation in the individual social learning and personality factors most important for predicting school violence, aggression, and delinquency across school contexts. In most cases, the same social learning and personality factors appear to be important in both school districts.

• Some differences exist in the amount of variation explained by social learning factors across dependent variables. In general, the social learning factors identified by Albert Bandura are best able to explain variation in school violence and school aggression and to a lesser extent school vandalism and delinquency and to a much lesser extent instrumental school aggression.

• Social learning factors appear to explain slightly more variation in school aggression for the central California school district (small, agricultural) opposed to the southern California school district (large, urban).

• Personality variables are able to explain substantially more variation in school violence, school aggression, and school vandalism and delinquency opposed to instrumental school aggression. Risk-seeking behavior and self-centeredness or low empathy are significant predictors of each school behavior. All three personality characteristics – low empathy, impulsivity, and risk-seeking behavior – are significant predictors of school violence.

• Acquisition or modeling variables account for a substantial amount of variation in each school behavior, especially school violence and school aggression. The most consistent and predictive variables for each school behavior include modeled sibling, modeled peer aggression, peer attitudes, and media influences. Peer influences, opposed to sibling attitudes and parental factors, are more important for predicting each school behavior.

• The degree of model-observer identification with aggressive models does not increase the predictive utility of modeling influences. Thus, simple exposure to aggressive models may be sufficient for explaining levels of school-related aggression, violence, and delinquency in high schools.

• In terms of instigation mechanisms, incentive inducements – opposed to aversive instigators – appear to contribute to a greater understanding of aggressive, violent, and delinquent behaviors in high schools. Moreover, the utility of aversive instigators to explain the occurrence of high school behavior may rest in identifying those specific or actual situations and interpersonal factors that represent significant sources of frustration for youth.

• Maintaining mechanisms (e.g., reinforcements and neutralizations) are important for explaining variation in school behaviors. The most consistent vicarious and self-reinforcement predictors are the observation of positive reinforcements for aggression, the self-reward for aggression, and minimal self-punishment for aggressive, violent, and delinquent acts in high school. The appeal to higher loyalties and denial of victim represent significant neutralization strategies used by aggressive, violent, and delinquent high school youth.

Although the preceding chapters provide a variety of important empirical findings, this chapter is primarily concerned with the specific individual factors found to be predictive of each school behavior. Table 7.1 provides a summary of the individual social learning and personality predictors most important for predicting each school behavior. As shown in Table 7.1, some
Table 7.1. Summary of Multivariate Predictors of School Aggression, School Violence, and School Vandalism and Delinquency

<table>
<thead>
<tr>
<th>Social Learning Mechanisms And Personality</th>
<th>School Violence</th>
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<th>Instrumental School Aggression</th>
<th>School Vandalism and Delinquency</th>
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<tr>
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<tr>
<td>Perception of Few Alternatives</td>
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Table 7.1. Summary of Multivariate Predictors of School Aggression, School Violence, and School Vandalism and Delinquency (Continued)

<table>
<thead>
<tr>
<th>Social Learning Mechanisms And Personality</th>
<th>School Violence</th>
<th>School Aggression</th>
<th>Instrumental School Aggression</th>
<th>School Vandalism and Delinquency</th>
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<td>Risk-Seeking Behavior</td>
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<td>.292***</td>
<td>.176***</td>
<td>.307***</td>
</tr>
</tbody>
</table>

Note: All predictors significant at p < .05; two-tailed test. Only those factors significant in theoretically expected direction are reported.

All scales, except of self-punishment for aggression, are scored in a positive direction where high scores indicate an increase in the presence of each construct. High scores on self-punishment for aggression indicate that the person does not engage in self-punishing behaviors for the use of aggression.

Predictors for acquisition mechanisms represent results of multivariate regression without parent, peer, and sibling identification.

Predictors for neutralization of self-punishment represent results of multivariate regression without controlling for approval of violence.

variables represent significant predictors across each school behavior. These predictors include peer models, peer attitudes, media influences, sibling models, modeling instigators, the instructional instigator of peer coercion, the thwarting of goal-directed behavior, generalized sources of interpersonal and situational frustration, observation of positive reinforcement, lack
of self-punishment, appeal to high loyalties, denial of victim, self-centeredness or low empathy, and risk-seeking behavior. In spite of some consistency in predictors across school behaviors, it is obvious that some social learning variables and personality factors are more important than others for explaining and predicting different school behaviors.\textsuperscript{1} This chapter uses this variation in predictors to assess the adequacy of the full social learning theory for explaining each high school behavior while determining the relative predictive power of each social learning mechanism.

Using the multivariate results presented in Table 7.1, composite measures representing each social learning mechanism are constructed using only the most significant social learning predictors for each school behavior.\textsuperscript{2} This process ensures that each social learning mechanism is represented by the individual variables considered to be the most powerful predictors of each school behavior.\textsuperscript{3} Moreover, this approach maximizes the potential of each social learning mechanism and personality to explain variation in school aggression, violence, and delinquency.\textsuperscript{4} As a result, the subsequent analyses will provide information regarding the "uppermost" potential of the full social learning model to explain variation in each school behavior. In addition, constructing the composite measures in this manner will offer insight into the "uppermost" predictive power of each social learning mechanism relative to other social learning mechanisms and personality. The analysis of the full social learning model begins with a bivariate examination of the independent, dependent, and control variables used in this study.

**Assessing the Full Social Learning Model**

The bivariate correlations (Pearson's $r$) between dependent, independent, and control variables used to estimate the power of the full social learning model are set forth in Table 7.2. The zero-order correlation matrix provides an initial assessment of the impact of social learning mechanisms on school behaviors and points to any potential problems of multicollinearity. As
expected, all of the social learning mechanisms including personality are related to each school behavior in a positive direction with variability in the strength of the relationships. From these results, it is clear that a strong relationship between social learning factors and each school behavior is present, particularly for school violence and school aggression. Prior to controls for additional factors, all of the bivariate correlations between social learning mechanisms and school violence and school aggression exceed .30, except for aversive instigators. Likewise, a strong correlation exists between personality and school violence ($r = .39$) and school aggression ($r = .40$). The strongest bivariate relationships are found between the two dependent variables of school violence and school aggression and acquisition mechanisms, incentive instigators, vicarious and self-reinforcements, and personality.

The impact of social learning factors on instrumental school aggression and school vandalism and delinquency are less salient. Nonetheless, the influence of social learning mechanisms on instrumental school aggression and school vandalism and delinquency remain strong, with the exception of aversive instigators. Despite the fact that most of the relationships are strong, social learning variables and personality factors are more predictive of school vandalism and delinquency rather than instrumental school aggression. For school vandalism and delinquency, acquisition mechanisms, incentive instigators, neutralizations of self-punishment, and personality represent the strongest relationships. Prior to controls for additional factors, personality represents a particularly strong correlate -- compared to social learning constructs -- of school vandalism and delinquency ($r = .41$). Although social learning mechanisms appear to have less of an impact on instrumental school aggression, some of the same constructs appear to be important. Similar to other school behaviors, acquisition mechanisms, incentive instigators, and personality exert a strong influence on instrumental school aggression. The relative influence of acquisition mechanisms and personality on
Table 7.2. Pearson Correlation Matrix, Means, and Standard Deviations for Social Learning Mechanisms, Personality, and Control Variables

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<th>$X_8$</th>
<th>$X_9$</th>
<th>$X_{10}$</th>
<th>$X_{11}$</th>
<th>$X_{12}$</th>
<th>$X_{13}$</th>
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<td>.27</td>
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<td>.35</td>
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</table>

$p < .05^*$ $p < .01^{**}$

Notes: All composite measures scored in a positive direction where high scores indicate an increase in the presence of each construct. Gender is coded as males (1) and females (2). Ethnicity is coded as white (1) and nonwhite (2).
instrumental school aggression is followed by vicarious and self-reinforcements, neutralizations of self-punishment, and aversive instigators.

Three control variables – age, gender, and ethnicity – are also included in Table 7.2. Age and ethnicity are weakly correlated with each dependent variable. However, there appears to be a moderate to strong inverse relationship between gender and school aggression, violence, and delinquency. As expected, the direction of the relationship indicates that males are more likely to be associated with each school behavior. Thus, the initial bivariate findings suggest that gender may be an important predictor for school behaviors at the multivariate level. The strongest relationships for gender are found between school violence ($r = - .31$) and school aggression ($r = - .28$).

In addition, it is important to note that the zero-order correlation matrix presented in Table 7.2 indicates that multicollinearity may pose a problem for multivariate analysis. Although the intercorrelations between the independent variables never exceed .70 (the typical standard for determining the presence of high degrees of multicollinearity), several intercorrelations rise above .40. This produces some concern that multicollinearity could attenuate the results of the OLS analysis. As a result, this study underscores the importance of determining the magnitude of any possible effects of multicollinearity. The methods for identifying and assessing the extent of multicollinearity are reviewed in Appendix B. In short, multicollinearity does not appear to pose a substantial problems for the OLS regression analyses presented below. The following section presents the ordinary least squares analysis of Bandura’s social learning theory of aggression and assesses the relative contribution of personality.

*Assessing Bandura’s Mechanisms of Aggression*

Table 7.3 displays the results of the OLS regression for the full social learning model,
excluding personality. The results of the regression analysis show strong support for the social learning theory of aggression developed by Albert Bandura (1973). The $R^2$ values for all four equations are significant at $p < .001$. Similar to the bivariate results, it appears that the social learning mechanisms are best able to explain variation in school violence and school aggression opposed to instrumental school aggression and school vandalism and delinquency. When all of the social learning predictors are incorporated into the full regression equation, the model explains 33% of the variation in school violence and 34% of the variance in school aggression compared to 21% in school vandalism and delinquency and 16% in instrumental school aggression. In essence, these findings suggest that Bandura’s social learning of aggression may be less able to explain variation in minor delinquency and goal-oriented types of aggression in school and better able to account for variation in general forms of school violence and aggression.

In addition, an interesting pattern emerges when the relative contributions of individual social learning mechanisms are examined. Although the acquisition of aggressive behavior is clearly the most consistent and powerful predictor in all four equations, the remaining social learning mechanisms shift in importance depending on the school behavior being predicted. For instance, aversive instigators and the neutralization of self-punishment are significant predictors of school violence. However, these social learning factors are not important for predicting school aggression. Instead, the incentive instigators become important while the use of neutralizations are no longer significant. In like manner, both aversive and incentive instigation mechanisms are important for predicting school vandalism and delinquency; however, these social learning factors are not important for predicting instrumental school aggression. The findings regarding the relative contributions of each social learning mechanism, in conjunction with the differences in explained variation ($R^2$), suggest that different social learning explanations may be required to fully understand the occurrence of each behavior in
Table 7.3. Regression of Self-Reported School Aggression, School Violence and School Vandalism and Delinquency on Social Learning Mechanisms, Controlling for Age, Gender, and Ethnicity

<table>
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<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>School Violence</td>
<td>Acquistion Mechanism</td>
<td>.137</td>
<td>.296</td>
<td>10.38***</td>
<td>.144</td>
<td>.299</td>
<td>10.81***</td>
<td>.087</td>
<td>.183</td>
<td>5.88***</td>
<td>.101</td>
<td>.193</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Instigation Mechanism</td>
<td>.041</td>
<td>.065</td>
<td>2.69**</td>
<td>.009</td>
<td>.013</td>
<td>.57</td>
<td>.035</td>
<td>.045</td>
<td>1.68</td>
<td>.067</td>
<td>.077</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Aversive Instigators</td>
<td>.019</td>
<td>.041</td>
<td>1.45</td>
<td>.081</td>
<td>.154</td>
<td>5.36***</td>
<td>.028</td>
<td>.046</td>
<td>1.54</td>
<td>.078</td>
<td>.180</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Incentive Instigators</td>
<td>.039</td>
<td>.087</td>
<td>3.25***</td>
<td>.074</td>
<td>.126</td>
<td>4.66***</td>
<td>.081</td>
<td>.150</td>
<td>5.02***</td>
<td>.012</td>
<td>.026</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Maintaining Mechanism</td>
<td>.054</td>
<td>.165</td>
<td>6.03***</td>
<td>.020</td>
<td>.049</td>
<td>1.83</td>
<td>.015</td>
<td>.033</td>
<td>1.12</td>
<td>.056</td>
<td>.132</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Vicarious &amp; Self-Reinforcements</td>
<td>.007</td>
<td>.013</td>
<td>.59</td>
<td>.018</td>
<td>.029</td>
<td>-1.34</td>
<td>.016</td>
<td>.023</td>
<td>-0.97</td>
<td>-.003</td>
<td>-.005</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Neutralization of Self-Punishment</td>
<td>-.110</td>
<td>.186</td>
<td>-.596</td>
<td>.33</td>
<td>.34</td>
<td>.16</td>
<td>.21</td>
<td>.4712***</td>
<td>N</td>
<td>1454</td>
<td>1456</td>
</tr>
</tbody>
</table>

Note: All composite measures are scored in a positive direction where high scores indicate an increase in the presence of each construct. Gender is coded as males (1) and females (2). Ethnicity is coded as white (1) and nonwhite (2).
high schools. Nonetheless, the findings offer strong support for a social learning explanation of high school aggression, violence, and delinquency. The following analysis examines whether the addition of personality can enhance the ability of social learning theory to explain and predict each school behavior.

Assessing the Contribution of Personality to Bandura's Mechanisms of Aggression

The multivariate analysis up to this point has focused exclusively on the predictive and explanatory power of the social learning theory of aggression developed by Albert Bandura. As noted above, the findings suggest considerable support for the traditional formulation of social learning theory. Nonetheless, an important aspect of this study is to assess whether personality enhances the capacity of social learning theory to explain and predict high school aggression, violence, and delinquency. In recent years, it has become increasingly apparent that personality factors are likely to be an essential part of any effort to accurately conceptualize a variety of youth behaviors, including aggression, violence, and delinquency (Andrews and Bonta 1999; Patterson, Reid, and Dishion 1992). This awareness has resulted in the development of social learning explanations that place greater emphasis on the influence of personality traits and other constitutional factors (see Chapter 3). Yet, few studies have systematically examined the contribution of personality to a social learning explanation of high school aggression, violence, and delinquency. The following multivariate analysis assesses whether including a measure of personality augments the explanatory and predictive power of Bandura's social learning theory of aggression.

The OLS regression results estimating the full social learning model with personality are presented in Table 7.4. The regression results provide strong evidence that personality exerts a significant independent effect on each school behavior. Similar to acquisition mechanisms, personality is arguably one of the most consistent and powerful predictors in all

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Table 7.4. Regression of Self-Reported School Aggression, School Violence and School Vandalism and Delinquency on Social Learning Mechanisms with Personality, Controlling for Age, Gender, and Ethnicity

<table>
<thead>
<tr>
<th>Social Learning Mechanisms and Personality</th>
<th>Type of School Behavior</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>School Violence</td>
</tr>
<tr>
<td>Acquisition</td>
<td>.126</td>
</tr>
<tr>
<td>Instigation</td>
<td></td>
</tr>
<tr>
<td>Aversive Instigators</td>
<td>.037</td>
</tr>
<tr>
<td>Incentive Instigators</td>
<td>.014</td>
</tr>
<tr>
<td>Maintaining</td>
<td></td>
</tr>
<tr>
<td>Vicarious &amp; Self-Reinforcement</td>
<td>.032</td>
</tr>
<tr>
<td>Neutralization of Self-Punishment</td>
<td>.045</td>
</tr>
<tr>
<td>Personality</td>
<td>.049</td>
</tr>
<tr>
<td>Age</td>
<td>-.022</td>
</tr>
<tr>
<td>Gender</td>
<td>-.068</td>
</tr>
<tr>
<td>Ethnicity</td>
<td>.006</td>
</tr>
<tr>
<td>Constant</td>
<td>-.126</td>
</tr>
<tr>
<td>R²</td>
<td>.34</td>
</tr>
<tr>
<td>F</td>
<td>83.20***</td>
</tr>
<tr>
<td>S.E.</td>
<td>.21</td>
</tr>
<tr>
<td>N</td>
<td>1454</td>
</tr>
</tbody>
</table>

p<.05* p<.01** p<.001***

Note: All composite measures are scored in a positive direction where high scores indicate an increase in the presence of each construct. Gender is coded as males (1) and females (2). Ethnicity is coded as white (1) and nonwhite (2).
four regression equations. Although personality is a significant predictor in each regression equation, the standardized regression coefficients for personality suggest that personality characteristics may be particularly important for understanding instrumental school aggression (beta = .17; p < .001) and school vandalism and delinquency (beta = .22; p < .001) opposed to school violence (beta = .11; p < .001) and school aggression (beta = .11; p < .001). In fact, the measure of personality is the strongest predictor of instrumental school aggression and school vandalism and delinquency. Nonetheless, even when personality is added to the regression equation, there are few changes in the relative importance of other social learning predictors found in Table 7.3. As a result, the same social learning factors remain important for each school behavior as the independent effects of personality are incorporated into the social learning model.

In spite of the importance of personality as an individual predictor, there are only slight increases in the amount of variation explained in each regression equation when personality is included in the regression equation. In a comparison of Tables 7.3 and 7.4, the addition of personality results in $R^2$ increases of .01, .01, .02, and .03 for school violence, school aggression, instrumental school aggression, and school vandalism and delinquency, respectively. From these results, it is clear that personality asserts its most significant contribution to social learning theory when explaining the behaviors of instrumental school aggression and school vandalism and delinquency. Thus, consistent with the bivariate correlations presented in Table 7.2, personality is able to account for more variation in instrumental school aggression and school vandalism and delinquency opposed to school violence and school aggression. Despite only small to moderate changes in the amount of variation explained by personality, the $R^2$ changes for each regression equation are significant at p < .001.

Thus, personality appears to be an important factor for understanding each school
behavior. The findings suggest that personality may not only contribute to a social learning explanation of school violence and school aggression, but may be an essential factor for understanding goal-oriented forms of school aggression and general forms of delinquency in high school. This point is underscored by the fact that personality emerges as the single most powerful predictor for instrumental school aggression and school vandalism and delinquency.

In addition, the results of the OLS regression analysis suggest that the individual predictors tend to vary across different school behaviors. In both regression models (see Tables 7.3 and 7.4), the predictors shift in importance as the analysis moves across the dependent variables. Whereas personality and acquisition mechanisms are consistently strong predictors, the influence of aversive instigators, incentive instigators, vicarious and self-reinforcements, and neutralizations of self-punishment vary for each school behavior. This clearly implies that social learning explanations are likely to be distinct for different high school behaviors. As a result, these findings underscore the importance of future studies to specify the different causal processes that are likely to underlie social learning explanations for unique school behaviors.

Finally, it is important to note that both regression models indicate gender to be a significant predictor of each high school behavior (see Tables 7.3 and 7.4). Not surprisingly, the results indicate that males are at a higher risk for engaging in aggressive and violent acts in high school. Although an examination of the role of gender is beyond the scope of this study, these findings suggest a separate analysis for male and female subgroups may yield more information useful for developing a complete social learning explanation. Nonetheless, the following analysis further assesses the explanatory power of the full social learning model and the relative contribution of each social learning mechanism and personality.

Assessing the Relative Explanatory Power of Social Learning Mechanisms and Personality

Using a data analysis strategy modeled after Akers, Krohn, Lanza-Kaduce, and
Radosevich (1979), this study further examines the explanatory power of the full social learning model. The strategy involves the calculation of partial regression coefficients for each social learning mechanism including personality and estimates of the total amount of variance explained by each component. This is achieved by regressing each school behavior on each social learning mechanism and personality in separate regression equations. Then each social learning construct and personality are alternatively eliminated from the regression equation and the remaining proportion of explained variance is compared to the explained variance for the entire model. As each social learning mechanism and personality are eliminated from the regression equation, any reduction in the amount of explained variation for the entire model will provide an estimate of the independent contribution of each independent variable.

Although traditional OLS regression provides a basis for comparison through standardized regression coefficients, this approach offers an additional method for estimating the impact of each component of social learning theory, the contribution of personality, and the power of the full social learning model. When analyzed together with the results of the OLS regression analyses presented in Tables 7.3 and 7.4, this approach is likely to render even greater insight into the capacity of social learning theory to provide an useful framework for examining high school aggression, delinquency, and violence.

Table 7.5 displays the results of the multivariate analysis as each mechanism is alternately eliminated from the regression equation. In most instances, the factors important for predicting each school behavior in Tables 7.4 coincide with factors responsible for most of the variation explained in the models presented in Table 7.5. Most of the social learning constructs, including personality, contribute to the explanation of each school behavior. Although a few constructs appear to do most of the explaining in each school behavior, the explanatory power of the full model is not exceedingly dependent on any single social learning construct or personality. In other words, even when the most powerful construct is taken out of
Table 7.5. Results from Regression Analysis Alternately Eliminating Mechanisms from the Full Models for School Aggression, School Violence, and School Vandalism and Delinquency

<table>
<thead>
<tr>
<th>Social Learning Mechanism Eliminated</th>
<th>School Violence (N = 1455)</th>
<th>School Aggression (N = 1457)</th>
<th>Instrumental School Aggression (N = 1471)</th>
<th>School Vandalism and Delinquency (N = 1460)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>When Mechanism Is Eliminated</td>
<td>R^2 Remaining</td>
<td>R^2 Decrease</td>
<td>When Mechanism Is Eliminated</td>
</tr>
<tr>
<td>Acquisition Mechanism</td>
<td>.273</td>
<td>.049</td>
<td></td>
<td>.269</td>
</tr>
<tr>
<td>Instigation Mechanisms</td>
<td>.319</td>
<td>.003</td>
<td></td>
<td>.322</td>
</tr>
<tr>
<td>Aversive Instigators</td>
<td>.320</td>
<td>.001</td>
<td></td>
<td>.309</td>
</tr>
<tr>
<td>Incentive Instigators</td>
<td>.318</td>
<td>.003</td>
<td></td>
<td>.316</td>
</tr>
<tr>
<td>Maintaining Mechanisms</td>
<td>.305</td>
<td>.016</td>
<td></td>
<td>.322</td>
</tr>
<tr>
<td>Vicarious and Self-Reinforcement</td>
<td>.315</td>
<td>.006</td>
<td></td>
<td>.315</td>
</tr>
<tr>
<td>Neutralization of Self-Punishment</td>
<td>.321</td>
<td>.022</td>
<td></td>
<td>.322</td>
</tr>
</tbody>
</table>

Note: All of the composite measures are scored in a positive direction where high scores indicate an increase in the presence of each construct.

School Violence -- thrown one punch at another student, been involved in one-to-one fight, hit a teacher, hit any other adult while in school, sexual assault, been involved in a group fight, pushed or shoved another student.

School Aggression -- threatened to hit a teacher, threatened to hit any other adult while in school, threatened to hit another student in school, verbally insulted a teacher in school, verbally insulted other students in school, verbally insulted any other adult while in school, verbally pressured a student in a sexual manner, carried a hidden weapon into school.

Instrumental School Aggression -- used verbal threats or intimidation to get money or things from other people in school, spread lies about other students to make yourself look good, "picked on" or "made fun of" another student to look good in front of your friends.

School Vandalism and Delinquency -- drawn or painted graffiti on school buildings or walls, broke or damaged school property on purpose, cheated on school tests, stolen (or tried to steal) something at school, skipped classes, been suspended from school.
the regression model, the remaining variables are able to account for a substantial amount of the
variation in each school behavior. These results suggest that the theory as a whole is supported
as a valuable framework for understanding high school aggression, violence, and delinquency.

In spite of the support for social learning theory in its entirety, these results clearly
indicate that Bandura's social learning theory of aggression is more applicable to school
violence and school aggression opposed to instrumental school aggression and school vandalism
and delinquency. Moreover, Table 7.5 indicates that some social learning constructs are more
important than others for explaining different school behaviors. Hence, the relative importance
of social learning constructs and personality tend to shift depending on the school behavior
being predicted. For instance, acquisition mechanisms are essential for explaining variation in
school violence (R^2 decrease = .049) and school aggression (R^2 decrease = .053), but are not
as important for understanding instrumental school aggression (R^2 decrease = .018) and school
vandalism and delinquency (R^2 decrease = .010). In contrast, personality emerges as an equally
important variable for understanding instrumental school aggression (R^2 decrease = .017) and
represents the most important variable for explaining school vandalism and delinquency (R^2
decrease = .032).

In addition, some interesting changes occur in the relative strength of constructs
considered to be of secondary importance for explaining each school behavior. For instance,
neutralizations of self-punishment account for the second largest reduction in explained
variation for school violence (R^2 decrease = .016). Yet, neutralizations are not important for
explaining any other school behavior. Likewise, the results indicate that incentive instigators
are notably important for explaining variation in school aggression (R^2 = .013) and school
vandalism and delinquency (R^2 = .013), but not for school violence (R^2 = .001) and
instrumental school aggression (R^2 = .000). Overall, vicarious and self-reinforcements and
aversive instigators assert less of contribution to our understanding of each school behavior

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compared to personality and other social learning constructs.

In sum, these results offer strong support for social learning theory as a beneficial framework for explaining high school aggression, violence, and delinquency. The fact that each social learning construct, including personality, can be eliminated from the regression model without substantially reducing the ability of the full model to account for variation in each school behavior provides supportive evidence for the theory as a whole. Moreover, these findings support the notion that personality can make a significant contribution to a social learning model. Although it is clear that the modeling of aggressive behavior (e.g., acquisition mechanisms) is an overriding factor in explaining variation in school violence and school aggression, personality increases the ability of social learning theory to explain variation in each school behavior. In particular, personality makes a substantial contribution to a social learning explanation of instrumental school aggression and school vandalism and delinquency. In fact, the capacity for personality to explain school vandalism and delinquency is stronger than any construct identified by social learning theory. Thus, these findings offer persuasive evidence for a) social learning theory as a valuable paradigm for understanding high school aggression, violence, and delinquency and b) personality as an important contributor to a social learning explanation of each school behavior. Nonetheless, the subsequent analysis determines whether a social learning explanation of school aggression is invariant across different school contexts.

The Contribution of Social Learning Mechanisms and Personality across School Districts

Another aspect of this study is to determine whether a social learning explanation of high school aggression is likely to vary across school contexts. Up to this point, the analysis has centered on the predictive and explanatory power of each social learning mechanism and personality for the total sample. Thus, a separate analysis is used to assess whether the factors
that predict or explain these school behaviors differ across school districts. Although preliminary results regarding the between-district differences for individual variables were examined in Chapters 5 and 6, the following analysis provides a more complete picture of the variation between each school district by testing the full social learning model and comparing the contribution of each social learning mechanism and personality. Similar to the between-district comparisons presented in Chapters 5 and 6, this chapter focuses on the variation between the central (small, rural) and southern (large, urban) California school districts in the explanation of school aggression.

The results of the analysis of between-district differences in the explanation of school aggression while controlling for age, gender, and ethnicity are presented in Table 7.6. As expected, the results are consistent with the district comparisons reported in Chapters 5 and 6. Social learning mechanisms and personality account for more explained variation in school aggression in the central California sample \((R^2 = .39)\) compared to the southern California sample \((R^2 = .30)\). Likewise, there is little variation in the factors most important for predicting school violence, aggression, and delinquency across school contexts.

The results presented in Table 7.6 indicate that there are little or no differences in a social learning explanation of school behaviors across different school contexts. The control variable of age represents the only significant slope difference between the two school districts. In addition, the standardized regression coefficients suggest minor differences in the predictive utility of each construct, except for the control variable age. Age is a significant predictor of school aggression only in the southern California (large, urban) sample \((p < .001)\). Those students who are younger in the southern California sample are at higher risk of participating in school aggression. Similar to the OLS regression results for the total sample, m
Table 7.6. Effects of Social Learning Mechanisms and Personality on School Aggression, Controlling for Age, Gender and Ethnicity, Central and Southern California School Districts

<table>
<thead>
<tr>
<th></th>
<th>Central California School District (n = 726)</th>
<th>Southern California School District (n = 729)</th>
<th>T-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B Beta</td>
<td>B Beta</td>
<td></td>
</tr>
<tr>
<td>Social Learning Mechanisms and Personality</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acquisition Mechanism</td>
<td>.119 (.254)***</td>
<td>.138 (.277)***</td>
<td>.69</td>
</tr>
<tr>
<td>Instigation Mechanism</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aversive Instigators</td>
<td>.022 (.032)</td>
<td>-.007 (-.010)</td>
<td>.87</td>
</tr>
<tr>
<td>Incentive Instigators</td>
<td>.070 (.137)***</td>
<td>.082 (.152)***</td>
<td>.39</td>
</tr>
<tr>
<td>Maintaining Mechanism</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vicarious and Self-Reinforcements</td>
<td>.066 (.113)***</td>
<td>.063 (.107)***</td>
<td>.09</td>
</tr>
<tr>
<td>Neutralization of Self-Punishment</td>
<td>.003 (.009)</td>
<td>.011 (.026)</td>
<td>.35</td>
</tr>
<tr>
<td>Personality</td>
<td>.065 (.145)***</td>
<td>.031 (.066)</td>
<td>1.37</td>
</tr>
<tr>
<td>Age</td>
<td>.000 (.000)</td>
<td>-.033 (-.105)***</td>
<td>2.33*</td>
</tr>
<tr>
<td>Gender</td>
<td>-.104 (-.171)***</td>
<td>-.065 (-.115)***</td>
<td>1.41</td>
</tr>
<tr>
<td>Ethnicity</td>
<td>-.009 (-.015)</td>
<td>-.017 (-.025)</td>
<td>.28</td>
</tr>
<tr>
<td>R²</td>
<td>.39</td>
<td>.30</td>
<td></td>
</tr>
</tbody>
</table>

* p < .05; ** p < .01; *** p < .001

Notes: Standardized effects are shown in parentheses. The formula for computing this t-value can be found in Clogg, Petkova, and Haritou (1995).

The central California school district represents the smaller city located in predominately an agricultural area. The southern California school district is located in a large, inner city jurisdiction.

All composite measures scored in a positive direction where high scores indicate an increase in the presence of each construct. Gender is coded as males (1) and females (2). Ethnicity is coded as Anglo or white (1) and non-Anglo or nonwhite (2).

predict high school aggression. In both the central California and southern California school districts, the most predictive social learning factors include acquisition mechanisms, incentive instigators, and vicarious and self-reinforcements. Meanwhile, the presence of aversive instigators and the use of neutralizations of self-punishment are not predictive in either school district. However, personality appears to be the exception. Although personality is highly predictive of school aggression in the central California sample (beta = .145; p < .001), it fails to reach statistical significance in the southern California school district. Although this
does not result in a significant slope difference across the two school districts, this finding points to the possibility that personality may contribute less to a social learning explanation of high school aggression in large urban school districts. In other words, environmental factors identified by social learning theory and specific to schools in large urban areas may exert stronger effects on in-school behaviors; thereby, mediating the effects of individual differences such as personality. As shown in Table 7.6, acquisition mechanisms and incentive instigators are particularly important for predicting school aggression in the southern California sample. Likewise, the control variable age accounts for a significant amount of variation in school aggression for the southern California school district. As a result, these findings may be a product of the strong influence put forth by specific social learning mechanisms in the southern California sample. Nonetheless, in spite of the differences in the importance of personality, the findings shown in Table 7.6 clearly indicate that there is considerable consistency factors most important for predicting and explaining high school aggression, violence, and delinquency across unique school districts.

Conclusion

This chapter set out to test the adequacy of social learning theory to provide a useful framework for understanding high school aggression, violence, and delinquency. In doing so, four primary research question of this study were addressed: a) Is Bandura’s social learning theory of aggression supported as a vehicle for understanding high school aggression, violence, and delinquency?; b) If so, which social learning mechanisms are most important for understanding each high school behavior?; c) Can personality contribute to the ability of a social learning paradigm to explain high school aggression, violence, and delinquency?; and d) To what extent does a social learning explanation of high school aggression vary across school
The results of the analyses support Bandura’s social learning theory of aggression as a vehicle for understanding high school aggression, violence, and delinquency. All of the dependent variables are strongly related to the central mechanisms of social learning theory, except for instrumental school aggression. Most findings indicate that social learning theory is best able to explain variation in school violence and school aggression opposed to school vandalism and delinquency and instrumental school aggression. Although each of the social learning mechanisms contribute to the full model, the findings suggest that particular social learning mechanisms are more important than others for explaining aggression, violence, and delinquency in school. It appears that the exposure to aggressive models represents the most stable predictor for each school behavior. However, aversive instigators, incentive instigators, the neutralization of self-punishment, and vicarious and self-reinforcements vary in their importance depending on the school behavior being predicted.

In addition, this chapter provides strong evidence for the capacity of personality to contribute to a social learning explanation of high school aggression, violence, and delinquency. Although personality is a significant predictor of each school behavior, it appears to be most important for explaining variation in instrumental school aggression and school vandalism and delinquency. In fact, personality is better able to predict and explain more variation in school vandalism and delinquency than other social learning constructs. In sum, the results of the analysis in this study imply that personality can make a significant contribution to a social learning explanation.

Finally, the results of this chapter indicate that a social learning explanation of school aggression is not likely to vary significantly across different school contexts. Only minor variation was found in the factors that predict high school aggression across both the central California and southern California school districts. Although a significant slope difference was
found for the control variable of age, there appears to be only small differences in the predictive power of each social learning construct and personality across school districts. Chapter 8 provides a discussion of the theoretical and practical implication of this study as well as possible future directions for research in the areas of social learning theory and high school aggression, violence, and delinquency.
Notes

1 It is important to reiterate that the empirical findings regarding the multivariate predictors summarized in Table 7.1 are limited to identifying the individual social learning factors most important within each social learning mechanism. The multivariate predictors were assessed using separate regression equations for each social learning mechanism and personality. As a result, the analysis in previous chapters does not provide information regarding the power of the full social learning model or the relative predictive value of each social learning mechanism, including personality when other social learning factors are held constant.

2 Similar to analysis in previous chapters, the composite measures representing each social learning mechanism and personality were divided by the number variables included the composite measure to restrict the range of each predictor included in the analysis. This procedure increases the comparability of social learning mechanisms regardless of the number variables used to construct the composite measure.

3 A separate multivariate analysis using all of the variables to assess whether there were substantial changes in the amount of explained variation for each equation when all variables are used in the analysis. The results suggest that more variation can be explained in each equation when only the most significant variables are used to construct the composite measures for each social learning mechanism. Moreover, there were few changes in the strength of individual predictors. However, two changes in individual predictors are worth mentioning. In short, when examining the OLS regression models with personality, incentive instigators failed to predict school aggression and aversive instigators failed to predict school vandalism and delinquency.

4 This approach gives greatest weight to those social learning and personality variables that have the largest effect on each school behavior. Likewise, this process ensures that the effect of the summary measures on school violence, aggression, and delinquency approximates the combined effects of individual social learning and personality variables. Combining each social learning mechanism and personality in this way is appropriate because these measures are believed to have a cumulative impact on each school behavior. Since the variables that comprise each composite measure are assumed to have a cumulative impact – opposed to being internally consistent with each other – alpha reliability scores were not calculated these measures. See Agnew and White (1992) for a brief discussion and example regarding the construction of these composite measures.

5 A zero-order correlation matrix of all the individual variables analyzed in Chapters 5 and 6 was produced to determine whether a high level of multicollinearity was present. Despite relatively high intercorrelations between the composite measures presented in Table 7.2, a zero-order correlation matrix of all the single variables used in this study (e.g., the variables that comprise the composite measures) revealed low levels of multicollinearity. As a consequence, multicollinearity did not pose a problem in the multivariate analyses presented in Chapters 5 and 6.

6 Although multicollinearity did not pose a serious problem for the use of ordinary least squares (OLS) analysis, this approach represents an extended effort to further delineate the individual contribution of each social learning mechanism and personality and, at the same time, eliminate
any potential problems that might be the result of high intercorrelations between the independent composite measures. Since the focus of this analysis is on the relative contribution of each social learning mechanism and personality, this method provides a useful alternative for examining the amount of variation explained by each composite measure while further reducing any threats due to the presence of multicollinearity.

Although Akers et al. (1979) used the technique for determining the relative predictive values of each social learning mechanism and all of the single variables identified by social learning theory, this study uses the approach solely to determine the amount of variation explained by each social learning mechanism and personality. Thus, the method is not used to estimate the importance of the single variables that comprise the primary social learning constructs or personality, but applied only to estimate the relative contribution of each social learning mechanism (e.g., the composite measures that represent the central constructs of social learning theory) and personality. Chapters 5 and 6 provide a detailed examination of the individual social learning variables most predictive of each school behavior. See Table 7.1 for a summary of the most important multivariate predictors.

This approach to analyzing the data not only supports the OLS regression analysis presented in Tables 7.3 and 7.4, but provides a more direct examination of the amount of variation explained by each social learning mechanism and personality. By alternately eliminating each variable from the model and examining the variation explained, this strategy provides a more explicit demonstration of the relative importance of each social learning mechanism and personality.

In practice, a statistical package is used to assess the $R^2$ change as each construct in eliminated from the full model. This results in a more precise estimation of the reduction in explained variation when each variable is eliminated from the model. Therefore, as a result of rounding error, Table 7.5 may show discrepancies between the reduction of explained variation ($R^2$) and the amount of explained variation remaining in the model when each construct is eliminated from the model.

To better demonstrate the power of the full model and relative influence of each social learning mechanism and personality, the control variables of age, gender, and ethnicity are not used in the analysis presented in Table 7.5. A more direct examination of the capacity of each social learning mechanism and personality is offered when the control variables are excluded from the analysis. Moreover, the relative explanatory power of each control variable is not of central importance for this study or this particular analysis. Since the control variables made a substantive contribution to the overall power of the regression models, some shifts in the magnitude of the standardized regression coefficients occurred when the control variables were eliminated from the model. In two specific instances, the relationship between constructs changed in order of importance. In comparison of Tables 7.4 and 7.5, personality and acquisition mechanisms invert in importance for explaining instrumental school aggression while aversive instigators become more important than neutralizations of self-punishment for explaining school vandalism and delinquency. Therefore, caution should be used when making strict comparisons between the analyses presented in Tables 7.4 and 7.5.

See Clogg, Petkova, and Haritou (1995) for the formula used to assess the between-district differences and Paternoster, Brame, Mazerolle, and Piquero (1998) for a further discussion of the correct statistical test for determining the equality of regression coefficients. The formula
described by Clogg et al. (1995) provides a method for comparing regression coefficients across models when linear regression is used. Furthermore, the procedure is discussed in greater detail in Chapter 5.

12 As noted in Chapter 4, the greatest mean differences in prevalence rates were found for school aggression. Therefore, if significant differences in the explanation of these behaviors are present, the divergent explanations are likely to be most pronounced for school aggression. Thus, this study only focuses on the between-district variation in school aggression.
Chapter 8

Implications and Future Directions

Introduction

The series of violent incidents that have occurred during the past few years has brought considerable attention to the issue of violence in American schools. Although student victimization rates have remained fairly stable over the past few years, there continues to be a substantial amount of crime, including acts of aggression and violence, against both students and teachers in too many schools across the country. As the rate of school violence and aggression remains at levels that detract from the educational experience for many American youth, the problems that policy-makers and school administrators must address appear to be on the increase. A comparison of 1989 and 1995 figures shows slight increases in the percentage of students twelve years of age and older who report that they: a) have been victims of violent crime at school; b) are able to obtain drugs at school and; c) are aware of the presence of street gangs in their schools (Chandler, Chapman, Rand, and Taylor 1998). Moreover, recent figures indicate that teachers continue to be affected by the extensive problems facing our schools. In 1998, nearly one in six public school teachers (16%) reported having been a victim of a violent act in school or on school property (Harris and Associates 1999). The presence of such high levels of aggression and violence in schools has contributed to an environment characterized by heightened fear and personal concerns for safety. According to recent research, it is clear that students are more fearful at school today than in the past (U.S. Department of Justice 1998).

Despite the pervasive problem of school violence and aggression, relatively few studies have systematically applied a single theoretical model to explain such behaviors in the context of high schools. Moreover, most studies on adolescent aggression and violence do not provide empirical knowledge specific to the high school context. As a consequence, many school-based
prevention and intervention programs that target high school youth are relying on empirical research that is not specific to the school context. Moreover, many of these school-based programs are applying theoretical principles that have not been rigorously tested in the domain of high schools. As noted in previous chapters, the use of theory is essential for specifying how different empirical factors come together for a coherent explanation of adolescent aggressive behavior and how those factors should be addressed through interventions (Kazdin 1990). Thus, in response to the growing need for both theoretical and empirical research pertinent to high schools, this study set out to examine a widely supported theoretical model in a manner that offers a more accurate conceptualization of the factors most important for understanding school-related aggression, violence, and delinquency. In addition, this study sought to determine whether the inclusion of personality would improve the ability of social learning theory to explain school behaviors.

The results of this research indicate that Albert Bandura’s social learning theory of aggression holds substantial potential for providing a solid theoretical foundation for understanding school-based aggression and violence. Moreover, the findings indicate that personality can contribute to a social learning explanation of high school behaviors, particularly instrumental forms of aggression and school vandalism and delinquency.

The end result is a study that puts forth the empirical and theoretical foundation necessary for an adequate understanding of school-based aggression, violence, and delinquency. In doing so, these findings provide specific evidence regarding a) the overall explanatory power of social learning theory, b) the relative contribution of each mechanism and personality c) the most predominant means for acquiring aggressive behavior, d) the most important factors that contribute to the instigation and regulation of high school behavior; and e) the degree to which empirical factors and a social learning explanation of high school aggression is likely to vary across school contexts. Likewise, results from bivariate and multivariate analyses offer insight

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into the nature of the relationship between adolescent aggression and other antisocial behaviors such as the similarity between childhood precursors and their relevance to school-based adolescent aggression.

The purpose of this concluding chapter is to summarize the key findings of this study and to offer recommendations for school-based prevention and intervention programs. In the process of highlighting the most important findings of this study, this chapter provides a discussion of the relevance of these findings to both traditional and contemporary formulations of social learning theory. In addition, this chapter discusses the implications of these findings for research on school violence and adolescent aggression. Using the results of this research, this chapter concludes with a discussion regarding specific directions for future research on social learning theory and adolescent aggression and how such research may enhance our understanding of youth behaviors in school. We begin with a discussion of the potential limitations of this research.

Limitations of the Present Study

As shown by the results of this research, social learning theory is likely to provide a valuable theoretical framework for identifying the pivotal mechanisms and mediators operating in high school aggression and violence. However, in the course of utilizing social learning theory as a framework for understanding school violence, this research also represented an effort to assess the adequacy of social learning theory. Yet, in spite of the systematic effort to assess the empirical adequacy of social learning theory, this research does not represent a specific test of social learning theory. This study had two primary objectives: a) to assess the adequacy of social learning theory to explain school violence and b) to utilize the framework of social learning theory to learn more about school violence and aggression by examining specific ways in which aggressive and violent school behaviors are acquired, instigated, and maintained.
In the case of the first goal, some scholars might not consider this research a true test of social learning theory. Critics might notice, for example, that we did not observe the actual workings of instigators. Indeed, this study did not utilize an experimental design that would have afforded greater control over our subjects. For obvious practical and legal reasons, as well as ethical ones, an experimental or "laboratory" approach was not realistic for assessing the role of situational instigators in the context of high schools. Instead, we had to rely on students to recall and report the situational and interpersonal incidents that would be most likely to frustrate them. We then found an empirical association between these reports and school aggression and violence.

In addition, it is important to point out that this study employed a cross-sectional rather than a longitudinal design that specifies the temporal order of acquisition, instigating, and maintaining mechanisms. Fortunately, social learning theory provides a solid theoretical model for making inferences about causal direction. Nonetheless, while the findings are strong, explaining as much as 30% of the variance in school violence and school aggression, they must be viewed with consideration for the fact that this was not the strongest research design possible.

In the strictest sense, this study did not examine a true probability sample. The respondents used in this study were derived from a selection of general education courses in two California school districts. Population figures obtained from the central office of each high school district were used to construct a weight that maximized the representativeness of the total sample and each district sample (see Chapter 4). This process increased the capacity of the findings to be generalized to a larger population of high school students. As a result, the final sample is representative of approximately 30,000 high school students located in central and southern California. Even so, this geographic region contains a high percentage of Hispanic and Latino youth that caution its generalization to some other areas of the country.
Finally, this study did not measure serious forms of school violence such as school shootings. Ideally, this study would have included the most serious forms of violence such as school shootings. It is clear that extreme forms of school violence are of great importance to the general public and school officials. However, school shootings are extremely rare and do not lend themselves to prediction. As a result, this study included less serious, but more prevalent forms of school violence. A special effort was made to measure notably serious behaviors such as physical assaults and threats on teachers and school authorities, gang fights, the use and presence of weapons in school, and unwanted sexual advances or sexual assaults. It is anticipated that this research will help school officials identify students who are at-risk of engaging in the most prevalent types of serious aggressive and violent behaviors that occur in high schools. This information may prove to be more useful to school officials and policymakers in their efforts to implement long-term strategies designed to improve the environmental conditions at most high schools.

Results

The results of this study provide evidence regarding the ability of the full social learning model to explain school behaviors, the relative impact of individual social learning factors, and the stability of a social learning explanation of school aggression across different school contexts. The following is a brief overview of the major findings of this study.

The Explanatory Power of the Full Social Learning Model

The results of this study clearly support social learning theory as an important vehicle for understanding high school-based aggression, violence, and delinquency. Both bivariate and multivariate analyses reveal that the central mechanisms of social learning theory, including
personality, are strongly linked to each school behavior. Furthermore, based on the multivariate analyses presented in Chapter 7, it is clear that the capacity of the social learning model to explain each behavior is not contingent on any one aspect of the theory. In assessing the relative contribution of each individual mechanism, the social learning model is able to explain a substantial amount of variation in each school behavior even when each construct is eliminated from the model.

Even so, the multivariate regression results of the full social learning model reveal that the central concepts identified by the traditional formulation of social learning theory are most adept at explaining variation in behaviors indicative of school violence and school aggression. In fact, the full social learning theory is able to explain more than thirty percent of the variation in school violence and school aggression. Nonetheless, the results further indicate that social learning theory is also quite useful for explaining other kinds of school behavior. Twenty-one percent of the variation in school vandalism and delinquency and sixteen percent of the variation in instrumental school aggression is accounted for by social learning theory. Likewise, it is important to point out that the same social learning factors that explain school violence and school aggression, to a somewhat lesser extent, explain instrumental school aggression and school vandalism and delinquency. Hence, these findings indicate that social learning theory may be useful for understanding a variety of school behaviors and that many high school youth may not be specializing in particular behaviors. Instead, aggressive and violent youth may also be engaging in other antisocial behaviors such as school vandalism and delinquency; thereby, augmenting the utility of social learning theory for explaining a wide range of behaviors in high school.

In addition, depending on the school behavior being examined, it is clear that some social learning mechanisms are more important than others are. Acquisition mechanisms and personality characteristics are perhaps the most consistent predictors across all four school
behaviors. However, the predictive utility of acquisition mechanisms and personality varies across school behaviors. Acquisition mechanisms are acutely important for understanding school violence and school aggression while personality characteristics are of central importance for explaining instrumental school aggression and school vandalism and delinquency. In fact, personality emerges as the strongest predictor of instrumental school aggression and school vandalism and delinquency when controlling for the effects of age, gender, and ethnicity. Beyond the effects of acquisition mechanisms and personality characteristics, other social learning constructs shift in importance across each school behavior. For instance, the use of neutralization strategies is especially important for understanding school violence. In like manner, incentive instigators prove to be extremely important for understanding school aggression and school vandalism and delinquency. Yet, incentive instigators are not important for explaining other school behaviors, including school violence or instrumental school aggression.

The Relative Impact of Individual Social Learning Factors

In examining the utility of social learning theory, this study also provided specific information regarding the processes or means in which high school youth learn or acquire aggressive behavior as well as the specific factors that contribute to the instigation and regulation of aggression and violence in high schools. From the results of this research, it clear that some sources of modeling are more important that others for the acquisition of aggressive behavior. Modeled sibling and peer aggression, peer attitudes, and media influences were the most consistent influences across each school behavior. Similarly, it appears that the behavior and attitudes of peers, rather than sibling attitudes and parental factors, are most important for predicting school behaviors. Regarding those factors that contribute to the instigation of school behaviors, it appears that the utility of aversive instigators may rest in identifying those specific
or actual situations and interpersonal factors that represent actual sources of frustration for youth. However, incentive instigators characteristic of modeling and instructional instigators, particularly peer coercion, represent some of the strongest correlates of school behavior.

Finally, various maintaining mechanisms including vicarious and self-reinforcements as well as neutralizations of self-punishment are important for explaining the occurrence of each behavior in high schools. Those youth that observe positive reinforcements for aggression, reward themselves for aggressive behavior, and do not punish themselves (i.e., through feelings of remorse, guilt, or anxiety etc.) are more likely to report involvement in school behaviors, especially school violence, school aggression, and school vandalism and delinquency. In like manner, students who generally approve of violence or neutralize or justify their actions tend to report more participation in each school behavior assessed in this study. In particular, those students who: a) appeal to higher loyalties (e.g., feel that fighting is necessary to uphold honor or that standing up for friends is more important than the punishment for fighting in school) and b) denigrate or deny the presence of their victims (e.g., believe that gay students or gang members deserve to be beaten up) are more likely to be associated with school violence, aggression, and delinquency.

A Social Learning Explanation Across School Contexts

This research also provided information on the prevalence of each school behavior and whether a social learning explanation of high school aggression was likely to remain stable across different school contexts. The results indicate that there is a substantial degree of consistency between school districts in the prevalence of school behaviors, the power of the social learning explanation, and the types of social learning mechanisms at work.

Although a substantial proportion of students engage in aggressive, violent, and delinquent behaviors in school, most students report infrequent involvement and tend to report
minor forms of each school behavior – regardless of the school district. Moreover, there is little difference in the social learning explanation of school aggression across different school context. Thus, despite differences in the school environment, the social learning models operate in a similar fashion. As a result, the most predictive social learning factors in both school districts include acquisition mechanisms, incentive instigators, vicarious and self-reinforcements, and personality.

In sum, the results of this research support Bandura’s social learning theory of aggression as a valuable tool for identifying and explaining the specific learning, instigating, and maintaining mechanism that are at work in high schools. Moreover, the findings indicate that personality offers a significant contribution to a social learning explanation of goal-oriented forms of school aggression and school vandalism and delinquency. As a result, this research provides empirical knowledge relevant to extant research on adolescent aggression and social learning theory.

Discussion

Based on the results of this study, social learning provides a theoretical understanding of the factors that contribute to aggressive, violent, and delinquent behaviors in high schools. As noted in previous chapters, social learning theory argues that adolescents learn their behaviors through modeling influences provided by parents, siblings, peers, and dominant subculture (Akers 1977; Bandura 1996; Bandura and Ross 1963; Straus, Gelles, and Steinmetz 1980; Burgess and Akers 1966). Moreover, social learning suggests that the influence of particular models is somewhat contingent on the degree of model-observer identification (Akers 1977; Bandura 1996; Bandura and Ross 1963; Burgess and Akers 1966). In essence, those
youth who strongly identify with aggressive models are hypothesized to be more likely to adopt the behaviors of the model.

This study found that some models are more important than others; however, the degree to which youth identify with those models does not appear to substantially influence whether aggressive behaviors are acquired by high school students. The results of this study indicate that sibling and peer models as well as peer attitudes and the amount of exposure to aggressive models in the media are particularly important for understanding most of the aggressive behaviors that are displayed in high school. Moreover, it is quite clear that levels of neighborhood and school aggression may serve as important sources for the acquisition of aggressive and violence behaviors that spill over into the high school. Having aggressive behaviors modeled in one's neighborhood and school significantly predicted one's own violence and aggression in school when other acquisition mechanisms identified by social learning theory were held constant.

Nonetheless, the degree to which high school youth identify with aggressive models does not appear to be a necessary factor for the acquisition of aggressive, violent, and delinquent behavior. Surprisingly, the amount of variation explained in each school behavior decreases when the degree of model-observer identification is considered. As noted in Chapter 5, this finding may be due to how the variables were constructed for the OLS regression. In addition, it is likely that the importance of model identification is circumvented by the fact that the primary models included in this study (e.g., parents, siblings, and peers) are likely to resemble significant sources of modeling for most adolescents - regardless of whether or not the youth consciously "respects" or "identifies" with their family members or closest friends. Even so, contrary to social learning theory, the results suggest that the degree to which high school youth identify with aggressive models may contribute very little to an explanation of
school behaviors. At minimum, these results question the importance of model-observer identification when the models constitute central features of an adolescent’s life.

Social learning theory further maintains that the actual performance of aggressive behaviors in high school is likely to be dependent on the presence of instigators that induce a particular response from a student (Bandura 1973; 1977). The instigation to act in an aggressive manner can be activated by the presence of aversive conditions or the recognition that the immediate situation provides strong incentives for the performance of aggressive behavior (Felson 1993; Guerra 1989; Guerra and Slaby 1989; Megargee 1982; 1995; Parke and Slaby 1983; Perry, Perry, and Rasmussen 1986; Tedeschi and Felson 1994; Megargee 1982; 1995; Warr 1996). The results of this study suggest that both aversive and incentive instigators are important for understanding school behaviors. In the case of aversive instigators, this study asked students to identify and prioritize likely instigators or sources of frustration. This inquiry resulted in valuable information regarding situational and interpersonal factors that adolescents feel are indicative of aversive instigators. However, more importantly, this study found that the ability of aversive instigators to explain school behaviors nearly doubles when the factors that youth identify as important are included in regression models.

In addition, by asking students to priorities aversive instigators, this study identified various situational and interpersonal factors that represent significant sources of frustration for youth that do not translate into aggressive school behaviors. It is clear that many youth are experiencing high levels of frustration. Bivariate results indicate that authority figures such as parents and teachers represent significant sources of frustration for youth; however, the frustration produced by parents and teachers do not necessarily translate into aggressive and violent behavior. More specific, teachers who talk down to students and parents who do not listen to kids generate high mean scores for frustration, but do not translate into the school-related behaviors examined in this study. This poses formidable concern for those researchers...
interested in understanding the relationship between frustrations and adolescent behavior. If the frustrations felt by adolescents do not translate directly into aggression, it is unclear how these frustrations manifest themselves in adolescent populations. Thus, it appears that a rather complex relationship may exist between high levels of frustration and how it manifests itself among high school youth.

Similarly, other factors thought to represent aversive instigators for youth do not appear to be important for understanding school aggression and violence. For example, the recent school shootings has led some scholars to speculate that peer isolation and persistent rejection by peers may be contributing factors to school violence and school aggression. Although research has traditionally viewed peer rejection as a childhood precursor to adolescent aggression and violence (for example, see Patterson, Reid, and Dishion 1992; Reiss and Roth 1993), this study anticipated that peer rejection and peer isolation may represent significant aversive instigators for high school youth. Yet, as somewhat of a surprise, the rejection of students by peers and the feeling of isolation from peers fail to be significant predictors of high school behaviors for most youth. In fact, peer rejection was inversely related to school aggression and school vandalism and delinquency. Thus, this finding provides evidence that some childhood precursors — regardless of their usefulness for understanding behaviors in childhood — may not be entirely useful for understanding behavior in adolescence.

There is some support, however, for the influence of other aversive instigators on high school behavior. The thwarting of goal-directed behavior, school failure, physical assaults, and verbal insults appear to be somewhat important for understanding school behaviors. In particular, the thwarting of goal-directed behavior appears to be an exceptionally strong predictor of school violence and school aggression. This finding adds some credence to other theoretical traditions in criminology including strain and general strain theories (see Agnew 1985; 1989; 1992; Agnew and White 1992; Cloward and Ohlin 1960; Merton 1938). These
traditions as well as social learning theory recognize that the school can represent a powerful
source of frustration or strain for many youth. This study found that students who perceive that
their school provides few opportunities and rewards for their efforts are likely to feel frustration
that often translates into aggressive and violent behaviors in high school. Likewise, those
students who feel it is important for them to do well in school, but are not doing well, are more
likely to report involvement in school violence, instrumental school aggression, and school
vandalism and delinquency. Although the impact of aversive instigators appears to be small
when the impact of other social learning mechanisms are controlled, the presence of aversive
conditions appear to be most important for explaining high school violence and school
vandalism and delinquency. Regardless, the long-standing theoretical and empirical link
between frustration and aggression necessitates further examination into the factors that
represent sources of frustration for high school youth (see Berkowitz 1962; Dollard, Doob,
Miller, Mowrer, and Sears 1939; Megargee 1982; 1995).

Social learning argues that aggressive behaviors can also be instigated by the capacity
of human beings to foresee favorable consequences of aggression behavior (Andrews and Bonta
1994; 1999; Bandura 1973; 1977; Megargee 1982; 1995). As a result, previous research has
concluded that some children and youth may act in an aggressive manner in an effort to obtain
tangible goods or social rewards (Moffitt 1993; Perry, Perry, Rasmussen 1986). The results of
this study offer support for this notion. Incentive inducements, rather than aversive conditions,
appear to contribute to a greater understanding of aggressive, violent, and delinquent behaviors
in high school. This appears to be the case even after the effects of aversive instigators and
other social learning mechanisms are controlled.

Nonetheless, as in the case of aversive instigators, incentive instigators are clearly
important for explaining school-related behaviors. The anticipation of positive outcomes,
modeling instigators, and the instructional instigator of peer coercion tend to exert most of the
influence on school behaviors. Although students’ perceptions that aggression can yield positive outcomes is an important predictor, the presence of modeling instigators and coercive peers represent unusually persuasive “triggers” for high school youth. As a consequence, those students who report that a good fight can be exciting or that it does not make them nervous to see other students intimidate a teacher are more inclined to be involved in all school behaviors, including minor forms of school vandalism and delinquency. Likewise, those students who feel that certain students (e.g., charismatic friends, others they “look up to”) influence their behavior in an aggressive manner and pressure them to fight are more likely to report greater involvement in all school behaviors. Thus, this research provides strong evidence that supports many of the primary instigation mechanisms identified by social learning theory.

Although the performance of aggressive behavior is often contingent on the presence aversive and incentive instigators, social learning theory hypothesizes that the regulation or maintenance of aggressive behavior occurs primary through a process of reinforcement. Reinforcements for aggressive behavior can come from a variety of sources including vicarious and self-reinforcements and cognitive neutralizations of self-punishment (Andrews and Bonta 1994; 1999; Bandura 1973; 1977; Bandura and Ross 1963; Berkowitz 1974; 1990; Burgess and Akers 1966; Glaser 1971; Hutchinson, Azrin, and Hunt 1968; Nietzel 1979; Patterson, Reid, and Dishion 1992; Slaby and Roedell 1982; Skinner 1969; Stumphauzer 1973). As a result, previous research has shown that aggressive and antisocial behavior may be conditioned through witnessing others reinforced for their aggressive behavior, reinforcing one’s own aggressive behavior, or adopting attitudes and beliefs that serve to neutralize feelings of guilt typically associated with behaving in an inappropriate manner (Baron 1971; Guerra 1989; Matsueda and Anderson 1998; Moffitt 1993; Patterson 1982; Patterson and Dishion 1985; Patterson, DeBaryshe, and Ramsey 1989; Perry, Perry, and Rasmussen 1988; Slaby and Roedell 1982).
The results of this research reveal that aggressive and other antisocial behaviors in high school are regulated through reinforcement contingencies as well as attitudes that neutralize the consequences for aggressive behavior. Thus, the observation of positive reinforcements, self-rewards for aggression, and the lack of self-punishment for aggression are all highly predictive of youth behavior in school. Above all, the observation of positive reinforcements and the failure to engage in self-criticism or guilt for aggressive behavior represent exceptionally strong predictors of each school behavior. As a consequence, the data supports previous studies which indicates many aggressive and delinquent children and youth perceive the use of aggression as an appropriate means for obtaining social status, tangible rewards, or for eliminating aversive treatment by others (see Perry, Perry, and Rasmussen 1986). Likewise, those students who feel little emotional discomfort for hurting others are more inclined to be involved in aggressive, violent, and delinquent behaviors in school.

In addition, this study offered insight into the contribution of attitudes and beliefs that provide rationalizations for the performance of aggressive and violent behaviors in high school. For decades, social science researchers have argued that an individual can be released from self-punishments for violations of their own personal standards of conduct through the use of neutralization techniques (Agnew 1994; Bandura 1973; Matza 1964; Minor 1980; Conklin 1992; Sykes and Matza 1957; Thurman 1984). In essence, these neutralization strategies - given the appropriate circumstances -- permit a person to engage in behaviors that may run counter to their own general belief system. Similar to the results of previous research, this study found that neutralizations are important for explaining the occurrence of school violence, even after the effect of other social learning mechanisms and personality characteristics are controlled. However, despite the importance of neutralizations for explaining school violence, the use of cognitive rationalizations and justifications are not useful for explaining other school behaviors, including school aggression.
Although it was anticipated that the use of neutralization techniques would also be important for understanding other school behaviors, this finding is still in keeping with the propositions of social learning theory and other traditional explanations regarding the use of cognitive neutralizations. As documented in previous research, neutralization effects are likely to be conditioned by the degree to which an individual approves of aggression and violence (see Agnew 1994; Austin 1977; Minor 1981; Thurman 1984). Since few students are likely to approve of behaviors characteristic of school violence (e.g., hitting a teacher or other adults or students and touching students in a sexual manner against their will), neutralizations are likely to be increasingly necessary for relieving feelings of guilt associated with violent incidents in school. As a result, it was not surprising that this study found that neutralizations were most useful for predicting acts of school violence. Regardless, it is important to note that those youth that generally approve of the use of aggression are much more likely to engage in all school behaviors, including minor forms of school vandalism and delinquency. This finding is consistent with previous research that points to a relationship between adolescent attitudes and antisocial behavior (Andrews and Bonta 1994; 1999; Andrews, Wormith, and Kiessling 1985; Mak 1990; Perry, Perry, and Rasmussen 1986; Slaby and Guerra 1988).

In addition, this study provides evidence that cognitive processes and attitudes are related to school behavior through the use of specific neutralization strategies. It is clear from this research that high school students tend to use certain techniques of neutralization over others. This holds true even after the effects of general approval for violence are held constant. Once the effects of approval of violence are controlled, the techniques of appealing to higher loyalties and denying the presence of victims continue to exert a strong influence on school-related behaviors. As a result, students who believe that “standing up for friends” and “upholding their honor” is an appropriate justification for the use of aggression are more likely to report greater involvement of such behavior in school. In a similar fashion, those youth that
hold the belief that certain students including gang members and homosexuals deserve to be beaten up are more likely to be associated with each school behavior. Thus, these results reveal that targeting antisocial and aggressive attitudes is likely to be a necessary part of any effort to reduce aggression, violence, and delinquency in high schools.

Finally, in light of recent empirical evidence and theory development that indicate personality characteristics are important for understanding adolescent aggression and antisocial behavior (see Andrews and Bonta 1994; 1999; Eron, Gentry, and Schlegel 1994; Gottfredson and Hirschi 1990; Grasmick, Tittle, Bursik, and Arneklev 1993; Howell, Krisberg, Hawkins, and Wilson 1995; Loeber and Farrington 1998; Patterson, Reid, and Dishion 1992; Reiss and Roth 1993), this study set out to determine whether personality would contribute to a social learning explanation of high school aggression, violence, and delinquency. Therefore, in the course of assessing social learning theory, particular attention was given to the role of personality.

Similar to mechanisms identified by social learning theory, the importance of individual personality characteristics tend to vary across school behaviors. Although impulsivity, risk-seeking behavior, and low empathy are all strongly correlated with each school behavior at the bivariate level, when all three personality dimensions are entered into a regression model risk-seeking behavior and low empathy represent the most consistent predictors for each school behavior. Nonetheless, all three personality factors are predictive of school violence. Thus, those students who have difficulty controlling their impulses, have a tendency to take unnecessary risk, and have little concern for the welfare of others are significantly more likely to engage in acts of violence in high schools.

The inclusion of personality into the full social learning model resulted in relatively small increases in explained variation for each regression equation (see Chapter 7). However, once the effects of all other social learning mechanisms were controlled, personality remained a
significant predictor of all the school behaviors examined in this study. Moreover, it appears that personality may be particularly important for understanding instrumental school aggression and school vandalism and delinquency opposed to school violence and school aggression. When included in a regression model with other social learning constructs, personality emerged as the strongest predictor of instrumental school aggression and school vandalism and delinquency. Moreover, once personality was introduced to the each regression equation, the independent impact of the other social learning factors was diminished. These findings suggest that some of the individual effects of other social learning factors may be accounted for by personality.

As noted above, it clear that the factors identified by Bandura's social learning theory of aggression are most important for the prediction of school violence and school aggression. This is largely the result of the strong influence acquisition mechanisms have on school violence and school aggression. However, acquisition or learning mechanisms decline considerably in their ability to explain variation in instrumental school aggression and school vandalism and delinquency. Therefore, it is highly probable that personality is able to account for some of the effects of other social learning factors.

Thus, these results lend considerable support to researchers who argue that personality characteristics are important for understanding antisocial and delinquency behavior (see Andrews and Bonta 1994; 1999; Gottredson and Hirschi 1990). It is evident that personality not only contributes to a social learning explanation of school violence and aggression, but also is likely to be a very important factor in explaining the occurrence of goal-oriented forms of school aggression and general forms of school delinquency. Based on the results of this research, the subsequent discussions offer a variety of potential implications for theory, empirical research, and efforts to reduce the occurrence of aggression, violence, and delinquency in high schools.
Implications for Social Learning Theory and Adolescent Aggression Research

The results of this study have a variety of implications that relate to social learning theory and adolescent aggression research. In effect, this research not only tells us something about social learning theory and its capacity to guide initiatives to understand and prevent aggression in high schools, but also tells us something about the nature of adolescent aggression and how it relates to other school behaviors. This research acknowledges the presence of competing theories that may contribute to an explanation of school aggression and violence. However, this research set out to examine whether a single theoretical paradigm—social learning theory—could provide a useful model for understanding school violence and aggression.

This study placed known correlates of antisocial behavior and adolescent aggression in a theoretical framework that offers a meaningful explanation for high school aggression, violence, and delinquency. Extant empirical research on adolescent aggression and violence provides a strong foundation for identifying the relevant factors for understanding high school aggression and violence. From a review of the literature on adolescent aggression, it is evident that adolescent aggression is a multifaceted phenomenon that results from a host of factors including cognitions (e.g., beliefs, expectations, neutralizations), personality constructs (e.g., impulsiveness, risk-seeking behavior, low empathy), personal background factors (e.g., family abuse, antisocial peers), and situational conditions (e.g., "triggers" or instigators, inhibitors). As a result, the empirical factors likely to contribute to a comprehensive explanation of high school aggression and violence include school failure, familial aggression, anti-social peers, individual attitudes toward aggression and personality characteristics such as impulsivity, risk-taking behavior, and low empathy (see Chapter 2). Nonetheless, despite the importance of such factors for understanding adolescent aggression, few studies on high school aggression and

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violence have assessed whether these factors are useful for understanding school-based aggression. As noted in previous chapters, some of the most comprehensive studies on school violence fail to relate the knowledge derived from such studies back to relevant theory and research.

In like manner, few studies have set out to determine whether a single theoretical paradigm could account for the empirical factors found in adolescent aggression research and offer a rationale for why these empirical factors are important for understanding aggression in the context of high schools. As a result, a persuasive link between empirical factors found in adolescent aggression research and relevant theory has not been substantiated for the context of high schools (see Chapter 3). However, by integrating adolescent aggression research and relevant theory, this study offered evidence that the empirical factors identified in adolescent aggression research come together into a predictive model that is supportive of social learning theory.

In the course of uniting adolescent aggression research and relevant theory, this study points to specific implications for a social learning explanation of school behaviors. For instance, this research tells us that social learning theory is not equally useful for explaining all forms of aggression and delinquency in high schools. Bandura (1973) and other scholars have acknowledged various operational definitions of aggression and violence. Many scholars have argued that distinct types of aggression can be identified by the underlying roots and motivations offered by the behavior (Bandura 1973; Berkowitz 1962; Buss 1966; Fagan and Wilkinson 1998; Felson 1993; Hunt 1993; Tedeschi and Felson 1994). As a result, different patterns and types of aggression are likely to have different empirical and theoretical explanations (Moffitt 1993). On the other hand, other scholars have maintained that a substantial degree of similarity is present among the predictors of adolescent aggression and violence and other forms of antisocial behavior (Cairns, Cairns, and Neckerman 1989; Dryfoos

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Therefore, this study assessed whether the same factors were important for explaining distinct school behaviors, including expressive versus goal-oriented forms of school aggression and school vandalism and delinquency.

The findings indicate that the explanatory power of social learning theory is contingent on the behavior being examined. As a result, the amount of variation explained by the primary constructs of social learning theory and personality varies considerably across each school behavior. Although social learning theory is useful for understanding each school behavior, it is clear that the theory is most helpful in explaining serious behaviors indicative of school violence and expressive forms of school aggression compared to instrumental school aggression and school vandalism and delinquency. When all of the social learning predictors (including or excluding personality) are incorporated into an OLS regression equation, the model explains nearly twice as much variation in school violence and school aggression than in instrumental school aggression. Moreover, much less variation is explained in school vandalism and delinquency than school violence and school aggression. Hence, these findings imply that Bandura's social learning of aggression with and without personality is most capable of explaining school violence and school aggression opposed to minor delinquency and goal-oriented types of aggression in school.

In addition, this study provides some evidence that the specific predictors and underlying explanations are likely to vary across different types of high school behaviors. Although acquisition mechanisms and personality are consistently strong predictors or each school behavior, the remaining social learning factors including aversive and incentive instigators, vicarious and self-reinforcements, and neutralization mechanisms tend to fluctuate in their importance depending on the school behavior being examined. For instance, the use of neutralization techniques appear to be particularly important for understanding school violence.
and school vandalism and delinquency, but are not important for predicting less serious behaviors of school aggression and instrumental aggression. Likewise, incentive instigators are important for explaining school aggression and school vandalism and delinquency; however, they do not appear to be useful for understanding school violence and instrumental forms of aggression. These findings support the notion that different patterns and types of aggression are likely to have different empirical and theoretical explanations (Kazdin 1990; Moffitt 1993). As a result, these findings underscore the importance of specifying the different causal processes that may underlie social learning explanations across different school behaviors. The specification of the underlying causal processes of unique school behaviors may determine the relative success of many school-based prevention and intervention programs.

Finally, this study found that there is a substantial amount of consistency in the empirical factors that predict each school behavior across school context and these factors are in accordance with a social learning paradigm. The most predictive social learning factors for both school districts include acquisition mechanisms, incentive instigators, and vicarious and self-reinforcements. From the multivariate results of the full social learning model, it appears that social learning factors may exert even stronger effects on school behaviors in an urban environment; thereby, mediating the effects of personality. Nonetheless, the results of this research indicate that a social learning explanation, on the whole, is quite stable across both school districts. Thus, the utility of social learning theory may extend across a broad variety of school contexts -- making a social learning paradigm applicable as a universal model for guiding prevention and intervention efforts. Hence, the following section provides a discussion of the likely policy implications of this research for school-based prevention and intervention strategies.
Policy Implications

Schools hold an important and unique position in our society for impacting on the lives of youth. They are essential for developing the intellectual, emotional, social, and moral capacities of youth (Good and Weinstein 1986). Empirical research clearly indicates that schools do make a difference in the achievement, socioemotional, and socialization outcomes of children and adolescents (Good and Weinstein 1986; Linney and Seidman 1989; Rutter 1983). Our high schools should furnish an environment conducive for the educational achievement and the socioemotional development of youth; however, many are saturated with aggressive and violent behaviors that undermine the educational process and threaten the physical safety and psychological security of students (Elliott, Hamburg, and Williams 1998; Good and Weinstein 1986); Morrison, Furlong, and Morrison 1994). Nonetheless, school prevention and intervention programs have the potential to not only reduce the prevalence of high school aggression and violence, but promote an environment conducive for the healthy development of adolescents as they proceed into adulthood (Gottfredson 1997). Hence, this research provides important directions for policy-makers and school officials to consider as they search for a better understanding of violence that occurs in their schools and seek to develop and improve long-term strategies necessary for the reduction of school aggression. The following section presents a discussion of the leading implications of this research for school administrators and other practitioners as well as policy-makers.

Theory and School-Based Intervention and Prevention

For school-based prevention and intervention efforts to be successful they must be guided by a sound theoretical and empirical understanding of the factors that contribute to unhealthy school environments (Hawkins, Farrington, and Catalano 1998). Prior research
suggests that the effectiveness of many school-based programs is often undermined by a lack of adequate knowledge regarding the consequential empirical correlates of adolescent aggression and the theoretical basis for why specific factors are important for the context of high schools (Hawkins, Farrington, and Catalano 1998; Kazdin 1990; Samples and Aber 1998). As a consequence, some prevention and intervention efforts suffer from faulty conceptualization of the problem, are based on intuitive appeal, and are driven by short-term policy agendas rather than empirical research (Harootunian 1986). Thus, the development of school-based prevention and intervention strategies must rely upon firmly established empirical research grounded in reliable theoretical principles. In a recent review of school-based prevention initiatives, Gottfredson (1997:194) concluded that:

“School-based prevention efforts would benefit from the development and testing of multi-level theories that specify how environmental features of schools interact with individual-level processes generating delinquent behavior. Efforts to clarify the causal processes linking school characteristics and schooling experiences to delinquency can be expected to lead to refined program designs which target the most potent theoretical variables.”

This conclusion led Gottfredson (1997) to recommend congressional support for theory-building and testing efforts that seek to clarify the causal processes relating to school experiences and delinquency. Using social learning theory as a framework, this study acknowledged the recommendations offered by Gottfredson (1997) by exploring environmental features of the community and the school such as student's exposure to community and school violence, their actual school experiences and their perceptions about various reinforcements in school. Likewise, this research assessed the influence of individual-level predisposition including personality attributes and personal attitudes and beliefs toward the use of aggression.

As a result, this research points to specific factors that are likely to contribute school aggression, violence, and delinquency and; thereby, should be incorporated into school-based prevention and intervention programs. School administrators and program coordinators, by
integrating the findings of this research, could immediately start improving prevention and intervention programs that may already be operating in their schools. According the National Department of Education, seventy-eight percent of public schools reported having some type of formal violence prevention or violence reduction program in 1998. In these schools, many violence reduction efforts incorporate some form of broad classroom-based instruction geared at incorporating anti-violence messages into the school curriculum. Moreover, many other violence reduction initiatives are based on cognitive-behavioral principles. These initiatives include conflict resolution programs, peer mediation strategies, social skills training, and the teaching of anger management techniques. Clearly, this study has direct implications for the development and betterment of in-school programs based on cognitive-behavioral principles. Although a comprehensive review of all the implications for each of these programs is beyond the scope of this study, the following is a brief discussion of the likely contributions of research for school-based initiatives.

**Treatment Targets for School-Based Prevention and Intervention**

Whether violence reduction efforts in schools rely on classroom instruction or cognitive-behavioral style approaches, each depend on accurate information regarding the factors that play a part in the occurrence of serious behavior in school. Although curriculum-based programs often work with a more general student population, information on the factors that contribute to aggressive behavior is often used to tailor the curriculum in a manner that enhances social competency skills and addresses specific attitudes and beliefs that often serve to regulate aggressive behavior. In many cognitive-behavioral programs, this information is used to identify those students considered to be high risk for engaging aggression and violence. Nevertheless, these programs count on information that is useful for identifying high-risk students and the factors that make students at-risk for aggressive and violent behavior.
The results of this study provide a basis for identifying at-risk high school youth and specifying appropriate treatment targets. First, this research tells us something about the individual characteristics and background factors of those students who are at-risk for engaging in aggressive and violent behavior. It is quite clear from the results of this research that school aggression is a learned behavior and that some students are predisposed to behave in an aggressive manner. In particular, those students who have siblings and peers that model aggression and those students who are exceedingly interested in violent television programs may be at greater risk for a variety of school behaviors. This study indicates that programs should target or challenge aggressive behaviors modeled by a youth's siblings and peers. Moreover, programs should focus on countering the influence of a youth's peers who hold attitudes favorable to the use of aggression. At the macrosocial level, it is clear that schools must develop programs that recognize the influence of media portrayals on the acquisition of aggressive behaviors. Those youth that identify with aggressive media images are more likely to report involvement in aggressive and violent behavior as well as acts of vandalism and delinquency in school. Thus, school officials and program coordinators should direct efforts toward developing extensive strategies to counter the predominant learning influences in a youth's life.

Likewise, it is important for school officials and policy-makers to recognize that some students are predisposed to be aggressive by relatively stable personality factors. Those students who are highly impulsive, take risks, and express low empathy for others are at greater risk. Moreover, it is evident that attitudes, self-reinforcements, and the adoption of neutralization strategies are important for understanding youth who report involvement in school aggression, violence, and delinquency. Those students who reward themselves for their physical prowess, appeal to loyalties such as friends and honor, and express that certain classes of individuals are more deserving of victimization than others are more likely to display aggression. These
attitudes could be successfully countered by enhancing cognitive-behavioral components of existing programs including role-playing activities and the development of new cognitive restructuring programs. In essence, school prevention and intervention programs should be designed to alter these specific thinking patterns with particular attention paid to those students who have learned aggressive behavior or exhibit personality characteristics that predispose youth to aggressive behavior.

Second, many school-based programs require an accurate understanding of the “real-life” situations and school conditions that increase the likelihood of aggression and violence taking place in school. Thus, this research tells us something about likely school conditions that may foster an atmosphere conducive for aggressive and violent behavior. The presence of modeled aggression in the surrounding neighborhood and in school failed to be predictive of instrumental school aggression and school vandalism and delinquency. However, exposure to high degrees of neighborhood aggression was predictive of school violence when the effects of other acquisition mechanisms were held constant. Likewise, exposure to high levels of violence in school was predictive of school violence and school aggression.

These findings are consistent with previous research that emphasizes the influence of neighborhood and school conditions on school behavior (see Dodge 1992; Hellman and Beaton 1986; Laub and Lauritsen 1998). Nonetheless, it appears that those students who perceive high levels of aggression and violence in their school and neighborhood are more likely to acquire aggressive behaviors. Perhaps neighborhood and school conditions exert an effect on school violence and school aggression through acquisition or modeling mechanisms. Regardless, comprehensive prevention strategies that recognize the importance of the broader neighborhood context and school conditions should be considered, particularly in efforts specifically focused on reducing acts of violence and aggression in schools. Likewise, by focusing on student’s perceptions of neighborhood and school violence, these initiatives may have the collateral
benefit of reducing the level of fear among students in school. Nonetheless, this study points to specific school conditions that school administrators and program coordinators should focus their attention.

For instance, the results of this research suggest that the nature of the reinforcement contingencies present in a school environment can have a dramatic impact on the behavior of some students. Although this research is not the first to imply that governance conditions and other school attributes may play a role in school violence and school disorder (see Gottfredson and Gottfredson 1985; 1989; Harootunian 1986; National Institute of Education 1978), this study provides strong evidence that the structure of reinforcements in the school environment and, more specifically, student's perceptions of the reinforcements in the school environment may be very important. In particular, school officials and programs coordinators should be aware that the observation of positive consequences for the use of aggression in school is closely tied to self-reported school behaviors. Those students who believe that fighting in school and behaving in an aggressive manner toward teachers is rewarded by other students or results in some other positive outcome are more likely to be involved in aggression and violence. Likewise, those students who perceive the consequences or punishments for fighting in school are applied by school authorities in an unjust or unfair manner are more likely to report engaging in school violence, school aggression, and instrumental school aggression. Thus, school officials should develop and promote clear and consistent policies for handling incidents of aggression and violence in high schools; thereby, attending to the nature of reinforcements in schools while program coordinator's challenge student perceptions regarding probable consequences for engaging in aggressive and violent behaviors in school.

Finally, this research clarified the “real-life” situations, interpersonal events, and other instigators that contribute to the performance of aggressive behavior in high schools. From the results of this research, it is evident that schools need to develop strategies designed to enhance

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the ability of youth to cope with frustration and choose nonviolent alternatives to solve disputes. School officials need to be aware of frustration-producing situations as well as situations that provide incentives for aggressive behavior in school. It is clear that a variety of situational and interpersonal sources of frustration often translate into disruptive behavior in school. Being accidentally knocked down and students “hitting on” a significant other represent situations that are related to school violence and aggression. Likewise, those situations that involve being physically pushed appear to be particularly strong. For instance, being pushed by a person of another race, being knocked down but not on purpose, and simply being pushed by another student are associated with school vandalism and delinquency. Moreover, interpersonal sources of frustration that depict unjust or unfair treatment and race and class differences represent strong correlates of school behaviors. The results of this study indicate that students of another race, rich or wealthy students, and students who are identified as teacher’s pets represent significant sources of frustration for many youth that translate into aggression and violence.

In other cases, this study found that aggressive and violent behavior in school may be instigated by more general sources of frustration. Those students who indicate that their schoolwork is important, but are having difficulties, are much more likely to be involved in school violence and school vandalism and delinquency. Likewise, those students who perceive few opportunities or few rewards in school for their efforts in school are more likely to report higher levels of involvement in school violence, school aggression, and school vandalism and delinquency. In addition, those students who are routinely exposed to physical threats and verbal threats and insults in school report higher involvement in school violence and instrumental school aggression, respectively.

School officials and school personnel should use this information to identify other high-risk situations and make an effort to intervene with those students who are exposed to high levels of generalized frustration. Those students experiencing high levels of frustration –
combined with other risk factors – may be at greater risk for engaging in violent school behavior. Likewise, school-based conflict resolution programs and peer mediation initiatives as well as anger management and coping strategies should incorporate information regarding frustration-producing situations and events that offer incentives for aggression to develop and improve scenarios for role-playing activities and teaching nonviolent responses to conflict.

In sum, it is clear that school officials and policy-makers must begin to recognize and acknowledge a social learning paradigm as a general framework essential for understanding the occurrence of adolescent behavior across unique school context. The results of this study show that both the prevalence and the explanation of school behaviors are rather stable between the two California school districts. Although many researchers consider school violence to be a reflection of violence in the broader social context (see Hellman and Beaton 1986; Laub and Lauritsen 1998; McDermott 1983; Menacker, Weldon, and Hurwitz 1990; National Institute of Education 1978; Sheley, McGee, and Wright 1995), this study found no significant differences in the mean level of school behaviors across two considerably different school districts. Thus, the percentages of students reporting involvement in school aggression, violence, and delinquency is similar across unique school context. As a result, social learning theory is likely to represent a universal framework useful for organizing efforts to reduce antisocial behaviors in schools, including aggression and violence. The following section provides a discussion regarding future directions for adolescent aggression and social learning research as they pertain to the context of high schools.

**Future Directions**

This study represented a comprehensive examination of social learning theory and the empirical factors that contribute to school violence, aggression, and delinquency. However, in
the course of examining the factors that provide a basis for understanding school aggression, it became apparent that a variety of findings would require further examination. First, and foremost, future research should investigate the causal processes that underlie each type of school behavior. The results of the multivariate analysis estimating the full social learning model point to the prospect that the social learning factors important for each school behavior may come together in a manner that requires different explanations. The most obvious evidence comes from the regression results that show the social learning factors primarily responsible for explaining each school behavior tend to vary in their importance across the dependent variables. The shift in importance between acquisition mechanisms and personality and the prospect that neutralizations of self-punishment are important for understanding school violence and not for explaining other school behaviors offers evidence that the causal processes may be different. Likewise, since gender was found to be a statistically significant control variable for most school behaviors, future research should assess whether the causal processes and specific learning, instigating, and maintaining mechanisms differ for males and females. Despite the fact that Bandura's social learning theory of aggression provides a strong theoretical foundation for making inferences about causal factors, future studies should empirically test the interrelationships among the primary social learning construct and personality.

In addition, there is a need for research that further investigates the nature of the relationship between personality predispositions, learning factors and instigation mechanisms. Initially, there should be a search for a wider variety of actual situations and interpersonal factors that translate into school aggression and violence. In doing so, researchers should also seek to identify more situations that offer incentives for aggressive behavior. These factors should be examined in the context of learning and personality factors. There is a need to determine when and what situations are important to youth and at what point these factors become important. For instance, what situations (e.g., those that produce frustrations or those

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that offer incentives) are most likely to result in aggressive behavior among students who have acquired aggressive behavior or are predisposed by such factors as impulsivity and low empathy? Moreover, future research should examine whether particular background factors can insulate youth from aggressive behavior. Recent empirical research has uncovered a variety of individual-level as well as social and institutional protective factors including a resilient temperament, a positive orientation, positive extracurricular activities, and having conventional peers that often insulate youth from delinquency and future crime (Rutter 1985; Werner and Smith 1992; Rae-Grant, Thomas, Offord, and Boyle 1989; Brewer, Hawkins, Catalano, and Neckerman 1995). However, there are few studies that examine the protective factors that offer the most promise for insulating youth from aggressive behavior in the school context.

Finally, there is a need to further explore the nature of the relationship between adolescent aggression and violence and other antisocial behaviors using a greater range of delinquent behaviors (e.g., drug use, gang activity, property crimes, and so forth). Although this study clearly goes a long way in improving our understanding of different school behaviors by assessing serious behaviors such as school aggression and violence as well as school vandalism and delinquency, future studies should expand further the range of behaviors in school. From the results of this research, it is clear that high school youth do not appear to be specializing in particular antisocial behaviors at school. Despite some consistency in the predictors for each school behavior, it was also clear from the results of this study that the explanatory power of social learning theory differed across school behaviors. Moreover, the social learning mechanisms most important for predicting each behavior tended to vary in importance. As noted in previous chapters, there is still considerable debate regarding the degree of similarity between correlates of adolescent aggression and more minor forms of delinquent behavior (Gottfredson and Hirschi 1990; Loeber and Hay 1994; Loeber and LeBlanc
1990; Moffitt et al. 1989; Patterson, Dishion, and Bank 1984; Pulkinen 1982; Stattin and Magnusson 1989; Tolan and Loeber 1993).

As a consequence, further examinations into the nature of the relationship between adolescent aggression and other antisocial behaviors should be conducted while assessing the similarity in the explanation of these behaviors and others -- within and outside the school context. Future adolescent research and school violence research could benefit from an understanding of any differences in the explanation and prevalence of aggression inside and outside schools. Previous research has found that the early display of aggression and violence in multiple settings is a predictor of more serious deviant behavior in adolescents (Loeber 1982; Loeber and Magda Stouthamer-Loeber 1998). Future research should examine the degree to which the same individuals are responsible for behaviors inside and outside of high school and whether there are any differences in a social learning explanation of these behaviors across settings. In the past, the consistency in aggression and other forms of antisocial behavior across settings has been viewed by some scholars as an expression of an antisocial a trait, by others as due to environmental influences, and by still others as resulting from person-environment interactions (Lewis 1990). Regardless of the level of consistency, it is likely that social learning theory will provide a strong model for assessing any differences in the explanation of behaviors across settings.

Conclusion

The primary objective of this study was to advance our current empirical and theoretical understanding of high school aggression, violence, and delinquency. However, by combining empirical evidence found in adolescent aggression and school violence research with the principles of social learning theory, this study not only advanced our current understanding
of school behaviors, but also laid the groundwork necessary for mounting a serious examination into the theoretical and empirical factors that contribute to violence in our high schools. It is hoped that this research will encourage future researchers to rely on sound theoretical principles and utilize knowledge from a variety of disciplines in an effort further advance our empirical and theoretical understanding of school violence.

The preceding chapters provided the initial rationale for why social learning theory might be an effective model for investigating the problem of school violence. Through a review of the most pertinent literature on adolescent aggression, it became apparent that an adequate explanation of school violence would require the consideration of a host of factors including relevant cognitions (e.g., beliefs, expectations, neutralizations), personality constructs (e.g., impulsiveness, risk-seeking behavior, low empathy), personal background factors (e.g., family abuse, antisocial peers), and situational conditions (e.g., “triggers” or instigators, inhibitors). Moreover, it became clear that Bandura’s social learning theory of aggression was likely to provide a solid theoretical foundation for uniting the multiple risk factors of adolescent aggression.

As expected, the results of this study provided the empirical evidence necessary to promote social learning theory as a valuable theoretical framework for understanding school violence. The results of the OLS regression of the full model indicate that over thirty percent of the variation in school violence and school aggression can be explained by the primary mechanisms identified by social learning theory. Moreover, the results of this study reveal that explanatory power of the social learning model is not dependent on any one social learning mechanism. As a result, the data indicate that social learning theory, in its entirety, is supported as a valuable tool for explaining variation in school-based aggression and violence.

Thus, based on the results of this study, it is hoped that school officials, policy-makers, and academic researchers will recognize the utility of a social learning model for understanding
the disruptive behaviors that take place in high schools. School officials and policy-makers should use the results of this research to improve existing programs and develop new long-term initiatives for reducing violence in schools. In like manner, school violence researchers should seek to further our knowledge regarding the factors that contribute to school violence by testing the link between the primary concepts of social learning theory and the empirical correlates of adolescent aggression as they relate to the context of high schools. It is anticipated that the ability of social learning theory to account for macrolevel as well as individual-level contributions to school violence will enable it to surpass all other theoretical explanations. Hence, it is time for school-officials and policy-makers to embrace a single theoretical paradigm that has the capacity to unify the most significant contributors to school violence and aggression – social learning theory.
Notes:

1 It is important to note that social learning theory is recognized as a general theory that incorporates various theoretical explanations. For instance, some scholars may recognize that social learning theory includes theoretical constructs found in general strain theory, techniques of neutralization, and others. This research did not set out to determine the relative capacity of different theories to explain school behaviors. Instead, this research focused specifically on assessing the utility of social learning theory for explaining school behaviors without controlling for constructs found in competing theoretical paradigms.

2 See Chapter 5 for a detailed look at the individual social learning predictors most predictive of each school behavior across school districts.

3 This study did not include direct measures of neighborhood crime or other community factors often deemed important for assessing the relationship between the broader social context and school conditions. However, as noted in Chapter 4, the two California school districts were located in dramatically different cities that differed in terms of population and economic functions of the city.
References


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USA Today "For Kids, Life on a Hair-Trigger." (Feb. 3,1994).


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Measures of Theoretical Constructs
Appendix A

I. Acquisition Mechanisms

A. Parental Identification
1. I respect at least one of my parent(s) or guardian(s).

B. Modeled Parental Aggression
1. When my parent(s) or guardian(s) get upset or angry, they sometimes hit others.
2. When my parent(s) or guardian(s) get upset or angry, they sometimes threaten others.

C. Parental Attitudes Toward Aggression
1. At least one (or both) of my parent(s) or guardians(s) taught me that most conflicts can be settled by talking things over.
2. In most instances, I would be punished at home by at least one (or both) of my parent(s) or guardians(s) for fighting in school.

D. Sibling Identification
1. I have at least one brother or sister whose opinions I respect.

E. Modeled Sibling Aggression
1. I never see any of my brothers or sisters take advantage of other people.
2. I have at least one brother or sister who threatens others when he or she get angry.

F. Sibling Attitudes Toward Aggression
1. If I was being bullied by another student, at least one of my brothers or sisters would expect me to stand up to them.

G. Peer Identification
1. In your opinion, how much do you respect what your best friends do and say?

H. Modeled Peer Aggression
1. Some of my friends have threatened teachers.
2. Most of friends know how to use physical force to get what they need.
3. Most of my friends would not threaten other people in school.
4. Some of my friends have physically hurt other people while in school.
5. My friends seem to treat other students with respect.

I. Peer Attitudes Toward Aggression
1. My closest friends would be mad at me if I hit or threatened to hit another student without any reason.

J. Macrosocial-Modeled School Aggression

Neighborhood Aggression
1. I rarely see fighting in my neighborhood.
School Aggression
1. I don’t see much fighting in my school.
2. I see a lot of students threatened by others in school.

Television Violence
1. What are the characteristics of a program that keep you interested in watching it? (Please place a number on each corresponding line)

II. Instigation Mechanisms

Aversive Instigators

K. Peer Isolation
1. How important is it to you to spend time and do things with friends?
2. I feel like I have enough friends.
3. I seem to have a difficult time dating.
4. I feel that I fit in well with my friends.

L. Peer Rejection
1. It is important for me to spend time and do things with students who seem to “have it together” (i.e., get good grades, are respected by teachers and other students, or seem to have a good future).
2. I am generally accepted by many students at this school.
3. I often feel rejected by many of the “model” or “ideal” students (i.e., those who get good grades, are respected by teachers, or seem to have a good future).
4. In terms of dating, I feel rejected by those students who seem to be doing well in school.

M. School Failure
1. How important has your school work been to you?
2. In your opinion, how well are you doing at getting good grades?
3. Other people think of me as a good student.
4. I generally feel as though I am a success in school.
5. Which of the following best describes the grades you are getting in school?

N. Other School Activities
1. School activities are pretty important to me.
2. I wish I was doing better in the school activities that are really important to me.

O. Physical Assaults in School
1. I rarely get physically threatened in my school.

P. Verbal Threats and Insults in School
1. I often get teased by other students.

Q. Aversive Reductions in Life
1. I am much happier now that I am in high school.

R. Thwarting of Goal-Directed Behavior
1. This school seems to provide me with many opportunities to succeed.
2. I am often rewarded in this high school for my best effort.
Interpersonal Instigators of Aggression
What type of people are most likely to frustrate you?
A. A student of the opposite sex
B. A student who get things he or she doesn’t deserve
C. A student of another race
D. A teacher who talks down to students
E. Parents who don’t listen to kids
F. Students who gossip
G. Students who bring weapons to school
H. A rich or wealthy student
I. Students who think they know it all
J. A student who pushes others around
K. A teacher who is unfair
L. A teachers’ pet
M. A student that “hits on” your girlfriend or boyfriend
N. A student drug-dealer

Situational Instigators of Aggression
Which of the following events or situations would make you the most frustrated?
A. If I was insulted
B. Being insulted with other students watching
C. If I was pushed by a person of another race
D. If I was pushed by any other person
E. If I was knocked down, but not on purpose
F. A student was “hitting on” my girlfriend/boyfriend
G. If someone insulted a friend of mine
H. If I was being teased by another student
I. If my friends thought I should fight

Incentive Instigators

S. Anticipated Outcome
1. In this school, students who get into fights probably will get suspended.
2. Students who treat other students with respect are the most liked.
3. If I bullied others, I would probably have more problems in school.
4. I would be looked upon as a jerk if I intimidated the teacher in class.

T. Modeling Instigators
1. A good fight can be exciting.
2. It makes me nervous to see other students intimidate teacher.

U. Instructional Instigators

Peer Coercion
1. Certain students can get me acting tougher than I really am.
2. I often feel pressured by my friends to help them out if they get into a fight.

Peer Acceptance
1. My friends encourage treating others with respect.
2. My friends would most likely criticize me if I got into a fight.
V. Perception of Alternatives in School
1. I could get help from school authorities if I was threatened by another student in school.

III. Maintaining Mechanisms

Vicarious Reinforcement

W. Observed Punishment/Rewards

Observed Positive Rewards for Aggression in School
1. The rewards for fighting in school are better than the rewards for solving problems another way.
2. Students who “stand up” to teachers are well-liked by other students.
3. Fighting in school is often useful for getting things you want.
4. Fighting someone today is often the best way to keep them from bothering you in the future.

Observed Few Consequences for Aggression in School
1. The school is very strict with students who "get out of line."
2. Our school is closely monitored (e.g., security systems, police).
3. Most students get punished for breaking school rules.

X. Unjust Reward/Punishment in School
1. Some students get punished more severely than others for fighting in school.

Self-Reinforcement Mechanisms

Y. Self-Reward for Aggression
1. I take pride in knowing I can physically take care of myself.

Z. Self-Punishment for Aggression
1. I feel bad when my actions result in somebody getting hurt.

Neutralizations of Self-Punishment

AA. General Approval for Violence
1. It is wrong for someone your age to hit or threaten to hit someone regardless of the reason.

BB. Condemning the Condemnor
1. Fighting in school is no big deal because it seems like everyone does it.

CC. Appeal to Higher Loyalties
1. Standing up for my friends is more important than any punishment for fighting in school.
2. Sometimes it's necessary for some students to get into fights in order to uphold their honor or put other students in their place.

DD. Denial of Responsibility
1. The fights many students get into are often not their fault.
EE. Denial of Injury
1. Fighting in school isn’t a really big deal because most of the time nobody gets hurt.

FF. Denial of Victim
1. Most people who have been beaten up in school probably deserved it.
2. Students who are gang members deserve to be hurt by others.
3. Gay students are just “asking” for a beating.

IV. Personality

GG. Impulsivity
1. I often act on the spur of the moment.
2. I don’t devote much thought and effort to preparing for the future.
3. I often do whatever brings me pleasure here and now, even at the cost of some distant goal.
4. I’m more concerned with what happens to me in the short run than in the long run.

HH. Self-Centeredness or Low Empathy
1. I try to look out for myself first, even if it means making things difficult for other people.
2. I’m not very sympathetic to other people when they are having problems.
3. If things I do upset people, it’s their problem, not mine.
4. I will try to get the things I want even when I know it’s causing problems for other people.

II. Risk-Seeking Behavior
1. I like to test myself every now and then by doing something a little risky.
2. Sometimes I will take a risk just for the fun of it.
3. I sometimes find it exciting to do things for which I might get in trouble.
4. Excitement and adventure are more important to me than security.

Self-Report Aggression, Violence, and Delinquency

JJ. School Violence
1. Thrown on punch at another student while in school?
2. Been involved in a one-to-one fight—you and one other student—in which several punches were thrown, while in school?
3. Hit a teacher while in school (this includes not only classroom teachers but the principal or assistant principal)?
4. Not counting teachers, hit any other adult while in school (for example, janitor, secretary, visitor)?
5. Touched a person of the opposite sex in a sexual manner in school when they did not want you to?
6. Been involved in a group fight with students while in school (that is, a fight involving three or more students)?
7. Pushed or shoved another student in school?
**KK. School Aggression**
1. Threatened to hit—but did not actually hit—a teacher while in school (this includes not only classroom teachers but the principal or assistant principal)?
2. Not counting teachers, threatened to hit—but did not actually hit—any other adult while in school (for example, janitor, secretary, visitor)?
3. Threatened to hit—but did not actually hit—another student in school?
4. Verbally insulted a teacher in school (this includes not only classroom teachers but the principal or assistant principal)?
5. Verbally insulted other students in school?
6. Not counting teachers, verbally insulted any other adult while in school (for example, janitor, secretary, visitor)?
7. Verbally pressured a student in a sexual manner in school when they did not want you to?
8. Carried a hidden weapon into school?

**LL. Instrumental School Aggression**
1. Used verbal threats or intimidation to get money or things from other people in school?
2. Spread lies about other students to make yourself look good?
3. “Picked on” or “made fun of” another student to look good in front of your friends?

**MM. School Vandalism and Delinquency**
1. Drawn or painted graffiti on surfaces like school buildings or walls?
2. Broke or damaged school property on purpose (breaking windows, smashing desks and furniture)?
3. Cheated on school tests?
4. Stolen (or tried to steal) something at school, such as someone’s coat from a classroom, locker, or cafeteria, or a book from the library?
5. Skipped classes without an excuse?
6. Been suspended from school?
Appendix B

Assessing the Impact of Multicollinearity on OLS Regression
Assessing the Potential Impact of Multicollinearity on OLS Regression
Appendix B

Since the initial examination of the zero-order correlation matrix identified a potential problem of multicollinearity, several tests were used in this study to determine whether multicollinearity could pose a problem for OLS regression analysis. Simply put, the results indicated that the level of multicollinearity was not sufficient to produce biased estimates of the regression coefficients. Yet, it is important to further emphasis that the bivariate relationships between independent variables must be particularly strong to produce significant difficulties for OLS regression analysis when large samples are used (Berry and Feldman 1985; Fox 1991). As shown in the zero-order correlation matrix (see Table 7.2), no intercorrelations were found to be larger than .60. Nevertheless, in the process of testing social learning theory, other researchers have cited potential problems of multicollinearity (for example, see Akers, Krohn, Lanza-Kaduce, and Radosevich 1979). Thus, the issue warrants a brief description of the methods used to “rule out” potential problems due to the presence of multicollinearity in this study.

The process for assessing the potential impact of multicollinearity involved a combination of examining common “warning signs” and applying direct diagnostic tests. First, a common reason to suspect multicollinearity is when all of the partial slope coefficient estimates for the individual predictors fail to be significant at p < .05, but the full model shows a good fit to the data (e.g. F-statistic is significant) (Berry and Feldman 1985). As shown in Tables 7.3 and 7.4, several individual t-ratios for the regression coefficients are significant in excess to p < .05. These results are consistent with the model F-statistic results for each regression equation which are significant at p < .001. Therefore, there is no reason to suspect problems produced by multicollinearity based on the OLS regression results presented in Tables 7.3 and 7.4.
Second, an indication of the levels of multicollinearity can be obtained through a process of alternately substituting the independent predictors in a regression equation and examining the relative stability of the remaining regression coefficients (Berry and Feldman 1985). Thus, in each regression equation presented in Tables 7.3 and 7.4, each predictor was, in turn, removed from the model to assess whether the elimination of any composite measure would lead to a dramatic change in the regression coefficients for the variables remaining in the model. Although some fluctuation occurred in the size of the standardized regression coefficients for the remaining independent predictors, the changes were trivial and the relationships of the separate mechanisms remained unchanged.

Finally, two diagnostic techniques were used to assess the potential impact of multicollinearity: a) R² values for each equation were examined after each independent variable was regressed on all other independent variables in the model and b) variance inflation factor (VIF) scores were estimated to determine whether levels of multicollinearity were likely to seriously impact the precision of parameter estimates. Using both methods, multicollinearity did not appear to pose a significant problem in the analysis. As all the independent variables were regressed on each other, the R² values for the regression equations failed to be sufficiently high to be viewed as a source of concern. Although some of the VIF scores were larger than prior multivariate analyses presented in Chapters 5 and 6, the VIF estimates failed to indicate levels necessary to significantly impact the precision of parameter estimates. The square root value of the VIF for any of the social learning predictors in each regression equation never exceeded 1.35. In sum, each assessment technique indicated that multicollinearity would not pose a significant problem for the OLS regression methods used in this study. As a result, the findings of the OLS regression analyses on the full social learning model with and without personality are presented in Table 7.3 and 7.4.
Notes:

1 Fox (1991) argues that the linear relationships among independent variables must be very strong before collinearity seriously degrades the precision of estimates. Fox (1991) demonstrates that it is not until the correlation between independent variables approaches 0.9 that the precision of estimation is halved.

2 In fact, this process is similar to the procedures used to conduct the analysis modeled after Akers, Krohn, Lanza-Kaduce, and Radosevich (1979) (see Table 7.5). Each independent predictor had to be eliminated from the regression equation in order to assess the relative capacity of each social learning mechanism and personality to explain variation in school behaviors. This process resulted in few changes in the standardized regression coefficients in each regression equation.

3 The minor fluctuations in the size of the standardized regression coefficients were likely due to the predictive power of particular independent predictors (for instance, acquisition mechanisms for predicting school aggression) opposed to the presence of high degrees of multicollinearity (see Table 7.4). In a case where a particular construct explains a disproportionate amount of variation in the full regression model, the removal of that construct would be expected to produce some change in the magnitude of the regression coefficients for the remaining variables.

4 Using this approach, the degree of multicollinearity increases as $R^2$ values approach the value 1.00 (Berry and Feldman 1985). Thus, high levels of multicollinearity are present if any $R^2$ values come close to 1.00. In this study, the largest $R^2$ values were .44 and .45. However, a majority of the $R^2$ values for never approached .40.
Appendix C

Survey of High School Youth 1998
Please Raise Your Hand If You Do Not Understand Any Items
This survey is designed to help us find ways to reduce school aggression. We are interested in learning how you and other young people think and feel about a number of things, and what has happened since you have been in high school. Your honest responses to these questions will help us to make high schools safer places and help us better understand what goes on in the lives of young people. Your answers will be anonymous and confidential. This means nobody will know how you answered the questions in this survey. In fact, please don't put your name on the survey.

"About My Neighborhood and School"

We would like to begin by asking you what your neighborhood and school are like. Please place the number on the line that best describes how strongly you agree or disagree with the statements.

<table>
<thead>
<tr>
<th>5</th>
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<tbody>
<tr>
<td>STRONGLY AGREE</td>
<td>AGREE</td>
<td>NEITHER AGREE</td>
<td>DISAGREE</td>
<td>STRONGLY DISAGREE</td>
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</tbody>
</table>

1. ___ I rarely see fighting in my neighborhood.
2. ___ I don't see much fighting in my school.
3. ___ I see a lot of students threatened by others in school.
4. ___ I feel pretty safe in this high school.

"About My Friends"

Now we would like to ask some questions about your friends. We are interested in knowing how your friends get along with other people and your relationship with your friends.

1. In your opinion, how much do you respect what your best friends do and say? (Circle one)

<table>
<thead>
<tr>
<th>A Great Deal</th>
<th>Quite a Bit</th>
<th>Not Too Much</th>
<th>Very Little</th>
</tr>
</thead>
</table>

Please place the number on the line that best describes how strongly you agree or disagree with the statements.

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<th>5</th>
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<tr>
<td>STRONGLY AGREE</td>
<td>AGREE</td>
<td>NEITHER AGREE</td>
<td>DISAGREE</td>
<td>STRONGLY DISAGREE</td>
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</tbody>
</table>

2. ___ Some of my friends have threatened teachers.
3. ___ Most of my friends know how to use physical force to get what they need.
4. ___ Most of my friends would not threaten other people in school.
5. ___ Some of my friends have physically hurt other people while in school.
6. ___ My friends seem to treat other students with respect.
7. ___ My closest friends would be mad at me if I hit or threatened to hit another student without any reason.
8. When my closest friends get angry or upset, I sometimes see them: (Please X all that apply)

- push or shove people
- yell at people
- workout or exercise
- spend time with friends
- throw or hit objects
- go somewhere by themselves
- refuse to talk
- discuss why they are upset
- stomp out of the room

9. When my closest friends want something, I sometimes see them: (Please X all that apply)

- push or shove people
- yell at people
- say angry things
- throw or hit objects
- discuss what they want

"How my Parents Behave Toward Me and Others"

In this section, we want to know about your relationship with your parents or guardians and how they react to your behavior. For each item, place the number on the line that best describes how strongly you agree or disagree with the statements.

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<tbody>
<tr>
<td>STRONGLY AGREE</td>
<td>AGREE</td>
<td>NEITHER AGREE NOR DISAGREE</td>
<td>DISAGREE</td>
<td>STRONGLY DISAGREE</td>
</tr>
</tbody>
</table>

1. ____ I respect at least one (or both) of my parent(s) or guardian(s).

2. ____ At least one (or both) of my parent(s) or guardians(s) taught me that most conflicts can be settled by talking things over.

3. ____ In most instances, I would be punished at home by at least one (or both) of my parent(s) or guardians(s) for fighting in school.

4. ____ My parent(s) or guardian(s) have sometimes spanked me for bad behavior at home.

5. ____ If I was being bullied by another student, one (or both) of my parent(s) or guardian(s) would expect me to stand up to them.

6. ____ My parent(s) or guardian(s) seem to get along most of the time.

7. ____ When my parent(s) or guardian(s) get upset or angry, they sometimes hit others.

8. ____ When my parent(s) or guardian(s) get upset or angry, they sometimes threaten others.
9. When I get in some sort of trouble, my parent(s) or guardian(s) would typically: (Please X all that apply)

- ___ yell at me
- ___ do nothing
- ___ encourage me to do better
- ___ talk to me
- ___ hit or spank me
- ___ help me
- ___ threaten me
- ___ ground me
- ___ insult or talk down to me
- ___ other (SPECIFY)
- ___ joke about it
- ___ take away privileges

10. When my parent(s) or guardian(s) get angry or upset, I often see them: (Please X all that apply)

- ___ push or shove people
- ___ yell at people
- ___ drug
- ___ help others
- ___ do nothing
- ___ workout or exercise
- ___ threaten others
- ___ spend time with friends
- ___ drink alcohol
- ___ go somewhere by themselves
- ___ other (SPECIFY)
- ___ discuss why they are upset
- ___ drive fast
- ___ refuse to talk
- ___ say angry things
- ___ stomp out of the room
- ___ other (SPECIFY)
- ___ or house

"How My Brothers and Sisters Behave Toward Me and Others"

In this section, we want to know about your relationship with your brothers and sisters and how they treat you and others. Please place the number on the line that best describes how strongly you agree or disagree with the statements.

Do you have any brothers or sisters (including stepbrothers and stepsisters)? (Please X one)

- ___ (1) Yes
- ___ (2) No

IF YOU ANSWERED NO, GO TO PAGE 5, SECTION: "Things That Frustrate Me About My Family"

<table>
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<tr>
<th></th>
<th>STRONGLY AGREE</th>
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<th>NEITHER AGREE NOR DISAGREE</th>
<th>DISAGREE</th>
<th>STRONGLY DISAGREE</th>
</tr>
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<tbody>
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</tbody>
</table>

1. ___ I have at least one brother or sister whose opinions I respect.

2. ___ I never see any of my brothers or sisters take advantage of other people.

3. ___ If I was being bullied by another student, at least one of my brothers or sisters would expect me to stand up to them.

4. ___ My brothers and sisters seem to get along most of the time.
5. ____ I have at least one brother or sister who threatens others when he or she gets angry.

6. ____ At least one of my brothers or sisters sometimes hits me when I make them angry.

7. When my brother(s) or sister(s) get angry or upset, I see at least one of them: (Please X all that apply)

- push or shove people
- yell at people
- workout or exercise
- spend time with friends
- throw or hit objects
- go somewhere by themselves
- refuse to talk
- discuss why they are upset
- stomp out of the room
- or house
- do drugs
- help others
- do nothing
- threaten others
- drink alcohol
- say angry things
- drive fast
- other (SPECIFY)

8. When I make my brother(s) or sister(s) angry, they usually: (Please X all that apply)

- yell at me
- hit me
- threaten me
- do nothing
- turn others against me
- explain to me why they are angry
- insult or talk down to me
- just forget it
- tease me
- drink alcohol
- throw or hit objects
- go somewhere by themselves
- refuse to talk to me
- discuss why they are upset with me
- stomp out of the room or house
- spend time with friends
- push or shove me
- do drugs
- other (SPECIFY)

"Things That Frustrate Me About My Family"

List or describe three things about your family that frustrate you or make you the most angry.

A. __________________________________________________________

_________________________________________________________

B. __________________________________________________________

_________________________________________________________

C. __________________________________________________________

_________________________________________________________
“My Relationship With Others in School”

Now we are interested in knowing about your friends. Please let us know how well you “get along” with other students in school.

1. How important is it to you to spend time and do things with friends? (Circle one)

<table>
<thead>
<tr>
<th>Very Important</th>
<th>Pretty Important</th>
<th>Somewhat Important</th>
<th>Not too Important</th>
<th>Not Important</th>
</tr>
</thead>
</table>

2. How important is it to you to have dates and go to parties and other social activities? (Circle one)

<table>
<thead>
<tr>
<th>Very Important</th>
<th>Pretty Important</th>
<th>Somewhat Important</th>
<th>Not too Important</th>
<th>Not Important</th>
</tr>
</thead>
</table>

Please place the number on the line that best describes how strongly you agree or disagree with the statements.

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<tr>
<td>STRONGLY AGREE</td>
<td>AGREE</td>
<td>NEITHER AGREE</td>
<td>DISAGREE</td>
<td>STRONGLY DISAGREE</td>
</tr>
</tbody>
</table>

3. ___ I feel like I have enough friends.

4. ___ I seem to have a difficult time dating.

5. ___ I get invited to enough parties and other social activities.

6. ___ I feel that I fit in well with my friends.

7. ___ It is important for me to spend time and do things with students who seem to “have it together” (i.e., get good grades, are respected by teachers and other students, or seem to have a good future).

8. ___ I am generally accepted by many students at this school.

9. ___ I often feel rejected by many of the “model” or “ideal” students (i.e., those who get good grades, are respected by teachers, or seem to have a good future).

10. ___ In terms of dating, I feel rejected by those students who seem to be doing well in school.

List or describe three things about your relationships with other students or friends that frustrate you or make you the most angry.

A. ____________________________________________________________

B. ____________________________________________________________

C. ____________________________________________________________
"How I Am Doing in School"

In this section, we want to know some of your feelings about school. We want to know how much you enjoy school and how well you are doing in school.

1. How important has your school work been to you? (Circle one)

   Very Important | Pretty Important | Somewhat Important | Not too Important | Not Important

Please place the number on the line that best describes how strongly you agree or disagree with the statements.

<table>
<thead>
<tr>
<th>5</th>
<th>4</th>
<th>3</th>
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<tbody>
<tr>
<td>STRONGLY AGREE</td>
<td>AGREE</td>
<td>NEITHER AGREE NOR DISAGREE</td>
<td>DISAGREE</td>
<td>STRONGLY DISAGREE</td>
</tr>
</tbody>
</table>

2. Other people think of me as a good student.

3. I generally feel as though I am a success in school.

4. School activities are pretty important to me.

5. I wish I was doing better in the school activities that are really important to me.

"Other School Activities"

Now we are interested in knowing what school activities you regularly take part in and how important these school activities are to you.

6. What school activities do you often take part in: (Please X all that apply)

   ___ play sports
   ___ attend school sports events
   ___ music classes
   ___ student clubs (i.e., fellowships, support groups)
   ___ academic clubs (i.e., debate team, foreign language computer)
   ___ drama club
   ___ newspaper
   ___ band or orchestra
   ___ cheerleading
   ___ student council
   ___ yearbook committee
   ___ school dances (i.e., holiday dances, Prom dances)
   ___ other (SPECIFY)

7. How important is it for others to think of you as a good student? (Circle one)

   Very Important | Pretty Important | Somewhat Important | Not too Important | Not Important
8. In your opinion, how well are you doing at getting good grades? (Circle one)

Very Well  O.K  Not Well  Don't  Know

“What I Have Done While in School”

Now we are interested in knowing the behaviors YOU have done over the past two school years in school or on school property (this includes the school building, classroom, school bus, school parking lot, and school recreation areas) during school hours. This also includes things you have done on school property while waiting for school to begin and soon after you have been let out of school.

Circle the number that best describes how often you have done each thing in school. Remember that nobody, but the research staff will see your answers. Please be honest while answering the following questions.

WHILE IN SCHOOL DURING THE PAST TWO SCHOOL YEARS, HOW OFTEN HAVE YOU...

<table>
<thead>
<tr>
<th>Event</th>
<th>Less Than Once a Month</th>
<th>At Least Once a Month</th>
<th>Once a Week</th>
<th>More Than Once a Week</th>
<th>Every Day</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Thrown one punch at another student while in school?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>2. Been involved in a one-to-one fight—you and one other student—in which several punches were thrown, while in school?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>3. Hit a teacher while in school (this includes not only classroom teachers but the principal or assistant principal)?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>4. Not counting teachers, hit any other adult while in school (for example, janitor, secretary, visitor)?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>5. Touched a person of the opposite sex in a sexual manner in school when they did not want you to?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>6. Been involved in a group fight with students while in school (that is, a fight involving three or more students)?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>7. Pushed or shoved another student in school?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

348
WHILE IN SCHOOL DURING THE PAST TWO SCHOOL YEARS, HOW OFTEN HAVE YOU...

<table>
<thead>
<tr>
<th></th>
<th>Never</th>
<th>Less Than Once a Month</th>
<th>At Least Once a Month</th>
<th>Once a Week</th>
<th>More Than Once A Week</th>
<th>Every Day</th>
</tr>
</thead>
<tbody>
<tr>
<td>8. Threatened to hit--but did not actually hit--a teacher while in school (this includes not only classroom teachers but the principal or assistant principal)?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>9. Not counting teachers, threatened to hit--but did not actually hit--any other adult while in school (for example, janitor, secretary, visitor)?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>10. Threatened to hit--but did not actually hit--another student in school?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>11. Verbally insulted a teacher in school (this includes not only classroom teachers but the principal or assistant principal)?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>12. Verbally insulted other students in school?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
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<td>6</td>
</tr>
<tr>
<td>13. Not counting teachers, verbally insulted any other adult while in school (for example, janitor, secretary, visitor)?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>14. Verbally pressured a student in a sexual manner in school when they did not want you to?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>15. Carried a hidden weapon into school?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>16. Used verbal threats or intimidation to get money or things from other people in school?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>17. Spread lies about other students to make yourself look good?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>18. “Picked on” or “made fun of” another student to look good in front of your friends?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>19. Drawn or painted graffiti on surfaces like school buildings or walls?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>20. Broke or damaged school property on purpose (breaking windows, smashing desks and furniture)?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
</tbody>
</table>
WHILE IN SCHOOL DURING THE PAST TWO SCHOOL YEARS, HOW OFTEN HAVE YOU...

<table>
<thead>
<tr>
<th></th>
<th>Never</th>
<th>Less Than Once a Month</th>
<th>At Least Once a Month</th>
<th>Once a Week</th>
<th>More Than Once a Week</th>
<th>Every Day</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
</tbody>
</table>

21. Cheated on school tests?  
22. Stolen (or tried to steal) something at school, such as someone's coat from a classroom, locker, or cafeteria, or a book from the library?  
23. Skipped classes without an excuse?  
24. Been suspended from school?

List or describe three things about your school (e.g., teachers, rules, school work) that frustrate you or make you the most angry.

A. ________________________________________________________________

B. ________________________________________________________________

C. ________________________________________________________________

"How Others Behave Toward Me in School"

Now we are interested in knowing how you feel others treat you in school. Please place the number on the line that best describes how strongly you agree or disagree with the statements.

<table>
<thead>
<tr>
<th></th>
<th>5</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>STRONGLY AGREE</td>
<td>AGREE</td>
<td>NEITHER AGREE NOR DISAGREE</td>
<td>DISAGREE</td>
<td>STRONGLY DISAGREE</td>
</tr>
</tbody>
</table>

1. ___ I rarely get physically threatened in my school.

2. ___ I often get teased by other students.

3. ___ I am much happier now that I am in high school.
4. ___ I'm frustrated because things don't seem as easy as they used to be.

5. ___ I am often rewarded in this high school for my best effort.

6. ___ This school seems to provide me with many opportunities to succeed.

“How Other Students are Treated in This School”

Now we would like to know what you believe might happen when certain things occur in school. Please place the number on the line that best describes how strongly you agree or disagree with the statements.

1. ___ In this school, students who get into fights probably will get suspended.

2. ___ Students who treat other students with respect are the most liked.

3. ___ If I bullied others, I would probably have more problems in school.

4. ___ I would be looked upon as a jerk if I intimidated the teacher in class.

5. ___ The rewards for fighting in school are better than the rewards for solving problems another way.

6. ___ Students who "stand up" to teachers are well-liked by other students.

7. ___ Most students get punished for breaking school rules.

8. ___ Most students get away with bullying others in school.

9. ___ Fighting in school is often useful for getting things you want.

10. ___ Fighting someone today is often the best way to keep them from bothering you in the future.

11. ___ Some students carry weapons to school without getting caught.

12. ___ This school is very strict with students who "get out of line."

13. ___ Our school is closely monitored (e.g., security systems, hall monitors or police).
14-17. What would your school’s typical response be to the following: (Circle all that apply)

<table>
<thead>
<tr>
<th>Threatening another student in school: (Circle all that apply)</th>
<th>Carrying a weapon into school: (Circle all that apply)</th>
</tr>
</thead>
</table>
| a. Nothing  
  b. Arrest  
  c. Suspension  
  d. Detention  
  e. Warning  
  f. Notify Parents  
  g. This Never Happens  
  h. Don’t Know  
  i. Other (SPECIFY) | a. Nothing  
  b. Arrest  
  c. Suspension  
  d. Detention  
  e. Warning  
  f. Notify Parents  
  g. This Never Happens  
  h. Don’t Know  
  i. Other (SPECIFY) |

<table>
<thead>
<tr>
<th>Fighting in school: (Circle all that apply)</th>
<th>Threatening a teacher: (Circle all that apply)</th>
</tr>
</thead>
</table>
| a. Nothing  
  b. Arrest  
  c. Suspension  
  d. Detention  
  e. Warning  
  f. Notify Parents  
  g. This Never Happens  
  h. Don’t Know  
  i. Other (SPECIFY) | a. Nothing  
  b. Arrest  
  c. Suspension  
  d. Detention  
  e. Warning  
  f. Notify Parents  
  g. This Never Happens  
  h. Don’t Know  
  i. Other (SPECIFY) |
"What I Have Done Outside School"

Now we are interested in knowing the behaviors YOU have done outside school (this includes at home or hanging out anywhere in the late afternoon, early evening, or even during the summer) during the past two years.

Circle the number that best describes how often you have done each thing while NOT in school or on school property. Again, nobody but the research staff will see your answers. Please be honest while answering the following questions.

OUTSIDE OF SCHOOL DURING THE PAST TWO YEARS, HOW OFTEN HAVE YOU...

<table>
<thead>
<tr>
<th>OUTSIDE OF SCHOOL DURING THE PAST TWO YEARS, HOW OFTEN HAVE YOU...</th>
<th>Less Than Once</th>
<th>At Least Once</th>
<th>More Than Once</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Never</td>
<td>Month</td>
<td>Month</td>
</tr>
<tr>
<td>1. Thrown one punch at another person (brother, sister, peer, parent, other adult) outside of school?</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>2. Been involved in a one-to-one fight—you and one other person—in which several punches were thrown, outside of school?</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>3. Been involved in a group fight with other people outside of school (that is, a fight involving three or more persons)?</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>4. Touched a person of the opposite sex in a sexual manner (brother, sister, peer, parent, other adult) outside of school when they did not want you to?</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>5. Pushed or shoved another person (brother, sister, peer, parent, other adult) outside of school?</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>6. Threatened to hit—but did not actually hit—another person (brother, sister, peer, parent, other adult) outside of school?</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>7. Verbally insulted another person (brother, sister, peer, parent, other adult) outside of school?</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>8. Verbally pressure another person in a sexual manner outside of school when they did not want you to?</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>9. Used verbal threats or intimidation to get money or things from other people (brother, sister, peer, parent, other adult) outside of school?</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>
### OUTSIDE OF SCHOOL DURING THE PAST TWO YEARS, HOW OFTEN HAVE YOU...

<table>
<thead>
<tr>
<th>Question</th>
<th>Never</th>
<th>Less Than Once a Month</th>
<th>At Least Once a Month</th>
<th>Once a Week</th>
<th>More Than Once a Week</th>
<th>Every Day</th>
</tr>
</thead>
<tbody>
<tr>
<td>10. Spread lies about other people (brother, sister, peer, parent, other adult) to make yourself look good?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>11. &quot;Picked on&quot; or &quot;made fun of&quot; another person (brother, sister, peer, parent, other adult) to look good in front of your friends?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>12. Damaged or destroyed property belonging to your parents or other family members on purpose?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>13. Damaged or destroyed other property that did not belong to you on purpose (not counting family or school property)?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>14. Stolen (or tried to steal) a motor vehicle, such as a car or motorcycle?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>15. Stolen (or tried to steal) something worth more than $50?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>16. Knowingly bought, sold, or held stolen goods (or tried to do any of these things)?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>17. Ran away from home?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>18. Lied about your age to gain entrance or to purchase something; for example, lying about your age to buy liquor or get into a movie?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>19. Stolen (or tried to steal) things worth $5 or less?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>20. Been paid to have sexual relations with someone?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>21. Sold marijuana or hashish (&quot;pot&quot; or &quot;hash&quot;)?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>22. Stolen money or other things from your parents or other members of your family?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>23. Been loud, rowdy, or unruly in a public place?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
</tbody>
</table>
OUTSIDE OF SCHOOL DURING THE PAST TWO YEARS, HOW OFTEN HAVE YOU...

<table>
<thead>
<tr>
<th></th>
<th>Never</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>24. Sold hard drugs, such as heroin, cocaine, and LSD?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>25. Taken a vehicle for a ride without the owners permission?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>26. Had (or tried to have) sexual relations with someone against their will?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>27. Avoided paying for such things as movies, bus or subway rides, and food?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>28. Been drunk in a public place?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>29. Stolen (or tried to steal) things worth between $5 and $50?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>30. Broken into a building or vehicle (or tried to break in) to steal something or just look around?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>31. Begged for money or things from strangers?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>32. Made obscene telephone calls, such as calling someone and saying dirty things?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td></td>
</tr>
</tbody>
</table>

Now we would like to ask you questions about yourself that will help us understand the results. We will use this information only to group you with others who are like you to determine whether your views are similar.

1. What school do you go to? ______________________

2. How old are you?_____

3. What grade are you in? (Circle one)
   9th 10th 11th 12th Other:__________

4. Are you? (Please X one)
   ____ (1) Male
   ____ (2) Female
5. Have you ever stayed back or repeated a grade in school? (Circle one)

No                   Yes, once                   Yes, more than once

6. What is the total number of brothers, sisters, or step-brothers or sisters in your family (excluding yourself)? ______

7. Which one of these groups best describes you? (Please X only one)

(1) Anglo or White
(2) American Indian
(3) African American
(4) Asian
(5) Hispanic
(8) Other (SPECIFY) ______________

8. Which of the following best describes the grades you are getting at school? (Please X only one answer)

Mostly A's             Mostly C's
Mostly A’s and B’s     Mostly C’s and D’s
Mostly B’s             Mostly D’s
Mostly B’s and C’s     Mostly D’s and F’s

9. Have you ever been interested in joining a gang? (Please X one)

(1) Yes
(2) No

10. Were you once a gang member, but are no longer a member of a gang? (Please X one)

(1) Yes
(2) No

11. Are you now an active gang member? (Please X one)

(1) Yes
(2) No

12. With whom are you now living? (Please X only one answer)

(1) Mother and Father
(2) Father and Stepmother
(3) Mother only
(4) Wife or Husband
(5) Father only
(6) Mother and Stepmother
(7) Grandparent(s)
(8) Other (SPECIFY) ______________

13. Do those persons who you are now living with (parents or guardians) own their home?

(1) Yes
(2) No
(3) Don’t know
14. What was the highest level of schooling your father or male guardian completed? (Please X only one answer)

   (1) 8th grade or less
   (2) some high school
   (3) graduated from high school
   (4) some college
   (5) graduated from college
   (6) graduate work after college
   (7) not applicable

15. Is he currently employed full-time now?

   (1) Yes
   (2) No
   (8) Not applicable

16. What is the highest level of schooling your mother or female guardian completed? (Please X only one answer)

   (1) 8th grade or less
   (2) some high school
   (3) graduated from high school
   (4) some college
   (5) graduated from college
   (6) graduate work after college
   (7) not applicable

17. Is she employed full-time now?

   (1) Yes
   (2) No
   (8) Not applicable

18. Do YOU currently work for pay, such as baby-sitting or fast-food?

   (1) Yes
   (2) No

IF YOU ANSWERED NO TO QUESTION #16, GO TO PAGE 17, SECTION: “What I Like to Watch on T.V.”

19. About how many hours per week, on average do you work? _________

20. About how many days per week, on average, do you work for pay? (Circle one)

   1day  2days  3days  4days  5days  6days  7days

21. About how much money each week do you bring home from your job _________

357
22. About how many of your coworkers have stolen something from work, used drugs or alcohol while at work, have been in fist-fights while at work, or called in sick when not?

<table>
<thead>
<tr>
<th>None of Them</th>
<th>Some of Them</th>
<th>Most of Them</th>
<th>Almost all of Them</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

"What I Like to Watch on T.V."

Now we would like to know the types of things which make a good television program for you. Think about the television programs you like to watch and let us know why they are your favorites. Circle the number that corresponds to how important each type of program or scene is for keeping you interested.

How important are the following characteristics of T.V. programs for keeping you interested?

<table>
<thead>
<tr>
<th></th>
<th>VERY IMPORTANT</th>
<th>IMPORTANT</th>
<th>A LITTLE IMPORTANT</th>
<th>NOT IMPORTANT</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Athletic or sports scenes</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>B. Humorous scenes</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>C. Violent action scenes</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>D. News shows</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>E. Horror scenes</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>F. Suspenseful scenes</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>G. Educational programs</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>H. Musical scenes</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>I. Science fiction scenes</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>J. Animated cartoons</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>K. Martial arts fighting scenes</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>L. Sexual scenes</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>M. Romantic scenes</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>N. Combat or war scenes</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>O. &quot;Shoot outs&quot; between cops and criminals</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>P. Other (SPECIFY)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
"How My Friends Would React To My Behavior"

Now we are interested in knowing how your closest friends would react to you for behaving in a certain way. Please place the number on the line that best describes how strongly you agree or disagree with the statements.

<table>
<thead>
<tr>
<th></th>
<th>5</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>STRONGLY AGREE</td>
<td>AGREE</td>
<td>NEITHER AGREE</td>
<td>DISAGREE</td>
<td>STRONGLY DISAGREE</td>
</tr>
</tbody>
</table>

1. ____ Certain students can get me acting tougher than I really am.
2. ____ My friends would most likely criticize me if I got into a fight.
3. ____ I often feel pressured by my friends to help them out if they get into a fight.
4. ____ My friends encourage treating others with respect.
5. ____ Many times the best way to deal with being threatened in school is to take matters into my own hands.
6. ____ I could get help from school authorities if I was threatened by another student in school.
7. ____ Some students get punished more severely than others for fighting in school.
8. ____ I take pride in knowing I can physically take care of myself.
9. ____ I feel bad when my actions result in somebody getting hurt.
10. ____ A good fight can be exciting.
11. ____ It makes me nervous to see other students threaten a teacher.

"What I Think About Behaviors in School"

Now we are interested in knowing how you feel about certain behaviors and people in school. Please place the number on the line that best describes how strongly you agree or disagree with the statements.

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<td></td>
<td>STRONGLY AGREE</td>
<td>AGREE</td>
<td>NEITHER AGREE</td>
<td>DISAGREE</td>
<td>STRONGLY DISAGREE</td>
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</table>

1. ____ It is wrong for someone my age to hit or threaten to hit someone regardless of the reason.
2. ____ Fighting in school is no big deal because it seems like everyone does it.
3. ____ Standing up for my friends is more important than any punishment for fighting in school.
4. ____ Sometimes it is necessary for some students to get into fights in order to uphold their honor or put other students in their place.
Please place the number on the line that best describes how strongly you agree or disagree with the statements.

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<td>5. ___. The fights many students get into are often not their fault.</td>
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<td>6. ___. Fighting in school isn't a really big deal because most of the time nobody gets hurt.</td>
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<td>7. ___. Most people who have been beaten up in school probably deserved it.</td>
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<td>8. ___. Students who are gang members deserve to be hurt by others.</td>
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<td>9. ___. Gay students are just “asking” for a beating.</td>
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“What Makes Me Angry”

Next we would like to ask you about the types of people that may or may not make you angry.

Simply place a number on the line corresponding to the type of people who are: Very likely (4), Somewhat likely (3), Not too likely (2), and Very unlikely to make you frustrated (1).

What type of people are most likely to frustrate you?

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<tr>
<th></th>
<th>VERY LIKELY</th>
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<th>VERY UNLIKELY</th>
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A. A student of the opposite sex | 4 | 3 | 2 | 1 |
B. A student who get things he or she doesn’t deserve | 4 | 3 | 2 | 1 |
C. A student of another race | 4 | 3 | 2 | 1 |
D. A teacher who talks down to students | 4 | 3 | 2 | 1 |
E. Parents who don’t listen to kids | 4 | 3 | 2 | 1 |
F. Students who gossip | 4 | 3 | 2 | 1 |
G. Students who bring weapons to school | 4 | 3 | 2 | 1 |
H. A rich or wealthy student | 4 | 3 | 2 | 1 |
I. Students who think they know it all | 4 | 3 | 2 | 1 |
J. A student who pushes others around | 4 | 3 | 2 | 1 |
K. A teacher who is unfair | 4 | 3 | 2 | 1 |
L. A teachers’ pet | 4 | 3 | 2 | 1 |
M. A student that “hits on” your girlfriend or boyfriend | 4 | 3 | 2 | 1 |
N. A student drug-dealer | 4 | 3 | 2 | 1 |
Are there other types of people who frustrate you (i.e., would get a 3 or 4) who are not listed above? Please list them below:

A. 

B. 

C. 

Now, which of the following events or situations would frustrate you.

Place a number on the line corresponding to the type of situation: Very likely (4), Somewhat likely (3), Not too likely (2), and Very unlikely to make you frustrated (1).

Which of the following events or situations would make you the most frustrated?

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<td>A. If I was insulted</td>
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<tr>
<td>B. Being insulted with other students watching</td>
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<td>C. If I was pushed by a person of another race</td>
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<td>D. If I was pushed by any other person</td>
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<td>E. If I was knocked down, but not on purpose</td>
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<td>F. A student was “hitting on” my girlfriend/boyfriend</td>
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<td>G. If someone insulted a friend of mine</td>
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<td>H. If I was being teased by another student</td>
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<tr>
<td>I. If my friends thought I should fight</td>
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Are there other types of events or situations that frustrate you (i.e., would get a 3 or 4) that are not listed above? Please list them below:

A. 

B. 

C. 

361
"How I Feel About the Future, Others, and Activities"

Now we are interested in knowing how you feel about the future. How important is it to you to think about and prepare for the future or are you happy to only be concerned about what is happening in your life right now.

Please place the number on the line that best describes how strongly you agree or disagree with the statements.

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1. ___ I often act on the spur of the moment.
2. ___ I don’t devote much thought and effort to preparing for the future.
3. ___ I often do whatever brings me pleasure here and now, even at the cost of some distant goal.
4. ___ I’m more concerned with what happens to me in the short run than in the long run.
5. ___ I try to look out for myself first, even if it means making things difficult for other people.
6. ___ I’m not very sympathetic to other people when they are having problems.
7. ___ If things I do upset people, it’s their problem, not mine.
8. ___ I will try to get the things I want even when I know it’s causing problems for other people.
9. ___ I like to test myself every now and then by doing something a little risky.
10. ___ Sometimes I will take a risk just for the fun of it.
11. ___ I sometimes find it exciting to do things for which I might get in trouble.
12. ___ Excitement and adventure are more important to me than security.
13. ___ I frequently try to avoid things that I know will be difficult.
14. ___ When things get complicated, I tend to quit or withdraw.
15. ___ The things in life that are easiest to do bring me the most pleasure.
16. ___ I dislike really hard tasks that stretch my abilities to the limit.
17. ___ If I had a choice, I would almost always rather do something physical than something mental.
18. ___ I almost always feel better when I am on the move than when I am sitting and thinking.
19. ___ I like to get out and do things more than I like to read or contemplate ideas.
20. ___ I seem to have more energy and a greater need for activity than most other people my age.
Please place the number on the line that best describes how strongly you agree or disagree with the statements.

4 3 2 1
STRONGLY AGREE AGREE DISAGREE STRONGLY DISAGREE
AGREE SOMEWHAT SOMEWHAT DISAGREE

21. ____ I lose my temper pretty easily.

22. ____ Often, when I’m angry at people I feel more like hurting them than talking to them about why I am angry.

23. ____ When I am really angry, other people better stay away from me.

24. ____ When I have a serious disagreement with someone, it’s usually hard for me to talk about it without getting upset.

YOU ARE FINISHED.
THANK YOU FOR PARTICIPATING IN THIS IMPORTANT STUDY!