

Prevention of Antisocial and Violent Behavior in Youth:
A Review of the Literature

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ABSTRACT

Recurrent media coverage of school shootings has created the widespread belief that our youth have become dangerously violent and that our public schools are no longer safe. Concern over what to do about youth antisocial and violent behavior is a controversial issue that has substantial implications for national policy. The Office of Juvenile Justice and Delinquency Prevention describes three important factors in youth violence prevention: (a) understanding factors that place youth at risk, (b) developing effective programs to overcome risk factors, and (c) enhancing the protective factors that promote resiliency. This paper reviews the literature regarding youth antisocial and violent behavior. The following questions are addressed: Who are the youth characterized as antisocial, violent, and delinquent and what patterns of behavior do they exhibit? What factors put them at risk for developing such behaviors? When exposed to risks, what factors help promote resiliency and protect youth from developing these patterns of behavior? What strategies and specific programs are successful in preventing youth from developing antisocial and violent behavior?

Prevention of Antisocial and Violent Behavior in Youth: A Review of the Literature

Over the past decade, youth antisocial and violent behavior has become a grave national concern and a top political policy issue that has been sensationalized by media coverage of rare but devastatingly violent crimes committed by youth at school. The increase in media reports of school violence may skew the public's perception of its actual prevalence, since school violence statistics actually show a declining trend in recent years (U.S. Department of Education and Justice, 2001). The Office of Juvenile Justice and Delinquency Prevention reports that the juvenile violent crime arrest rate in 1999 was the lowest in the decade despite an 8% growth in the juvenile population from 1993 to 1999 (Snyder, 2000). However, this decline should not inspire complacency, as violent crime rates in the U.S. are still higher than many other countries (Stone & Kelner, 2000). In fact, America's rate of youth violence has been estimated at twice the combined rate of 25 other comparable democracies (Mendel, 2000).

The prevailing response to youth violence and crime by government officials, policy makers, and the juvenile justice system has been reactive and punitive. The metaphors used to characterize the issue suggest counter-aggressive responses: "Get tough" on youth crime, "fight" to control adolescent crime, "tackle" the youth crime challenge, "battle" against juvenile crime, and "attack" delinquency (Dodge, 1999). These slogans suggest that a goal is to obliterate youth antisocial and violent behavior through hard-line punishments rather than to prevent or reduce such behavior by teaching and helping youth to develop better coping strategies that keep them positively connected to their

families, schools, and communities. The rate of youth homicide rose dramatically during the early 1990s, which may have kindled the fear of a rising epidemic in youth violence. This fear appears to have led well-meaning policy makers into adopting strong, reactive measures used with adult felons without first evaluating evidence regarding their effectiveness. Large sums of money have been spent annually on waging this "war on youth violence", with services that have not been proven to be effective and in some cases are actually counterproductive. For instance, laws that permit the transfer of juvenile offenders to adult courts and correctional facilities have been shown to actually increase recidivism rates and waste tax dollars. Mendel (2000) cites several studies in which youth that had been transferred to criminal court were rearrested more often, more quickly, and for more serious offenses than youth who were retained in juvenile courts. Moreover, criminal prosecution costs taxpayers much more than adjudication by juvenile courts due to the added expense of jury trials. In addition, youth who are transferred to adult courts may spend months in jail awaiting trial at a cost to taxpayers of \$100-\$175 per day.

Although intervention efforts traditionally have focused on treatment after the fact (e.g., incarceration and rehabilitation), decades of research suggest that prevention is the most effective strategy available for reducing youth antisocial and violent behavior (Bilchik, 1997; Dodge, 1999; Hawkins et al., 2000; Kashani, Jones, Bumby, & Thomas, 1999; Leone, Mayer, Malmgren, & Meisel, 2000; Snyder, 2000). Yet prevention is not a popular model in a society that is fixated on immediate gratification (Kauffman, 1999). By analogy, if a person develops an

illness for which he or she takes a particular medicine and then improves, the effects of the intervention are evident. However, if preventative steps are taken and the illness never develops, the effects of the preventative intervention are not clearly evident. Therefore, it is difficult to show a definite causal relationship.

Changing popular opinion and government policy in order to promote prevention and adopt proven models of best practice is a long and difficult process, especially when the issue involves behaviors that are dangerous and illegal (Sugai, Sprague, Horner, & Walker, 2000). The nature of antisocial and violent behavior tends to prompt drastic, knee-jerk interventions. Nevertheless, there is growing evidence that prevention research findings have begun to influence federal, state, and local policy in this country. Governmental agencies are beginning to call for empirically validated, proactive solutions to the problems of youth antisocial and violent behavior (Greenberg, Domitrovich, & Bumbarger, 1999). For example, the existence of an emotional or behavioral disorder and dropping out of school are two risk factors associated with antisocial and violent behavior. The 1997 Amendments to the Individuals with Disabilities Education Act (IDEA, P.L. 105-17) authorizes research involving the prevention of emotional disturbances and dropping out of school (Part D, section 672 & 674).

The purpose of this paper is to review the published literature on youth antisocial and violent behavior, including: (a) the characteristics of this population and the prevalence of antisocial and violent behavior, (b) the factors that place youth at risk for developing such behaviors, (c) the factors that help promote resiliency and protect youth who are exposed to these risks from developing

these patterns of behavior, and (d) the strategies and specific programs that address youth antisocial and violent behavior. A search of the published literature for this review included several steps. First, personal inquiries were made of professionals with relevant research and practice interests, which resulted in several current and background sources. Second, professional journals were searched from 1990 to the present, focusing on articles that describe longitudinal studies and meta-analyses. Third, relevant texts were searched for applicable information. Finally, a site search was conducted on the World Wide Web of organizations, databases, references, and on-line publications. Data were collected and synthesized from these sources pertaining to risk factors, including developmental pathways and contextual variables, resiliency factors, and empirically validated programs for preventing youth antisocial and violent behavior.

Youth Antisocial and Violent Behavior

A challenge in identifying youth, persons under the age of 18, who engage in antisocial and violent behavior, is defining what constitutes such behavior. Antisocial behavior is defined as "hostile or harmful acts to organized society" or "behavior that deviates sharply from the social norm" (Merriam-Webster, 2001). Mayer (1995) describes antisocial behavior as repeated violations of socially normative behavior, "usually involving aggression, vandalism, rule infraction, defiance of adult authority, and violation of the social norms and mores of society" (p. 468). There are two broad dimensions of behavior disorders, internalizing and externalizing. Internalizing disorders are directed inward and

involve behavioral deficits, such as withdrawal, isolation, and depression.

Externalizing disorders are directed outward and involve behavioral excesses, such as disturbing others, verbal and physical aggression, and acts of violence (Nelson, Rutherford, & Wolford, 1996). Violent behavior has been defined as behavior that includes physical injurious attacks and life-threatening use of drugs, murder, or suicide (Dwyer, Osher, & Hoffman, 2000) and the intent to cause physical injury, damage, or intimidation (Elliot, Hamburg, & Williams, 1998).

Antisocial youth who exhibit externalizing behaviors have been the primary focus of research and of school and community intervention programs. These are the youth that gain public attention because they display behaviors that cannot be ignored. If these youth commit law violations and are apprehended, they typically become involved with the juvenile justice system. Adjudication by the juvenile courts generally results in the youth being labeled as a juvenile delinquent. This is a legal term applied to an individual under the ages of 18 who has committed an illegal act¹. Although many youth are officially delinquent at some time during their adolescence, only about three percent are adjudicated each year (Kauffman, 2001). The majority of crimes committed by juveniles are non-violent crimes; violent crimes such as aggravated assault, robbery, forcible rape, or murder account for only about five percent of juvenile arrests (Snyder, 2000). The Surgeon General's report on youth violence (Satcher, 2001) documents a sharp rise in arrests of youth aged 10-17 for violent crimes from 1983 to 1994. As noted earlier, rates declined from 1994 to 1999, but the rate was still 15 percent higher than the 1983 rate. The report identifies

the availability of firearms to young people as a major factor behind this increase in youth violence.

Youth who exhibit internalizing behavior disorders may be extremely troubled but often are overlooked by school personnel and mental health professionals because they rarely act out. For this reason they are in danger of not receiving services for their developmental deficits (Heward, 2000). However, at some point such youth may exhibit externalizing behaviors in the form of suicide or targeted violence. Suicide is the third leading cause of death among youth. According to a report from the Centers for Disease Control and Prevention (Thornton, Craft, Dahlberg, Lynch, & Baer, 2000) the suicide rate for youth aged 15-19 increased by 11% between 1980-1997; during the same period, the rate for youth aged 10-14 the rate escalated by 109%.

Targeted violence is defined as “violent incidents where both the perpetrator and target(s) are identified or identifiable prior to the incident” (Reddy et al., 2001, p.3). Incidents of targeted violence by youth (e.g., multiple homicides) are rare. Since 1974 the U. S. Secret Service National Threat Assessment Center has identified 37 incidents of targeted school violence (Vossekuil, Reddy, Fein, Borum, & Modzeleski, 2000). Although these acts of violence are horrific and highly publicized in the media, the small number of cases makes it difficult to determine causal factors. Due to the secretive nature of planning and lack of reliable prevalence statistics, there are few conclusive studies about the risk factors involved for youth developing the patterns of behavior that are classified as targeted violence (Crume, 2000; Goodman, 2001).

On the other hand, a substantial amount of research has been devoted to the factors that may put youth at risk for developing overt antisocial and violent behavior (Allan, Nairne, & Majcher, 1996; Elliot et al., 1998; Hoagwood, 2000; Loeber & Stouthamer-Loeber, 1998; Mendel, 2000; Reddy et al., 2001; Walker & Sprague, 1999b). The following section describes the risk factors and conditions that are related to the development of youth antisocial and violent behavior.

Risk Factors

Risk factors are conditions or situations that are empirically related to particular outcomes (Reddy et al., 2001). Welch and Sheridan (1995) define a child who is "at-risk" as "any child or youth who, due to disabling, cultural, economic, or medical conditions, is (a) denied or has minimum equal opportunities and resources in a variety of settings and (b) is in jeopardy of failing to become a successful and meaningful member of his or her community (i.e., home, school, and business)" (p. 31). Everyone experiences some degree of risk in his or her life and the number, types, duration, and severity of risks may adversely affect an individual's development. Obviously, a variety of antecedents may precede deviant behavior, and multiple risk factors are associated with antisocial and violent behavior. The combinations and the complex relationship of these risks within certain developmental stages can increase the chances for antisocial and violent behavior (Dodge, 1999; Furlong & Morrison, 2000; Garfinkel, 1997; Greenberg et al., 1999; Hawkins et al., 2000; Kelly, Loeber, Keenan, & DeLamatre, 1997). Risk factors that contribute to youth antisocial and violent behavior can be categorized as internal (individual) or external (family,

school, community and peer relations) (Catalano, Loeber, & McKinney, 1999; Dodge, 1999; Hawkins et al., 2000).

Internal risk factors

Internal risk factors are described as individual, within the self, and intrapsychic (Roy, 2000). These individual risk factors can be further divided into physical and psychological characteristics. In their meta analysis of studies involving predictors of youth violence, Hawkins and colleagues (2000) found that physical predictors, such as pregnancy and delivery trauma, low birth weight, low resting heart rate, and brain circuitry dysfunction showed weak but positive correlation to later violent behavior. On the other hand, the studies of psychological characteristics, such as cognitive deficits, hyperactivity, concentration problems, restlessness, risk-taking, aggressiveness, early involvement in antisocial behavior, and beliefs and attitudes favoring deviancy showed stronger, consistent correlation with violent behaviors in boys. Limited intelligence also has been associated with poor problem-solving skills, poor social skills, and risk for aggression and violence (Calhoun, Glaser, & Bartolomucci, 2001). Studies show the IQ scores of delinquent youth are approximately eight points lower than those of the general population, regardless of race, family size, or economic status (Flannery, 1997). Other cognitive deficits, such as low levels of abstract and moral reasoning and inappropriate interpretation of others' behaviors, have been found to correlate with violent behavior in youth (Kashani et al., 1999).

Such cognitive deficits, of course, also are associated with educational disabilities. Moreover, a clear correlation has been established between the presence of an educational disability, school failure, and criminal behavior (Garfinkel, 1997). Although estimates vary, researchers agree that the prevalence of disabilities such as emotional and behavioral disorders (EBD), attention deficit hyperactivity disorder (ADHD), and learning disabilities (LD) is higher among adjudicated youth than in the general population of youth (Gresham, Lane, & Lambros, 2000; Kelly et al., 1997; O'Donnell, 2000). In fact, youth with disabilities are significantly over-represented in the juvenile justice system. While the prevalence of disabilities in public schools is estimated to be between 10 and 12 percent, rates have been found to range from 30 to 60 percent in juvenile correction facilities (Nelson et al., 1996). While the presence of a disability is not a direct cause of delinquency, school failure and educational disabilities significantly increase the risk for involvement with the courts and for incarceration (Scott, Nelson, & Liaupsin, 2001). In addition, many investigators agree that early involvement in antisocial or violent activity has been a stable and strong predictor of later violent behavior (Arllen, Gable, & Hendrickson, 1994; Hawkins et al., 2000; Laub & Lauritsen, 1998; Reilly, 1999; Walker, Stieber, Ramsey, & O'Neill, 1991). Early exposure to patterns of antisocial behavior acts like a virus, lowering the immune system and making the person vulnerable to a host of other diseases or negative behavior patterns (Sprague & Walker, 2000).

Another individual factor that has been linked to later criminal and violent behavior is the youth's antisocial beliefs and deviant attitudes. When youth

involved in violent events were asked what factors explained their behavior, many of them justified their behavior by explaining that their personal value system required retaliation against individuals who acted against them in some way (Furlong & Morrison, 2000). A prevailing public attitude is that misbehavior is a moral deficit within the individual (Scott & Nelson, 1999). However, individuals do not develop in isolation, but rather as integrated organisms who are influenced by factors in several life domains including the individual, family, school, community, and peer groups (Farmer, Quinn, Hussey, & Holahan, 2001). Thus, a dynamic interrelationship exists between the individual and all of his or her internal and external developmental systems. Hanson and Carta (1995) suggest that risk factor transactions occur because of the interdependence between a child and his or her environment. Therefore, efforts to understand internal (individual) risk factors must include study of external (family, school, community, and peer) factors that influence their appearance (Calhoun et al., 2001; Greenberg et al., 1999).

External risk factors

External risk factors are variables present in the environment that create contexts for daily living, specifically the home or family environment, the school setting, the neighborhood or larger community environment, and the persons with whom children associate (e.g., peer groups). Several conditions in the home have been found to predict early onset and chronic patterns of antisocial behavior in children and youth (McEvoy & Welker, 2000). These factors include parental criminality, harsh and ineffective

parental discipline, lack of parental involvement, family conflict, child abuse and/or neglect, and rejection by parents (Patterson, Forgatch, & Stoolmiller, 1998; Walker et al., 1991). The impact of these situations on a child's social and behavioral learning is obvious. For example, if the family model for problem-solving emphasizes aversive and punitive reactions to conflict situations, then the child will more likely use negative behaviors as a means to solve problems encountered outside the home. Patterson and his colleagues have produced a considerable body of research demonstrating how family members may teach children to be aggressive and noncompliant (Patterson, DeBaryshe, & Ramsey, 1989). That is, interactions between parents and children often include aversive exchanges in which children learn to respond to parent demands with negative behavior. Over time, this mutual exchange of aversive stimuli leads to established patterns of coercive interactions. Children who are exposed to these patterns of coercive interactions at home are likely to repeat them in school, increasing their risk for school failure (Sprague & Walker, 2000; Walker & Sprague, 1999b).

Moreover, the aggressive and noncompliant behavior displayed by these children in school is likely to occasion interactions between the school and home that parents find aversive. For example, school personnel are likely to call parents when their child's behavior is intolerable in school. Parents of high-risk children may be less involved in their child's education, have lower expectations for achievement outcomes, and have poor relationships with teachers (Wehby,

Harnish, Valente, Dodge, & Conduct Problems Research Group, in revision).

Because parents of children with behavior problems are likely to have histories of aversive interactions with the school, they may avoid involvement with school personnel on behalf of their children. Other risk factors associated with the family include parental attitudes favorable to violence, poor family management practices, and high family residential mobility (Hawkins et al., 2000).

Overall, the family's influence on a child's behavior is powerful and stable, as well as generational in scope (Arllan et al., 1994). The literature also suggests that a strong association exists between poverty and youth violence. In fact, low socioeconomic status may be the single most common denominator for risk of behavioral deviation (Scott & Nelson, 1999; Walker & Sprague, 1999b). Garnezy (1991) described other risk factors for children disadvantaged by poverty, which may include race (particularly Black and Hispanic), family structure (female headed households), maternal undernourishment, poor prenatal care, in-utero toxicity, and delivery complications. In addition, Adams (1988) found that children who grow up in poverty received as little as 40 hours' exposure to print material prior to entering school, compared to children of wealthy parents, who received an average of 1000 hours exposure. Hart and Risley (1995) also found that poor children tended to have less verbal interaction with their parents, resulting in significantly lower vocabularies. Thus, children from economically disadvantaged homes enter school with much poorer academic readiness skills. Typically, they are served by teachers from middle or upper income backgrounds, who use a

vocabulary and assume a level of familiarity with print materials that is far above that of many low income children (Scott et al., 2001).

The educational system would seem to be an antidote for poor or unstable home environments. Schools generally are thought of as places where children are universally cared for, supported, and nurtured. However, researchers have identified a number of factors in the school that may contribute to youth antisocial and violent behavior. Flannery (1997) listed several school-related risk factors that include: high student/teacher ratios, insufficient curricular and course relevance, and weak, inconsistent adult leadership. Additionally, inappropriate social behaviors may be learned or reinforced at school while appropriate behaviors are ignored. For example, when teachers or school personnel take a “hands-off” approach and ignore such infractions as name-calling, fighting, and harassment, they inadvertently condone such behaviors (Furlong & Morrison, 2000). This promotes a cycle that leads to increasing aggression in which lack of adult intervention allows the students to retaliate against aggressive peers with more aggression and violence. In effect, teachers who ignore students’ harassment of other students send a message that students are on their own to solve their interpersonal safety issues (Furlong & Morrison, 2000).

Other school factors correlated with youth antisocial and violent behavior include a lack of involvement in school activities by students, the absence of clear rules and school policies governing student behavior, and few allowances for individual differences in the school. For instance, when educators fail to establish clear rules or provide inconsistent consequences to pupils who break

rules, students may develop disrespect for school rules and learn to manipulate them to their own advantage (Mayer, 1995). Zero tolerance policies and an authoritarian discipline style that engages staff in power struggles with tend to exacerbate disruptions (Skiba & Peterson, 2000). In addition, when the academic curriculum and mode of instruction do not match the student's ability level, he or she may become frustrated or bored and less attached to the school altogether (Scott et al., 2001; Sprague & Walker, 2000). This relationship is evident in many students with emotional and behavioral problems, who exhibit patterns of academic underachievement in reading. Difficulties in reading also have been found to be extremely prevalent among children and youth who exhibit conduct disorder and delinquent behavior (Coleman & Vaughn, 2000).

To some extent, the relationship between behavior and academic problems may be due to differences in the amount of instructional interaction time with teachers that students who exhibit problem behavior experience compared with their typical peers. Teachers tend to interact less often with disruptive students (Carr, Taylor, & Robinson, 1991; Gunter, Jack, Depaepe, Reed, & Harrison, 1994). In a study of high-risk first graders, Wehby et al. (1993) found that teachers used twice as many negative commands with the high-risk group than they gave to a group of low-risk peers). Teachers also are more likely to exclude students with problem behavior from the classroom for disciplinary measures (Skiba & Peterson, 2000).

Research also has provided some insights into the types of social interactions that occur in classrooms for students who exhibit problem

behavior. In general, the most probable interactions begin with the teacher directing the student "to do" something and the student complying with the teacher's command (Shores et al., 1993; Simpson & Souris, 1988; Wehby, Symons, & Shores, 1995). These studies found little evidence of positive consequences for appropriate behavior. Shores et al. (1993) reported that teachers' rates of praise or positive statements were less than one per hour in many elementary classrooms. In the event that a student engaged in disruptive behavior the teachers typically responded with a command.

It appears that some parallel exists between coercive social interactions in schools and those in homes of children identified as at risk for developing antisocial or violent behavior (Wehby et al., 1993). As discussed earlier, these children may come to school with established responses to adult behavior that may increase the negative intensity of school-related activities, and that increase the probability that the child will engage in even more serious negative behavior.

The outcome of these patterns is that a cycle of academic failure and behavior problems is exacerbated, which often results in the student becoming detached from the school. Low school attendance, suspension, and dropping out of school are strong predictors of delinquency and violence (Schiraldi & Ziedenberg, 2001). In addition, it is estimated that more than half of students with mild disabilities in general education classrooms are at high risk for developing adjustment problems in adolescence and adulthood (Farmer et al., 2001). Limited opportunities for student involvement in school activities and a narrow

range of elective courses in the curriculum also add to a disconnect with school and subsequent school failure or dropping out.

Schools that lack staff trained to address their diverse and multi-need student populations may experience higher levels of youth antisocial and violent behavior. Although both general and special education teachers rate effective behavior management techniques among the most important teaching skills, classroom teachers report being most unprepared in this area (Skiba & Peterson, 2000). In a California study more than 50% of the teachers surveyed indicated that they did not feel prepared to address school violence issues (Furlong, Morrison, & Dear, 1994). General education teachers report that they are not able to effectively manage students with emotional and behavioral disorders, who are placed in their classrooms without appropriate supports (Kerr & Nelson, 2002). Ultimately, school risk factors may aggravate existing individual and family risk factors, increasing the likelihood that youth will develop antisocial and violent behavior (Elliot et al., 1998).

Certain physical characteristics found in schools also may contribute to youth antisocial behavior and violence. Overcrowding, poor building design, and portable buildings hamper communication and increase isolation (Flannery, 1997). Over-reliance on physical security measures (metal detectors, locker searches, surveillance cameras) appears to increase the risk of school disorder (Skiba & Peterson, 2000); and a school that appears unkempt adds to the general perception of a lack of order and safety (Schwartz, 1996).

Community factors that put youth at risk for antisocial and violent behavior include poverty and high levels of neighborhood disorganization (crime, drug-selling, gangs, and poor housing) (Calhoun et al., 2001). Communities with a high turnover of residents, that have a large proportion of disrupted or single-parent families, and with few adults to supervise or monitor children's and teenagers' behavior also pose risks for the development of youth antisocial and violent behavior (Flannery, 1997; Hawkins et al., 2000). Limited opportunities for youth recreation or employment, the availability of firearms, and violence in the neighborhood are other risk factors that have been associated with the community (Dobbin & Gatowski, 1996; Loeber & Farrington, 2000).

Media portrayals of violence have been well established as a risk factor. Flannery (1997) reviewed several large-scale studies that have linked media violence to children's tendency to exhibit higher levels of aggressive and sometimes violent behavior. Specifically, high levels of exposure to violence on television have been found to contribute to youth antisocial and violent behavior (Dwyer, 1999). Moreover, extensive television viewing, regardless of the content, has been found to negatively affect children's behavior (Kauffman, 2001). Video and computer games that promote "trigger-pulling" behavior (the purpose of which is to kill on-screen characters) reinforces rapid, impulsive, reflexive responses in children, that, in effect, contribute to the development of a tolerance for violence, if not to training in how to be violent (Dwyer, 1999).

Youth involvement with peers who exhibit high-risk and deviant behavior has been found to be one of the best predictors of delinquency (Farmer &

Cadwallader, 2000; O'Donnell, 2000). Adolescents who are unpopular with prosocial or conventional peers, and thus rejected by them, may find acceptance only in antisocial or delinquent peer groups. In fact, Farmer and Cadwallader (2000) found that preschool children who exhibit antisocial behavior begin to interact with their peers in ways that maintain and support the continuation of their antisocial behavior. In effect, children who associate with deviant peer groups go through a process of deviancy training, in which their peers teach them deviant norms and values. These relationships become stronger and more reinforcing over the years and the antisocial patterns and beliefs become more resistant to change (Henry, 2000).

Risk factors associated with youth antisocial and violent behavior are multifaceted, inter-related, and change over time. There is a constant and progressive interplay between the individual (internal risks) and his or her environment, such as family, school, community, and peers (external risks) (Farmer et al., 2001; Hanson & Carta, 1995). The larger the number of risk factors to which a child is exposed, the greater is the likelihood that he or she will engage in antisocial or violent behavior (Hawkins et al., 2000). However, risk factors for antisocial behavior and violence are not static and their effect changes depending on when they occur in a youth's development, in what context, and under what circumstances (Elliot et al., 1998).

Developmental Pathways and Contextual Variables

Longitudinal studies have established developmental pathways that lead to antisocial and violent behavior, which include learned patterns of aggression

and violence (Loeber & Farrington, 2000; Loeber & Stouthamer-Loeber, 1998; Patterson et al., 1998). When a pattern of antisocial behavior is set in motion, a snowball effect occurs, increasing vulnerability to later risks. While specific pathways vary, studies generally agree that a violent career begins with minor forms of conduct problems and antisocial or delinquent behavior. These acts continue to increase in frequency, seriousness, and variety, often progressing to serious violent behavior (Sprague & Walker, 2000; Walker & Sprague, 1999b; Walker et al., 1991).

Kelly and colleagues (1997) followed 1,517 boys aged seven to thirteen years old in the Pittsburgh Youth Study and observed three different types of behavioral pathways, each with similar risk factors and patterns that evolved over time. These include: (a) conflict with authority, such as defiance and running away, (b) covert actions, such as stealing and lying, and (c) overt actions, such as aggressive and violent behavior. The researchers concluded that the development of delinquent behavior is usually orderly and progressive.

Other researchers (e.g., Patterson et al., 1998; Sprague & Walker, 2000) have observed similar developmental patterns. Their research outlines a pattern that begins in the home with noxious behavior and negative family interactions. As outlined above, the pattern continues when children enter school, where they display antisocial behaviors learned at home, which are accompanied by subsequent academic problems, poor problem-solving skills, and peer and teacher rejection. Such behavior patterns lead to negative short-term outcomes, including low academic achievement, school failure, and truancy. Later, during

adolescence, association with antisocial peers and engagement in criminal activity may lead to destructive, long-term outcomes, such as dropping out of school, delinquency, and violence.

In addition, two distinct developmental trajectories for the onset of antisocial and violent behavior have been identified: early onset, which begins in childhood (before puberty) and continues into adolescence, and late onset, in which antisocial and violent behavior first emerges during adolescence (Loeber & Stouthamer-Loeber, 1998). Most youth who engage in antisocial and violent behavior first exhibit the pattern in adolescence (i.e. the late-onset trajectory). The majority of late starters show little or no evidence of early problem behaviors, behavioral disorders, or high levels of aggression (Satcher, 2001). These late starters have been called “experimenters” and their aggressive behavior does not usually persist. On the other hand, early starters, termed “persisters”, are much more likely to continue their aggressive behavior with increasing severity (Kelly et al., 1997). Patterson and colleagues (1998) summarize the pathway theory by noting that the early-onset trajectory, which begins with antisocial behavior in childhood, progresses to criminal acts and first arrest in adolescence, and then develops into a pattern of chronic offending. Other variables often contribute to this troubled path. For instance, a significant factor in the early development of children with antisocial behavior is disrupted parenting practices, suggesting a type of antisocial training in the home. Furthermore, as noted earlier, association with deviant peers during adolescence has been found to contribute to the development of or an increase in patterns of delinquent behavior (Loeber &

Farrington, 2000; Patterson et al., 1998). Thus, different risk factors may affect the individual during each developmental period. This implies that the same risk factors may have different predictive power, depending upon the time of their appearance. For instance, family factors may be more influential during childhood, whereas in adolescence peer factors may be more important. Thus, a number of interactive factors influence whether, or how, antisocial and violent behavior may develop, including: the frequency, intensity, and severity of risk factors across multiple settings; along with the occurrence of specific risk factors at particular developmental stages (Loeber & Farrington, 2000; Patterson et al., 1998; Satcher, 2001; Sprague & Walker, 2000).

Despite being exposed to the risk factors and pathway trajectories just described, many youth do not develop patterns of antisocial and violent behavior. In fact, approximately two-thirds of youth who are exposed to multiple risk factors across life domains do not engage in violent behavior (Bernard, 1995). The variable that appears to account for this phenomenon is the existence of certain "protective factors." Protective factors buffer or modify the effects of risk factors in a positive direction (Luthar & Cicchetti, 2000). Protective factors help persons develop resiliency.

Protective Factors

Resiliency has been described as a characteristic that allows a person to make appropriate behavioral choices in the presence of multiple risk factors. Resiliency may explain why a person can resist substance abuse, mental health problems, and criminal behavior even though he or she may be exposed to

significant stress and adversity (Finley, 1994; Spekman, 1993). The development of and/or the presence of protective factors which can help youth resist the influence of risk factors promote resiliency (Walker et al., 1996). Researchers have identified a number of protective factors that help deter youth from developing patterns of antisocial and violent behavior. These can be categorized in the same domains as risk factors; namely, internal (individual) or external (family, school, community, and peer relations) (Brooks, 1994; Garmezy, 1993).

Internal Protective Factors

Internal protective factors consist of personal attributes that help individuals overcome risks. Internal protective factors can be categorized as either physical or psychological. Physical characteristics such as good health and personal hygiene can be protective factors for children and youth. Psychological factors that may provide protection against antisocial and violent behavior patterns include: the ability to be flexible during periods of change (e.g., change in school or work schedule), having effective and efficient communication skills (e.g., asking for clarification on projects and assignments), the ability to use humor in deescalating negative situations, and the use of a wide range of social skills (Benard, 1995; Dobbin & Gatowski, 1996). The ability to understand and accept one's capabilities and limitations and having a positive outlook on situations also has been found to promote resiliency (Brooks, 1994; Spekman, 1993). Using coping and stress reduction strategies such as writing, music, painting, and dance are protective factors that foster resiliency by allowing an

individual to creatively express inner turmoil and find some order amongst confusion (Wolin & Wolin, 1994).

Cognitive competence, particularly language acquisition and the ability to read, is a powerful protective factor in a society that relies heavily on the written word (Davis, 1999). Maguin and Loeber (1996) conducted a meta-analysis of studies involving academic performance and delinquency, particularly those aimed at improving academics and reducing delinquency. Their results indicated that increases in academic performance were associated with decreases in rates of delinquency. Other cognitive factors that appear to be strong protective factors against antisocial and violent behavior involve emotional and moral development. Examples of emotional skills that foster resiliency include being in control of one's actions and reactions, delaying gratification, being proactive, setting goals, making decisions about what to do rather than just letting things happen, taking responsibility for one's decisions, and engaging others when needed (Davis, 1999; Speckman, 1993). Moral cognitive skills, such as expressing empathy and compassion for other people, are important in fostering resiliency. Studies in which children were taught concepts such as empathy, impulse control, and anger management reported concomitant reductions in aggressive behaviors (McMahon, Washburn, Felix, Yakin, & Childrey, 2000). Research also has shown that children involved in service learning projects and activities that contributed to the well being of others had less problematic behaviors than children who were not involved in such activities (Davis, 1999; Finley, 1994).

It should be noted that, although the above factors are described as internal, children do not make themselves resilient. Most of these personal characteristics are shaped by interactions between the child and his or her environment (Calhoun, Glaser, & Bartolomucci, 2001; Luthar & Cicchetti, 2000). For example, a child raised in a family with poor conflict resolution skills is likely to develop much different problem-solving strategies than a child from a family that models fair and democratic approaches to resolving conflicts.

External Protective Factors

Like risk factors, external protective factors can be categorized in home, school, and community domains. Resiliency researchers have identified three themes involving external protective factors that seem common to each of these domains. These include (1) caring relationships, (2) positive and high expectations, and (3) opportunities for meaningful participation (Benard, 1995; Davis, 1999; Grotberg, 1995).

Many factors in the home can promote these. For example, an attachment to at least one family member who engages in proactive, healthy interactions with the youth constitutes an important caring relationship. Research on early attachment has shown that a person's expectations about how others are likely to behave toward him or her are formed by the interactions with early caregivers (Davis, 1999). In fact, Fonagy (2001) found that children who were insecurely attached demonstrated anxious and fearful behaviors and they viewed the world and people as threatening, in contrast to children who were securely attached to an early caregiver. This individual (e.g., parent, sibling, grandparent, aunt/uncle)

may provide the youth with a sense of belonging and purpose within the family unit and value his/her abilities (i.e., meaningful participation). They also may communicate a belief to the child that he/she can and will be successful (i.e., setting high expectations) (Grotberg, 1995). Parents also contribute to the development of their child's resilience by setting rules in the home, showing respect for their child's individuality, and by being responsive and accepting of their child's behavior (Hanson & Carta, 1995).

In the schools, both teachers and administrators can play an integral part in the development of resiliency of youth exposed to multiple risks. Schools help students develop resiliency by providing protective factors such as a positive and safe learning environment, by setting high, yet achievable, academic and social expectations, and by facilitating academic and social success (Furlong & Morrison, 2000). One way to increase respect for students is to include them in the development of school policies. This may help insure that such policies will be respected and enforced (Schwartz, 1996). Youth who belong to a socially appropriate group (e.g., academic club or social organization) that is sponsored or supported by the school also are less likely to demonstrate antisocial and violent behavior (Catalano, Loeber, & McKinney, 1999). School personnel, especially teachers, can provide protective factors for children and youth by conveying an attitude of compassion, understanding, and respect for the student. A teacher is the most frequently encountered positive role model outside the family and the development of a caring relationship between a student and teacher may be a strong protective factor. Teachers who offer trustworthiness,

sincere interest, individual attention, and who use rituals and traditions in the classroom often are the determining factor of whether a child opens his/her mind to learn (Benard, 1997; Davis, 1999; Garmezy, 1991).

According to the Center on Crime, Communities, & Culture (1997) quality educational interventions may be the most desirable and economical protective factors against delinquency. For example, teaching reading skills to juveniles has been demonstrated to be more effective than boot camps in reducing recidivism rates. The report also observed that prevention is more cost effective than building prisons. Alternative educational programs that include individualized instruction, rewards for positive behavior, goal-oriented work, and small student populations have been effective in reducing dropout rates in many communities (Tobin & Sprague, 2000). Many experts believe that schools are perfectly positioned to play a key role in the identification, prevention and treatment of at-risk juveniles (Catalano et al., 1999; Farmer et al., 2001; Garmezy, 1991; Greenberg et al., 1999; Guetzloe, 1999; Loeber & Farrington, 2000). Since antisocial behavior early in a child's school career is a strong predictor of delinquency in adolescence, many children who are at-risk for antisocial behavior and violence can be identified in the earliest grades of school (Walker et al., 1996). Most students who are at-risk perform below their expected academic levels and this academic deficit suggests the critical need for an academic component in prevention and remediation (Johns, 2000). Since academic engagement generally is incompatible with inappropriate social behavior, effective violence prevention programs should strive to increase academic

engagement and build competence in academic tool subjects (Ruhl & Berlinghoff, 1992; Scott et al., 2001).

Wandersman and Nation (1998) noted that research associating protective factors with neighborhoods and communities is sparse, but neighborhoods can provide a context where youth are exposed to positive influences. They also presented a view of neighborhoods as a key to developing resiliency in the face of economic disadvantage. Various aspects of a community that represent a network of social structures and organizations can deter a person from engaging in antisocial and violent behavior. For instance, a community mentor can be instrumental in teaching a child strategies for avoiding trouble and interacting positively with others (Van Acker & Wehby, 2000). A mentor also can be the link between the school and family for supporting and encouraging the strengths and abilities of youth.

Career counseling and job training may function as protective factors since youth who are employed are less likely to be arrested (Calhoun, Glaser, & Bartolomucci, 2001). Other community initiatives that foster and support resiliency include recreational opportunities, volunteer activities, and well-organized after-school programs (Walker et al., 1996). Since youth are more likely to commit crimes during after-school hours than at any other time of day, community-based after-school programs are an effective crime prevention strategy. Several evaluations of after-school programs have demonstrated that these programs reduce juvenile crime and drug use. For example, the Memphis Shelby Crime Commission (Memphis Shelby Crime Commission, 2001) reviewed

after-school programs in communities and found several that were successful in reducing the local crime rate. One of the studies they reviewed involved a Canadian public housing project that provided low-income children ages 5 to 15 with an intensive after-school recreational program. They found that arrests of juveniles in the after school program declined 75 percent compared with their arrest rates prior to entering the program, whereas arrests of juveniles in a comparison group with a minimal after school program increased 67 percent during the same time period. A Carnegie Council study (Terzian, 1994) concluded that community-based youth programs can provide the critical community support necessary, in conjunction with family- and school-focused efforts, to prevent delinquency. The Council found that community-based programs provide opportunities for youth to develop a sense of importance, well being, belonging, and active participation.

Peer relationships are important sources of support for children and youth, and prosocial peers may provide protection from the other risks that youth face. Furthermore, families and school personnel can help children and youth develop positive social relationships (Henry, 2000; Werner, 1995) by teaching social skills and drawing students who are isolates into prosocial groups (Wood & Huffman, 1999). Farmer and Cadwallader (2000) suggest that altering the social context or peer factors that support and maintain the antisocial behavior may enhance interventions geared toward reducing a youth's antisocial behavior. They recommend using functional behavior assessment procedures and to combine contextual and individual factors in developing assessment-based

interventions. Positive peer relationships are strong protective factors because of the powerful influence (i.e., support and modeling) of peer groups. Peer interactions are frequent, intense, diverse, and allow opportunities for experimentation, making them influential in shaping one's identity and autonomy (Davis, 1999).

In summary, researchers and practitioners advocate for prevention of antisocial and violent behavior by fostering resilience in individuals who are exposed to multiple internal and external risk factors. The goal is to identify risk and protective factors, determine when in the life course they typically occur and how they operate, and then determine how to intervene at just the right time to be most effective (Satcher, 2001). Multiple internal and external protective factors can be targeted and strategies can be developed to reduce the influence of risks on youths' propensity for antisocial and violent behavior (Benard, 1995; Finley, 1994). The following section describes specific strategies and programs that focus on children and youth who exhibit, or are at high risk for, antisocial and violent behavior. Research evidence of the impact of these approaches on youth will be emphasized.

Interventions that Address Youth Antisocial and Violent Behavior

The approaches that have been taken in addressing the problems of youth antisocial and violent behavior may be classified as involving either reactive or proactive strategies. Reactive approaches consist of interventions that involve treatment of existing problems after the fact, while proactive strategies address potential risks and attempt to prevent problems from becoming manifest. A

critical variable in evaluating approaches used to address youth antisocial and violent behavior is the presence or absence of empirical support. It is unfortunate that many current strategies lack evaluation research, and appalling that some strategies continue to be used even though they have proven to be ineffective (Nelson, 1997).

Approaches Lacking Empirical Support

Traditionally, strategies for addressing youth antisocial and violent behavior have focused on treatment of existing problems and rehabilitation of the offending youth (Winett, 1998). Such strategies usually have been implemented after the fact and involve aversive sanctions (e.g., corporal punishment, suspension, expulsion, and incarceration). The results of these approaches have not been positive (Leone et al., 2000). Unfortunately, most of the resources committed to addressing youth antisocial and violent behavior have been invested in untested programs (Flannery, 1997) that lack accountability for the expenditures of public funds (Kramer, 2000; Mendel, 2000).

Without empirical evidence, it is impossible to determine which programs have had significant positive effects. This lack of accountability, along with practitioners' inattention to evaluation and empirical results, often have led policy makers to advocate for practices that are fashionable even when research studies offer evidence that they are ineffective. For example, juvenile correctional boot camps, based on the popular notion that delinquent youth need a strong dose of discipline, continue to operate in several states despite studies showing that graduates' recidivism rates are as high or higher than youth placed in other

correctional programs (Office of Juvenile Justice and Delinquency Prevention, 1996; Satcher, 2001). Prison-based education and literacy programs have been shown to be more effective than boot camps in reducing the recidivism rate of incarcerated youth (Center on Crime, Communities, and Culture, 1997).

Another popular treatment choice for adjudicated youth is individual or group psychotherapy, although research has shown that these programs produce no effect on subsequent offending (Mayer, 1995). According to Hoagwood (2000), interventions that involve the manipulation of external factors exert a stronger influence on behavior than attempting to build internal factors through psychotherapy. In particular, group therapy may create a reinforcing context for antisocial behavior, in that the social attention that other youth provide for deviant behaviors in a group setting may help exacerbate the problem rather than effectively treating it. The effects of peer versus adult influence on youth behavior were dramatically illustrated in a classic study by Buehler, Patterson, and Furniss (1966). These researchers studied the contingencies of reinforcement in three institutional programs for delinquent girls. They found that the behaviors of the staff and the inmates provided environments that fostered and sustained antisocial patterns of behavior. On the one hand, the staff inconsistently punished antisocial behavior, while consistently ignoring instances of desired (prosocial) behavior exhibited by the girls. Moreover, staff tended to remain on the periphery of the group, which reduced their ability to supervise and respond appropriately to the girls' behavior. On the other hand, the peer group consistently punished prosocial behaviors and reinforced antisocial behaviors.

The models of antisocial behavior provided by peers were made all the more potent by the lack of consistent staff intervention.

Perhaps the most powerful reason for increasing the focus on empirically proven programs and strategies for youth crime prevention and reduction is that some programs for delinquent youth actually exacerbate offending. Widespread advocacy for such social policies as “zero tolerance” and “adult time for adult crime” may reinforce popular opinions that such policies are effective when, in fact, they are not. Transferring youth to adult jails to protect the public may sound tough and righteous, yet studies have shown that youth who spend time in adult jails are more likely to be re-arrested for increasingly serious crimes compared to youth who have been in juvenile facilities (Mendel, 2000).

Empirically Supported Approaches

Recognition of youth violence and aggression as a public health epidemic supports the contention that most traditional approaches to this problem have not worked as (Dwyer, 1999; Edmonson & Bullock, 1998; Nelson, 2000; Prothrow-Stith, 2001). Epidemics that threaten the health and well being of a society are known to progress through stages or waves (Prothrow-Stith, 2001). The first wave affects the most vulnerable populations, and with regard to youth violence, this wave occurs in poor, urban neighborhoods and males predominantly are involved. Subsequent waves affect less vulnerable populations, and the youth violence epidemic has spread to America’s middle class, to schools in small towns and rural areas. The third and fourth waves appear to involve females and

young children. To stop the spread of this serious epidemic, the use of invalidated or ineffective strategies must be abandoned.

As with other health disorders or diseases, the earlier the intervention is applied to antisocial and violent behavior, the more amenable it will be to treatment. Preventive interventions prior to the appearance of significant symptomatology are ideal (Greenberg et al., 1999). With regard to the health of our nation's youth, prevention is at the forefront of our goals, and an important component of any prevention campaign includes regular check-ups and screenings for health problems. While schools systematically screen children for hearing and vision problems, such screening rarely is done to identify students that may be at risk for antisocial and violent behavior, even though strategies for accomplishing this are available. For example, a system of multiple-gated screening has been developed to identify students at-risk for emotional and behavioral disorders (Sprague & Walker, 2000). The Systematic Screening of Behavior Disorders (SSBD) (Walker & Severson, 1990) is an example of this screening procedure and involves the use of the following gates: (a) teacher ranking of students on a behavioral dimension scale, (b) teacher rating of the highest ranked students on a critical events checklist and combined frequency index, and (c) direct observation of students whose checklist and rating scores exceed norm-referenced cutoffs. Individualized intervention plans and social skills training can be implemented with the students who are identified as at-risk after being passed through all three gates. Walker and his colleagues (Walker,

Severson, & Feil, 1994) also have developed a systematic screening instrument for use at the preschool level.

For decades, public health agencies have advocated prevention as the best strategy against epidemics. Recognition of the public health view on epidemiology, along with the extensive research on risk and resiliency factors has led many juvenile justice officials, politicians, and educators to recognize that prevention is the key component of any effort to reduce youth antisocial and violent behavior (Dodge, 1999). Strategies and programs with demonstrated prevention effects are reviewed next.

In response to public health epidemics, the Institute of Medicine defined a proactive, three-tiered framework that incorporates strategies of prevention intervention at graduated levels of intensity (Greenberg et al., 1999; Leone et al., 2000). This multi-level model of prevention has been widely used in public health, and has shown promise in social services, education, mental health, social work, and crime prevention. As used for preventing youth antisocial and violent behavior, the model is described in terms of primary, secondary, and tertiary prevention (Fitzsimmons, 1998; Guetzloe, 1999; Sprague & Walker, 2000; Walker et al., 1996).

Primary prevention strategies are applied through universal interventions and focus on enhancing protective factors for the general population that has not been identified as at-risk. The purpose of primary prevention is to prevent initial occurrences of a problem. Primary prevention programs may be more readily accepted and adopted than other intervention approaches since they are

positive, proactive, and their potential for stigmatizing participants is minimal (Greenberg et al., 1999). An example of a primary prevention strategy that addresses antisocial and violent behavior is a school-wide system of positive student discipline that is applied across all individuals through the efforts of all school staff.

Secondary prevention strategies are applied through targeted interventions and include efforts geared to specific problems or individuals for which primary prevention strategies have not been effective. This selected group is at a heightened risk of antisocial or violent behavior, and strategies are aimed at preventing re-occurrences of undesired behavior. Targeted prevention activities might include providing support to at-risk children and youth through mentoring and social skills instruction. Secondary prevention strategies are aimed at providing extra protection for those individuals who are exposed to multiple risk factors related to antisocial and violent behavior (Guetzloe, 1999).

Tertiary prevention strategies are applied through intensive interventions and include efforts addresses those individuals for whom secondary prevention strategies have not been effective. Tertiary prevention techniques usually are applied to a problem that is already out of control (Yell & Rozalski, 2000) and the goal is rehabilitation and preventing the condition from overwhelming the person and his/her environment. Youth who exhibit serious problems that constitute a chronic condition are candidates for strategies at this level. An example of tertiary prevention is a wraparound plan coordinated by the school for a student who also is being served by the juvenile justice system. This plan could involve services

across school, home, and community life domains (Eber, Nelson, & Miles, 1997; Walker & Sprague, 1999b). Families may receive such support as training on behavior management skills as well as how to meet their own continuing needs.

Collaboration of efforts is important for effectively preventing youth antisocial and violent behavior. For instance Cocozza (1992) describes the "Jerricho Principle", a metaphor for an integrated approach in which the walls between disciplines and sectors of a child's life are brought down through transdisciplinary collaboration. Such a service model combines and coordinates school, family, social, and psychological treatments into one comprehensive program. The metaphorical walls between politicians, bureaucrats, and various professionals and their individual agendas also should tumble down in order to provide a collaborative system of care. Additionally, institutional walls that separate schools, clinics, recreation, employment, and other community programs should come down and services taken to the youth's natural environment. Successful prevention programs attend to the social and ecological contexts in which the problem occurs (Furlong & Morrison, 2000; Winett, 1998).

Concern that there is an epidemic of youth violence has prompted development of a variety of potentially effective prevention programs across the nation. Components of these programs vary widely depending on the particular needs of the target population and the availability of funds and other resources (Schwartz, 1996). Effective program components and successful programs are described in the following section.

Successful Prevention Programs

In order to effectively and efficiently address the problem of youth antisocial and violent behavior, it is important that policy makers, administrators, program planners, and all practitioners make use of empirical data regarding the relationships between developmental pathways, risk, and resiliency factors. Many schools employ some types of violence prevention strategies and programs. Unfortunately, most of these programs operate in the absence of evidence of their effectiveness (Center for the Study and Prevention of Violence, 2000; Mendel, 2000), even though projects generally are required to have a plan for demonstrating empirically valid outcomes in order to qualify for extramural support (especially federal funds) (Flannery, 1998). The need for rigorous evaluation of programs is critical since many programs that have claimed to prevent antisocial and violent behavior have been shown to be ineffective, and a few have actually exacerbated the problem (Elliot et al., 1998; Flannery, 1997, 1998; Satcher, 2001).

Research addressing prevention efforts involving schools, families, and communities has demonstrated that the most effective prevention programs target appropriate risk and protective factors in different contexts, and include components that have been demonstrated as effective (Elliot et al., 1998). This approach is based on evidence that antisocial and violent behavior is affected by numerous risk and protective factors that cover several environmental contexts (individual, family, school, community, and peer group) and that these factors differ according to the ages of the youth (Satcher, 2001). Effective programs combine components that address both individual and contextual risks and build

individual skills and competencies. Effective programs also target the improvement of the social climate, and encourage the involvement in prosocial peer groups.

Skiba and Peterson (2000) reviewed public school violence prevention programs in order to identify components of successful programs. They observed that effective programs include a comprehensive combination of the following components: conflict resolution and social skill instruction, classroom management strategies, parent involvement, early warning and screening, school- and district-wide data systems, crisis and security planning, school-wide discipline and behavioral planning, functional assessment, and individual behavior plans.

Research indicates that effective program implementation is at least as important to a program's success as are the characteristics and content of the program itself (Satcher, 2001). A major reason that many programs fail to demonstrate effectiveness may be flawed implementation. The National Study of Delinquency Prevention in Schools (Gottfredson et al., 2000) investigated factors that may explain successful implementation of prevention programs. Based on their sample of 1,279 schools, the authors concluded that strong organizational support (i.e., high quality training and supervision), well-structured programming (i.e., explicit manuals, standards, and quality control), and integration into normal school operations are important for successful program implementation. Support from the principal, along with standards and methods for quality control, also are

critical. In addition, Gottfredson et al. stressed the importance of useful evaluations of prevention practices.

In response to the need to evaluate violence prevention programs, several agencies such as the Center for the Study and Prevention of Violence (CSPV) (2000), the American Federation of Teachers (AFT) (American Federation of Teachers, 2000), The Office of the Surgeon General (Satcher, 2001), and The Safe, Disciplined, and Drug-Free Expert Panel (Weinheimer, 2001) have outlined strict, scientific evaluation criteria. These agencies have identified effective violence prevention programs that meet their criteria².

The CSPV has named eleven programs that meet their high scientific standards in a series of "Blueprints". The Blueprints provide practical descriptions of effective programs, realistic cost estimates for the interventions, assessments of the capacity needed to ensure success, and potential barriers and obstacles to implementing the interventions. The CSVP identified these eleven exemplary violence prevention programs based on high scientific standards of program effectiveness including: (a) application of experimental designs with random assignment, (b) evidence of significant prevention or deterrent effects, (c) multiple site replication, and (d) sustained effects. Many of the programs reviewed demonstrated initial success in deterring delinquency, drug use, and violence during the course of treatment but only the Blueprint programs established long term effects that generalized to natural settings. The eleven programs identified by CSVP as Blueprints are Functional Family Therapy (FFT), Multidimensional Treatment Foster Care (MTFC), Multisystemic Therapy (MST),

Prenatal Home Visitation by Nurses, Life Skills Training (LST), the Midwestern Prevention Project (MPP), the Bullying Prevention Program, Promoting Alternative Thinking Strategies (PATHS) program, Big Brothers Big Sisters of America (BBBSA), the Quantum Opportunities Program (QOP), and The Incredible Years Series.

The American Federation of Teachers Task Force on Redesigning Low-Performing Schools developed a series called “What Works” to provide its members with information on researched-based, promising programs that, when implemented with integrity, improve student outcomes. The issue in this series focusing on discipline and violence prevention programs (Five Promising Discipline and Violence Prevention Programs) gives detailed descriptions of five programs that met their criteria, which include the following: (a) evidence of three or more quantitative evaluations showing positive outcomes, (b) effects at statistically significant levels, (c) third party, independent evaluations, (d) replication of effectiveness at multiple sites, (e) adequate support materials available for replication, and (f) effects showing sustainability. The five programs identified through these criteria are: The Good Behavior Game, Consistency Management & Cooperative Discipline, The Bullying Prevention Program, I Can Problem Solve, and Promoting Alternative Thinking Strategies (PATHS).

The Centers for Disease Control and Prevention (CDC), the National Institutes of Health (NIH), and the Substance Abuse and Mental Health Services Administration (SAMHSA) collaborated to develop the Surgeon General's Report on Youth Violence. The intent of this report is to summarize and disseminate

current knowledge regarding youth violence and to promote programs that are effective in preventing youth violence. The evaluation criteria for the model violence prevention programs recommended by the Office of the Surgeon General include: (a) an evaluation that used a rigorous experimental design (experimental or quasi-experimental), (b) results that showed significant deterrent effects on violence or serious delinquency or any risk factor for violence with a large effect, (c) replication with demonstrated effects, and (d) sustainability of effects. Seven programs met the criteria and made their list of model programs, including Functional Family Therapy, Multidimensional Treatment Foster Care, Multisystemic Therapy, Prenatal Home Visitation by Nurses, the Seattle Social Development Project, Life Skills Training, and the Midwestern Prevention Project.

The Safe, Disciplined, and Drug-Free Expert Panel was established by the Assistant Secretary of Educational Research and Improvement in the U.S. Department of Education for the purpose of evaluating programs and recommending those that should be designated as exemplary or promising. The seven criteria used by The Safe, Disciplined, and Drug-Free Expert Panel to identify exemplary or promising programs include: (a) relevant evidence of efficacy based on sound methodology, (b) clear and appropriate goals for the intended population, (c) rationale, content, and processes are aligned with the program's goals, (d) content is appropriate for the characteristics and needs of the intended population, (e) the intended population is effectively engaged in the program, (f) the program is integrated into the school's education mission, and (g) information and guidance are provided for replication. Nine exemplary

programs were identified by The Safe, Disciplined, and Drug-Free Expert Panel, including: Athletes Training and Learning to Avoid Steroids (ATLAS), The National Center on Addiction and Substance Abuse, Striving Together to Achieve Rewarding Tomorrows (CASASTART) at Columbia University, Life Skills Training (LST), Oregon Social Learning Center Treatment Foster Care, Adolescent Learning Experiences in Resistance Training (Project ALERT), Project Northland- Alcohol Prevention Curriculum, Project T.N.T.-Towards No Tobacco Use, Second Step: A Violence Prevention Curriculum, and Strengthening Families Program: For Parents and Youth 10-14.

Although the specific criteria employed by each of the agencies differed, they contain several common elements. These are: a) the use of a sound experimental or evaluation design and appropriate analytical procedures, b) empirical validation of effects, c) clear implementation procedures, d) replication of outcomes across implementation sites, and e) evidence of sustainability.

Of the prevention programs identified by The CSPV, The AFT, The Office of the Surgeon General, and The Safe, Disciplined, and Drug-Free Expert Panel, eight met criteria for at least two of these initiatives. These include Functional Family Therapy, Multidimensional Treatment Foster Care, Multisystemic Therapy, Prenatal Home Visitation by Nurses, Life Skills Training, the Midwestern Prevention Project, the Bullying Prevention Program, and the Promoting Alternative Thinking Strategies program. These eight programs are described in the following paragraphs according to their level of implementation: either primary or universal (addressing general populations of youth), secondary

(addressing youth at high risk for antisocial or violent behavior), or tertiary (addressing youth who are seriously delinquent or violent)³. Reports of research documenting the effectiveness of these programs are summarized from the CSVP website (<http://www.colorado.EDU/cspv/>).

The Bullying Prevention Program is a universal intervention for the reduction and prevention of bully/victim problems. It has been designated as a Blueprint Program by CSVP and a promising program by the AFT. Bullying is defined as aggressive behavior or intentional harm that is carried out repeatedly and over time, and occurs within an interpersonal relationship characterized by an imbalance of power. Bullying behavior often occurs without provocation and has been categorized as peer abuse. Research has shown that bullying is not just an isolated behavior on the part of its perpetrators, but rather the beginning of an antisocial and rule-breaking behavior pattern. Students (particularly boys) who bully others also are likely to engage in such delinquent behaviors as vandalism, shoplifting, truancy, and frequent drug use (Olweus, Limber, & Mihalic, 1998).

The basic premise of the Bullying Prevention Program is to arrest the development of an antisocial behavioral pathway and to redirect the student's behavior in more prosocial directions. The program usually is implemented in school, with school staff having the primary responsibility. Another premise of the program is that most efforts to create a better school environment must be guided by the adults at school, but that students also should be actively involved. The Bullying Prevention Program is designed for elementary, middle, and junior

high schools, and all of the students within a school participate in most aspects of the program. Components of the program are implemented at three levels: school-wide, in classrooms, and with individual students. In the school-wide portion, all students complete an anonymous questionnaire which is designed to assess the nature and prevalence of bullying at each school. A Bullying Prevention Coordinating Committee is formed to plan interventions, and coordinate all aspects of the school's program. The classroom components include establishing and enforcing class rules against bullying, and holding regular class meetings with students. The individual components include targeted interventions with children identified as bullies and victims, and discussions with parents of involved students. Counselors and school-based mental health professionals also may be consulted. The Bullying Prevention Program has shown substantial results in reducing boys' and girls' reports of bullying and victimization. In addition, students report decreases of general antisocial behavior such as vandalism, fighting, theft, and truancy, and significant improvements in the "social climate" of the school (Olweus, Limber, & Mihalic, 1998).

The PATHS program is an educational intervention designed to be used by educators and counselors in a multi-year, universal prevention model. It has been designated as a Blueprint program by the CSVP and a promising program by the AFT. The goals include promoting emotional and social competencies and preventing or reducing behavioral and emotional problems in elementary school-aged children. This prevention model is based on the following five principles.

First, the school environment is fundamental to a child and can be a central locus of change. Second, a holistic approach that includes a focus on affect, behavior, and cognition is necessary to influence significant changes in children's social and emotional competence. Third, children's ability to understand and discuss emotions is based on their ability to first inhibit their own behavior by using verbal self-control. Fourth, a central component of effective problem-solving and social interaction depends on children's ability to understand their own and others' emotions. Fifth, it is important to build protective factors that decrease maladjustment. All of these skills help increase children's ability to engage in positive social interactions and provide for a wide variety of learning experiences (Greenberg & Kusche, & Mihalic, 1998).

Teachers receive training and support from a curriculum consultant and they are provided with systematic, developmentally based lessons, materials, and instructions for teaching their students emotional literacy, self-control, positive peer relations, social competence, and interpersonal problem-solving skills. Results for participants have included improvements in self-control, understanding and recognition of emotions, ability to tolerate frustration, effective use of conflict-resolution strategies, and thinking and planning skills. Other reported benefits include decreases in anxiety, depressive symptoms, and conduct problems, including aggression (Howell, 1995).

The LST program is identified as a model program by the CSVP, the Surgeon General's report, and The Safe, Disciplined, and Drug-Free Expert Panel. The LST is a drug-abuse prevention program implemented as a

secondary prevention strategy that stresses the understanding of the causes of smoking, alcohol, and drug use/abuse. Based on the belief that drug abuse is the result of a dynamic interaction of an individual and his/her environment, LST uses a person-environment interaction model conducted in school classrooms over a three-year period. The LST approach recognizes that multiple pathways lead to drug use and abuse. The accumulation of risk factors increases the likelihood that an individual will become a drug user and eventually a drug abuser. The LST program consists of three major components: teaching students general self-management skills, teaching general social skills, and providing information and skills specifically related to the problems of drug abuse. This program consistently has shown dramatic reductions of tobacco, alcohol, and marijuana use. Studies also have documented long-lasting success with a wide range of adolescents (Botvin, Mihalic, & Grotmeter, 1998).

The Surgeon General's report and the CSVP both recognized the MMP as a model program that is implemented as a secondary prevention strategy. The MMP is a comprehensive, community-based, multi-faceted program for preventing adolescent drug abuse. It consists of teaching and reinforcing resistance and counteraction skills via multiple avenues or channels over a five-year period. School, home, and community organizations are the three major channels, and mass media messages are used throughout all channels. In addition, community organizations form health policy subcommittees in order to implement initiatives such as limiting cigarette smoking in public areas. The goal of MMP is to help youth recognize the tremendous social pressures that exist to

use drugs and to help them refrain from using drugs. Parents also participate in an extended prevention program in the home with their adolescents. Active learning techniques are used, including modeling, role playing, and discussion. The parental program involves parent-principal meetings and parent-child communications training. A consistent message supporting nondrug use is delivered via mass media. Some reported MPP outcomes include reductions in daily smoking, marijuana, alcohol, cocaine, and crack use in intervention schools. Program youth also demonstrated reductions in the need for drug abuse treatment two years after high school. Other reported results include reductions of parent alcohol and marijuana use, and an increase in positive parent-child communications about drug use prevention (Pentz, Mihalic, & Grotpeter, 1998).

Prenatal and Infancy Home Visitation by Nurses has been recognized as a model program by both the Surgeon General's report and the CSVP. This program is implemented as a secondary strategy and consists of intensive and comprehensive intervention by nurses during a woman's pregnancy and the first two years after the birth of the first child. The program is designed to serve low-income, at-risk pregnant women bearing their first child and incorporates a variety of other health and human services in order to achieve its goals. The three major goals of the program include (1) improvement of pregnancy outcomes; (2) improvement of the child's health and development; and (3) improvement of the mother's personal development. During the home visits, the nurses promote maternal health-related behaviors, providing proper care to

children, the use of family planning skills, educational achievement, and participation in the work force (Olds, Hill, Mihalic, & O'Brien, 1998).

The Prenatal and Infancy Home Visitation by Nurses program is based on the theories of human ecology, self-efficacy, and human attachment with a solid understanding of the risk factors that lead to negative outcomes and how to reduce those risks by promoting adaptive behavior and protective factors. This program has shown success for low-income women and their children by: (a) improving the women's prenatal health-related behaviors (particularly related to cigarette smoking and diet), (b) reducing pregnancy complications, (c) reducing the number of cases of child abuse, (d) reducing neglect and injuries to children, (e) reducing the rates of subsequent pregnancy, (f) increasing the space between the first and second born children, (g) reducing welfare dependence, (h) and reducing substance abuse and criminal behavior on the part of mothers (Howell, 1995).

Functional Family Therapy is considered a model program according to the Surgeon General report and a Blueprint program identified by the CSVP. It is a secondary prevention and intervention program that began in 1969 for at-risk youth and their families. The program, which emphasizes methods that enhance protective factors and reduce risk, aims to help troubled youth in a family context delivered in three phases. The first phase, engagement and motivation, incorporates techniques to impact maladaptive perceptions, beliefs, and emotions held by participating youth. Phase two is the behavior change phase in which individualized and developmentally appropriate techniques such as

communication training, specific tasks and technical aids, basic parenting skills, and contracting and response cost are used to alter target behaviors. Phase three, generalization, focuses on individualized family functional needs, their interaction with environmental constraints and resources, and establishment of an alliance with the therapist. The FFT program has shown success in reducing the rates of offending by participants, reducing the severity and number of foster or institutional placements for participants, and preventing their siblings from offending (Alexander et al, 1998).

Both the Surgeon General's report and the CSVP identified MST as a model program. Multisystemic Therapy is offered at the tertiary level as an intensive intervention that targets chronic, violent, or substance-abusing juveniles. Based on evidence that serious antisocial behavior is determined by the interplay of individual, family, school, peer, and neighborhood factors, the multisystemic approach treats individuals within interconnected systems that include individual, family, school, peer, and neighborhood domains. This is an individualized and goal-oriented treatment program that targets those specific factors in each youth's social network that contribute to his or her antisocial behavior. The goals of MST are to empower parents with the skills and resources needed in raising teenagers and to empower youth to cope with family, peer, school, and neighborhood problems. Intervention strategies include strategic family therapy, structural family therapy, behavioral parent training, and cognitive behavior therapies. The MST program outcomes for serious juvenile offenders include reductions in long-term rates of recidivism, reductions in out-of-home

placements, improvements in family functioning, and decreased mental health problems (Henggeler, Mihalic, Rone, Thomas, & Timmons-Mitchell, 1998).

Multidimensional Treatment Foster Care also was chosen by both the Surgeon General's report as a model program and the CSVP as a Blueprint program. It is implemented at the tertiary level and is an alternative to institutional, residential treatment, incarceration, hospitalization and group care placement for teenagers who have demonstrated chronic and severe problems involving criminal behavior. Association with deviant peers has been shown to be a strong predictor of involvement in violent and delinquent behavior. Yet most delinquency treatment programs put adolescents who exhibit such behavior together in groups that potentially contribute to the maintenance and enhancement of delinquent and violent acts. In MTFC families are recruited, trained, and closely supervised to provide adolescents with intensive supervision at home, in school, and in the community. The program builds on the youth's strengths and it includes clear and consistent limits with follow-through on consequences, positive reinforcement for appropriate behavior, a relationship with a mentoring adult, and separation from delinquent peers. The youth's biological family also participates in the treatment through weekly sessions with therapists as well as through home visits by the therapists, which eventually are faded. Evaluations of MTFC have demonstrated that, compared to a control group program youth spent fewer days incarcerated at 12-month follow-up, had lower recidivism, demonstrated less hard drug use in the follow-up period, and

were more quickly placed in community programs from more restrictive settings (Henggeler, et al, 1998).

These prevention programs cover a wide range of activities, offering prevention strategies at the primary, secondary, and tertiary levels, with empirically demonstrated success. They also illustrate a feature of effective interventions that is mentioned frequently in the literature: the creation of a comprehensive, integrated strategy as opposed to single-faceted interventions, (Mulvey, Arthur, & Reppucci, 1997). As these programs demonstrate, a multi-disciplinary approach to the prevention of antisocial and violent behavior has had a positive impact on policies and practices, as well as the behavior of youth. Without doubt, prevention programs addressing youth delinquency and violence are more effective when they include comprehensive, integrated, and collaborative services (Nelson et al., 1996).

Summary and Conclusions

Notwithstanding recent trends, antisocial and violent behavior by youth remains a pervasive problem in this country. Even though youth violent crime arrest rates have declined sharply in the past few years, the long-term trend shows a steady increase. In fact, youth violence has reached a proportion sufficient to be considered a public health epidemic. Unfortunately, there is no quick-fix vaccine that will effectively prevent it. Although violent crimes make up only 5% of youth arrests, the horrific nature of homicide by youth has prompted in-depth studies regarding the causes of youth antisocial and violent behavior, and how to prevent it. While the complex nature of this problem defies simple

solutions, knowledge of risk and protective factors helps explain why some youth become involved in antisocial and violent behavior and some do not.

Risk factors can be found in every life domain (individual, family, school, community, and peer group) and they exert different effects at different stages of development. Individuals do not develop in isolation but rather through complex interactions with their environments. Likewise, risk factors do not operate in isolation and the more risk factors to which a youth is exposed, the greater the likelihood he or she will become antisocial or violent. The strongest risk factors appear to be cognitive deficits, early involvement in antisocial and violent behavior, antisocial parental behavior, poor parenting skills, low family socioeconomic status, delinquent peers, low school involvement and dropping out, availability of guns, and media violence.

Longitudinal research has described the development of antisocial and violent behavior in terms of pathways or life-course trajectories, with the presence of risk and protective factors exerting added influences along the way. A pattern of antisocial behavior begins with minor conduct problems that progress to serious violent behavior. The two general onset trajectories for youth violence are early onset (before puberty) and late onset (adolescence). Youth who exhibit antisocial and violent behavior early in their lives commit more crimes, crimes of a more serious nature, and continue for a longer time than those whose trajectory begins later in adolescence. Therefore, identification and intervention with young children who exhibit early signs of deviant behavior is critical. While the need for effective prevention with late-onset youth also is

important, for most youth who exhibit this trajectory, their deviance begins in adolescence and ends with the transition into adulthood.

The presence of certain protective factors, which help youth develop personal resiliency, helps to explain why many youth who are exposed to even multiple risk factors do not develop antisocial and violent patterns of behavior. These protective factors may be found in all life domains, buffering or preventing the effects of risks that make a person vulnerable to developing antisocial and violent behavior. Resiliency appears to be shaped by interactions between children and the environment. Protective factors that seem to exert the most influence include the existence of a caring relationship with at least one adult, exposure to positive and high expectations for success, and having opportunities for meaningful participation (e.g., at home or in school).

The identification and understanding of risk and protective factors can lead to the development of more effective intervention and prevention strategies. However, to be effective, programs and strategies must be implemented systematically and with fidelity. Years of research have shown that systematic prevention is more efficient and effective than intervening after the problem is well developed. The three-tiered public health model of prevention provides an appropriate context for applying a wide range of strategies, across multiple life domains to reduce risks and increase protective factors. This model has shown preliminary success with regard to the prevention of antisocial and violent behavior.

Primary prevention strategies are the foundation of effective prevention, because protective factors can be best learned, performed, and maintained when they are ingrained in youth's daily routines. For example, teaching basic literacy skills, problem-solving, social skills, and rules to all students encourages academic success and discourages the development of antisocial and violent behaviors. Universal strategies that target change in the social context appear to be more effective than those that attempt to change individual attitudes, skills, and behaviors alone (Scott & Nelson, 1999; Sprague, Sugai, & Walker, 1998; Todd, Horner, Sugai, & Sprague, 1999).

While researchers have been studying the factors involved in the development of youth antisocial and violent behavior, the identification of effective prevention programs has lagged behind. Although hundreds of youth violence prevention programs currently are in use in schools and communities in the United States, relatively little is known about their effectiveness. Many programs in use today have not been carefully evaluated, and others that have been rigorously examined have been found to be ineffective, yet they continue to be popular with professionals, policy makers, and the public. This is an obvious and unnecessary waste of time, resources, and money. Evaluation research is difficult, time-consuming, and costly; however considering the stakes; it is critical to the effective prevention of antisocial and violent behavior in youth. A few agencies have taken on the task of identifying programs that meet rigorous effectiveness criteria, and their research has identified a handful of model prevention programs, important components, and implementation strategies.

In order to reduce the effects and prevent new occurrences of antisocial and violent behavior in our youth, researchers, government officials, policy makers, practitioners, and corporate and private citizens all must be involved to bridge that gap between research and practice. Researchers must continue to study and evaluate prevention and intervention programs, and, to increase public awareness of what works and what does not, their results must find outlets in the public media (Nelson, 2000; Shiraldi, 2000). Cost-benefit analysis is emerging as a component of social service program evaluations (Loeber & Farrington, 2000; Luthar & Cicchetti, 2000), and this practice should be routinized. For example, cost-benefit analyses could be used to determine whether prevention programs offer long-term monetary savings compared with interventions that emphasize reactive strategies.

Agencies--both governmental and private--that support research and demonstration projects addressing the prevention of delinquent and violent behavior in youth, should adopt uniform criteria for proposals, and require that projects incorporate these criteria in their evaluation plans. The publication and dissemination of a standard set of criteria for program evaluation would seem to be a useful addition to state and federal guidelines for projects seeking extramural funding.

Moreover, government officials and policy makers can launch public campaigns to increase awareness of these programs, provide technical assistance and information about them, and they can devise incentives for communities to invest in effective programs. We know how powerfully the media

can influence behavior. Government officials, policy makers, and corporate citizens can use this potent influence to prevent antisocial behavior and violence in youth through such media campaigns as public service announcements, news reports, or documentary television programs featuring effective prevention practices and programs.

Furthermore, practitioners should keep abreast of the current research regarding youth antisocial and violent behavior. Practitioners also should consult other professionals and build partnerships that span agencies and disciplines. It is becoming increasingly apparent that such partnerships must include families. Collaboration between families, schools, and community agencies may be the only means to effectively address the complex problems of youth (Walker et al., 1991). "To divert students at risk for behavioral disorders from an at-risk life path, it is essential that the key social agents in the student's life be directly involved in the intervention" (Walker & Sprague, 1999a, p. 336).

Collaborative partnerships among all sectors of society are needed for increased interaction between academic research centers and other professional disciplines and agencies that may be responsible for studying or implementing violence prevention programs. Finally, It has taken years to document the effects of such risk factors as violence in the media and access to guns. It will take time and considerable effort to reverse the negative effects of these risks. Thus, successful prevention programs must be in place for a long period of time (i.e., demonstrate stability) and they must include many components and target the general youth population as well as those at-risk for antisocial and violent

behavior (i.e., be extensive) (Mendel, 2000). If the public, including private citizens, educators, researchers, mental health professionals, policy makers, church officials, and business leaders all take ownership of the pervasive problem of youth antisocial and violent behavior, and galvanize efforts, perhaps our communities can become safer and more healthy environments for all citizens.

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Footnotes

¹ In the case of youth below the age of majority (18 in most states) legal violations also include status offenses, or behaviors that are legal only because of a person's age (e.g., curfew violations, incorrigibility).

² The fact that a program is not identified by these agencies does not mean it is ineffective. Rather, in many cases it may mean that the violence prevention program has not been rigorously evaluated.

³ The assignment of these programs to the levels of prevention they address is an arbitrary decision made by the authors of this review, based on available descriptive information.