Nipping Early Risk Factors in the Bud: Preventing Substance Abuse, Delinquency, and Violence in Adolescence Through Interventions Targeted at Young Children (0–8 Years)

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This bulletin describes state-of-the-art universal and selective prevention programs designed to promote parent and teacher competencies and to prevent conduct problems. In addition, it describes indicated interventions designed for children who already have been diagnosed with oppositional defiant disorder and/or conduct disorder. Emphasis is placed on empirically supported programs that have identified key malleable risk factors in children, families, and schools, which have been shown in longitudinal research to be related to later development of substance abuse, delinquency, and violence. We have targeted preschool and primary grade children, ages 0–8 years, in this review because research suggests that the most effective interventions can nip in the bud risk behaviors in the early years, before antisocial behaviors become crystallized. Guidelines for selecting effective interventions are provided.

KEY WORDS: prevention; conduct problems; parent and child training; teacher training.

Surveys of teenagers reveal that 15% of 8th graders and 27% of 12th graders have used illicit drugs within the last 30 days (Johnson *et al.*, 1999). Adolescent substance abuse is a serious problem and comorbid with other serious problems such as conduct disorders, mental illness, delinquency, and violence (Reid & Eddy, 1997). Children at the greatest risk of engaging in substance abuse or delinquent acts in adolescence are those who exhibit oppositional defiant disorder (ODD) and conduct disorder (CD) at a young age. (Hereafter in this study these ODD/CD problems will be referred to as conduct problems because although young children are most likely to be diagnosed with ODD, young children also exhibit the aggressive and antisocial features listed in the *DSM-IV* criteria for the diagnoses of CD, but are not old enough

to exhibit the criminal behaviors.) The risk of later problems is further increased if in addition to the early development of conduct problems, the child has any of the following risk factors: the child associates with deviant peers; the child's parents are harsh and inconsistent in their discipline and have difficulties monitoring their child's activities; and the child has not bonded well at school and is experiencing academic failure. Research suggests that almost all risk factors of substance abuse and delinquency, such as poverty, marital status, and so forth, have their impact on the child's outcome through one of these four risk factors. For this reason, we believe that only if an intervention has evidence that it leads to a clear change in one of these risk factors does it have sufficient empirical support to conclude that it will likely reduce the risk of later substance abuse and delinquency. This model is outlined in Fig. 1.

Other child, family, and contextual risk factors, in turn, contribute to the development of early onset conduct problems in a cumulative and synergistic manner (Group, 1992). Our model, as outlined in Fig. 2, derived from a model described by Reid

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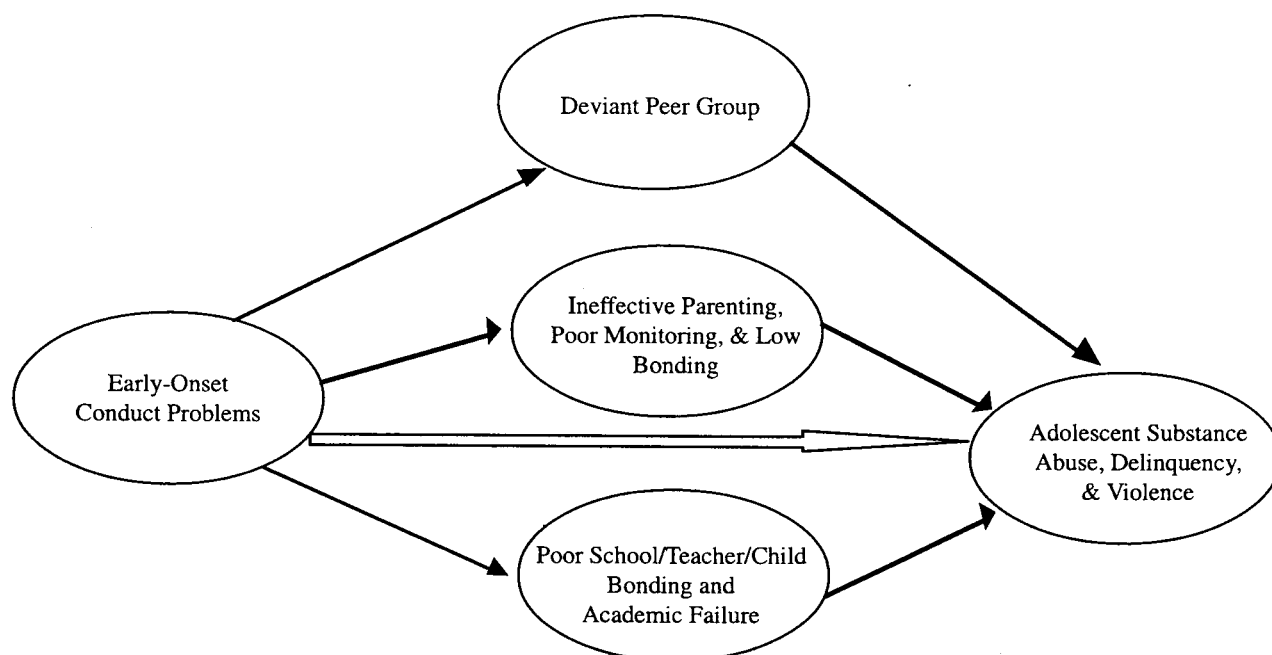
Fig. 1. Predictors of adolescent substance abuse and violence.

and Eddy (1997) and others (Group, 1992), begins in the toddler period. Children whose temperament is more impulsive, hyperactive, quick to anger often overwhelm parents. Many parents inadvertently respond to these children with harsh and punitive discipline, whereas others respond by frequently giving in to the child's demands in hopes of appeasing the situation. Yet both harsh and inconsistent discipline actually increases the likelihood of further conduct problems. Harsh parenting provides a negative model of behavior, fails to promote prosocial child behavior, and impedes development of adaptive social-cognitive skills. Inconsistent parenting, or failure to set limits, results in early conduct problems becoming more stable habits or patterns of behavior. High levels of family stress exacerbate disrupted and ineffective parenting and may contribute to low cognitive stimulation and poor support for the child's academic and social development (Webster-Stratton, 1990d). The cycle begins to unfold with ineffective parenting resulting in children developing increased behavior problems and cognitive deficits who, in turn, are increasingly difficult to parent.

When children with these family and child risk factors enter school, the developmental model becomes more complex. Teachers can inadvertently get into a pattern where they are more critical of, and provide less teaching and support to, these children

with challenging behaviors, further compounding the problem. This is especially true if they do not have good classroom management skills. Additionally, unless they are highly skilled, they may fail to intervene adequately when problems arise with peers, contributing to the child becoming rejected, further reducing social learning opportunities. Low parental involvement in education can compound the child's academic problems at school. Moreover, teachers may misunderstand the reasons for lack of parental involvement and respond more critically to the parent, further eroding the bonds between the home and school. Over time, rejected children find friends in other rejected children and form deviant peer groups that reinforce antisocial behaviors. Thus, these early problems may result in a synergistic cycle of cumulative events that increasingly compromise children's functioning over time. Indeed, research indicates that the greater the number of risk factors for children, the greater the likelihood of a negative behavioral outcome later in life (Hawkins et al., 1992a). A more complete review of etiological factors can be found elsewhere (Stoff et al., 1997).

It seems likely that if these early parent and child risk factors are not addressed and early onset conduct problems are not prevented or treated, aggressive children will go on to develop the secondary school and peer risk factors outlined in Fig. 1 and accelerate

Toddler/Preschool Age   Elementary School Age
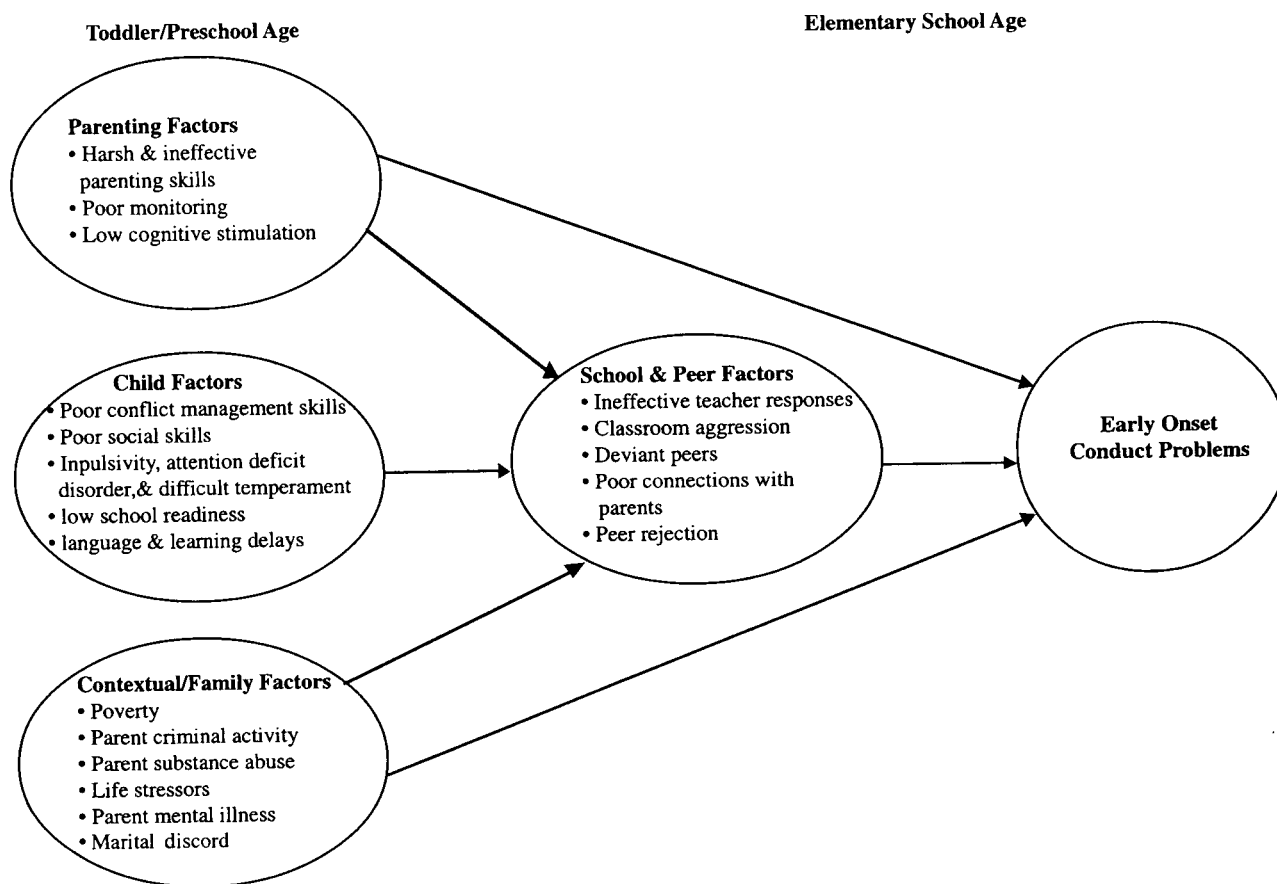

Fig. 2. Risk factors related to conduct problems.

the risk for substance abuse and delinquency. As can be seen in Figs. 1 and 2, cascading domains of risk factors make it imperative to start prevention programs as early as possible in order to "nip problems in the bud" before they create secondary school and peer risk factors and in order to provide adequate fertilization for building the protective factors that guard against substance abuse and violent behavior.

The main aim of this paper is to identify and describe empirically supported universal, selected, and indicated prevention interventions (Mrazek & Haggerty, 1994) for substance abuse, violence, and delinquency in adolescence by addressing major risk behaviors in early childhood (ages 0–8 years). We have combined these three serious adolescent problems because the risk factors for each are similar and they are often closely interrelated. Universal preventive interventions aim at all children in a geographic area without selective criteria. Selective preventive interventions aim at children at risk because of sociofamilial and environmental factors. Indicated

preventive interventions aim at children with personal factors such as diagnosed ODD or CD. We begin this review by briefly highlighting some of the indicated parent and child focused preventive interventions that have targeted a reduction in conduct problems in young children because of the centrality of this risk factor and because derivatives of these programs have often been used to develop universal and selective programs. A few selective parent programs are also included in this summary. Next we highlight universal classroom-focused prevention interventions that target the child's peer relationships at school and teacher classroom management skills. Finally we review multifocused interventions that combine universal interventions with more intensive selective and indicated interventions for high-risk children. We believe that applied settings would be best served if their prevention programs reflected a continuum of service from universal to selected to indicated prevention as well as intervention for children with identifiable problems.

We conclude by outlining key features of effective programs.

THE IMPORTANCE OF INTERVENING EARLY TO NIP PROBLEMS IN THE BUD

After studying the development of aggression for 30 years, Eron (1990) concluded that without intervention aggressive tendencies crystallized around 8 years of age. There is some evidence to suggest that if children with aggressive behavior problems are not treated by age 8, their learning and behavioral problems become less responsive to intervention and are more likely to become a chronic disorder (Bullis & Walker, 1994; Francis et al., 1991). These data and those of other researchers showing the origins of conduct disorders in early childhood (Moffitt, 1993) suggest the wisdom of starting prevention programs as early as possible in order to prevent this crystallization. This investment could reduce the burden of suffering and the financial costs related to later development of substance abuse, violence, and delinquency.

Additionally, there is evidence that the earlier the intervention is offered, the more positive the child's behavioral adjustment at home and at school and greater the chance of preventing later delinquency and drug abuse (Taylor & Biglan, 1998). Developmental research indicates that these "early-starters" can be identified at school entry by the occurrence of aggressive problems across the home and school settings (Campbell, 1995). Several researchers have demonstrated that violent adolescents could be identified with almost 50% reliability by age 6 (Campbell, 1990; Loeber et al., 1993) and even younger (Tremblay et al., in press). The transition from home to school is a strategic time to begin early intervention because this time can be stressful for parents and children. Supportive networks can be built to help parents and their children access the services they need and to teach parents to become involved in their child's schooling and to collaborate with teachers. Key developmental issues for high-risk children at school entry are the control of aggressive behavior; the acquisition and use of prosocial skills with peers; positive relationships with peers, parents, and teachers; and the development of a positive interest in school.

IDENTIFYING EMPIRICALLY SUPPORTED PREVENTION PROGRAMS

In this review, we include only those interventions that offer direct and scientifically sound evidence that they are likely to reduce risk factors related to later substance abuse, violence, or delinquency, and that service providers can obtain and replicate. Four standards are sufficient to meet this goal.

Standard 1: A Detailed Scientific Report on the Outcomes is Available

In this review, we relied primarily upon outcomes published in peer reviewed journals, although we included some studies that have recently been completed based on review of their unpublished reports.

Standard 2: Short- and Long-term Effects Demonstrated in a Randomized Controlled Trial Compared to No Treatment or an Alternative Treatment Approach

The only way to know unequivocally whether an intervention program produces beneficial effects on aggressive behavior is to evaluate it in an experimental design. The most important of such designs in terms of quality of evidence is the randomized controlled trial. In this type of study, individuals are randomly assigned (e.g., with a coin toss) to either receive or not receive an intervention program. Random assignment reduces the chance that individuals assigned to the control group (the group that receives no systematic intervention or an alternative intervention) or the intervention group (the group receiving skills training) differ from each other at the outset of the study.

The importance of relying upon evidence from randomized controlled trials or other rigorous experimental designs is well articulated in a paper by Chambless and Hollan (1998). That paper expands upon and refines standards that had been articulated earlier (APA Task Force on Psychological Intervention Guidelines, 1995), and represents the consensus in the scientific community concerning the minimum level of evidence for an intervention to be considered "empirically supported." These authors suggest that interventions that have been evaluated in a single controlled study be considered "promising," whereas interventions that have been evaluated in at least two controlled studies by independent researchers be considered "well established." In this review we describe all programs that have at least one randomized controlled trial documenting their effectiveness as compared to no treatment or an alternative treatment. We

have provided more depth about studies with follow-ups of at least 1 year for those receiving intervention, congruent with the idea that effective preventive interventions have relatively long-term outcomes. Not enough studies had follow-ups longer than this to set a longer time frame.

Standard 3: Effects Demonstrated on a Primary Predictor of Adolescent Substance Abuse, Violence, and Delinquency

For a study to offer persuasive evidence that an intervention offered to young children is likely to reduce later substance abuse, violence, or delinquency, it must actually assess effects on one of the primary predictors of these problems (see Fig. 2). Although outcomes on secondary factors hypothesized to be related to later problems are interesting, unless benefits are measured on at least one of the primary predictors of later substance abuse and delinquency, it is unclear what the implications are of such findings. Therefore, programs that did not target these primary factors were not included in this review.

Standard 4: A Manual is Available Describing the Intervention

The final standard that we set for this review was that an intervention has to have a detailed and available manual describing the intervention used. The importance of an intervention being carefully described so that others could potentially replicate it, is a critical feature of an empirically supported intervention (Chambless & Hollon, 1998).

PARENT-FOCUSED INTERVENTIONS

Prenatal and Infancy Parent Education for High-Risk Mothers (Prenatal to 2 Years)

Emerging research is showing the lifelong consequences of chemical agents (such as mothers' intake of alcohol, nicotine, and drugs during pregnancy), mothers' parenting interactions, and environmental effects on fetal and infants' brain development. These data provide a strong rationale for providing parent education programs during the pregnancy and infancy period about the importance of optimal nutrition and avoiding smoking, alcohol, and drug use during pregnancy and also about infant care, infant development,

and age-appropriate infant stimulation exercises. In particular, parents with a history of adjustment problems are most likely to maintain risky behaviors during pregnancy. From this perspective, a number of selective preventive interventions have targeted high-risk mothers (defined as living in conditions of poverty or because they were teenagers) by means of intensive home visiting from nurses during the pregnancy period and up to 2 years of life.

One such exemplary home visiting program was developed in Elmira by Olds et al. (1997). This intensive and comprehensive program was designed to help women improve their prenatal health and the outcomes of pregnancy; to improve care provided to infants and toddlers in order to improve children's health and development; and to improve women's own personal development and participation in the work force. Results of a randomized control group study indicated that nurse-visited women and children fared better than those assigned to control groups in each of the outcome domains established as goals for the program. Results showed that home visits during pregnancy led to mothers having heavier babies, stopping smoking, and having fewer preterm deliveries. In a remarkable 15-year follow-up study, findings showed that low-income and unmarried women provided with a home visitor during both the prenatal and postnatal period had, in contrast to those in the comparison group (prenatal only) and controls, fewer verified reports of child abuse or neglect, fewer subsequent births, received less welfare, fewer maternal behavior problems because of alcohol and drug abuse, and fewer arrests. Children of these mothers had fewer arrests, fewer instances of running away, and lower alcohol consumption (Olds, 1998).

This program has been replicated using the same 3-group randomized control group design by Kitzman (1997) in Memphis with 1,139 African American mothers (primarily poor and unmarried). Results showed that nurse-visited children suffered fewer injuries in the first 2 years of life. Similar results from nurse visit interventions were obtained by Larson (1980) in a home visiting program in Montreal and by Barnard et al. (1988) in Seattle. Barnard's study was one of the first to note client differences in intervention involvement based on the intervention model.

Parent and Family Interventions for 2–8-Year-Olds

By age 2 or 3, children often begin to have temper tantrums, be disobedient or defiant, and engage

in deliberately aggressive or destructive behavior. As a result, family interventions during this stage focus on assisting parents to cope with these issues, either through family therapy to modify the roles and structure of the family, or through parent training, to assist parents to learn and implement specific strategies to deal with these behaviors.

Family Therapy

There is a long tradition of using individual family therapy approaches such as structural, functional, and psychodynamic therapy to help families with children with conduct disorders. Generally these family therapy approaches (Minuchin, 1974) differ in terms of whether they are directive versus insight oriented, whether or not they are problem-focused, how much responsibility the therapist assumes for directing the course of treatment, how much emphasis is placed on cognitive versus affective domains, and whether they are pathological versus normalcy in focus. Although there are some highly promising results of randomized studies with families of adolescents using some of these approaches (Alexander et al., 1988; Henggeler et al., 1998), only one study meeting our criteria exists for families of young children (ages 2–8). In this study with Hispanic families, Szapocznik et al. (1989) randomly assigned 69, 6–12-year-old boys to three conditions: structural family therapy (using a directive approach to modifying maladaptive interactions), psychodynamic therapy (using a nondirective approach), and a recreational control condition. Structural family therapy was more effective than psychodynamic child therapy in protecting the family at 1-year follow-up. Otherwise there were no differences between the two treatment conditions in terms of reducing behavioral and emotional problems nor did they make more progress than controls on parent ratings.

Cognitive Behavioral Parent Training Programs for Children With Conduct Problems (Ages 3–8 Years)

Parent training programs based on cognitive social learning theory and designed for preschool and early school-age children can help counteract the *parent and family risk factors* by teaching parents about positive, nonviolent discipline methods and supportive parenting approaches that promote children's self-confidence, prosocial behaviors, problem-solving skills, and academic success. Parent training

can help parents to respond effectively and realistically (with nonviolent discipline strategies) to normal behavior problems so that these problems do not escalate. Parents can learn to provide support for their children's cognitive, social, and emotional growth. For example, a young child's intellectual and social development can be stimulated by joint reading sessions and parent–child play, whereas an older child's learning and enthusiasm for school can be facilitated by parental interest in homework and the classroom curriculum. Parent training programs can also help parents to communicate effectively with teachers and to advocate for their child's social and academic development. Additionally, training can help parents understand how to provide home support for school goals.

Parent Training Content. Most parent training programs draw extensively from the pioneering work of Patterson et al. (1975) and Hanf (1970). In these approaches to intervention, parents are encouraged and guided to increase their positive interactions and relationships with their children through the use of play and other activities. Parents are encouraged to "catch their children being good" by reinforcing appropriate behavior with praise and other rewards. They are assisted in reducing unnecessary commands, increasing the clarity of the limits they do set, and giving their child a chance to comply. Parents are typically taught to use logical and natural consequences, including loss of privileges as well as how to successfully problem solve with their child. Additionally, they are encouraged to monitor their children effectively, and to engage in nonviolent conflict-resolution strategies with them.

Although all of the parent training programs reviewed here include explicit training for parents in positive parenting strategies and nonviolent discipline, some early proponents of behavioral parenting skills attempted to change children's behavior by guiding parents only in the use of "positive" strategies, such as praise and rewards, without the use of negative consequences or punishments such as Time Out. Their clinical experience with this work led them to the conclusion that the positive strategies alone were insufficient to help a child with serious behavior problems (Patterson & Narrett, 1990). When these clinical researchers added guidance in the effective use of mild, brief punishments such as Time Out or loss of privileges, changes in the behavior of children with conduct problems were achieved (Wiltz & Patterson, 1974). The clinical impression of these researchers that this addition was necessary was reaffirmed in

an experimental study in which families were randomly assigned to receive guidance in social reinforcement, Time Out, or both (Hobbs & Forehand, 1975; Hoffman, 1989). Only children of the parents also trained in both Time Out and social reinforcement showed reductions in the frequency of disruptive behaviors. Thus, although the idea that relying on positive parenting strategies alone is appealing, it is not supported by the current evidence for children already exhibiting high levels of behavior problems.

Parent Training Process. People unfamiliar with the parent training literature often mistakenly assume that parent training simply involves didactically sharing information or teaching about child management strategies or behavior modification principles. They assume that this is relatively simple and that it makes little difference how clinically skilled the "instructor" is and that the "relationship focus" is secondary to teaching parents particular skills. Although this might be true for universal interventions with low-risk populations, research does not support this view for higher risk families experiencing multiple stressors, or for those whose children already exhibit high levels of behavior problems. For these families a more clinically sophisticated therapeutic approach is needed when conducting parent training. It is critical that the process of parent training is a collaborative one based on a supportive and caring relationship between the therapist and family. The therapist must demonstrate genuine understanding of what it is like to be a parent of a child with behavior problems (Patterson & Chamberlain, 1994; Webster-Stratton & Herbert, 1994). Therapists must be able to establish a good relationship with parents, yet still be able to offer adequate structure to the therapy process (Alexander et al., 1987). Therapists must be an effective "coach," sometimes educating, sometimes cheering on and encouraging parents to stick with it, and sometimes problem-solving difficult issues and exploring resistance, all with a high level of sensitivity, compassion, and understanding of child development principles (Webster-Stratton & Herbert, 1994). They must be able to draw the parents into the process of developing solutions themselves (Cunningham et al., 1993) rather than simply being recipients of information. They must be skilled at engaging parents in role-playing skills they are learning (Knapp & Deluty, 1989) and persuading them to practice things at home to establish new habits. All of this must be achieved in a supportive, caring, and optimistic atmosphere in which parents' confidence in themselves is increased.

Therapists offering parent training must also be skilled at responding to a range of nonparenting issues. In fact, some leaders in the parent training field have reported that up to one-third of their time spent with parents is focused on issues other than parenting (Patterson & Narrett, 1990). Considerable research has identified greater benefits for the children if the professionals systematically address issues beyond child management in the parent training process. Intervention strategies designed to specifically address marital difficulties, depression, and social isolation all have been shown to improve the effectiveness of parent training for families experiencing these problems parenting (Dadds et al., 1987; Wahler et al., 1993; Webster-Stratton, 1994). Parents experiencing these associated difficulties are also less likely to drop out of parent training when they have the opportunity to explore these other issues (Prinz & Miller, 1994). It appears that enhancing parents' ability to cope with other life stresses increases their effectiveness as parents. Although not all parents will need to address these issues, the ability to integrate these aspects into the therapy process as needed clearly enhances the effectiveness of parenting interventions (Taylor & Biglan, 1998).

Parent Training Program Format. Parent training for families of children with early onset conduct problems is commonly offered in an individual training format with a therapist working with individual parents or a family in a series of weekly sessions, typically at a clinic, although it may also be offered in a home visiting model (Tremblay et al., 1996a). During these sessions the therapist introduces parents to the child management practices described earlier. Parents frequently receive written information about the strategy or strategies covered that week, discuss and role-play them with the therapist, and adapt them to fit their unique situation. The parents may even practice the skills with their child at the clinic, receiving feedback through a "bug-in-the-ear" (a small microphone worn in the parent's ear) while the therapist watches and coaches them from behind a one-way mirror (Eyberg et al., 1995). Between sessions, parents practice the new strategies. The next week, parents review with the therapist how things went at home with the child and problem-solve any difficulties. Following this, the therapist introduces additional child management strategies and the same process is followed over the course of the next week.

Another increasingly popular and more cost-effective model of offering parent training is through group-based parenting programs. In this approach, a

number of families get together with one or two group facilitators to learn and practice a variety of child management strategies. Videotape vignettes of parent–child interactions are often used in these groups to illustrate effective and ineffective ways of managing misbehavior and promoting social competence. The group-based model offers the additional advantage of providing the social support that helps parents feel less lonely and stigmatized and more empowered.

Another format that has been gaining increasing attention is the use of self-administered parent training. These approaches include the use of books, audiotapes, videotapes, CD-ROM, and the Internet to bring parenting information to parents. These approaches can also be used in conjunction with therapist phone calls and in-person consultation and chat rooms to tailor information to parents' particular needs and concerns. Preliminary studies suggest that self-administered parent training approaches, especially when offered with some moderate amount of clinical consultation, can be reasonable approaches to assisting families (Webster-Stratton, 1992b; Webster-Stratton *et al.*, 1989).

Empirically Supported Programs Based on the Individual or Family Format

See Table 1 for a summary of specific parent programs by age of child, duration of program offered, format used, and behaviors targeted in research. The following discussion will provide a brief summary of these programs and their research.

Living With Children

In this pioneering behavioral parent training program developed by Gerald Patterson, John Reid, and their colleagues at the Oregon Social Learning Center (Patterson *et al.*, 1975), a therapist meets individually with parents, or with the parents and child if he/she is older, to train parents in child management skills in five main areas: tracking, positive reinforcement, discipline, monitoring, and problem-solving. Although a number of early quasi-experimental studies initially indicated the promise of this treatment approach compared to no treatment (e.g., Fleischman, 1981), the first randomized controlled trial evaluating this approach compared it to usual eclectic approaches offered in applied mental health settings (Patterson *et al.*, 1982). This study demonstrated that children of parents who received the parent training exhibited

significantly fewer problems when observed in the home than did children whose families received usual care. Other researchers have also evaluated variations on this approach to therapy, and which included some modifications described by Fleishman *et al.* (1983), with significant results.

Helping the Noncompliant Child

This parent training program, based on an individual training format, was designed to treat noncompliance in young children, ages 3–8 years, and was derived from the early work of Hanf (Hanf & Kling, 1973) and later modified and evaluated extensively by Forehand and McMahon (1981). Several randomized control group studies have demonstrated the effectivness of this program for increasing child compliance (Peed *et al.*, 1977). One study demonstrated that the effectiveness of the intervention was enhanced by training parents not only in child management strategies, but also in the social learning principles upon which the strategies are based (McMahon *et al.*, 1981). Other studies have demonstrated that the effectiveness of the intervention was enhanced by self-control training for parents (Wells *et al.*, 1980) and that training in problem-solving for nonparenting issues enhanced the intervention when offered to single mothers (Pfiffner *et al.*, 1990). A long-term follow-up study that compared 26 children who received treatment with matched community controls found no differences between the children who exhibited early conduct problems and the community group, indicating that treatment effects were maintained (Long *et al.*, 1994).

Parent–Child Interaction Therapy (PCIT)

An emphasis on improving parent–child relationships is found in PCIT, another individual training format developed by Eyberg (Schuhmann *et al.*, 1998) for treating young children with conduct problems. Although the importance of teaching behavior management is maintained, skills for child-directed play (describe, reflect, imitate, praise) are a major focus of intervention. Eyberg *et al.* (1995) present this program as an integration of traditional play therapy values and current behavioral thinking about child management. It is felt that parents' nondirective play with their children (ages 2–6 years) improves children's tolerance to frustration, helps reduce the anger level of oppositional

Table 1. Summary of Empirically Validated Prevention Programs for Young Children (0–8 Years) That Are Designed to Prevent Later Development of Substance Abuse, Violence, and Delinquency: Parent and Family Focused Interventions

Program type and name	Age of children (years)	Target and format of intervention	No. of hours	Populations studied			Child outcome
				Universal intervention (U)	Selective intervention (S)	Indicated intervention (I)	
Home visiting (Olds et al., 1997; Kitzman, 1997; Barnard et al., 1988)	Prenatal and infants	Individual parent education	60–90 min, every other week during pregnancy until child age 2 years		X		↓ Child arrests at 15 and ↓ child injuries
Structural family therapy (Szapocznik et al., 1989)	6–12	Family (psychodynamic)	12–24 hr, 50 min per week			X	↓ Behavior problems
Living with Children (Patterson et al., 1982)	3–12	Family skills training	15–20 hr per family			X	↓ Conduct problems
Helping the Noncompliant Child (Forehand & MacMahon, 1981)	3–8	Individual parent skills training	6–12 hr per family			X	↓ Noncompliance
Parent–Child Interaction Therapy (Eyberg, Boggs, & Algina, 1995; Schuhman et al., 1998)	2–6	Individual parent and child training	14 hr per family			X	↓ Conduct problems
Synthesis training (Wahler et al., 1993)	5–9	Individual parent skills training	36 1-hour sessions per family over 9 months			X	↓ Aversive behaviors
Enhanced family treatment (Prinz & Miller, 1994)	4–9	Family skills training	16–28 hr per family			X	↓ Behavior problems
Positive Parenting Program (Triple P; Sanders & Dadds, 1993)	7–14	Individual parent skills training Self-administered	6–12 hr per family			X	↓ Conduct problems
Incredible Years Parenting Program (Webster-Stratton, 1990a–d)	2–8	Group parent training Self-administered	20–44 hr per group (12–14)	X		X	↓ Child conduct problems
Community-based program (Cunningham et al., 1995)	2–5	Large group parent training	24 hr per group (18–28)	X		X	↓ Behavior problems
DARE to be You (Miller-Heyle et al., 1998)	2–5	Group parent training	20–24 hr per group	X			↓ Oppositional behavior
Focus on Families (Catalano & Haggerty, 1999)	7–11	Group parent training and home visits	53 hr	X			↓ Parental use of drugs

children, and offers more opportunities for prosocial behavior to occur. Moreover, engaging in play with their children helps parents recognize their children's positive qualities, strengthens attachment, and establishes a warm, loving relationship between the parent and child. Once parents have learned the child directed interaction (CDI) play, they are taught parent-directed interaction (PDI), which focuses on using clear, direct commands and imposing consistent consequences for misbehavior (Eisenstadt et al., 1993).

Einsenstadt et al. (1993) evaluated the relative effectiveness of each stage of PCIT. The participants were 24 families with young children with behavior problems. They found the PDI stage was in fact superior to the CDI stage for improving child compliance and disruptive behavior in the home and clinic. It didn't matter whether CDI or PDI were offered first.

Results suggest significant improvements in children's conduct problems and positive interactions with parents (Eyberg *et al.*, 1995; Hembree-Kigin & McNeil, 1995), which were maintained 1–2 years later (Eyberg *et al.*, 2000). No later effect of phase sequence was evident at follow-up. Other studies have indicated significant generalization of effects to the school setting (Funderburk *et al.*, 1998; McNeil *et al.*, 1991) and improvements up to 3–6 years later (Hood & Eyberg, 2000).

Synthesis Training

Wahler developed an approach to parent training specifically designed for socioeconomically disadvantaged, stressed, and depressed mothers (Wahler *et al.*, 1993). This model of intervention was developed to address the fact that stresses outside of the parent–child relationship tend to have a major impact on the capacity of these mothers to cope with challenges with their child. Specifically, this treatment model suggests that these parents tend to perceive their problems as a collective set, and that to deal effectively with difficulties with their child they must learn to be able to discriminate between stresses in dealing with their children and other stresses. During individual sessions that address traditional parent training topics, the therapist encourages discussion of both parenting and nonparenting issues, with the purpose of accentuating the differences between these two sets of experiences. This is often achieved by first exploring the similarities between the perceptions, responses, and interactions with the child and with others. For example, if the therapist judges that a mother's conflict with her son and a conflict with her boyfriend seem to share some common process, the therapist may ask, "What is it that these two want from you?" The goal is to help the parent become sensitive to the differences in these situations by first exploring their similarities.

In an evaluation of this approach, families of 23 children were randomly assigned to parent training only, parent training and synthesis training, or parent plus synthesis plus friendship liaison (e.g., mother brought a close friend). Parents received weekly clinic sessions spread over 9 months. Results of detailed observations of parent–child interactions indicated that parents who received synthesis training exhibited significantly fewer indiscriminant reactions to their child, and by follow-up their aversive behavior had also improved as compared to those who received parent training only. No differences were found based on whether or not a close friend attended the sessions, suggesting that this treatment approach can be offered either with or without such a friend attending (Wahler *et al.*, 1993).

Enhanced Family Treatment

Prinz and Miller (1994) developed and evaluated a version of the individual format of parent training for parents of children with conduct problems called "enhanced family training." In this model, therapists lead families through a flexibly paced series of 12 modules focused on child management practices. Therapists discuss the concepts with the parents and assist them in applying the concepts to their own situation. Therapists rely upon modeling and role-play, as well as observed parent–child interactions in the clinic playroom. Parents practice the skills at home, and return to discuss their experiences with the therapist. Parents are encouraged to focus on specific behaviors rather than general traits, and are taught to attend and reinforce behaviors that are not compatible with aggressive behaviors. Specific topics covered include reinforcement strategies (including social and activity reinforcements, as well as tangible and token reinforcements), extinction, mild punishments, clear instructions, and skill building. Later modules address home–school coordination, communication skills, and promoting generalization of child prosocial behaviors to new settings. Throughout the course of treatment, therapists make a consistent effort to ensure that issues beyond the parent–child relationship are addressed such as job stress, health problems, family disputes, and other issues that impact the parents and the family.

This approach to treatment was evaluated in a randomized controlled trial, in which 147 families with a markedly aggressive child (ages 4–9) were randomly assigned either to "enhanced family treatment" or to "standard family treatment." In "standard family treatment," parent–child issues were addressed in an identical format to enhanced family treatment, but therapists did not elicit discussion beyond the parent–child relationship. When parents raised such issues, the therapist simply acknowledged the issues, then returned to addressing issues of parenting. This study demonstrated that 29% families dropped out of the enhanced family treatment before completing the entire protocol, whereas 47% of parents dropped out of the standard family treatment. This difference was significant.

Positive Parenting Program (Triple P)

Another individual, family-based approach to parent training was developed in Australia (Sanders & Dadds, 1993). This approach places a strong emphasis on how to complete an intake interview and then communicate assessment findings in a manner that is most likely to engage parents. Once engaged, parents are taught to give descriptive praise and other reinforcement for appropriate behavior, as well as a correction procedure for certain deviant behaviors, which includes Time Out. Parents and the child attend up to six 1-hr sessions in a clinic. During the first 10 min, the parents and child interact with a variety of toys, while the therapist watches through a one-way mirror. During the remainder of the session, the child is allowed to play while the therapist meets separately with the parents to give feedback and to discuss any problems they are having implementing the procedures at home. When parents report satisfaction with their implementation of the procedures at home, families receive three 1-hr training sessions on how to address problems in one or two problematic community settings (e.g., shopping trips). Parents are taught to select and arrange suitable activities, discuss rules for the situation with the child prior to going, review and discuss how the activity went, and deliver any consequences. Following this, couples receive two 1-hr sessions on "partner support training," focusing on increasing support and problem-solving skills in the parents.

A randomized controlled trial compared two versions of this intervention with families having children exhibiting high levels of behavior problems. One version included the "partner support training" sessions, and one omitted these sessions. This study demonstrated that among high and low maritally discordant families, both approaches to treatment resulted in short-term improvements in the child's behavior compared to pretest. By 4-month follow-up, low maritally discordant families had maintained the gains whichever version of the intervention they were offered, but the high maritally discordant families were only able to maintain the gains if they had also received the partner support training (Dadds *et al.*, 1987).

The Triple P Parenting program has also been adapted and evaluated in a randomized controlled study as a self-administered program for families living in rural Australia. Results indicate that parents receiving the self-administered parent training reported significant reductions in their child's conduct problems compared to a waiting-list control group (Connell *et al.*, 1997).

Empirically Supported Programs Based on Group Format

Several of the family-based parent training programs described earlier have also been adapted to group-based format. Two of these have been adapted to group-based implementation and found to be effective in randomized controlled trials. One trial (Christensen *et al.*, 1981) evaluated a group-based version of *Living with Children* (Patterson & Guillon, 1968). A second trial (Pisterman *et al.*, 1989) evaluated a group-based version of *Helping the Noncompliant Child* (Forehand & McMahon, 1981). Two other group programs that have been evaluated in published randomized trials are described in greater detail in the following discussion.

The Incredible Years Parenting Series

This series, developed by Webster-Stratton, is based on a group training format and includes cognitive behavioral approaches such as mutual problem-solving strategies, self-management principles, and self-talk approaches. This content has been embedded in a relational framework including parent group support and a collaborative relationship with the group leader. There are two versions of the Incredible Years BASIC program, one for preschool children (ages 2–6 years) and one for early school-age children (ages 5–10 years). The content of both versions of the series utilizes videotape examples to foster group discussion about such matters as "child-directed play" approaches, and the strategic use of differential-attention, encouragement, praise, and effective commands as well as nonviolent discipline concepts (Time Out, logical and natural consequences, monitoring and problem-solving). Another videotape program in the series, called Supporting Your Child's Education (SCHOOL), is designed to complement the BASIC program for early school-age children and helps parents learn to support their children's learning at home, read with their children, help with homework, and communicate with teachers more successfully regarding academic and social goals.

The BASIC program is led by one or two group leaders with 10–14 parents per group and lasts for 12–14 weeks (2–2 1/2 hours per week). Over the course of the group, parents read a copy of the parenting

book, *The Incredible Years: A Troubleshooting Guide for Parents* (Webster-Stratton, 1992a), and watch approximately 250 brief vignettes of parents and children interacting, stopping after each vignette to discuss what they saw or to practice alternative responses (Webster-Stratton, 1984).

Although the BASIC and SCHOOL programs allow for various family stressors to be addressed during the group discussion and include some handouts and planned discussion on these topics, a supplemental ADVANCED parenting program (Webster-Stratton, 1990b) was developed that specifically addresses a number of these stressors in greater depth. This ADVANCED program teaches parents how to cope with upsetting thoughts and depression, how to give and get support from others, and how to communicate and problem-solve with adults. This additional 10–14-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 efficacy of the Incredible Years parent program as an indicated intervention or treatment program for children (ages 3–8 years) with conduct problems has been demonstrated by the program developer in six published randomized trials (Webster-Stratton, 1981, 1982a,b, 1984, 1994; Webster-Stratton *et al.*, 1988, 1989; Webster-Stratton & Hammond, 1997). In addition, the program has been replicated by independent investigators in mental health clinics with families of children with conduct problems (Scott *et al.*, 2001; Spaccarelli *et al.*, 1992; Taylor *et al.*, 1998). Further, two of these replications were "effectiveness" trials—that is, they were done in applied settings not a university research clinic, and the therapists were typical therapists at the center. Interestingly, the Taylor study found that parents who received the Incredible Years parenting program were more satisfied with service and felt that it was more suited to the unique problems they were facing than did the families who worked individually with a therapist using an eclectic and highly flexible approach.

The BASIC parent program was also evaluated in a randomized control study as a selective prevention program with Head Start families (Webster-Stratton, 1998). The significant results were replicated in a second study with 272 Head Start mothers (Webster-Stratton & Hammond, in press) and with Hispanic families in New York (Miller & Rojas-Flores, 1999). Finally, the program was found to be effective in strengthening parenting skills and reducing behavior problems with low-income African American

mothers who had enrolled their toddlers in day care centers in Chicago (Gross *et al.*, 1999).

This videotape-based program was also adapted for use by parents as a self-administered program and a randomized control study indicated there were significant reductions in conduct problems among children, achieving effects of similar magnitude to the parenting groups immediately following treatment (Webster-Stratton *et al.*, 1988). By 1-year follow up, parents who received the self-administered program were experiencing more difficulties than those families who received the more intensive group intervention, although they were still doing significantly better than prior to the intervention (Webster-Stratton, 1989; Webster-Stratton *et al.*, 1989). Another evaluation of this program demonstrated that the effectiveness of the program is significantly increased by offering parents two additional consultation sessions with a therapist (Webster-Stratton, 1990a).

Community-Based Parenting Program

Another group-based parenting program for parents of young children is the Coping Skills Parenting Program developed by Charles Cunningham in Ontario, Canada (Cunningham *et al.*, 1995). The curriculum included problem-solving skills, attending to and rewarding prosocial behavior, transitional strategies, when–then strategies for encouraging compliance, ignoring minor disruptions and disengaging from coercive interaction, prompting the child to plan in advance of difficult situations, and Time Out. Groups were offered in a large group format, averaging 18 families (27 adults). Groups consisted of a mix of high- and low-risk families, with families with children exhibiting behavior problems above the 90th percentile representing approximately half the participants. Over a 12-week period, parents met weekly to review homework, discuss community resources, and cover the topics in the program. The program relied primarily upon a coping problem-solving model in which parents viewed videotape models of ineffective parenting strategies for dealing with common child management problems and then generated solutions. Leaders modeled solutions suggested by participants, and then parents role-played the solutions and set homework goals.

This community program was evaluated in a randomized controlled trial comparing it to family-based parent training (with similar content) offered at a clinic or to a no treatment control. This study found that native English speakers and any family whose

children exhibited moderate behavior problems were equally likely to agree to participate in the groups or the clinic-based training. However, families for whom English was a second language and families with a child exhibiting severe problems were all more likely to agree to participate in the parenting groups at schools. It appears that parenting groups are especially useful in serving this needy population. Families who attended the parenting groups reported significantly greater improvement on parent reported behavior problems at home at immediate posttest assessment, and significantly greater improvement between posttest and a 6-month follow-up. Comparison of costs revealed that the parenting groups were significantly less expensive than clinic-based intervention offered to the same number of families.

Dare to Be You

This is a selective prevention program aimed at 2–5-year-old children in high-risk families. The program consists of 10–12 weekly 2 1/2-hr workshops offered to 10–25 families. The content of the program is designed to promote parents' self-efficacy and self-esteem, effective child-rearing strategies, understanding of appropriate developmental norms, and to increase social support and problem-solving skills. Additionally, there are 10–30 min joint practice activities for parents and children to practice the particular session objectives. The program has been evaluated in a randomized control design with a low-income population and has been replicated with multiethnic populations (Ute Mountain Ute, Hispanic, Anglo). Results indicate significant changes in parent reports of self-appraisals, democratic child-rearing practices, as well as decreases in reports of oppositional behavior (Miller-Heyl *et al.*, 1998).

Focus on Families

Focus on Families is another well-researched group-based parenting program that is designed specifically for parents who are former heroin addicts currently receiving methadone treatment. Focus on Families consists of one 5-hr family retreat and thirty-two 1.5 hr parent training sessions offered twice per week for 16 weeks. Children attend 12 of the sessions to practice the skills with their parents. Sessions target specific risk factors, including family goal setting, relapse prevention, family communication skills, family management skills, creating family

expectations about drugs and alcohol, teaching children skills, and helping children succeed in school. Therapists incorporate home visits into the intervention during the 16 weeks as needed, and offer regular follow-up home visits for several months following the program. A randomized controlled trial evaluation of Focus on Families revealed positive effects on parenting practices, increased coping ability for parents, and fewer relapses in using illegal drugs (Hawkins *et al.*, 1992a,b; Catalano & Haggerty, 1999).

Summary of Parent-Focused Interventions

In summary, intensive home visiting for poor mothers during the prenatal and first years of the infants' life can result in a later reduction in delinquency and drug abuse (Olds, 1998). For families with children 2 years old and above, behavioral parent training—either individual family-based, group-based, or self-administered—has been consistently shown to improve parenting practices and reduce conduct problems in children. Generalization of behavior improvements from the clinic setting to the home over reasonable follow-up periods (1–4 years) and to untreated child behaviors has also been demonstrated (Taylor & Biglan, 1998). Studies with children with conduct problems typically find that approximately two-third of children show clinically significant improvements, which means that their behavior falls in the normal range on standardized measures following the family intervention (Webster-Stratton, 1990c). There is mixed evidence on generalization of improvements from home to school; parent training studies have indicated that improvements in the child's behavior at home are not necessarily reflected in improved behavior according to teachers' reports particularly if teachers are not involved in the intervention (Taylor & Biglan, 1998). Finally, broader-based parent training approaches that include attention to interpersonal parent issues (e.g., depression and marital conflict) and family stressors, have demonstrated modest but significant improvements over and above what can be gained from parent training that strictly focuses on parent skills.

Based upon this evidence, we believe that service providers, as well as agencies that fund them, should consider implementing some of the above empirically supported interventions in their communities. In determining which services to offer, it is not necessary to select only one modality—individual- or family-based services, group-based approaches,

or self-administered approaches. Rather, a comprehensive set of family services should include each of these modalities. The research reviewed above demonstrates that some families, especially minorities, those for whom English is a second language, and families with children exhibiting severe behavior problems actually prefer group-based services and are more likely to attend them than individual-based services (Cunningham et al., 1995). Additionally, there is evidence that even multistressed families, including former heroin addicts on methadone, can be well served by group-based services (Catalano & Haggerty, 1999). However, there are also families who prefer individual-based interventions and would decline parent groups if offered (Taylor et al., 1998). Additionally, self-administered approaches, especially those supplemented with a few sessions of in-person or phone-based consultation, are useful in isolated communities with limited professional resources and can also serve families where one or both partners cannot make some sessions or where scheduling or other difficulties make it difficult to offer more intensive services. They may also be useful as an extremely inexpensive service that can be offered more readily to a much broader population. By offering all three formats—individual or family based, group based, and self-administered—within a community, service providers are more likely to be able to reach more families and offer them the type of service that is best suited for them.

CHILD-FOCUSED INTERVENTION—PULL OUT PROGRAMS

Overview

Many high-risk children not only show verbal and physical aggression, but they also lack social skills and show fewer prosocial behaviors than other children. In addition, sociocognitive processes such as negative perceptions, attributions, and expectations have been linked to aggressive behavior. Child-focused interventions have been designed to directly teach children social, emotional, and cognitive competence by addressing appropriate social skills, effective problem-solving, anger management, and emotion language (Bierman, 1989; Kazdin et al., 1987; Lochman & Wells, 1996).

Problem-solving skills are some of the most common skills taught in interpersonal skills training programs. The problem-solving skills approach is based

on the seminal work of Spivack and Shure (Shure, 1994; Spivak et al., 1976). Typically, problem-solving skills programs begin by teaching children to "stop and think" when they face a problem. Children are taught anger control skills, including taking several deep breaths, and using calming self-talk. Next, children are taught to answer the questions, "What is the problem?" and "How do I and others feel?" Once children understand what the real problem is, including the perspective of everyone involved, they are encouraged to think about, "What are some solutions?" After brainstorming several solutions, children are encouraged to think about, "What are the consequences of each of the solutions?" in order to decide "What is the best solution?" After implementing the solution, children are encouraged to evaluate how effective their solution was by answering, "How did I do?" When children have learned this series of steps to problem solving, they are taught to use the steps during high conflict situations through the use of role playing. Most of the skills training programs reviewed in this paper draw heavily from the Spivack and Shure model.

In addition to problem-solving skills, interpersonal social skills training programs frequently emphasize teaching social or coping skills. These include such skills as how to ask peers questions, how to share, and how to best help others (e.g., Bierman, 1989; Bierman & Furman, 1984). Assertiveness skills are frequently taught, including how to stand up for one's rights without the use of violence. Academic success skills, such as how to concentrate, how to listen to a teacher, and how to put up "quiet" hands, are frequently included in these programs. Although different programs place greater or lesser emphasis on these skills, virtually all interpersonal skills training programs combine problem-solving skills with social and coping skills.

A recent review of skills training programs identified that although some positive outcomes have been achieved using this approach, they have not been consistently achieved, and skills training programs are less effective for promoting young children's social competence and reducing conduct problems than are parent and family interventions (Taylor et al., 1999). There has been a failure to show convincingly that improvements in social or cognitive skills generalize outside the particular training or result in long-term maintenance (Bierman, 1989). One reason for the limited effectiveness of social skills training programs may be their short duration. Typical duration is 4–12 weeks (1–2 hr per week). Also, such programs are

Table 2. Summary of Empirically Validated Prevention Programs for Young Children (0–8 Years) That Are Designed to Prevent Later Development of Substance Abuse, Violence, and Delinquency: Child-Focused Interventions

Program type and name	Age of children (years)	Target and format of intervention	No of hours	Populations studied			Child outcome
				Universal intervention (U)	Selective intervention (S)	Indicated intervention (I)	
Problem-solving curriculum (Kazdin et al., 1992)	7–13	Individual Parent and child skills training	25 hr, 25 weeks			X	↓ Conduct problems at age 11
Incredible Years Dinosaur Program (Webster-Stratton, et al., 1997, 2000)	4–8	Small group child skills training	40 hr			X	↓ Peer aggression
Peer Coping Skills Training (Prinz et al., 1994)	6–8	Small group child skills training	19–24 hr, 22 weeks			X	↓ Aggression
Earlscourt Social Skills Program (Peplar et al., 1995)	6–12	Small group child skills training; parent training	twice weekly 75 min or less, 12–15 weeks			X	↓ Aggression

frequently delivered as pull out sessions that do not involve the teacher or parent nor do they impact the classroom environment and peer group responses to the aggressive children's behavior. Recently, several studies have indicated that when child training programs are combined with parent and teacher training programs, they may enhance the effectiveness of the outcomes for children with conduct problems (Kazdin et al., 1992; Webster-Stratton & Hammond, 1997; Webster-Stratton & Reid, 1999). (See Table 2 for review of programs by type, age of children, program format, duration, and population studied.)

Empirically Supported Programs—Social Skills, Problem-Solving, and Academic Skills Training

Incredible Years Dinosaur Curriculum for Promoting Social, Emotional, and Problem-Solving Competence

The Dinosaur Curriculum, a comprehensive program, which dovetails with the Incredible Years Parents and Teachers Curriculum, makes extensive use of videotape modeling, role playing methods, life-size puppets, games as well as practice activities and children's homework assignments with parents and letters to teachers outlining behaviors that can be reinforced at school. It emphasizes training children in skills such as emotional literacy, stopping bullying, friendship skills, anger management, interpersonal problem solving, and understanding school rules and how to be successful at school. The clinic-based

version of this curriculum is a "pull-out" treatment program for small groups of children presenting with conduct problems. Children meet for 2 hr weekly in the clinic in small groups (six per group) for 22 weeks. Teachers and parents are included in all aspects of the program. A classroom-based preventive version of this program has been developed that consists of 64 lesson plans and is offered to all students 2–3 times a week in 20-min circle time lessons followed by 20-min practice activities.

The clinic-based Dinosaur curriculum for children with conduct problems was evaluated in two randomized trials with conduct-disordered children ages 4–7. The first of these studies showed that the child training program resulted in significant decreases in peer aggression as indicated by independent observations and significant increases in problem-solving strategies compared with children whose parents got parent training only or than untreated controls. Like the Kazdin study described earlier, results showed that the combined parent and child training was more effective than parent training alone in producing changes both at home and at school and that both were superior to the control group. One year later, the combined parent and child intervention showed the most sustained effects across settings (Webster-Stratton & Hammond, 1997). In the second study, the effects of the child training program were replicated (Webster-Stratton & Reid, 1999). Results indicated that, when child training was combined with teacher training, there were improved reductions in

aggressive behavior with peers in the classroom and in negative behavior with teachers (Webster-Stratton et al., 2000). Currently a study is underway evaluating the effectiveness of this program as a classroom-based curriculum with Head Start, kindergarten, and Grade 1 children.

Peer Coping Skills Training

Another skills training program that has evidence of being able to reduce conduct problems in young children is the Peer Coping Skills Training program (Prinz et al., 1994). In this program, skills training groups are formed comprising both children with and without social problems, rather than the more typical strategy of grouping together only problematic children for training. The Peer Coping Skills intervention focuses primarily upon learning effective communication skills for a variety of common peer interactional situations. Children learn to improve their listening and speaking skills through a series of "probe challenges" (e.g., find out something that made your class partner laugh this week) that can only be achieved by using their new skills successfully. The probes progress from easy to hard, and children gradually have to meet more goals (e.g., remaining silent during a speaker's statement, maintaining appropriate eye contact with a speaker) with each successive probe.

The skills themselves are taught in small groups consisting of an equal number of children identified as aggressive and prosocial peers. Groups run for 50 min once per week for between 19 and 24 weeks during the school day. The actual dyadic role-play practice always consists of an aggressive child matched with a nonaggressive peer. In addition to the role-play practice, group sessions also included considerable time with children working on crafts and playing game activities together. During these periods, children are provided the opportunity to practice their new skills under close adult supervision. A token reward system was used to encourage each child to practice.

In a controlled trial evaluating this program, Prinz et al. (1994) found that the program resulted in significant improvement on teacher ratings of aggression immediately following the intervention. These differences remained at a 6-month follow-up assessment completed by a new teacher unaware of a child's group assignment. However, the average level of problems of the children with aggressive

behavior problems continued to be well within the clinical range, suggesting that this intervention (like most child-focused interventions) is typically inadequate *on its own* to adequately address already existing problems. These researchers also found no evidence of negative "contagion" effects on nonaggressive children. In fact these children showed significant improvements on teacher ratings of communication effectiveness.

Summary

These studies taken together seem to indicate that child-focused interventions are promising but have not yielded generalized behavioral improvements unless combined with parent or teacher training. When this occurs, the results are significantly enhanced in terms of improvements in peer relationships, school readiness, cooperation with teachers, and behaviors at home with parents. In other words, the generalization of effects across different settings (home to school) is enhanced.

CLASSROOM-FOCUSED INTERVENTIONS

School failure can contribute to the development of conduct disorders and later school drop out, substance abuse, and delinquency. It is likely that low school performance and conduct disorders are correlated and both are related to the same child and family risk factors discussed earlier. As we noted, children with conduct problems are often comorbid for learning delays, attention deficit hyperactivity disorder (ADHD), and cognitive deficits that may well be malleable. Thus, supporting these children's academic needs so that they are successful in school, as well as their social and emotional needs, may be a key strategy for preventing the escalation of conduct problems. (See Table 3 for review of programs by type, age of child addressed, duration, and population studied).

Empirically Supported Programs—Preschool-Focused Interventions

Perry Preschool Project Programs. The best example of an early intervention program targeting academic or cognitive performance and school success is the Perry Preschool project carried out in Ypsilanti (Michigan) by Schweinhart and Weikart

Table 3. Summary of Empirically Validated Prevention Programs for Young Children (0–8 Years) That Are Designed to Prevent Later Development of Substance Abuse, Violence, and Delinquency: Classroom-Focused Interventions

Program type and name	Age of children (years)	Target and format of intervention	No. of hours	Populations studied			Child outcome
				Universal intervention (U)	Selective intervention (S)	Indicated intervention (I)	
ICPS (Shure & Spivak, 1982)	4–5	Whole classroom social skills training	20-min daily lesson over 8 weeks	X			↓ Problem solving
High Scope Perry Preschool Project (Schweinhart & Weikart, 1988)	3–4	Whole classroom academic skills training; child skills training; parent skills training and home visits	$2^1/_2$ hr daily		X		↓ Arrests and reduced delinquency at age 27
Contingencies for Learning Academic and Social Skills (CLASS) (Hops et al., 1978)	4–6	Individual child training in classroom	20 min daily for 1 month			X	↓ Inappropriate behavior
Program for Academic Survival Skills (PASS) (Greenwood et al., 1977)	4–9	Teacher training + consultation	6 sessions + 17 consultant visits		X	X	↓ Inappropriate behavior
Good Behavior Game (Kellman et al., 1998)	6–7	Whole classroom child academic and social skills training; teacher training	10 min 3 days per week for Grades 1 and 2	X			↓ Aggression
Promoting Alternative Thinking Strategies (PATHS; Greenberg & Kusche, 1998)	6–8	Teacher training + weekly consultation	131 lessons over 5 years	X			↑ Problem solving ↓ Conduct problems
Second Step (Grossman et al., 1997)	8–9	Whole classroom	30 lessons, 35 min each 1–2 per week	X			↓ Physical aggression
Child Development Project (Battistch et al., 1996a,b)	8–12	School staff training; school-wide community building activities	Not given	X			↓ Alcohol use ↓ Vehicle theft

(1988). Three- and 4-year-old children who had a low IQ from poor families were randomly assigned to the experimental and control conditions and were later followed up to age 15. This daily preschool program (2 1/2 hr per day) was backed up by home visits by teachers (1 1/2 hr per week). The program lasted 2 years and focused on providing children with intellectual stimulation to increase their thinking and reasoning abilities in order to increase later school achievement. Results at age 15 indicated that intervention children were significantly better than control children in school achievement, teacher ratings of classroom behavior, and self-reports of

offending. Results at age 19 indicated the experimental group was more likely to be employed and to have graduated from high school and less likely to have been arrested. By age 27, the experimental group had accumulated only half as many arrests on average as the controls (Schweinhart et al., 1993). In a sister study, the High/Scope Preschool Curriculum study, Schweinhart and Weikart (1997) replicated the Perry Preschool study results with a follow-up study of 23 years. Other examples of interventions designed to prevent conduct disorders through school achievement are described now in the multifocused interventions.

Empirically Supported Programs—Elementary Classroom-Focused Interventions

Several elementary classroom-focused interventions have been evaluated in randomized controlled trials and shown to be effective at reducing conduct problems and promoting academic engagement with work and reducing other risk factors associated with academic failure and later delinquency and drug abuse. Some universal and selected interventions have focused primarily upon teachers' classroom management practices, whereas other universal interventions have focused primarily on teaching children interpersonal skills. Interventions falling into both of these approaches are described now.

Contingencies for Learning Academic and Social Skills (CLASS)

CLASS (Hops et al., 1978) is designed for children in preschool through Grade 1 who are more disruptive than their peers and who have difficulty staying on task. The program begins with a consultant meeting with the child and his parents, and then explaining the "game" they are going to play. The game is played every day at school for a month, initially for 20 min per day, and gradually expanding to the whole day. During the first 5 days, the consultant visits the classroom and sits beside the child while the teacher teaches a lesson. When the child is on task, the consultant holds the green side of a card toward the child, who received points for being on task. If the child begins to behave inappropriately, the consultant simply turns the red side toward the child. After 5 days, the teacher takes over using the card for portions of the day. If the child receives enough points, the entire class wins a prize, such as the chance to play a special game or 5 min of extra recess. In addition, the child brings the card home, and the parents are taught to praise and reinforce the child for earning the necessary points for that day. Three randomized controlled trials have shown that this process results in significant increases in the percentage of time spent in appropriate behavior in the classroom, and that benefits are persisting a year later with a new teacher (Walker et al., 1988).

Program for Academic Survival Skills (PASS)

PASS developed by Greenwood and colleagues is a second classroom approach. It involves offering teachers six training sessions and 17 visits by a classroom consultant (Greenwood et al., 1977). Strategies promoted include using teacher approval, student behavior rules, and group reward systems. Teachers use a clock light instrument that the teacher turns off when one or more students were off-task. When all students are on-task again, the light is turned on, and the timer continued. Teachers are taught strategies for maintaining the effects of the program, and generalizing it to other academic periods. An evaluation of the program showed that teachers could be successfully trained to implement the program, and that disruptive behavior in the classroom was reduced as a result (Greenwood, 1979). There were no long-term follow-up results.

Good Behavior Game (GBG)

This intervention is conducted in Grades 1 and 2 and is a classroom team-based program designed to improve children's social adaptation (reduce aggression and shy behavior) to rules and authority. Children are assigned to teams in the classroom and are penalized points whenever a member engages in verbal disruption, physical disruption, is out of seat, or noncompliant. The program rewards teams for appropriate behavior. It is conducted three times a week for 10-min periods. There is also a Mastery Learning component that is designed to help improve reading achievement through enrichment of the instructional strategies used by teachers in reading curriculums. Evaluation of these programs with 693 students indicated that the GBG intervention had a significant impact on reducing reports of aggressive behavior for boys. On peer nominations of aggressive behavior, intervention boys received fewer aggressive nominations by peers; however, no significant difference was found between girls and controls for this measure. Six-year follow-up indicated that males with higher rates of aggression at first grade showed significant reductions in later problem behaviors (Kellam et al., 1998).

Promoting Alternative Thinking Strategies (PATHS)

This program was originally developed for deaf children (Greenberg & Kusche, 1998) and was adapted by Kusche and Greenberg (1994) for use with regular education and special needs children. Teachers implement the PATHS curriculum within their classroom. The program covers five conceptual

domains: self-control, emotional understanding, positive self-esteem, relationships, and interpersonal problem-solving skills.

The effects of this program as a universal prevention for regular children was carried out with Grade 1 students as part of the Fast Track Multisite Program. In this implementation, teachers attended a 2 1/2-day training workshop and received weekly consultation and observation from project staff. Consultation addressed how to implement the skills training program as well as general feedback on classroom and behavior management. This study was implemented in approximately 12 schools in each of four communities over three successive years. Schools were randomly assigned to receive either the intervention or to serve as a control school. In this study, 845 children in intervention classrooms who were identified as exhibiting high levels of behavior problems also received a variety of supplemental interventions and were thus excluded from these analyses. Effects were measured on the remaining 7,560 children. Although no treatment effects were found on teacher ratings of children's behavior, a small, but statistically significant, effect was found on peer nominations of aggressive behavior. Although additional effects were reported related to global observer ratings of classroom atmosphere, these results must be interpreted with caution because the changes in behavior of the at-risk children receiving the more intensive intervention could have contributed to these effects (CPPRG, in press-a,b). As a result, it appears that this intensive skills training program, combined with weekly consultation to teachers, is able to make a small, but statistically significant, reduction in behavior problems within a universal population.

Second Step

This classroom curriculum, a derivative of Shure's ICSP program, was designed as a universal intervention for elementary children and seeks to promote prosocial behavior and improve interpersonal problem-solving skills. It consists of 30 lessons, 35 min each, taught once or twice a week in a classroom. It focuses on problem solving, empathy, and impulse control. One study has evaluated its effectiveness with 790 second and third grade students from 12 elementary schools. Assessments included parent and teacher reports and direct observations for 12 randomly selected students from each classroom. Data collected at 2 weeks posttreatment showed reductions

in physical aggression for one-quarter of observation measures collected. No significant effects were found in parent or teacher reports. Six months follow-up showed physical aggression in the classroom remained significantly reduced, and other outcomes did not retain significance (Grossman et al., 1997). Because no corrections were done for multiple statistical tests, these limited positive results must be treated cautiously.

Summary

As the above descriptions illustrate, there is beginning evidence to suggest that classroom behavior programs designed to promote social behaviors and academic competence are effective in increasing academic and social competence and reducing aggression. Skills training curriculum achieved modest gains, whereas training teachers in classroom management practices achieved more substantial effects. It seems likely that combining these interventions together and incorporating family-based interventions such as those described earlier would hold the promise of achieving larger effects and generalizing them beyond the classroom.

MULTIFOCUSED INTERVENTIONS—COMBINING PARENT TRAINING WITH CLASSROOM-FOCUSED PROGRAMS

Overview

Although parent training historically has not been seen by school personnel as an essential element in school service delivery, those involved in prevention of aggressive student behavior are beginning to include this component. There are several advantages to offering parent training programs in a school-based preventive model rather than in a mental health setting. First, in order to be successful, intervention must target multiple risk factors in the child, family, and school and be attentive to the links between these three areas. School-based programs are ideally placed to facilitate the parent–teacher–child links. Second, offering interventions in schools makes programs more accessible to families and eliminates the stigma associated with services offered in traditional mental health settings as well as some of the practical and social barriers to treatment access (e.g., lack of transportation, insurance, child care, or financial resources). Third, offering interventions

in preschool and early elementary grades in schools allows programs to be available before children's common behavior problems have escalated into such severe symptoms that they require referral and extensive clinical treatment. Moreover, when intervention is offered in natural communities, these communities become strengthened as a source of support for parents and teachers (Webster-Stratton, 1997). A fifth advantage of interventions delivered by on-site school staff is the sheer number of high-risk families and children that can be reached at comparatively low cost.

In the past decade there has been mounting evidence from several multimodal, randomized control, longitudinal prevention programs that rates of later delinquency, substance abuse, and school adjustment problems can be lowered by early parent–school intervention involving combinations of interventions targeted at parents, teachers, and children. Because these multiple target interventions were combined in one intervention it cannot be determined which components were responsible for the behavior change; therefore, they are included here as multifocused interventions. (See Table 4)

First Step

This school-based selective prevention program developed by Walker et al. (1998) is designed for at-risk kindergarten children with early signs of antisocial behavior patterns. This program is adapted from the CLASS program for acting out children, developed by Hops and Walker (Hops et al., 1978) described earlier. In addition to offering CLASS consultants implement a home-based 6-week program with the parents at home (1 hr per week). This intervention is based on the parent programs and research developed at Oregon Social Learning Center (OSLC) described earlier. Parents are helped through instructions, games, and activities to provide adequate monitoring and reinforcement to build child social competencies.

In a randomized study evaluating this program, a total sample of 46 high-risk kindergarten students participated and were randomly assigned to the intervention condition or waiting list control. The intervention consisted of the school and home intervention. All children were followed 1 year later (Grade 1), and one cohort was followed in Grade 2. Results of teacher reports indicated that intervention students were significantly more adapted, less aggressive,

and less maladapted compared to control students. (Parent reports were not presented.) Observations indicated that intervention students were more engaged academically compared to controls. Follow-up results 3–4 years later indicated effects lasted over time (Epstein & Walker, 1999).

The Montreal Longitudinal Experimental Study

This school-based indicated prevention program for high-risk boys includes classroom social-cognitive skills training based on the work of Shure and Spivak (1982) and a home-based parent training program based on the work of those at the Oregon Social Learning Center (Patterson et al., 1975). Tremblay and colleagues (Tremblay et al., 1995, 1996 a,b) identified 366 disruptive boys at age 6, and randomly assigned them to experimental and control conditions. The boys in the experimental condition received school-based training to foster social skills and self-control. Coaching, peer modeling, role playing, and reinforcement were used in small group sessions on topics such as, "What to do when you are angry" and "How to react to teasing." Also, their parents were trained at home approximately once every 3 weeks over a 2-year span. (The average number of sessions was 17.4.) Results have shown that a combination of parent and child training for high-risk children in kindergarten and first grade reduced rates of delinquency and school adjustment problems at age 12. By age 12, the boys in the experimental condition committed less burglary and theft, were less likely to get drunk, and were less likely to be involved in fights than controls. Also, boys in the experimental condition had higher achievement. The differences between the experimental and control boys increased as follow-up progressed.

Fast Track

This is probably the most comprehensive (and most costly), multicenter, multicomponent indicated program that has provided long lasting services to children exhibiting aggressive behaviors from first to fifth grades. The 6-year intervention included a classroom management component, sociocognitive skills training, emotional regulation skills training (PATHS, Kusche & Greenberg, 1994), academic tutoring, home visiting, parent–child relationship enhancement, and parent training (based

Table 4. Summary of Empirically Validated Prevention Programs for Young Children (0–8 Years) That Are Designed to Prevent Later Development of Substance Abuse, Violence, and Delinquency: Multifocused Interventions

Program type and name	Age of children (years)	Target and format of intervention	No. of hours	Populations studied			Child outcome
				Universal intervention (U)	Selective intervention (S)	Indicated intervention (I)	
First Step (CLASS; Walker et al., 1998)	5	Home-based parent skills training + program consultants + individual child training in class	6 weeks, 1 hr per week 2$\frac{1}{2}$ hr daily for 3 months 50–60 hr)			X	↓ Aggression ↑ Academic engagement
Montreal Program (Tremblay et al., 1995)	7–9	Lunch time child social skills peer training; home-based individual parent skills training	9 sessions 1st year; 10 sessions 2nd year 17 sessions over 2 years			X	↓ Delinquency at age 15, less fighting at age 12
Fast Track (conduct problems prevention group; CPPRG)	6–12	Classroom-based skills training (U); individual home-based for parents (S & I); group parent training (S & I); tutoring and social skills training for children (S & I)	6 years	X	X	X	↓ Conduct problems
Linking the Interests of Family and Teacher (LIFT; Reid et al., 1999)	7–11	Group parent training at school (S); classroom-based child skills training (U); playground program	Once a week, 6 weeks 20, 1 hr sessions twice a week	X			↓ Physical aggression
Seattle Social Development Project (Hawkins & Weiss, 1985)	7–11	Academic, social skills, and problem-solving training; teacher training; optional parent skills training	1st–5th grades grades 1st–3rd grades	X			↓ Violence at age 18 ↓ Aggression
Incredible Years Teacher Training (Webster-Stratton & Reid, 1999)	4–8	Group teacher training (U); group parent training (S & I); small group child training (I)	36–50 hr, for children, teachers, and parents	X	X	X	↓ Classroom aggression with peers and teachers ↓ Conduct problems at home

on Forehand and MacMahon's parent training program and Webster-Stratton's Incredible Years parent program). Also included in this intervention were home visiting and weekend friendship enhancement groups. Kindergarten children were identified by parents and teachers as having behavior problems and were included in the intervention or control group based on random assignment of schools when they were in first grade. Outcome at 1 and 3 years showed reductions in conduct problems and special education resource use (CPPRG, 1999, in press-b).

Linking the Interests of Families and Teachers (LIFT)

LIFT is a school-based universal prevention program designed for elementary school aged children and their families developed by Reid and colleagues at the Oregon Social Learning Center. Two versions of the program are available. The first is tailored to meet the needs of children and their families as they transit into the elementary school years; the second is tailored for youth and their families as they prepare for middle school. The core of the program is a 6-week group-based parent training designed to promote consistent and effective parental discipline techniques and close and appropriate supervision. During the school day, children participate in an interpersonal skills training program offered in the classroom twice a week for 10 weeks for a total of 20 hr. Each classroom is divided into four or five small groups of children who participate in small group activities together. During recess, a version of the Good Behavior Game (Kellam *et al.*, 1998) is used to encourage the use of positive skills during unstructured activities. Specifically, the LIFT instructor and school playground staff roam the playground and give armbands to children displaying positive behavior. Negative behaviors are tallied on a chart. At the end of each recess, children place their armbands in a jar. When the jar is full, the entire class receives a reward. Small group members also are able to earn prizes by keeping the number of negative behaviors observed on the playground to a minimum. Results of a controlled study of the LIFT showed postintervention effects on physical aggression on the playground, behavior improvements in the classroom, and reductions in maternal criticisms with children at home (Reid *et al.*, 1999).

PREVENTION PROGRAMS THAT INCLUDE TEACHER TRAINING

Integrated school-wide approaches that provide consistent classroom discipline plans and individualized behavior plans for children with conduct problems can be highly effective (Cotton & Wikelund, 1990; Gottfredson *et al.*, 1993; Knoff & Batsche, 1995). Specific teacher behaviors associated with improved classroom behavior include high levels of praise and social reinforcement (Walker *et al.*, 1995); the use of proactive strategies such as preparation for transitions and clear, predictable classroom rules (Hawkins *et al.*, 1991); the effective use of short, clear commands, warnings, reminders, and distractions (Abramowitz *et al.*, 1988; Acker & O'Leary, 1987); the use of tangible reinforcement systems for appropriate social behavior (Pfiffner *et al.*, 1985); team-based rewards (Kellam *et al.*, 1998); mild but consistent response costs (Time Out or loss of privileges) for aggressive or disruptive behavior (Pfiffner & O'Leary, 1987); and direct instruction in appropriate social and classroom behavior (Walker *et al.*, 1994), and problem-solving skills (Shure, 1994).

Programs that train teachers in classroom management strategies have consistently demonstrated short-term improvements in disruptive and aggressive behavior in the classroom for approximately 78% of disruptive students (Stage & Quiroz, 1997). Programs such as ACHIEVE (Knoff & Batsche, 1995) and BASIS (Gottfredson *et al.*, 1993) focus on classroom management skills, and discipline, social skills training, and home–school collaboration are effective in reducing teacher reports of antisocial behavior and improving academic achievement. Although these programs are promising, they failed to use randomized control designs or to measure the program effects across settings and over time. Several studies using randomized control designs have extended this teacher training research. Two large scale prevention projects, the Seattle Social Development Project (Hawkins *et al.*, 1999) and the Child Development Project (Battistich *et al.*, 1991) emphasized training teachers in classroom management as a universal prevention effort.

The Seattle Social Development Project

This program developed by Hawkins *et al.* (1992b) is a universal intervention that is a combination of modified teaching practices in mainstream classrooms and parent training. The teachers are trained in proactive classroom management, interactive teaching, and cooperative learning. First grade teachers also trained to implement the ICPS curriculum developed by Shure and Spivak (1982). The parent training component consists of optional parent classes offered in first through third grades. In the first and second grades, the "Catch Em Being Good" program was offered. The program is designed to improve parental monitoring and to help parents provide clear expectations for child behavior and support parents' use of positive reinforcement and negative consequences for misbehavior. The program evaluation consisted of 643 students (first to fifth graders) from eight schools in high crime areas within the Seattle Public School System. Schools were

assigned to intervention or control conditions. The 6-year follow-up of the Hawkins study (Hawkins *et al.*, 1999) with children who received the full school-based intervention (i.e., started in first grade) in first through fifth grades indicated that intervention students reported fewer violent delinquent acts; lower ages of drinking, sexual activity, and pregnancy by 18 years; and showed significant positive outcomes related to commitment and attachment to school, self-reported achievement, and self-report involvement in school misbehavior.

Child Development Project

This program developed by Battistich *et al.* (1996a) was intended to transform schools into "caring communities of learners." It focuses on enhancing protective factors such as school bonding and satisfying basic needs. Components include school staff training in the use of cooperative learning and a language arts model that fosters cooperative learning, buddy activities, and classroom decision-making. School-wide community-building activities are used to promote school bonding and parent involvement activities, such as interactive homework. This program was evaluated in a quasi-experimental study with 4,500 third to sixth grade students (average age 11 years) in 24 schools. Intervention and control schools were well matched. Results of a sequential design show improvements in prosocial and problem solving skills (Battistich *et al.*, 1989). A follow-up study of these children demonstrated that students who received the program were less likely to use alcohol and exhibited fewer delinquent behaviors (e.g., vehicle theft; Battistich *et al.*, 1996b). Those schools who were "high implementation" schools showed significant effects in reducing marijuana use, vehicle theft, and carrying a weapon.

Incredible Years Parents and Teachers Series

In a second randomized control selective prevention study in Head Start, Webster-Stratton *et al.* (in press) evaluated the combined effects of the Incredible Years Teacher Training program along with the Incredible Years Parenting program. Two hundred seventy-two Head Start mothers and 61 teachers from 14 Head Start centers were randomly assigned to the intervention condition or the control condition. Parents received the BASIC and aspects of the ADVANCE and SCHOOL programs. All Head Start teachers and aides received a 6-day workshop from the videotaped-based teacher curriculum sequenced over the year (monthly). These workshops focused on classroom management skills, relationship building with students and parents, and ways to promote social and emotional competence in the classroom. Assessments were conducted at baseline, postintervention, 1-year and 2-year postintervention (through Grade 1). The positive parenting results found in the previous prevention study were replicated. In addition, teachers from the intervention condition reported making significantly more effort to involve parents in their classrooms and were observed to be more positive and less harsh in their classroom management than control teachers. Students in the intervention classrooms were observed to exhibit significantly fewer negative behaviors and noncompliance with teachers and less physical aggression with peers than students in control classrooms. Intervention children were more engaged or on-task in the classroom and had higher school readiness scores (e.g., friendly, self-reliant, on task, low disruptive) than control children. Overall classroom atmosphere was significantly more positive for intervention classrooms than for control classrooms. Teachers also reported the intervention students to be more socially competent than the control students. One year later most of the improvements noted in intervention mothers' parenting skills and in their children's affect and behavior were maintained (Webster-Stratton *et al.*, in press).

This same teacher training program was evaluated for treatment of children (4–8 years old) with diagnosed conduct problems (Webster-Stratton & Reid, 1999). The teacher training program significantly enhanced the effectiveness of parent and child training in terms of decreasing aggressive behavior in the classroom, promoting academic readiness, and increasing on-task work in comparison to students in classrooms where teachers did not receive the program. Moreover, participating teachers were observed to use fewer inappropriate and harsh discipline strategies and to be more nurturing and positive than nonintervention teachers. These data suggest the added benefits of training both parents and teachers in management skills and in ways to collaborate in partnerships that foster children's social and academic development.

KEY FEATURES OF EFFECTIVE PROGRAMS

There are several excellent literature reviews indicating that cognitive–behavioral interventions are helpful for prevention of and treatment of conduct

disorders and for the promotion of social competence (Brestan & Eyberg, 1998; Taylor *et al.*, 1999; Taylor & Biglan, 1998). These reviews can be used by schools to evaluate the appropriateness of particular parenting programs for their schools. Based on the above research, schools are advised to use the following guidelines to select an effective parent/teacher/child intervention.

- Programs take a skills enhancing perspective.
- Program content is broad-based. Program content includes cognitive, behavioral, and affective components.
- Program length is typically greater than 20 hr for children and families at elevated risk of developing problems.
- Programs intervene as early as the risk factors can be clearly identified.
- Programs are developmentally focused. (i.e., targeted at specific ages).
- Programs use a collaborative process with parents, teachers, and children.
- Programs focus on parents' and teachers' strengths (not deficits).
- Programs utilize performance training methods. For example, programs that utilize videotape methods, live modeling, role-play or practice exercises, and weekly home practice activities are more effective than programs relying on didactic presentations.
- Programs educate participants not only in strategies, but also in the developmental and behavioral principles behind them.
- Programs promote partnerships between parents and teachers.
- Programs emphasize the clinical skills of the intervention staff.
- Programs are sensitive to barriers for low socioeconomic families and are culturally sensitive.
- Programs have been empirically validated in control and comparison group studies using multiple methods and provide follow-up data.

SUMMARY OF EFFECTIVE INTERVENTIONS FOR CHILDREN AGES 0–8 YEARS

As has been demonstrated by the existing research, effective interventions for at-risk children or children exhibiting conduct problems will involve several domains of risk factors. A parent component is especially critical to the success of schools' efforts to provide programs for preventing conduct problems and promoting social competence in students. The above review is not all inclusive, focusing instead on programs that have been shown to be effective using rigorous evaluation standards. Given the powerful potential of these programs, prevention and early intervention staff should be trained in empirically validated interventions (Brestan & Eyberg, 1998) and consider strategies to effectively integrate these into a school-wide plan. Central to any of these programs' success is the parent–teacher–school–counselor partnership model, a supportive network, that leads to parents and teachers feeling more supported in their efforts and results in more success than those that target either teachers or parents or children alone. When schools offer comprehensive intervention programs, they can expect to have reduced levels of conduct problems and school violence, increased academic success, and increased collaboration between home and school. Schools could initiate this process by routinely screening children to determine who could benefit from additional support, such as parent training or social skills programs. Then they could provide parenting programs by training school counselors, psychologists, nurses, or teachers so that they are confident in offering group-based parent programs. Moreover, they could provide a resource room for parents that includes books and videotapes on parenting, social skills, and problem-solving teaching for children. There is great need for schools to find the resources for such programs and to define their role as partners with parents in efforts to reduce conduct problems, promote social competence, and ultimately prevent later development of violence, substance abuse, and school drop out.

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