

# CHAPTER 1:

## Preventing Aggression & Violence

**George G. Bear, *University of Delaware***  
**Carolyn Webster-Stratton, *University of Washington***  
**Michael J. Furlong, *University of California at Santa Barbara***  
**Sabrina Rhee, *University of California at Santa Barbara***

*No matter how effective, motivated and attentive any of us is as a parent, our children go to school with boys who are lost and who have access to lethal weapons. Knowing how these boys reach this point and what we can do to reclaim them empowers us to reduce the odds that they will commit acts of lethal violence. (James Garbarino, 1999a, p. 3)*

With the occurrence of multiple homicides on school campuses during the 1997-1998 and 1998-1999 academic years—such as in Springfield, Oregon and Littleton, Colorado—there has been a growing public perception that an increasing number of students may "go off" at any time and cause serious harm to themselves and/or others. In response to this perception, school administrators, lawmakers, and prosecutors have recently "cracked-down" on juvenile violence. Metal detectors, security guards and police, crisis drills, "zero tolerance" discipline policies, and alternative programs for aggressive children are now found in many schools that previously saw little need for such measures. Several states now require that children who commit violent crimes be tried as adults. Lawmakers have also proposed school prayer, mandatory student uniforms, mandatory use of "ma'am" or "sir" when responding to teachers, and the school-wide posting of the Ten Commandments as partial solutions to the widely perceived rising tide of school violence. Although well intended, too often such "solutions" have been misguided, based on little, if any, empirical research supporting their effectiveness in preventing school violence and promoting children's mental health. Moreover, they have been based on the faulty premise that school violence has increased rapidly during the past few years (Skiba & Peterson, 1999).

As shown in several recent national studies, nearly all acts of violence, including both criminal and noncriminal acts, actually declined significantly during the past decade (Brener, Simon, Krug, & Lowry, 1999; U.S. Department of Education [DOE], 1999)—before most schools adopted "school safety" and "school violence" programs in response to the 1997-to-1999 rash of school shootings widely portrayed by the media. In actuality, schools are relatively safe and free from acts of violence. Serious violent crimes (i.e., physical attack or fight with a weapon, robbery, murder, suicide, rape, or sexual battery) are rare, with 90% of schools reporting no such incidents during the 1996-97 school year (DOE, 1999). Fewer than 1% of homicides and suicides among school-aged children occur at school (Kachur et al., 1996).

Although serious violent crimes are rare, other acts of aggression are quite common. One or more incidents of less serious crimes involving aggression (i.e., physical attack or fight without a weapon, theft or larceny, vandalism) are reported by 47% of our schools (DOE, 1999). Most common, however, are noncriminal acts of aggression, such as bullying, teasing, and rejecting peers. Although not criminal acts per se, these behaviors nevertheless often result in emotional harm to others. Few classrooms, playgrounds, and lunchrooms are exempt from such aggressive behaviors. However, because these behaviors are normative and do not necessarily entail physical harm, not all researchers view them as acts of "violence," reserving this term for non-normative, intentionally aggressive acts that are extreme, or serious, and that result in physical harm to another person (Elliott & Tolan, 1999).

The above distinction between violent and aggressive behavior is an important one: Violence is rare in schools, whereas aggression is quite common. Despite the importance of this distinction, educators seldom differentiate between violence and aggression. Instead, school violence is generally conceptualized broadly to include all acts of aggression, irrespective of severity. Thus, from the perspective of many educators and developers of intervention programs, school violence entails a broad spectrum of antisocial and aggressive behavior, including criminal violent acts, fighting, bullying, teasing, anger-control problems, sexual harassment, property damage, and weapon possession. An unfortunate result of fusing non-normative violent acts of aggression with normative acts of aggression is the risk of employing interventions that are either too harsh or too mild for a given school. For example, secu-

rity cameras and security guards would be appropriate in those schools experiencing frequent acts of violence, but inappropriate in the vast majority of schools.

In this chapter we review interventions designed to address aggression and violence in the schools. Consistent with the book's focus, emphasis is placed on primary-level preventive interventions (i.e., universal strategies and programs designed to prevent future aggression and violence among all students) and secondary-level preventive interventions (i.e., strategies and programs that target those students who already demonstrate early signs of aggression or are otherwise at-risk for future aggression or violence). Tertiary-level preventive interventions (i.e., strategies and programs designed to improve the behavior of those students who have a history of aggressive or violent behavior) are not reviewed, with the exception of those strategies and programs, such as parent training, that have clear implications for practice at the primary and secondary levels of prevention. In the first part of the chapter we review current models of aggression—models that explain the various pathways to aggression and violence. Next, we review strategies and programs for preventing or curtailing the future occurrence of aggression and violence in the schools.

## **PATHWAYS TO SCHOOL VIOLENCE: WHY DID THIS HAPPEN?**

### **Multiple Factors, Differing Theoretical Perspectives**

Interest in school violence as a focus of scientific and clinical research evolved initially not from educational researchers and practitioners but from researchers in the fields of public health, delinquency, and developmental psychology (Furlong & Morrison, in press). Consequently, current models used to understand the phenomenon of school violence have of necessity drawn upon theories that were developed to explain the etiology of youth antisocial behavior in general, including violence. Of particular application to the schools are developmental theories that explain age differences in aggression and their relation to various intraindividual and environmental factors: biological and temperament risk factors, family dysfunction, ineffective parenting, peer association with deviant peers, poor school climate and classroom management strategies, and community risk factors. Although these

factors, and many others, have been associated with aggressive behavior, research shows that there are no clear-cut univariate links between risk factors and a child's aggressive behavior. That is, risk factors are intertwined, synergistic and cumulative (Hawkins, Catalano, & Miller, 1992; Reid & Eddy, 1997).

Thus, contemporary models of aggression recognize that multiple factors influence aggression in a complex and reciprocal fashion. With implications for practice, most models view many risk factors, such as substance abuse, academic failure, and peer rejection, as (a) evolving from the same etiology, or process, as aggression; (b) comorbid or potentiating factors that foster future aggression; (c) outcomes of aggression and its correlates; or (d) a combination of the above (Cicchetti, 1993). An example of the complex and reciprocal relation between aggression and multiple risk factors follows. A student whose temperament is characterized by hyperactivity, impulsivity, and inattentiveness will be more difficult to parent or teach. In turn, the student is more likely to be subject to harsh and punitive discipline rather than encouragement. This critical parenting and/or teaching style not only fails to promote prosocial behavior in the temperamentally difficult student, but also provides negative models of behavior, thereby further impeding the student's development of adaptive social-cognitive skills. High levels of family stress, such as that associated with unemployment, marital difficulties, and moving, often contribute to ineffective parenting, resulting in the decreased parental support of the child's academic and social success in school.

Upon entering school the student's behavioral and academic problems are likely to result in frequent discipline from the teacher and rejection by peers. In turn, frequent discipline and peer rejection are likely to lead to decreased opportunities to learn and practice both academic and social skills and to distancing of the student's parents from the student, as well as from the school. Moreover, teachers may misunderstand the reasons for the parents' lack of involvement and respond more critically to the parents, failing to provide the support the parents desperately need, which further erodes the bonds between the home and school. Thus, various risk factors lead to an unfolding cycle of events over time that result in cumulative effects on a child's vulnerability. A critical implication of this developmental, multirisk factor view of conduct problems is that in order to be effective, school-based intervention

programs must be comprehensive, begin early, and address both risk and protective factors. Common risk and protective factors related to aggression appear in Table 1, divided for heuristic purposes into three major categories: intraindividual, classroom/school, and home/community/peers.

Many of the factors in Table 1 have been recently incorporated into "Early Warning" guides. For example, after the school shootings in Jonesboro, Arkansas, Springfield, Oregon, Littleton, Colorado and similar tragic events elsewhere, the U.S. Department of Education, the American Psychological Association, and the National School Safety Center developed lists of indicators associated with perpetrators of violent acts on school campuses. These indicators are shown in Table 2. It should be noted that the indicators are for youthful perpetrators and not the approximately 30% of perpetrators of physical violence at school who are adults. Moreover, it should be emphasized that these indicators are based on the consensus of opinion among experts, and not necessarily on empirical research.

With respect to empirical research on indicators or predictors of violent behavior, studies emanating from the risk and resiliency literatures have shown how a combination of intraindividual, family, school, and community factors are associated with the arrest of males for violent offenses by age 18. Based on a thorough review of longitudinal studies of violent behavior, Hawkins et al. (1998) identified such factors, as shown in Table 3. These risk factors are highly predictive of *violent* offenses from as early as age 10. When a student has a combination of these factors, the likelihood that he or she will be arrested for a violent offense increases dramatically. For example, Hawkins et al. (1998) found that whereas only 3% of youths with zero risk factors were arrested for a violent offense, this figure increased to over 30% among those with five risk factors.

Likewise, providing a perspective on the complementary roles played by risk and resiliency factors, Sullivan and Farrell (1999) found that the power of predicting antisocial behavior such as the use of drugs markedly increases when five risk factors are present and no protective factors or resources are available. As emphasized in this chapter, school psychologists should be well aware that no single risk or resiliency factor is vastly more predictive than another, the predictive power of these factors fluctuates with the age of the student, and that it is the complex interaction of contextual, individual, and situational factors that determines behavior.

**TABLE 1**  
**Factors Related to Aggressive and Disruptive Behavior in the Classroom**

**I. INTRAINDIVIDUAL**

**FACTORS**

**Behavioral Domain**

- Behavioral excesses
- Behavioral deficiencies
- Externalizing and internalizing behaviors
- Poor communication skills
- Poor self-management skills, including poor impulse and control

**Social-cognitive Domain**

- Biased attributions of hostility
- Beliefs, values, and standards
- Social goal setting
- Perception of goal blocking, threat, or derogation to one's ego and esteem
- Self-efficacy beliefs
- Self-perceptions of competence/adequacy and social support
- Specific social problem solving skills
- Specific social information processing skills
- Social perspective taking, interpersonal understanding, and negotiation strategies
- Distortions in moral reasoning

**Emotional Domain**

- Insensitivity, empathy
- Guilt and shame
- Pride
- Loneliness/Depression
- Anger
- Difficult temperament
- Self-concept

**Health Domain**

- Effects, and side effects, of medication
- Nutrition
- Sleep
- Attention-deficit disorder

- Alcohol and drug use
- Neuropsychological deficits (likely causes: maternal drug abuse; poor prenatal nutrition; pre- or postnatal exposure to toxic agents (e.g., lead); brain injury during delivery; genetically inherited differences; nutrition; lack of stimulation or affection; child abuse and neglect)
- Psychophysiological indicators such as low resting heart rate and low skin conductance
- High levels of testosterone
- Neurotransmitters, such as low CSF 5-HIAA

**II. CLASSROOM/SCHOOL FACTORS**

- Teacher/school expectations, goals, commitment
- Proactive classroom management
- Relationship between student(s) and teacher
- Physical environment
- Instructional skills (frequent repetition, pacing of instruction, etc.)
- Motivational strategies
- Disciplinary procedures used to correct behavior problems
- Curriculum (difficulty, length, practice, interest)
- Unfair rules and disciplinary practices
- Student involvement and acceptability of discipline
- Degree of emphasis on external control, reinforcement vs. consequences

- Consistency in procedures across classes
- Building/district policies
- Class size, school size
- School atmosphere
- Availability of resources (within and outside of school)
- Home/school communication and collaboration
- Staff qualifications

**III. HOME/COMMUNITY/PEER FACTORS**

- Parenting style: Overly authoritarian, permissive, authoritative?
- Verbal/physical aggression in home or community
- Communication between parents and child
- Supervision and monitoring of behavior
- Different values/expectations between home/school
- Parental values, beliefs, behaviors
- Family stressors (including drugs, alcohol, poverty, divorce, large family size)
- Lack of academic support
- Low parental expectations
- Steady diet of exposure to violent behavior on TV, CDs, and video games
- Being a victim of aggression
- Availability of weapons
- Availability of drugs
- Community crowding, norms, values
- Norms, values, beliefs among peers that support aggression
- Peer models
- Peer rejection

**TABLE 2**  
**Early Distress Indicators Associated with Aggressive Behavior, as Identified by the United States Department of Education (DOE), American Psychological Association (APA), and the National School Safety Center (NSSC)**

<b>Distress Indicators</b>	<b>DOE</b>	<b>APA</b>	<b>NSSC</b>
Social withdrawal	■	■	■
Excessive feelings of isolation and being alone	■	■	
Excessive feelings of rejection	■	■	
Being a victim of violence	■	■	■
Feelings of being picked on and persecuted	■		
Low school interest and poor academic performance	■	■	
Expression of violence in writings and drawings	■		■
Uncontrolled anger	■	■	■
Patterns of impulsive and chronic hitting, intimidating, and bullying behaviors	■	■	
History of discipline problems and/or frequent run-ins with authority	■	■	■
Past history of violent and aggressive behavior or suicide attempts	■	■	■
Intolerance for differences and prejudicial attitudes	■		
Drug use and alcohol use	■	■	■
Affiliation with gangs or "fringe" groups	■	■	■
Inappropriate access to, possession of, and use of firearms	■	■	■
Serious threats of violence	■	■	■
Resorts to name calling, cursing, abusive language	■		
Preoccupied with weapons, incendiary devices, explosives	■		
History of truancy, suspensions, expulsions	■		
Displays cruelty to animals	■	■	
Little supervision from caring parent or adult	■		
Has been bullied or a victim of chronic bullying	■	■	
Blames others for problems he or she causes	■		
Consistently prefers media with violent themes or acts	■		
Prefers reading materials with violent themes, rituals, and abuse	■		
Often depressed or has significant mood swings	■		
Feeling constantly disrespected	■		
Failing to acknowledge the feelings or rights of others	■		

**Note.** Based on reports by the U.S. Department of Education (DOE) (Dwyer, Osher, & Warger, 1998), American Psychological Association (APA; 1999), and National School Safety Center (NSSC; 1999).

**TABLE 3**  
**Odds Ratios and Predictive Accuracy Associated with**  
**Conviction of Violent Crime at Age 18 Based on**  
**Characteristics at Ages 10, 14, and 16**

FACTOR	AGE 10	AGE 14	AGE 16
<b>Individual Factors</b>			
Gender (Male)	2.31		
Hyperactivity (Teacher Rating)	2.17	1.98	
Hyperactivity (Parent Rating)		2.11	1.96
Risk-Taking Behavior		3.18	3.50
Selling Drugs		3.34	4.55
Early Violent Behavior (ages 12 -13)		3.71	
Proviolence Attitudes		2.09	
<b>Family Factors</b>			
Parental Violent Behavior		1.84	1.35
Parental Criminality		2.16	2.03
Poor Family Management	1.29	2.11	2.63
Family Conflict	1.05	16.1	2.16
Parents' Proviolence Attitudes	2.32		2.69
Residential Mobility		1.32	
<b>School Factors</b>			
Low Academic Performance	1.65	2.05	2.71
Low School Commitment	1.10	1.76	1.80
Low Educational Aspirations	1.20	1.86	1.60
School Transitions		1.82	2.97
Antisocial Behavior (Teacher Ratings)	2.66		
<b>Peer Factors</b>			
Sibling Delinquency	1.79	1.40	2.26
Peer Delinquency	2.25	2.82	3.95
Gang Membership		3.39	4.58
<b>Community</b>			
Economic Deprivation	1.61	1.33	1.51
Community Disorganization		2.19	3.16
Low Neighborhood Attachment	1.54	1.00	1.69
Easy Availability of Drugs	1.77	2.63	3.09
Neighborhood Adults Involved in Crime		3.15	3.90
Proviolence Community Norms		1.11	1.38
<b>Classification Accuracy Across Factors</b>			
Correct Prediction of Violence at age 18	80.4%	84.3%	83.9%
% False Predictions of Violence	1.2	1.5	4.2
% False Predictions of No Violence	18.4	14.2	12.9

**Note.** Data are from "A Review of Predictors of Youth Violence" by J. D. Hawkins, T. Herrenkohl, D. P. Farrington, D. Brewer, R. E. Catalano & T. W. Harachi, (1998). In R. Loeber & D. P. Farrington (Eds.), *Serious & violent juvenile offenders: Risk factors and successful interventions* (pp. 106-146). Thousand Oaks, CA: Sage. Copyright 1998 by Sage. Adapted with permission.



In light of this complexity, researchers have recently focused on building models of aggression that integrate different theoretical perspectives, with the understanding that one theoretical perspective alone cannot adequately explain the multiple factors related to aggression from birth to adulthood. Such an integrated, multifeature, developmental approach to model building is evident in each of the models profiled below: (a) the *social learning model* (Dishion, French, & Patterson, 1995; Patterson, Capaldi, & Bank, 1991), (b) the *social information processing model* (Crick & Dodge, 1994; Dodge, 1993), (c) the *cognitive neoassociationistic model* (Berkowitz, 1989a, 1990a, 1990b) and (d) the *life-course persistent and adolescent-limited model* (Moffitt, 1993a, 1993b).

These perspectives provide the conceptual frameworks with which to better understand how various risk and resilience factors are associated with chronic and/or violent aggression. In addition to helping practitioners understand the "why" about aggression in schools, these contrasting perspectives should help guide practitioners in selecting and developing programs for preventing aggression. We should note that the social learning and social information processing models are highlighted because of the large number of research studies they have generated and also because of their direct linkages to prevention and intervention programs. As seen later, nearly all popular school violence programs, especially those of demonstrated effectiveness, employ strategies devised from social learning and social information processing models of aggression. Although Moffitt's and Berkowitz's models have yet to generate many intervention programs, their inclusion provides contrasting viewpoints with respect to what is considered the primary determinants of aggression, with Moffitt emphasizing neurological components of aggression and Berkowitz emphasizing the interaction between cognition, emotions, and contextual factors.

### **Social Learning Model**

Based on social learning theory and several decades of research, Patterson and colleagues at the Oregon Social Learning Center have successfully identified a variety of proximal and distal factors related to aggression and antisocial behavior (Dishion et al., 1995; Patterson et al., 1991). Such factors are incorporated into their comprehensive model of antisocial behavior—a model that guides perhaps the greatest number of intervention programs seen in today's schools and mental health centers. The model

emphasizes the importance of proximal factors linked to aggression, especially antecedents and consequences of behavior occurring in everyday social exchanges between children, siblings, and parents within dysfunctional families. The model also can be applied to social exchanges between children and teachers.

It is within the context of everyday social exchanges between family members, beginning in early childhood, that noncompliant and aggressive patterns of behaviors are directly taught. That is, verbal and physical aggression is learned, through the modeling of overly harsh, coercive, and inconsistent discipline and the reinforcement, both negative and positive, of a variety of antisocial behaviors and cognitions.

The family environment of aggressive children and adolescents is one of coercion. That is, family interactions are often characterized by a family member using verbal or physical aggression to stop another family member from irritating him or her or from interfering with his or her goals. Negative reinforcement, and to a lesser extent positive reinforcement and modeling, play a major role in the learning and maintenance of coercive behavior. The typical coercive process entails a parent making a demand; the child ignoring, arguing, or otherwise not complying; the parent demanding more harshly; continued noncompliance by the child (perhaps escalating to increased arguing, whining, or threats to the parent); and finally the parent failing to enforce the demand. In this case, the child "wins" by not having to comply and by getting the parent to quit bothering him. In other cases, however, the parent is likely to respond to continued noncompliance with increased verbal or physical aggression until the child eventually complies. In either case, coercive behavior is reinforced, and thus is likely to be repeated.

As aggression becomes effective in controlling others and reducing or eliminating events perceived to be aversive (Eron, Huesmann, & Zelli, 1991), skills of coercion are repeatedly practiced, often at the expense of learning and practicing prosocial and adaptive behaviors. Hence, parents of aggressive children not only directly teach aggression, but also fail to consistently model and reinforce prosocial, problem-solving behavior. Moreover, they fail to support academic achievement and effectively monitor and supervise their children's behavior (Webster-Stratton, 1985a).

The above proximal variables have repeatedly been shown to contribute markedly to the early, and continued, development of

antisocial behavior (Patterson et al., 1991). For example, Patterson (1986) found that parenting and family interaction variables accounted for 30% to 40% of the variance in children's antisocial behavior. In addition to factors specific to social interactions, researchers have implicated a variety of more distal factors, especially family and community factors that contribute to poor parental discipline and monitoring. Primary among these distal factors are socioeconomic disadvantage and correlates thereof, such as single parenting, family conflict, and substance abuse (Tolan, Guerra, & Montaini-Klov Dahl, 1997). For example, Dodge, Pettit, and Bates (1994) found socioeconomic disadvantage to correlate with harsh discipline, lack of maternal warmth, exposure to aggressive adult models, maternal aggressive values, family life stressors, mother's lack of social support, peer group instability, and the lack of cognitive stimulation. These factors accounted for over half of the variance in teacher-rated externalizing problems and peer-nominated aggression. Consistent with Patterson's coercion model, harsh discipline was found to be the strongest single predictor of behavior problems.

It should be emphasized that although the relation between harsh discipline and children's aggression is a robust finding, recent research suggests that this relation is moderated by the overall quality and warmth in the parent-child relationship. For example, Deater-Deckard, Dodge, Bates, and Pettit (1996) found that the relationship between harsh discipline and externalizing problems held only among children in homes in which a warm child-parent relationship was lacking. Likewise, in a recent review of research on risk and resilience, Doll and Lyon (1998) concluded that a warm relationship with at least one caregiver was a strong protective factor against the negative influences of family dysfunction. This finding was supported by the results of a large national study of adolescent development that showed that youth who report positive relationships and bonding with their families and schools engage in less risky and fewer antisocial behaviors (Resnick et al., 1997). Family life stressors, many of which are related to socioeconomic disadvantage, contribute to poor parenting and parent-child relationships.

Parents of children with conduct problems report major stressors at a rate two to four times greater than for families with typically developing children (Webster-Stratton, 1990a). They also report more day-to-day hassles or minor stressors. An accumulation of day-to-day stressors can have effects similar to those of

major stressors, disrupting parenting and leading to increased rates of coercive behavior and irritability in the parents' interactions with their children (Forgatch, Patterson, & Skinner, 1988). Parents who are stressed, depressed, and demoralized are less likely to be able to provide the supportive parent management strategies, as well as cognitive stimulation, necessary to foster a child's academic performance and social behavior at school. As proposed by Wahler and Sansbury (1990), highly stressed mothers are less able to screen out extraneous information (e.g., negative interchanges with neighbors or spouse), causing them to react inconsistently or indiscriminately to their children's behavior.

Numerous studies have shown that stress-inducing experiences characterize the homes of aggressive children and that the effects of stress on children are mediated by poor parent management practices (Patterson, Capaldi, & Bank, 1991). From a developmental perspective, such poor parenting begins a spiraling pattern of aversive behavior in home, school, and community. In this pattern, discipline problems become associated with (a) poor academics; (b) rejection by peers, teachers, and parents; (c) increased noncompliance and aggression toward others; (d) feelings of alienation and poor self-concept; and (e) an eventual drift toward deviant peers who share and support the child's behavior, cognitions, and feelings.

In sum, the social learning model highlights the confluence of multiple factors on the development of aggression from early childhood to adolescence. It explains the early onset and stability of aggression among the chronically aggressive, or life-course persistent aggressors. Although modeling and reinforcement of aggressive behavior by parents are recognized as playing a primary role in the development of aggression, they are not viewed as the only processes linked to aggression and the failure to self-regulate. The role of social cognitive and emotional variables are also recognized (Snyder & Patterson, 1995), as are the influences of violent television shows (Hughes & Hasbrouck, 1996) and violence in one's community (Gorman-Smith & Tolan, 1998).

### **Social Information Processing Model**

Social information processing theory emphasizes the active role of cognition in social adjustment (Crick & Dodge, 1994; Dodge, 1993). The theory posits that various social cognitive skills, deficits, and biases are learned through the same social learning processes

(e.g., modeling, reinforcement) as are noncompliance and coercive behaviors. However, social information processing theory departs from traditional social learning theory in positing that it is the student's self-directed social cognitions, and not external modeling and reinforcement of behaviors per se, that accounts primarily for various forms of antisocial behavior (Dodge, Price, Bachorowski, & Newman, 1990). As such, social cognitions, the more subjective aspects of social interactions, are viewed not simply as outcomes of social learning, but as playing a critical mediating role in social interactions, including interactions involving aggression.

The most widely researched model of social information processing is the developmental model of Dodge (Crick & Dodge, 1994). At the core of the model are six social information processing steps. These steps explain types of information a student retrieves from memory and how the information is processed. Although there is an inherent logical order to the steps, it is understood that processing does not necessarily occur in a linear fashion. Instead, information related to each step is typically processed simultaneously, rather than sequentially, and information processed at one step may loop backward or forward to influence information at a previous or future step. The six steps are described briefly below.

**Encoding and Interpreting Social Cues**—In the first two steps, encoding cues and interpreting cues, a student *reads* specific cues in the situation. At these two initial steps a student may compare immediate situational cues to cues already stored in memory, analyze what the problem might be and why the problem exists (e.g., "I'm not getting what I want."), infer what others might be thinking or intending to do (e.g., "He's trying to stop me."), compare the present social exchange with previous ones ("What happened last time? Was I successful? Should I do it again?"), and consider the importance of the exchange to the self and the peer ("Is this important to others or me?").

Research on these first two steps has yielded several explanations of aggressive behavior. Compared to less aggressive children, habitually aggressive children tend to (a) selectively attend to particular social cues, especially those interpreted as being hostile in intent or aversive, while failing to attend to mitigating cues; (b) have memory and retrieval deficits that interfere with processing social information; and (c) impulsively draw from well established

existing schemata that support aggression (e.g., "Hit when threatened or provoked.") before correctly reading cues in the given situation (Dodge & Tomlin, 1987; Slaby & Guerra, 1988). Biases in interpretation are most likely to affect behavior in social encounters characterized by ambiguous social cues (Hudley, 1994).

Research shows that the above social cognitive problems are often linked to emotions. For example, hostile attributional biases are more likely to occur when an aggressive child is emotionally aroused (Dodge & Somberg, 1987). Social information processing research also suggests that a breakdown in the encoding and interpretation of information is a better predictor of violent behavior than is nonviolent antisocial behavior (Dodge et al., 1990).

**Determining Goals in a Given Situation**—After interpreting the situation, children determine their personal goals, or desired outcomes, in the given situation. Goals for a specific situation are generally linked to preexisting cognitive scripts, but also may be newly developed (Crick & Dodge, 1994). Research shows that whereas nonaggressive and aggressive children tend to share the common goal of wanting to be socially accepted, social goals among aggressive children are often preempted by more hedonistic goals such as getting what one wants and retaliating against those who present obstacles to one's goals (Erdley & Asher, 1998; Slaby & Guerra, 1988).

**Constructing a Response**—At the next step, response access or construction, alternative behavioral or emotional responses are drawn from memory, or if the situation is a novel one, new alternatives are constructed. Regarding the relation of response access or construction to school violence, research indicates that when compared to socially adjusted children, aggressive children tend to generate fewer alternative solutions (Slaby & Guerra, 1988). Perhaps more important, their responses are qualitatively inferior. Aggressive children tend to think of fewer competent responses and more atypical, maladaptive, aggressive responses (Rubin, Briem, & Rose-Krasnor, 1991), viewing the latter as socially acceptable and not immoral (Boldizar, Perry, & Perry, 1989; Crick & Ladd, 1990). In general, aggressive children value aggression, believing that it is socially normative, leads to positive outcomes, and that circumstances justify its use (Guerra, Huesmann, & Hanish, 1995; Lockwood, 1997). For example, a recent school survey of seventh

to eleventh graders found that acts of school violence were positively related to the endorsement of the following two attitude items: "If someone threatens you, it is okay to hit that person," and "It feels good when I hit someone." (Cornell & Loper, 1998).

Dishion et al. (1995) emphasized that among many aggressive children, belief systems endorsing aggression are grounded in the reality of their environments. Similarly, Garbarino (1999b) argued that young people are as bad as their predominant social environment. As shown in Patterson's (Patterson et al., 1991) model, in many homes and communities aggression, and underlying cognitions, are modeled and reinforced through ongoing coercive social exchanges. Indeed, ethnographic studies indicate that urban environments often support "codes of violence" that often are associated with social status and that serve an adaptive function (Anderson, 1990).

**Deciding What to Do**—Response-decision, the next step in social information processing, refers to the process by which the individual evaluates alternative responses according to their appropriateness and expected outcomes. At this step, moral judgements and judgements of self-efficacy are made. Research shows that moral reasoning among aggressive children tends to be hedonistic in perspective, focusing on immediate self-serving gains, rather than on the needs of others or on long-term consequences to the self (Bear & Rys, 1994; Quiggle, Garber, Panak, & Dodge, 1992).

Research also shows that aggressive children feel confident that their aggressive behavior will "work." They believe that aggression will lead to more favorable outcomes than would prosocial alternatives (Quiggle et al., 1992). Related research on self-efficacy indicates that aggressive children feel confident that they actually do have the necessary aggressive skills to achieve their goals, but believe they are less skilled at avoiding conflict or inhibiting aggression when provoked (Erdley & Asher, 1998; Quiggle et al., 1992).

**Enactment of Aggression**—Feelings of self-efficacy support aggression at the sixth and last step, enacting or committing an aggressive act. Deficits at this step are often seen in a student's failure to exhibit prosocial or adaptive behaviors even when the student has decided that such behavior should be exhibited (Dodge, McClaskey, & Feldman, 1985).

The above research pinpoints specific information-processing biases and deficits related to aggression and violence. It is important to emphasize, however, that *combinations* of biases and deficits tend to characterize aggressive students. When deficits are combined across multiple steps, future aggression is highly predictable, with multiple correlations ranging from .40 to .94 (Coie & Dodge, 1998).

### **Cognitive-Neoassociationistic Model**

Cognitive-neoassociationistic theory (Berkowitz, 1989a, 1990a, 1990b) shares many similarities with social information processing, especially its focus on social cognition. However, greater emphasis is placed on the role of negative affect in aggressive behavior and the role of environmental stimuli in triggering aggression. Aggressive behavior is seen as the product of the combination of latent variables, including emotions, that enhance the likelihood of aggressive responses to appropriate stimuli. Berkowitz argued that aggressive individuals are inclined to interpret ambiguous occurrences as threats to their pride or as barriers to the attainment of desired goals, become quickly aroused emotionally when they perceive these threats, and are less likely to regulate their emotions. Negative affect tends to activate ideas, memories, and expressive motor reactions associated with anger and aggression as well as rudimentary angry feelings. However, he also emphasized that unpleasant environmental conditions often lead to an increase in violence (Berkowitz, 1989a). For example, high temperatures during the summer are associated with increases in crime, including homicides and assaults. The urban riots of the 1960s were exacerbated by unusual summer heat. Berkowitz further notes that laboratory studies show that high room temperature, irritable cigarette smoke, and foul odors have all promoted aggressive displays, including relatively strong attacks on an available target.

Applied to the school setting, cognitive-neoassociationistic theory highlights the importance of the broader school climate and context in which students and teachers interact. Berkowitz (1990a, 1990b) argued that violence in America can be effectively decreased by reducing external determinants, such as by creating physical environments that are conducive to learning and prosocial interactions, by teaching students that aggression does not pay and is morally wrong, and by providing students alternative ways of responding.



Thus, aggression is viewed as the result of a variety of influences operating together, some arising from earlier experiences and learning and some from the immediate situation. Earlier emotion-laden experiences are stored in memory, in an emotional network. Aversive events negatively prime such memory, triggering aggression. It is in this context that aggression's linkage to frustration, and to a lesser extent to sadness and depression may be understood (Berkowitz, 1989b).

**"Life-Course Persistent" and "Adolescent-Limited" Models of Aggression**

About half of all violent crimes are committed by 5% or 6% of adolescents and young adults who begin their antisocial activities at an early age (Moffitt, 1993a). Moffitt argued that social learning, social information processing, and emotion-based theories do not adequately explain the continuity and early onset of aggression and antisocial behavior among this small group of "life course persistent" aggressors. She also posited that these theories fail to explain adequately the discontinuity and sudden late onset of aggression that characterizes a much larger group of "adolescent-limited" aggressors who tend to commit their first, and often their only offense, between the ages of 14 and 17. Moffitt (1993a) argued that aggression differs among these two groups in etiology, developmental course, prognosis, and pathology or normality. She offered two new theories that attempt to account for such differences.

**Life-Course Persistent Aggressors**—Drawing largely from recent research in the interrelated areas of neuropsychology, temperament, and attention-deficit hyperactivity disorder, Moffitt (Caspi & Moffitt, 1995; Moffitt, 1993a, 1993b) argued that chronic aggression begins with neurological impairment. She showed that multiple sources of neurological impairment have been linked to children's antisocial behavior, including genetics, maternal drug abuse, exposure to toxic agents, brain injury, poor nutrition, lack of stimulation or affection, and child abuse. Neurological effects are not seen as deterministic, however. Moffitt (1993a, 1993b) reviewed research demonstrating the extreme malleability in neuropsychological functioning and how neurological and environmental factors interact in determining aggression. According to Moffitt, such research demonstrates that neurological impairment influences aggression primarily by interfering with the develop-

ment of language-based verbal skills and executive functions of the brain (Moffitt, 1990).

Moffitt (1993a, 1993b) agreed that poor parenting skills and related family stressors contribute to coercive parent-child interactions; however, she attaches primary causality to neurological-based temperament, especially hyperactivity and poor self-control. That is, a child's temperamentally-driven behavior irritates the parents (who often share their child's temperament), evoking harsh discipline, especially in homes in which parenting practices are already generally poor. Continuity in aggression is fostered by the direct impact of language and executive reasoning deficiencies on poor academics, poor social information processing, impulsive behavior, and a restricted behavioral repertoire (related to a failure to learn, and opportunities to practice, prosocial and adaptive behaviors that might compensate for deficiencies). Social rejection and poor self-concept often result from these deficits. Together, these factors place the child at additional risk for negative outcomes, including substance abuse, school dropout, and gang membership. Together, these factors set the stage for the life-course persistence of aggression, contributing to the development of a stable antisocial personality while trapping the individual into an environment in which antisocial behavior is reinforced.

In implicating neurological influences as the primary causal factors in life-course persistent aggression, Moffitt (1993a, 1993b) drew from the rapidly growing literature showing that biologically-based impulsivity and hyperactivity predispose children for interpersonal problems, including aggression. Indeed, impulsivity and hyperactivity have consistently been shown to correlate moderately or strongly with aggression (Barkley, 1997). Researchers have found that young children with conduct disorders are at much greater risk for later serious violent offenses at age 15 if an attention deficit - hyperactivity disorder (ADHD) accompanies their conduct disorder (Moffitt, 1990). Moffitt also argues that low intelligence, which shares with ADHD a biological basis, contributes to antisocial behavior among the life-course persistent aggressors. In support of this argument, Moffitt (1990) found a 17-point mean deficit in the IQs of delinquents who began their aggression in childhood, but only a 1-point deficit in the IQs of adolescent-limited aggressors.

Many researchers and theorists do not share Moffitt's (1993b) emphasis on the neurological bases of impulsivity, hyperactivity, and low intelligence, noting that such an emphasis (a) is not very

useful for developing interventions, with a few exceptions such as medication for ADHD; and (b) contributes very little to the understanding of the interaction of cognitive, emotional, behavioral, and environmental processes involved in aggression (Coie & Dodge, 1998). Nevertheless, nearly all theories and models of aggression recognize the important influence of these factors in the development of aggression. Impulsivity and hyperactivity in particular are viewed widely as major precursors to the development of antisocial and violent behavior (Barkley, 1997).

**Adolescent-Limited Aggressors**—This group represents adolescents who engage in "normative" acts of antisocial behavior, beginning in early adolescence and typically ending in young adulthood. Acts of aggression by this group are much less frequent and tend to be less violent than those of the life-course persistent aggressors. Fighting, theft, vandalism, and drug use are common offenses among adolescent-limited aggressors. Moffitt (1993a) argued that social learning and social information processing models fail to adequately account for the sudden onset and discontinuity in these behaviors during adolescence. Her model is in agreement, however, with both of these models in implicating reinforcement and punishment contingencies, often under the control of peers and adults, as major causes of adolescent-limited aggression. Moffitt offers two reasons why these influences are so powerful during adolescence: "motivating maturity gap" and "social mimicry." That is, as a result of adult constraints on behavior, and as a by-product of a modern society in which social status is difficult to obtain without a college education, adolescents are motivated to seek less constructive, or antisocial, ways to gain "adult" status. One way is with aggression.

Aggression is thus perceived by many adolescents as a means by which they can be more autonomous or mature, acquiring the power and privileges of adults. Consistent with ethnographic studies of delinquents, Moffitt (1993a) viewed the quest for maturity and autonomy as a primary factor in aggression. These factors also explain the violent behavior of life-course persistent aggressors, but are considered secondary to the influence of neurological factors. Coinciding with a desire for autonomy and maturity is a tendency for adolescents to mimic the aggression of more chronically aggressive peers. That is, many adolescents recognize that such mimicry may lead to increased status, money, and power.

Although the above factors promote a marked increase in antisocial behavior and violence during adolescence, adolescent-limited aggressors, unlike their life-course persistent peers, engage in fewer and less severe acts. This is attributed to the absence of neurological impairment, which allows for the greater development of social, emotional, and academic competencies. In turn, these competencies enable them to refrain from antisocial behavior and to seek reinforcement in more constructive way (Moffitt, 1993a). Finally, Moffitt argued that among those adolescents who commit no antisocial behaviors, one is likely to find one or more of the following: (a) delayed puberty, (b) successful opportunities to engage in roles respected by both adults and peers, (c) environments in which antisocial acts are not modeled and reinforced, and (d) strong character traits associated with the resistance of negative peer influences.

When viewed together, the above models of aggression and antisocial behavior delineate multiple pathways through which violence often evolves. Although each model places emphasis on different factors or pathways to aggression, each also recognizes that neurological impairment, temperament, distortions or deficiencies in information processing, and poor parenting and supervision, but in most cases a combination thereof, play a critical role in the development of aggression.

### **STRATEGIES AND PROGRAMS FOR PREVENTING AGGRESSION AND VIOLENCE**

The above models of aggression, and related research, have led to the design and implementation of various programs shown to be effective in preventing and reducing aggression. As suggested by theory, and supported by research, effective programs tend to share several characteristics (Blechman, Prinz, & Dumas, 1995; Catalano, Arthur, Hawkins, Berglund, & Olson, 1998; Guerra, Tolan, & Hammond, 1994; Kazdin, 1994; Lipsey & Wilson 1998; Loeber, Farrington, & Waschbusch, 1998; Mash, 1998; Tolan & Guerra, 1994):

- They are *comprehensive*—using multiple strategies that target multiple risk factors and multiple protective factors;
- They are *broad-based*—adopting a systems perspective toward understanding, preventing, and treating aggression;
- They are *intensive and sustained over time*—committing sufficient resources over an extended period of time;

- They are *developmental*—emphasizing age differences in forms of aggression, its determinants, and interventions that are sensitive to these differences; and
- They are *provided early*, before aggression becomes chronic and severe.

A recent survey of national experts on school violence yielded a similar, although more lengthy, list of key components of effective school-based violence prevention and intervention programs (Dusenbury, Falco, Lake, Brannigan, & Bosworth, 1997). These key components are shown in Table 4.

The above components are seen in the strategies and programs presented below for preventing and reducing aggression and violence. These strategies and programs appear elsewhere in comprehensive reviews of the prevention and intervention literatures (see Brestan & Eyberg, 1998; Catalano et al., 1998; Gottfredson, 1997; Guerra et al., 1994; Kazdin, 1994; Larson, 1994, 1998; Lipsey, 1992; Lipsey & Wilson, 1998; McMahon & Wells, 1998; Miller, Brehm, & Whitehouse, 1998). It should be noted that distinctions between school-based strategies and programs for preventing and reducing aggression and clinic-based strategies and programs for reducing or treating aggression often are blurred. Few intervention strategies are unique to either prevention or treatment, with interventions varying mostly as a function of the degree of emphasis placed on a particular strategy, the strength of the intervention, and the extent to which multiple interventions are combined to address the behavior of concern. Thus, although the emphasis here is on school-based prevention strategies and programs, we also include clinic studies of the treatment of chronically aggressive children and youth, especially those strategies and programs that have direct implications for school-based prevention.

#### **Involving the Student's Parents and Family**

In a recent review of 82 empirically tested psychosocial interventions for children and adolescents with conduct disorders (Brestan & Eyberg, 1998), only two were found to be effective based on rigorous evaluation standards adopted by the American Psychological Association (e.g., randomized control-group designs). Both were parent training programs: a program derived directly from Patterson's social learning model and a program based on videotape modeling developed by Webster-Stratton (1996a, 1997). Among the 10 additional treatment programs judged to be

**TABLE 4**  
**Key Components of Effective School-Based Programs,**  
**Based on a Survey of National Experts**

- ❑ A comprehensive, multifaceted approach that includes family, peer, media, and community components.
- ❑ Programs that begin in the primary grades and are reinforced across grade levels.
- ❑ Developmentally tailored interventions.
- ❑ Program content that promotes personal and social competencies.
- ❑ Interactive techniques such as group work, cooperative learning, discussions, and role plays or behavioral rehearsal that facilitate the development of personal and social skills.
- ❑ Ethnic identity/culturally sensitive material is matched with the characteristics of the target population.
- ❑ Staff development/teacher training to ensure that the program will be implemented as intended.
- ❑ Activities designed to promote a positive school climate or culture (i.e., classroom management strategies and discipline).
- ❑ Activities designed to foster norms against violence, aggression, and bullying.

**Note.** From "Nine critical elements of promising violence prevention programs" by L. Dusenbury, M. Falco, R. Brannigan, and K. Bosworth, 1997, *Journal of School Health*, 67 (pp. 409-414). Copyright 1997 by the American School Health Association. Adapted with permission.

promising or "probably efficacious," three were parent training or family therapy programs. Likewise, upon reviewing various interventions for treating antisocial children and youth, Kazdin (1994) concluded that four interventions show the greatest promise. Two of them, parent-management training and family therapy, emphasize the importance of the child's parents and family in the treatment of children with antisocial behavior (the two other treatments that Kazdin found most promising are problem solving training and school- and community-based treatments). Thus, despite the perceived obstacles to the delivery of parent training or family therapy, it is clear that schools cannot afford to neglect family-focused interventions when attempting to prevent aggression and violence, especially in secondary and tertiary-level preventive interventions.

Research shows that children of parents who participate in parent management training are likely to improve on a variety of outcomes, including dropping out of school, school attendance, disruptive behavior at school and home, and indices of criminal activity (Kazdin, Siegel, & Bass, 1992; Webster-Stratton, 1996b, 1997). The effects of parent training in preventing and reducing conduct problems are most impressive when intervention begins early, during early childhood or the early school years (Kazdin, 1995; Taylor & Biglan, 1998). Early intervention also has more lasting effects when parent training incorporates an academic/cognitive component (Yoshikawa, 1994). Likewise, programs are more effective, especially with respect to generalization of improved behavior across settings, when parent training programs are combined with child social skills programs, teacher training, and efforts to promote positive relationships with teachers (Webster-Stratton, 1998a). In a later section, we present several model parent education programs by Webster-Stratton, some of which have focused on prevention.

**Multisystemic Therapy and Family Therapy**—For adolescents with a chronic history of conduct problems, it is evident that an intensive parent component, as a part of a more comprehensive therapeutic program, is necessary for reducing violence. In addition to parent education programs reviewed in a later section (under Model Programs), research supports the effectiveness of multisystemic therapy (Henggeler, Schoenwald, Borduin, Rowland, & Cunningham, 1998) and functional family therapy (Morris, Alexander, & Waldron, 1990). These models are based on a systems perspective in which family dysfunction, conflict, and mal-

adaptive processes are addressed and parents are empowered with skills and resources for solving family problems. For example, multisystemic therapy addresses multiple factors that contribute to a child's antisocial behavior, including family, school, peer, individual, and neighborhood/community factors. Multisystemic therapy has been shown to be effective in reducing a variety of antisocial and delinquent behaviors, including truancy, theft, running away, violence, and noncompliance (Henggeler et al., 1998).

**System-of-Care Approach**—Multisystemic therapy's comprehensive and family-oriented approach to services is consistent with the popular system-of-care model of delivering mental health services to children with complex and multiple needs. Programs based on this model use wraparound service planning that entails an individualized service plan for a child and the child's family—an approach familiar to school psychologists (see Eber & Nelson [1997] for an example of how schools can assume the lead role in a system-of-care; see Skiba, Polsgrove, and Nasstrom [1996] for a review of characteristics of system-of-care programs for students with conduct disorders.)

The system-of-care approach is comprehensive in that it integrates multiple life domains. Some of the basic tenets of the approach are (a) building on strengths of children, families, and systems; (b) identifying and developing support structures for necessary role changes among school personnel; (c) changing attitudes about partnerships with families, ensuring that services are family centered; (d) creating and nurturing interagency networks, merging and blending community services and funding; (e) gaining acceptance for changes in school-based programs and services to meet the needs of students, rather than finding a "fit" within existing services and funding; and (f) adopting a case management approach that focuses on individual needs.

Given that system-of-care programs vary widely, program evaluation is difficult. Nevertheless, evaluation of these programs have indicated significant effects on children and families, including (a) children's successful transition from residential settings to their homes; (b) a reduction in the number of out-of-state placements, allowing children with emotional and behavioral problems to remain in their own neighborhood schools; and (c) reports of significant improvements in children's adaptability (Rosenblatt & Furlong, 1998).



Whereas the system-of-care approach has focused on treatment rather than prevention, it is clear that many of its tenets apply to efforts to prevent antisocial behavior, particularly among children in high risk communities. Indeed, the Centers for Children's Mental Health Services have funded programs in more than 40 communities that are designed to create coordinated, community-based, cross-agency mental health and social service systems for preventing and treating children and youth with behavioral disorders within their family, school, and community contexts (Burchard, Atkins, & Burchard, 1996; Yoe, Santarcangelo, Atkins, & Burchard, 1996). Nearly all of these programs emphasize a parent education component, some of which begin in the hospital immediately following a child's birth.

**Home-School Collaboration and Consultation**—Although parent management training and family therapy are critical components of programs for students with a chronic history of antisocial behavior or who are at great risk for such, less intensive interventions involving parents may be sufficient in helping to prevent aggression among most students (Webster-Stratton & Hammond, 1997). Christenson, Rounds, and Franklin (1992) present a thorough review of home-school collaboration strategies and programs that have been found to be effective in preventing and reducing children's academic and social problems (also see Chapter 10, this volume). Likewise, Sheridan, Kratochwill, and Bergan (1996) present evidence of the effectiveness of involving parents in problem solving consultation when problems are first brought to the attention of school psychologists and counselors.

### **Teaching Social Information Processing Skills**

A number of studies have demonstrated the effectiveness of intervention strategies and programs specifically designed to prevent or reduce antisocial behavior by targeting social cognitive and social information processing skills shown to be linked to social behavior (see Chapter 2 in this volume; for additional reviews, see Consortium on the School-Based Promotion of Social Competence, 1991, 1994; Gottfredson, 1997; Guerra et. al., 1994; Hughes & Cavell, 1995; Kadzin, 1994; Larson, 1994, 1998). Nearly all popular school-based programs for preventing school violence include a social problem solving curriculum, typically based on the classic social problem solving research by Shure and Spivak (1982),

information processing models (e.g., Crick & Dodge, 1994), or models of emotional competency (e.g., Elias et al., 1997). Likewise, training in social problem solving is frequently a part of mental health treatment programs for aggressive and antisocial children (Kazdin, 1994). Cognitions and emotions commonly targeted in these programs include:

- Social information processing, social problem solving, and social decision making skills (Crick & Dodge, 1994; Elias, et al., 1997; Erdley & Asher, 1998; Hudley, 1999; Hudley et al., 1998; Webster-Stratton, 1997);
- Anger management and impulse control (Lochman, Dunn, & Wagner, 1997; Lochman & Wells, 1996);
- Moral reasoning (Bear, Richards, & Gibbs, 1997; Elias et al., 1997);
- Self-management, including self-monitoring, self-evaluation, and self-reinforcement (Shapiro & Cole, 1994);
- Empathy training (Eisenberg & Fabes, 1997); and
- Social perspective taking, interpersonal understanding and negotiation strategies (Selman & Schultz, 1990).

Most research-supported programs for teaching social problem solving and decision making tends to use multiple strategies that target a combination of the above areas. Table 5 shows a list of some of the most popular social cognitive, prevention-oriented curriculum programs, designed for primary-level intervention, that have been shown to be effective in improving social cognitive skills and/or behavior. Although each of these programs is supported by published research showing positive social and/or behavioral outcomes, only four (*BrainPower*, *Dinosaur Social Skills and Problem-Solving Curriculum*, *PATHS*, and *Second Step*) have published results showing that an empirical research design with a follow-up component was used to show lasting improvement in behavior. As noted in comprehensive reviews of social problem solving programs (e.g., Beelmann, Pfingsten, & Losel, 1994; Larson, 1998) most programs have simply demonstrated short-term improvements on self-report measures of either social problem solving or behavior. Failure to show that improvements in behaviors are maintained and generalized outside of the training setting also has plagued social skills training programs that emphasize direct teaching, modeling, and practice of specific behaviors (DuPaul & Eckert, 1994; Mathur, Kavale, Quinn, Forness, & Rutherford, 1998).

**TABLE 5**  
**Sample of Primary-Level Preventive Intervention Programs of Demonstrated Effectiveness**

<b>Prevention Program</b>	<b>Source</b>
Aggressors, Victims, and Bystanders: Thinking and Acting to Prevent Violence	Slaby, Wilson-Brewer, & Dash (1994)
Brainpower Program (Reattribution Training)	Hudley et al. (1998); Hudley (1999)
Dina Dinosaur's Social Skills and Problem-Solving Curriculum	Webster-Stratton (1990c)
I Can Problem Solve (ICPS)	Shure (1992)
PATHS Program (Promoting Alternative Thinking Strategies)	Greenberg, Kusche, Cook, & Quama (1995)
Resolving Conflict Creatively Program	Aber, Jones, Brown, Chaudry, & Samples (1998)
Seattle Social Development Project	Hawkins et al. (1998)
Second Step: A Violence Prevention Curriculum	Committee for Children (1992); Grossman et al. (1997)
Social Decision Making and Problem Solving	Elias & Clabby (1992); Elias & Tobias, (1996)
Social Problem Solving (SPS) Program (including New Haven's K-12 Social Development Project)	Weissberg, Barton, Shriver (1997)
Viewpoints: A Guide to Conflict Resolution and Decision Making for Adolescents	Guerra, Moore, & Slaby (1995)
Violence Prevention Curriculum for Adolescents	Prothrow-Stith (1987)

Whereas programs that teach children how to use social problem solving skills show much promise as an intervention, these programs should not be confused with "lecture" programs that rely primarily on moral appeal, fear arousal, or information dissemination in teaching students *what* to think (as opposed to *how* to think or how to decide *why* certain actions are wrong). Lecture programs have not been found to be effective in preventing or reducing antisocial behaviors (Gottfredson, 1997). Included in this category are deterrence programs such as Scared Straight and law-related education programs, such as the popular DARE program (however, note that the curriculum for this program has been recently revised to include social problem solving strategies found to be effective in other programs).

### **Establishing School- and District-Wide Norms of Appropriate Behavior**

Programs included in this category differ from the above programs in their emphasis on changing behavior directly, rather than indirectly through social cognition. A variety of traditional school-effectiveness practices are typically used, including the implementation of systematic rewards and sanctions, clear school rules, expectations and policies, increased supervision and monitoring of behavior, improved school-wide climate, school-wide campaign or ceremonies (e.g., rewarding prosocial behavior and communicating to parents, students, and teachers the problems with bullying), and close communication with families and communities (Cotton & Wikelund, 1990).

Project ACHIEVE (Knoff & Batsche, 1995) is a good example of a behaviorally oriented, comprehensive, multisite program that attempts to improve school norms. Program components include teacher training in classroom management techniques; collaborative problem-solving consultation; social skills training; remedial, curriculum-based instruction; and home-school collaboration. The program has been shown to be effective in reducing reports by teachers and administrators of disobedience, fighting, disruptiveness, abusive behavior, and disrespect and in improving academic achievement. However, studies have examined only short-term effects and have not included rigorous experimental research designs. Thus, it is unclear if the program prevents future delinquent acts.

BASIS (Gottfredson, Gottfredson, & Hybl, 1993) is another good example of a school-wide program designed to change school

norms, with an emphasis on the use of behavioral techniques. The program targets schools with a large number of high-risk students and focuses largely on staff training. Like ACHIEVE, BASIS focuses on clarifying school rules and improving the consistency of their enforcement, improving classroom management and discipline, enhancing home/school communication, and systematically reinforcing students for good behavior. Minor delinquent acts have been shown to decrease in schools in which the program has been implemented with high fidelity.

Whereas ACHIEVE and BASIS rely largely on traditional methods of improving schools, particularly staff development and the direct teaching of desirable behavior, other programs have used more innovative strategies to improve school climate and behavior. For example, in a school-wide project funded by the National Institute of Justice, eleventh graders were empowered to improve student behavior in their high school as part of their course requirements in government and history. Fighting, teacher victimization, and student fear about violence decreased as outcomes of this innovative intervention (Kenney & Watson, 1996). In an exemplary project for reducing bullying, Olweus (1999) blended traditional and innovative practices. The project included (a) various forms of media to inform teachers, parents, and children about the problem and how to counteract it; (b) clear rules against bullying; (c) sanctions against bullying and rewards for appropriate behavior; (d) class meetings to discuss bullying and to clarify norms against it; (e) improved supervision of children, especially on the playground; and (f) increased teacher involvement in creating and maintaining a positive school climate. Conducted in Norway, the program was successful in altering school norms. The program led to impressive reductions in bullying (about 50% reduction) as well as to smaller decreases in vandalism, truancy, and theft. It should be noted that whereas the above programs have been shown to be effective in reducing behavior problems in the school setting, their effects on long-term measures of aggression and antisocial behavior, and on behavior outside of the school setting, have not been determined.

#### **Combining Proactive, Corrective, and Instructive Strategies at the Classroom and Small Group Levels**

Programs in this category focus more on small group and classroom behavior than on school-wide norms and climate. They tend

to be less comprehensive in scope and often are a major component of more comprehensive, school-wide programs (e.g., ACHIEVE, BASIS). This category includes a variety of developmentally appropriate strategies commonly found in the behavior modification and educational psychology literatures such as those shown in Table 6.

Research has consistently demonstrated the short-term effectiveness of a wide variety of behavioral techniques, such as positive reinforcement, behavioral contracting, time-out, overcorrection, response cost, and level-systems for teaching and managing behavior. A recent meta-analytic review of this literature (Stage & Quiroz, 1997) found that on the average 78% of disruptive students decreased their disruptive classroom behavior following the use of behavioral interventions. Although most of the studies included in the review consisted of single subjects or small groups, other studies have clearly demonstrated the effectiveness of behavioral interventions when implemented at the classroom level or across multiple grade levels. For example, Kellam, Rebok, Ialongo, and Mayer (1994) demonstrated the effectiveness of the Good Behavior Game (an interdependent group contingency intervention) in reducing aggressive behavior in a sample of 1,000 urban elementary students. Likewise, several empirical studies demonstrated lasting effects of social skills training in preventing a variety of behavior problems, including aggression, but especially when the training included social-cognitive and parent education components (Tremblay et al., 1996; Vitaro, Brendgen, & Tremblay, 1999).

Research in educational psychology has consistently demonstrated the critical importance of a host of teacher and classroom characteristics in the prevention and management of behavior problems, such as high academic and behavioral expectations, instructions and materials that are motivating, curriculum adaptations, and the frequent monitoring of behavior achievement (Ysseldyke & Christenson, 1994). In particular, an "authoritative" teaching style has been shown to be effective. Authoritative teachers *prevent* most behavior problems from ever occurring. When problems do occur they handle them with a combination and variety of effective behavioral techniques, while viewing disciplinary situations as opportunities to teach children self-discipline (Bear, 1998; Brophy, 1996).

Webster-Stratton (Webster-Stratton & Hammond, 1997) provided an excellent example of a research-driven, in-service training program for teachers and school counselors that targets the

**TABLE 6**  
**Classroom Behavior Management Strategies Used**  
**by Effective Classroom Teachers**

- ❑ Work to develop a classroom environment that is caring, pleasant, relaxed, and friendly, yet orderly and productive.
- ❑ Show a sincere interest in the life of each student (e.g., know their interests, goals, family, pets, friends, etc).
- ❑ Model the behaviors they desire in their students and convey that such behaviors are truly important.
- ❑ Encourage active student participation in decision making.
- ❑ Strive to teach prosocial behavior and to reduce undesirable behavior.
- ❑ Strive to develop cognitions and emotions related to prosocial behavior.
- ❑ Work to develop peer acceptance, peer support, and close friendship among students.
- ❑ Appreciate and respect diversity.
- ❑ Appreciate and respect each student's opinions and concerns.
- ❑ Emphasize fairness, allowing for appropriate flexibility in application of consequences for rule violations.
- ❑ Use cooperative learning activities.
- ❑ Minimize competition and social comparisons.
- ❑ Avoid producing feelings of shame (focusing more on pride and less on guilt).
- ❑ Reinforce acts of kindness in the classroom, school, and community.
- ❑ Communicate often with each child's home.
- ❑ Provide frequent and positive feedback, encouragement, and praise, characterized by:
  - Sincerity and credibility.
  - Providing specific suggestions and opportunities for good behavior.
  - Highlighting the importance and value of the student's social and academic achievement.
  - Attributing success to effort and ability (implies that similar successes can be expected in the future).
  - Encouraging belief that students behave well because they are capable and want to, not because of consequences.
  - A focus on both the process and the product of good behavior.
  - Reference to prior behavior when commenting on improvement.
  - Specification of what is being praised.
  - Praise that is contingent upon good behavior.

*Table 6 continued on p. 32*

TABLE 6  
Classroom Behavior Management Strategies Used  
by Effective Classroom Teachers (*continued*)

- Beginning during the first few days of school, establish clear rules that are characterized by:
  - Clear and reasonable expectations.
  - "Do"s and "Don't"s regarding classroom behavior.
  - Attempts to develop student understanding of rules and their consequences.
  - A small number of important rules being highlighted.
  - Fairness and developmental appropriateness.
  - Explanations and discussions of the rationale for each rule.
  - Student input during their development.
  - Clear examples of appropriate, and inappropriate, behavior related to each rule.
  - Direct teaching of appropriate behavior when necessary.
  - Clear consequences for rule infractions.
  - Distributing a copy of rules and consequences to children and parents.
  - Applying classroom rules consistently.
  - Frequent reminders of rules and expected behaviors.
  - Their nondisturbance of the learning process. That is, the rules do not discourage healthy peer interactions such as cooperative learning or appropriate peer discussions.

**Note.** From "School discipline in the United States: prevention, correction, and long-term social development," by G. G. Bear, 1998, *School Psychology Review*, 22 (p. 20). Copyright 1998 by the National Association of School Psychologists. Adapted with permission.



above classroom management strategies. The videotape-based, discussion-oriented program includes six components: (a) the importance of teacher attention, encouragement, and praise; (b) motivating children through incentives; (c) the proactive teacher (focused on instructional techniques); (d) decreasing inappropriate behavior; (e) building positive relationships with difficult students; and (f) social skills and problem solving training in the classroom. A key feature of the program is the use of more than 200 videotaped models of teachers interacting with children in classrooms from preschool through third grade. In an empirical study of 145 children with diagnosed conduct problems, the teacher training program was shown to significantly enhance the effectiveness of parent training and child training interventions in terms of decreasing aggressive and noncompliant behavior and improving academic readiness and engagement. Moreover, participating teachers were shown to use fewer inappropriate and harsh discipline strategies and to be more nurturing and positive than non-intervention teachers. The favorable results of the training program were recently replicated with Head Start teachers (Webster-Stratton & Reid, 1999).

### **Mentoring**

Mentoring programs involve an ongoing one-on-one relationship between an adult and a high-risk child or adolescent. Typically, mentoring focuses on improving academics, or social competency, or on providing vocational guidance. Mentoring programs have been shown to be effective in improving school attendance and reducing substance abuse (Gottfredson, 1997; Sherman, 1997). With a few exceptions, they have not been shown to be effective in preventing or reducing antisocial and violent behavior. However, it should be noted that few mentoring programs have been adequately evaluated (Gottfredson, 1997; Sherman, 1997). A recent evaluation of the community-based Big Brothers/Big Sisters program yielded promising results. Mentored youth were 46% (70% for minority participants) less likely than controls to begin using drugs and 27% less likely to begin drinking alcohol. They also hit others 32% less often, skipped half as many days of school, felt more competent about their schoolwork, and improved slightly in their grade point averages (Grossman & Garry, 1997). Long-term effects were not evaluated.

### **Focusing on the Prevention of Gang Violence**

Gang prevention programs are designed specifically to prevent adolescents from joining gangs or to divert gang members from violence. Perhaps the most widely used gang violence prevention program is Gang Resistance Education And Training (GREAT), funded by the U.S. Bureau of Alcohol, Tobacco, and Firearms. This 9-week program, taught by trained, uniformed police officers, consists primarily of lessons on cultural differences, the impact of crime, social problem solving, conflict resolution, and self-understanding. Evaluations show that participants, compared to controls, fare better with respect to prosocial behaviors and attitudes, attachment to parents and school, involvement with nondelinquent friends, less fighting and delinquent activity, impulsive or risk-taking behavior, and gang-supporting attitudes (Arnette & Walsleben, 1998). The major limitation of these evaluations, however, is that they were based entirely on self-report measures. In general, reviews of evaluation studies of gang violence prevention programs tend to be mixed. For example, whereas Gottfredson (1997) evaluated the GREAT program negatively, noting that it lacks the teaching of those social decision making skills found to be effective in other programs, the Office of Juvenile Justice and Delinquency Prevention Study Group on Serious and Violent Juvenile Offenders judged GREAT as "promising" (Loeber & Farrington, 1997).

### **Providing Alternative Education Programs**

Largely in response to the public's perception of a rising tide of school violence, many schools have adopted "zero tolerance" policies consisting mainly of suspension and expulsion. Others have developed alternative schools, recognizing the limitations of suspension and expulsion. The effects of suspension and expulsion are similar to those that apply to punishment procedures in general. That is, punishment (a) fails to address factors underlying the student's problem behavior; (b) does not teach replacement behaviors such as prosocial alternatives; (c) produces short-term, but not lasting, decreases in behavior problems; (d) is likely to harm the student-teacher relationship; and (e) is likely to foster resentment, retaliation, and/or emotions that are counterproductive to learning (Hyman, 1997; Martens & Meller, 1990). Suspension and expulsion often allow students to avoid or escape from situations they find aversive (e.g., difficult or irrelevant academic work, peer rejection, a noncaring or harsh teacher), nega-

tively reinforcing inappropriate behavior. Moreover, these two common disciplinary practices in the schools typically result in students losing valuable instructional time (thus contributing to their school failure and the risk of dropping out of school) and gaining greater exposure to negative role models (Walker et. al., 1996).

Alternative education programs for students with disciplinary problems are designed to avoid the above shortcomings of suspension and expulsion, while simultaneously helping to ensure overall classroom safety and order. With respect to serving violent and antisocial children, there are two types of alternative education programs: (a) traditional alternative education programs that serve "at-risk" students for an extended period of time, and (b) Interim Alternative Education Settings (IAESs) in which placement is short-term, generally 1 to 45 days. IAESs were first introduced to educators in the 1997 Amendments to the Individuals with Disabilities Act for the purpose of providing a temporary setting primarily for students with disabilities who have exhibited a major infraction of school rules (e.g., possession of drugs or weapons or threat of violent behavior) and who may need a change in their current educational placement.

Only a few empirical studies have been published on the effectiveness of traditional alternative education programs, yielding mixed findings with respect to a lasting impact on delinquent behaviors (Cox, Davidson, & Bynum, 1995; Gottfredson, 1997). No empirical studies have yet been published on IAESs. It should be emphasized, however, that alternative programs should be effective in preventing behavior programs from recurring when they include the effective program components reviewed above. In the absence of a parent component, the linking of assessment to interventions, the provision of adequate support services, changes in the regular classroom setting to which the student returns, and so forth, it is unlikely that placement in an alternative education program will result in lasting improvement in behavior (see Bear, 1999, and Bear, Quinn, & Burkholder, in press, for recent reviews of characteristics of alternative education programs that are likely to be associated with a program's effectiveness).

### **Providing School-Based Counseling**

School-based counseling programs, either individual or group, that focus on active listening, vocational guidance, or changing general attitudes, values, and beliefs toward aggression have tend-

ed to receive unfavorable reviews with respect to their impact on preventing aggressive and delinquent behavior (e.g., Gottfredson, 1997; Lipsey, 1992). However, research reviews have been more favorable in reference to counseling services provided in clinical treatment (Lipsey & Wilson, 1998). Differences in evaluations should be expected given the wide variety of counseling techniques employed and the failure on the part of reviewers to differentiate among techniques. Counseling programs should be effective when they rely on those strategies presented previously that have been shown to prevent or reduce aggression (e.g., parent involvement, teaching anger control and social decision making skills), but are likely to fail when they focus on strategies of undemonstrated value (e.g., building self-esteem, active listening without fostering problem solving skills, counseling that does not address the multiple factors influencing the student's behavior).

### **Peer-Led Interventions**

**Peer-Mediation Programs**—Unlike curriculum-based programs that are designed to teach all students a variety of social problem solving and conflict resolution skills (as reviewed previously), programs in this category teach these skills to a selected cadre of students. These students apply the skills to resolving or mediating disputes among peers. Unfortunately, despite the marked increase in the number of peer mediation programs during the past decade, empirical studies of their effectiveness are sparse. Reports of their effectiveness are based largely on anecdotal and descriptive data.

In a comprehensive review of the few empirical studies that have been reported, Johnson and Johnson (1996) concluded that considerable evidence exists showing that peer mediation training "results in students knowing the negotiation and mediation procedures, being able to use the procedures in actual conflicts, transferring the procedures to nonclassroom conflicts, and transferring the procedures to nonschool conflicts in the home." (p. 479).

It should be noted that most of the studies included in Johnson and Johnson's (1996) review that yielded favorable results were conducted on their Teaching Students To Be Peacemakers Program (Johnson & Johnson, 1995). Johnson and Johnson found mixed evidence that peer-mediated conflict resolution programs improved self-esteem, overall perceptions of the school climate, or student attitudes toward conflict and training. Evidence, largely correla-

tional and based on self-reports and testimonials from project staff, supported the effectiveness of conflict resolution and peer mediation programs in reducing violence and discipline problems, as measured primarily by school-reported decreases in referrals, detentions, and suspensions. As noted by Johnson and Johnson, and by others (e.g., Brewer, Hawkins, Catalano, & Neckerman, 1995; Gottfredson, 1997), there is very little empirical evidence demonstrating the effectiveness of peer mediation on aggression and violence: Existing studies tend to suffer from multiple methodological weaknesses (e.g., poor measures, short-term design, no random assignment, etc.).

In a recent longitudinal evaluation of the Resolving Conflict Creatively Program, which included over 5,000 students in grades 2 to 6 in New York City, Aber, Jones, Brown, Chaudry, and Samples (1998) found little evidence to support the program's peer mediation component. Teachers who focused more on the teaching of class-wide lessons (focusing on active listening, assertiveness, negotiation, and social problem solving) and less on the use of peer mediators, had a greater favorable impact on students' aggressive cognitions (hostile attributional biases and aggressive fantasies) than did those teachers who taught no lessons but had a high percentage of specially trained peer mediators in their classrooms. Interestingly, Aber et al. (1998) found that one of the strongest determinants of the program's effectiveness in reducing aggressive cognition was whether or not the classroom supported the norm of aggression as being "really wrong" or "OK." Only in the former classes were lessons effective. The researchers did find that the number of peer mediators present in a classroom correlated significantly with classroom normative beliefs against aggression.

Unfortunately, most studies, including the Aber et al. (1998) study, fail to report on the quality of the peer mediation training or the skills of those trained. As cautioned by Johnson and Johnson (1996): "While merely introducing a third person into a conflict may be highly beneficial, it can also be highly problematic. Emerson (1990), for example, in his study of peer mediation programs in elementary schools in Oregon, found that most of the teachers/trainers did not (a) understand mediation, (b) understand how to train peer mediators, and (c) have adequate group process skills. Consequently, many student mediators were improperly trained, frequently viewed as policemen, and frequently disliked by other students" (p. 485).

**Other Peer-Led Interventions**—These programs entail a variety of peer-based intervention programs in which aggressive children play the primary role in helping their peers. Included are peer counseling, peer-led discussions of the negative effects of crime, group contingency reward programs, and programs in which disruptive students are paired with a nondisruptive "buddy." These programs have been found to be ineffective, with several researchers noting that they may be counterproductive, exerting a negative influence on the least disruptive students in the group (Gottfredson, 1997; Guerra et. al., 1994).

#### **Recreational, Enrichment, or Leisure After-School Programs**

These programs are designed to occupy the after-school hours of students, particularly those who are unsupervised and thus at greatest risk for being either a perpetrator or victim of aggression and violence. In addition to providing adult supervision, such programs generally offer sports, recreational, social, and academic activities. Unfortunately, few empirical studies have investigated their effectiveness, especially in preventing aggression from occurring outside the supervised setting. Anecdotal reports and nonempirical studies show the programs to be effective in improving academic achievement, school attendance, and general behavior problems (U.S. Department of Education, 1998). Their effectiveness can be attributed not only to adult supervision, but also to decreased time watching television, more time spent on homework, increased academic assistance, and greater access to support services such as counseling and vocational training.

When not combined with programs that directly teach social competency skills, these programs appear to have no *lasting* effect on aggression (Gottfredson, 1997). Aggression may decrease, but such a decrease is typically limited to the time during which structured activities and supervision are offered. Nevertheless, this alone is a valuable outcome in many communities, given that juvenile crime typically occurs after school. However, for purposes of this review, for a program to be deemed effective, it should produce improvements that are more lasting.

#### **MODEL PROGRAMS FOR PREVENTING SCHOOL VIOLENCE**

In this section we profile two types of model programs for preventing school violence: comprehensive school-based programs

and parent-family training programs. First, we briefly review two comprehensive, school-based programs: Fast Track and the Child Development Project. Both of these programs employ multiple strategies to develop children's social, emotional, and behavioral competencies. Both include classroom management and parent education components. Both have strong, although different, theoretical and empirical bases and are being implemented at multiple sites across the nation. Because many of the strategies used by these two programs, especially strategies for teaching children social problem solving and decision making skills, are covered more extensively in Chapter 2 in this volume, we devote less attention to these two programs and greater attention to parent-family training programs.

### **Comprehensive School-Based Programs**

**The Fast Track Program**—Families and Schools Together (FAST Track; Bierman, Greenberg, & Conduct Problems Prevention Research Group [CPPR Group], 1996; McMahon, Slough, & CPPR Group, 1996) is the largest school-based prevention program funded by the federal government (NIMH). This comprehensive, multisite, school-based prevention program integrates several of the most effective interventions for preventing conduct problems: parent training, social problem solving and social skills training, friendship enhancement, remedial instruction, and consultation to teachers. The social information and social learning models reviewed previously provide the framework for the program's two primary components: social problem solving/emotional competence and parent management training.

The PATHS (Kusche & Greenberg, 1994) curriculum is used to teach social problem solving and to promote emotional competence (see Chapter 2 in this volume). All children are taught two to three lessons weekly, extending from first through fifth grade, that focus on social problem solving, resolving social conflicts, controlling anger, and generally on how to behave in a socially appropriate manner.

Children who exhibit conduct problems (e.g., those scoring in the upper 10% on teacher checklists) receive additional components. Included is an intensive, direct parent management training component that combines an individual and group-based approach, using curricula developed and validated by Forehand

and McMahon (1981) and Webster-Stratton (1996a, 1997). These curricula are supplemented with additional parenting lessons designed to teach social cognitive strategies for use by both parents and children (e.g., anger control). Home visits also are included. The high risk students also participate in a Saturday program that targets social problem solving, social skills training, and cooperative group activities. Parents also participate in the Saturday program.

Additional components of the Fast Track program are teacher training, remedial reading instruction, a peer-pairing component, and the provision of a school consultant (counselor, school or clinical psychologist) to assist the classroom teacher in managing children with discipline problems. Together, these components strive to improve children's social competencies in six areas: (a) social participation, (b) prosocial behavior, (c) communication skills, (d) self-control, (e) regulating oneself in rule-based interactions, and (f) social problem solving skills.

A recent large-scale study, using a randomized design, evaluated the effectiveness of two specific components of FAST Track, the PATHS curriculum and teacher consultation (CPPR Group, 1999a). A total of 198 first-grade classrooms participated in the intervention. Significant effects were found in peer ratings of classroom behavior and observer ratings of classroom atmosphere. That is, compared to 180 comparison classrooms, at the end of first grade project participants (particularly boys) were rated by peers as less aggressive and less hyperactive-disruptive. Moreover, unbiased observers rated intervention classrooms as having a more positive classroom atmosphere (e.g., students followed rules, expressed feelings appropriately, showed greater interest and enthusiasm, and stayed more focused and on task). No differences were found in teacher ratings of behavior. Effects were greatest in those classrooms in which the project's components were implemented with fidelity and in high dosage.

In a separate study (CPPR Group, 1999b), researchers focused on the impact of the overall multicomponent program (including social skills training, academic tutoring, parent training, and home visits) on 446 behaviorally disruptive, high risk children. Compared to children in the control group, at the end of Grade 1 children in FAST Track showed significantly greater improvements in a variety of social cognitions (i.e., emotion recognition, emotion coping, social problem solving, aggressive retaliation), spent more



time in positive peer interaction, were more socially accepted, and were rated by parents, teachers, and unbiased observers as less aggressive-disruptive. Project participants also were shown to spend less time per week in special education. In addition, parents of children in the project reported less use of physical punishment and were rated as showing more warmth and positive involvement and more appropriate and consistent discipline than did parents in the control group. Finally, parents rated themselves as improving in parenting skills and in parenting satisfaction and reported high levels of satisfaction with the overall program. Teachers also rated parents as improving in their involvement in school.

Together, the above two evaluations provide some of the strongest evidence to date in support of school-based interventions—many of which are commonly used by school psychologists—for promoting social and emotional competence and preventing social maladjustment.

**Child Development Project**—The Child Development Project (Battistich, Watson, Solomon, Schaps, & Solomon, 1991) is a multisite project, supported by the William Grant Foundation, grounded in a cognitive-developmental, constructivist approach to social and moral development. The teaching of prosocial behavior and self-discipline, primarily by use of strategies designed to promote socio-moral reasoning, social problem solving, and empathy, is emphasized. The Child Development Project's major program components include (a) ongoing staff development; (b) cooperative learning activities; (c) a literature-rich language arts curriculum that highlights important social, cultural, and moral values; (d) activities designed to build a caring classroom and school community; (e) home-school collaboration activities; and (f) developmental discipline, which focuses on promoting social problem solving and the internalization of democratic values.

The Child Development Project has generated a number of published research studies, including multiple studies of the program's effectiveness. Results show that compared to control groups, children in the program are more prosocial, possess better social problem-solving skills, and show a greater commitment to democratic values—compromise, asserting one's opinion, and respect of other's opinion and right to participate in decision making (Battistich, Solomon, Watson, Solomon, & Schaps, 1989). The

program has had less impact on indices of antisocial behavior. However, a recent follow-up study (Battistich, Schaps, Watson, & Solomon, 1996) demonstrated that project participants, particularly in schools in which the program was implemented with fidelity, are less likely to use alcohol and more likely to exhibit fewer delinquent behaviors (e.g., threatening others, carrying a weapon, skipping school, or stealing vehicles).

### **Parent-Family Training Programs**

The following parent-family training programs were selected on the basis of their widespread availability, detailed descriptions of training procedures, and empirical validation including data concerning their long-term effectiveness in preventing or reducing conduct problems.

#### **"Living with Children" Program and "Families" Program—**

The most highly influential parent-training program was developed by Patterson, Reid, and their colleagues at the Oregon Social Learning Center (Patterson, Chamberlain, & Reid, 1982; Patterson, Reid, Jones, & Conger, 1975). Spanning two decades of research with more than 200 families, their work provides an exemplary model for outcome research with conduct-problem children. Although directed toward parents of preadolescents and adolescents who were engaged in overt conduct disorders, their program is described here first because it has provided the foundation for numerous other parent training programs, both prevention- and treatment-oriented.

The program, which is based on a one-to-one counseling model, starts with having parents read a programmed text, either *Living with Children* (Patterson, 1976) or *Families* (Patterson, 1975). Afterwards, they complete a test on the reading material. The counselor then works with each parent individually in a step-by-step approach wherein each newly learned skill forms the foundation for the next new skill. Five behavior management practices form the core content of the program. *First*, parents are taught to pinpoint the problem behaviors of concern and to track them at home (e.g., compliance versus noncompliance). *Second*, they are taught how to use social and tangible reinforcement techniques (e.g., praise, point systems, privileges, and treats) and to shift from tangible to social reinforcements over time. *Third*, they are taught discipline procedures: 5-minute time-outs, short-term privilege removal, response

cost, and work chores. *Fourth*, they are taught to "monitor"—provide close supervision for their children even when the children are away from home. This involves parents knowing where their children are at all times, what they are doing, and when they will be home. In the *final phase* of treatment, parents are taught problem solving and negotiation strategies and become increasingly responsible for designing their own programs. The treatment content has been described in a manual by Patterson (1975) and elaborated upon by Reid (1987). The program has undergone extensive evaluation (Patterson et al., 1982; Patterson & Fleischman, 1979).

A group-based version of this program, the *Adolescent Transition Program, Parent Focus* (Dishion & Kavanagh, in press), was developed for parents of older children with at-risk behaviors (ages 11 to 15 years). This 12-session, group-based parenting program (Irvine, Biglan, Metzler, Ary, & Smolkowski, 1997) has been shown to improve both parents' practices and youths' behaviors (Dishion & Andrews, 1995). The program uses videotape examples and discussion to assist parents in pinpointing and reinforcing desired behaviors and setting limits effectively.

**Helping the Noncompliant Child**—Another influential parent training program, designed to treat noncompliance in young children, ages 3 to 8 years, was developed originally by Hanf (1970) at the University of Oregon Medical School and later modified and evaluated extensively by McMahon and Forehand (1984). As described by Forehand and McMahon (1981) in their book, *Helping the Noncompliant Child*, the first phase of this comprehensive parent training program involves teaching parents how to play with their children in a non-directive way and how to identify and reward children's prosocial behaviors through praise and attention. The objective is for parents to learn to break the coercive cycle by increasing their social rewards and attention for positive behaviors and reducing their commands, questions, and criticisms. Parents also learn to use social and tangible rewards for child compliance and to ignore inappropriate behaviors. The second phase of the program involves teaching parents how to give direct commands in such a way as to gain more compliance and how to use 3-minute time-outs for noncompliance. Progression to each new skill in the treatment program is contingent on the parent's achieving an acceptable degree of competence in the previously presented skill.

In this program the counselor/therapist works with individual parents and children together. Training methods include role playing, modeling, and coaching. The program utilizes a playroom equipped with one-way mirrors for observation and "bug-in-the-ear" devices through which the therapist can prompt and give feedback to parents while they play with their child. Homework is assigned in the form of daily 10-minute play sessions with the child using the strategies learned in the clinic. In this intervention the focus is on the reinforcement value of parental attention. Parents are taught to use "descriptive commenting" with appropriate behaviors—that is, to describe their children's behavior when they are acting in appropriate, positive ways—and to praise those behaviors. Parental attention reinforces and thus promotes the replacement behaviors. Only after mastering the use of positive attention are parents taught discipline techniques to limit negative behavior. Reorienting the pattern of parent-child interactions from punishment to positive reinforcement is presumed to interrupt the overlearned negative cycles in which many parents of noncompliant children find themselves, and which only promote further noncompliance. Research with this intervention has shown it to have lasting effects in reducing noncompliance and conduct problems (Forehand, Rogers, McMahon, Wells, & Griest, 1981; McMahon & Forehand, 1984).

An emphasis on the relational aspects to parenting training is found in the intervention program developed by Eyberg (1988) called "parent-child interaction therapy" (Hembree-Kigin & McNeil, 1995). While the emphasis on behavior management is maintained, the skills for child-directed play are elaborated in great detail, composed of "DRIP skills": Describe, Reflect, Imitate, Praise. Eyberg (1988) presents this program as an integration of traditional play-skill values and current behavioral thinking about child management (Eyberg & Boggs, 1989). It is felt that parents' nondirective play with their children improves children's frustration tolerance, helps reduce their anger levels, and offers more opportunities for prosocial behavior to occur (Hembree-Kigin & McNeil, 1995). Moreover, engaging in play with their children helps parents recognize their children's positive qualities. As parents learn nondirective play skills, they learn how to respond in a sensitive and genuine manner, how to relate to their child's level of development, and how to stimulate their learning. The primary goal of this training is to strengthen attachment and establish a warm, loving relationship between the parents and the child.

**Incredible Years Parent Training Program**—Another example of a parent training program for preschool and young school-aged children, ages 3 to 8 years, and for slightly older children, ages 5 to 10 years, are two 12- to 14-week programs developed by Webster-Stratton, entitled *The Incredible Years* (Webster-Stratton, 1984). The program makes extensive use of videotape modeling methods. The program incorporates (a) Patterson's (1982) nonviolent discipline components concerning time-out, logical and natural consequences, and monitoring; (b) components of Hanf's (1970) "child-directed play" approaches; and (c) the strategic use of differential-attention, encouragement and praise, and effective use of commands. It also includes cognitive behavioral approaches such as mutual problem solving strategies, self-management principles, and self-talk approaches to cope with depressive and self-defeating thoughts. This content has been embedded in a relational framework including parent group support and a collaborative relationship with the group leader. The use of videotape examples to foster group discussions is designed to promote parental self-efficacy and engagement with the program and reduce parental resistance and dropout (Webster-Stratton & Hancock, 1998). The videotape vignettes show unrehearsed parent models in natural situations with their children "doing it right" and "doing it wrong" in order to demystify the notion that there is "perfect parenting" and to illustrate how one can learn from one's mistakes. After each vignette, the leader facilitates a group discussion of the relevant interactions and encourages parents' ideas.

The group discussion and collaborative format were chosen to ensure that the intervention would be sensitive to individual cultural differences and personal values, as well as to enhance parents' commitment to parental self-management. Asking each parent to identify the particular positive behaviors they want to see more of in their children and the negative behaviors they want to decrease emphasizes the self-management aspect of the program. These targeted behaviors then become the focus for parents to apply the "parenting principles" that they learn in the program. In this sense the program is "tailored" to each family's individual needs and goals as well as to each child's abilities and temperament. A book for parents entitled *The Incredible Years: A TroubleShooting Guide for Parents* as well as a self-administered version of the videotape program are also available (Webster-Stratton, 1992). Research on this program has shown it to be effective either as a prevention program

or as an intensive intervention for parents of children with diagnosed oppositional defiant disorder or conduct disorder (Webster-Stratton, 1990b, 1996a, 1998a).

In addition to the two BASIC programs designed to strengthen positive parenting skills, Webster-Stratton developed two other videotape training series. The first is called the ADVANCE parent training program and includes content on problem solving communication (D’Zurilla & Nezu, 1982; Spivak, Platt, & Shure, 1976). This 14-week program has been shown to enhance the effects of BASIC by promoting children’s and parents’ conflict management skills and self-control techniques (Webster-Stratton, 1994). The other videotape program is called *Supporting Your Child’s Education* and focuses on helping parents learn how to support their children’s learning at home, read with their children, help them with homework, and communicate with their teachers more successfully. This 6-week program has been shown to result in significantly increased parental involvement in their children’s school-related activities at home and at school (Webster-Stratton, 1998a). Finally, Webster-Stratton developed two other videotape-based training series—one for training teachers in positive classroom management strategies and in effective methods of communicating with and involving parents, and the other for training children directly in problem solving, anger management, and social skills (i.e., *Dina Dinosaur Social Skills and Problem-solving Curriculum* [Webster-Stratton, 1990c]). In addition to the classroom management components described earlier, the teacher training program encourages teacher-parent communication via the use of positive good-news calls home, positive notes home, and brown bag lunches for teachers and parents. Teachers also are shown how they can have productive conferences with parents and collaborate effectively to develop coordinated home-school behavior plans.

### **Essential Features of Effective Parent-Family Training Programs**

As demonstrated throughout this chapter, a parent component is critical to the success of programs for preventing or reducing antisocial behavior, including school violence. The above review of parenting programs was not comprehensive, focusing instead on the few programs that have been shown to be effective based on rigorous evaluation standards. Given the powerful potential of these programs, school psychologists involved in preventing and

reducing school violence should carefully consider how to integrate such programs into a comprehensive school-wide plan. In this section we present information that is useful for implementing parent-school cooperative interventions plans.

There are several excellent literature reviews of parent training programs for the prevention and treatment of conduct disorders (e.g., Brestan & Eyberg, 1998; Taylor & Biglan, 1998; Webster-Stratton, 1998b), to which school psychologists should refer when evaluating the appropriateness of a particular parent program for their school. These reviews generally conclude that the most effective parent programs include the program content, methods, and processes shown in Table 7.

Central to a program's success is a parent-teacher partnership approach, which leads to both parents and teachers feeling more supported in their efforts, and results in an intervention that will be far more successful than one that targets either teachers or parents alone. Likewise, a systems perspective is important, especially over dealing with chronically aggressive children. A systems perspective should be integrated with the traditional skills training component—a perspective that emphasizes the importance of children's interactions within the social fields of family, peers, school, and community (the microsystem) as well as the connections between these social fields (Bronfenbrenner, 1979). The child's bonding to social institutions, both family and school, as well as the family's bonding to the child and school are believed to be critical features in prevention of antisocial behavior. For example, as noted earlier, many parents of children with conduct problems have had negative encounters with teachers concerning their children's behavior problems. Such encounters add to parents' feelings of incompetence, their sense of helplessness regarding strategies to solve the problems, and their alienation from the school. This spiraling pattern of child negative behavior, parent demoralization and withdrawal, and teacher reactivity ultimately can lead to a lack of connection and of consistency between the socialization activities of the school and home.

In a recent study, teachers reported that parents of high risk children were less interested in knowing the teacher, seemed to hold different goals for their child, and seemed to value education less than did parents of low risk children (Coie, Lochman, Terry, & Hyman, in press). In the case of ethnic and racial minority families, some of these differences may be cultural (e.g., traditional respect for teachers in Asian culture may result in parents' reluctance to get to know

**TABLE 7**  
**Summary of Best Practice Principles for Family- and Parent-Focused School Violence Prevention and Interventions**

**Program content is broad-based.**

The program's content is relevant and sensitive to individual parent needs and family circumstances. Research indicates that broad-based family programs that focus on parenting skills, problem solving, communication, personal family issues and a wide range of risk or protective factors are more effective than programs that are strictly focused on parent skills. This holds especially for parents who are coping with family issues such as serious depression, drug abuse, marital discord, and extreme poverty.

**Program content includes cognitive, behavioral, and affective components.**

The program emphasizes parents' feelings and cognitions about themselves, their parenting, and their children. The program promotes parent self-management as well as understanding of behavioral principles and skills. Such programs tend to have high consumer satisfaction and lasting effects.

**The program's length is greater than 20 hours.**

The program is at least 20 to 40 hours in length. Programs of such length have more sustained and significant effects than shorter interventions. The advantage of offering parenting programs in schools is that parenting programs can be offered at key transition points such as entry to kindergarten, middle school, and high school. This not only provides a lengthier and more comprehensive approach but also provides parents with periodic "boosts" to keep up their efforts at home and to facilitate ongoing relationships with new teachers.

**The program starts early and is developmentally focused.**

There is evidence that the younger the age of the child at the time of intervention, the more positive will be his or her behavioral adjustment at home and at school. This does not mean parent interventions should not be offered to parents of adolescents with antisocial behavior but rather aims to point out that research suggests it is far easier to turn around aggressive behavior problems when children are young than when they are adolescents. By adolescence, aggression has become a stable way of coping with conflict, negative reputations for these children are firmly established in schools, they have had ongoing experience with chronic rejection since the preschool years, and their only friends are other deviant adolescents like themselves. Moreover, parents have experienced years of pain and helplessness and may have given up hope. Parenting programs need to focus on particular developmental stages and ages such as the preschool and beginning school years (4 to 8 years), primary school, middle school, and adolescent years. Programs that try to address parenting issues for all ages in one program are doomed to failure because parents may easily get confused about what strategy is used for what age level and it is more difficult for leaders to cover all the material in a comprehensive manner. For example, Time Out works well with children 4 to 10 years old but work chores and loss of privileges work better with adolescents.

**Program uses a collaborative process with parents.**

Programs that are collaborative, where parents are given responsibility for identifying their own goals and developing their own solutions alongside the person who is doing the parent training, result in more parental engagement, fewer dropouts and are perceived as more culturally sensitive. When parents perceive parenting programs as meaningful and relevant to their own needs and cultural traditions the result will be greater attendance, retention, and behavior change.

*Table 7 continued on p. 49*



TABLE 7  
Summary of Best Practice Principles for Family- and  
Parent-Focused School Violence Prevention and Interventions\*  
(continued)

**The program focuses on parents' strengths (not deficits).**

Programs that are focused on parents' strengths (as opposed to their deficits) assuming that even the most highly stressed parents bring knowledge and expertise regarding their child and their needs, result in less dropout and more behavior change.

**The program involves partners and builds social networks.**

Programs that are offered to parents in groups, that encourage partners' involvement and build within-group buddies among parents, not only are more cost effective but also reduce parents' sense of isolation and increase their sense of support as well as result in more lasting effects.

**The program utilizes performance training methods.**

The training methods need to be responsive to a variety of parental learning styles and utilize "performance-based" training methods such as videotape modeling, role-playing, and home practice assignments. Direct feedback, instruction, and experience with practicing different parenting approaches are more effective in bringing about behavior change than "verbal-based" learning methods (e.g., discussion and written handouts).

**The program emphasizes group leader skill.**

Programs that have trained leaders who are friendly, collaborative, non-hierarchical, non-judgmental, supportive and caring, and who demonstrate a coping model are more effective than program leaders who are "expert," distanced, and prescriptive.

**The program is sensitive to barriers for low socioeconomic families.**

Successful programs need to be accessible and realistic given the practical constraints of parents living on welfare or who are among the "working poor." These programs often provide child care, transportation, food, and evening groups as well as daytime groups. Moreover, weekly calls from leaders and buddies are necessary to engage families, particularly highly stressed families, and result in lower dropout rates and higher attendance.

**The program is based on one or more empirically validated parent training programs.**

Extensive research indicates that parent training is the single most effective intervention available for reducing early conduct problems. The short-term treatment outcome success has been verified by a number of researchers who have reported significant changes in parents' and children's behavior and in parental perceptions of child adjustment. Home observations have indicated that parents are successful in reducing children's levels of aggression by 20% to 60%. Generalization of behavior improvements from the clinic setting to the home over reasonable follow-up periods (1 to 4 years) and to untreated child behaviors has also been demonstrated. Although there is mixed evidence whether generalization of improvements holds from home to school, studies have indicated that improvements in the child's behavior at home are not necessarily reflected in teachers' reports of improved peer relationships, particularly if teachers are not involved in the intervention. However, there is evidence that when parent training programs are combined with child social skills programs and teacher training there is greater and more lasting improvement across home and school.

\*References are provided in the text.

the teacher personally). In any event, these differences between high risk and low risk families suggest that intervention requires not only training both parents and teachers to promote appropriate social-cognitive and behavioral skills, but also a conscious and proactive effort to promote healthy bonds or "supportive networks" between parents and school, child and school, and parents and teachers.

Helping parents to build supportive networks is particularly important for those parents characterized by insularity and lack of social support. Insularity is defined as "a specific pattern of social contacts within the community that are characterized by a high level of negatively perceived social interchanges with relatives and/or helping agency representatives and by a low level of positively perceived supported interchanges with friends" (Wahler & Dumas, 1984). Mothers characterized as insular are more aversive and use more aversive consequences with their children than noninsular mothers. Parents who are isolated, stressed and depressed may perceive teachers and counselors more critically, contributing to negative exchanges not only with their children but also with school personnel. These negative exchanges may be misunderstood or taken personally by teachers, thereby contributing to their critical responses to parents and their children. Insularity and lack of support have also been reported to be significant predictors of a family's relapse or failure to follow through with intervention plans (Webster-Stratton, 1985b). On the other hand, social support is an important protective factor for parents (Dumas & Albin, 1986). Social support buffers the effects of stressful events and directly contributes to parents' feeling of well-being (Cohen & Wills, 1985; Kessler & McLeod, 1985). Social support affects parents' behavior toward their children and the success of family interventions (Heinicke, 1990; Wahler & Afton, 1980).

#### **Overcoming Obstacles to Implementation**

Most of the obstacles that apply to parent-family training programs also apply to school-based prevention and intervention programs in general. This would include inadequate funding resources and facilities; too few staff and/or inadequately trained staff; and the lack of program support and commitment on the part of administrators, staff, and parents. Certain obstacles are more specific to parent training programs. Primary among these obstacles is parent participation. Unfortunately, about half of all families that begin parent management training or family therapy programs drop out (Kazdin, 1996). Factors commonly associated with high attrition include

socioeconomic disadvantage, minority group status, parent and family stress, family dysfunction, logistical obstacles (e.g., transportation, child care, when classes are offered), the severity of the child's problems, and the parent disliking the trainer/therapist or believing that the program will not help (Kazdin, Holland, & Crowley, 1997).

It is unknown whether attrition rates are similar for school-based preventive programs. Although reports of poor parent participation in school-based parent programs appear in the literature (e.g., Kumpfer, Molgaard, & Spoth, 1996), one might expect more favorable attrition rates for school-based programs given that schools often offer a more accessible and less stigmatizing setting than the typical mental health clinic. Indeed, there is evidence to suggest that parents of children with behavior problems are more willing to attend group-based parenting classes at school than individually tailored sessions at a mental health clinic (Cunningham, Bremner, & Boyle, 1995). A likely advantage of offering parent interventions in families' natural communities (versus in mental health clinics) is that parents will develop lasting friendships, ongoing support groups in their communities and schools, and closer relationships with teachers and school staff.

Several studies have reported success in overcoming poor parent participation and high attrition. For example, the FAST Track program enhanced recruitment and participation rates by paying each family \$15 per 2-hour session, providing child care during the sessions, matching the ethnicity of the staff with that of the families, and by providing ongoing social support (McMahon & Slough, 1996). Unfortunately, few schools can afford the costs of several of these practices. A less costly practice was found to be effective in reducing attrition in a study by Prinz and Miller (1994): Their program simply allowed for the frequent discussion of adult-generated issues.

## **CONCLUSION**

Teachers across the nation are faced daily with students who exhibit high rates of aggression, inattention, hyperactivity, defiance and non-cooperation. Indeed, conduct problems in students are escalating and emerging at younger and younger ages (Campbell, 1990; Webster-Stratton & Hammond, 1998a). Studies have indicated that anywhere from 7% to 20% of preschool and school-age children meet the diagnostic criteria for oppositional

defiant disorder and conduct disorder (American Psychiatric Press, 1994). These rates may be as high as 35% for low income families receiving welfare (Webster-Stratton & Hammond, 1998a). These children present management problems for teachers and parents. They also present a problem for their peers, through their bullying and classroom disruption upon entering school.

The need for teachers and parents to successfully manage young children who are aggressive and oppositional is urgent because, if left unmanaged, these behaviors are stable over time and appear to be the single most important behavioral risk factor related to escalating violence and antisocial behavior for boys and girls in adolescence (Kellam et al., 1991; Patterson, 1982). Early onset of aggressive behavior in young children repeatedly has been found to predict the development of drug abuse and delinquency in adolescence (Brook, Whiteman, Gordon, & Cohen, 1986) as well as other problems such as peer rejection, depression, and school dropout (Kazdin, 1985). Clearly, intervention starting in the early school years is a strategic way to prevent or reduce aggressive behavior problems before they "ripple" into well-established negative reputations, escalating violence, and academic failure (Bierman, Miller, & Stabb, 1987; Coie, 1990; Dodge, Bates, & Pettit, 1990). In fact, there is some evidence to suggest that if children with aggressive behavior problems are not treated by age 8, their behaviors are more likely to become a chronic disorder (Walker, Colvin, & Ramsey, 1995). Unfortunately, recent projections suggest that approximately 70% of the children who need mental health services for conduct problems—in particular, young children—do not receive them (U.S. Congress, Office of Technology Assessment, 1991). Very few of those who do receive treatment ever receive an intervention that has been empirically supported (Brestan & Eyberg, 1998; Kazdin & Kendall, 1998).

School psychologists can play a critical role in helping schools and communities implement effective prevention programs that have the potential to have the dual benefit of making schools safer from violence and at the same time reducing the incidence of antisocial behavior and juvenile crime. To this end, we have described a number of empirically validated classroom, family-focused, and campus-wide interventions that schools can utilize to influence and support effective school and family functioning. When schools offer such comprehensive programs, they can expect to have reduced levels of conduct problems and school violence, increased academic success, and increased collaboration between home and school.

## RECOMMENDED RESOURCES

Artiz, S. (1998). *Sex, power, and the violent school girl*. New York: Teachers College Press.

Explores the topic of violent crimes and behavior among females, presenting historical trends of violence and aggression among females and discusses competing explanations for this increase. The primary value of this book is the inclusion of six detailed case histories of female adolescents who were referred for counseling because of violent behavior at school.

Lockwood, D. (1997). *Violence among middle school and high school students: An analysis and implications for prevention*. Washington, DC: U.S. Department of Justice, Office of Justice Programs, National Institute of Justice.

Provides much needed information about the antecedents and processes involved with schoolyard fights. Drawing from interviews with students, the report discusses interactions that provoke fights and the rationalizations used by students to explain why fighting takes place. Of particular importance to school violence prevention efforts is the finding that students overwhelmingly believed that their fighting behavior was completely justified because of the provocation of another student.

Poland, S., & McCormick, J. S. (1999). *Coping with crisis: A resource for schools, parents, and communities*. Longmont, CO: Sopris West.

Offers practical strategies for school psychologists, educators, and others who respond to school crises such as shootings, suicides, fights, and gang-related violence. Step-by-step information and case studies are presented.

Webster-Stratton, C. (1999). *How to promote children's social and emotional competence*. Thousand Oaks, CA: Sage.

Designed for teachers, school psychologists, and others who work with children ages 4 to 10 years. Describes classroom strategies, games, activities, and materials for use by teachers in the classroom or for psychologists running social skills groups designed to promote social and emotional competence. Topics include ways to help students manage their emotions, friendship skills, problem solving, setting up individual behavior plans, developing relationships with difficult students, and approaches for working with parents.

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