

Chapter 18

Conduct Disorder

Carolyn Webster-Stratton
Rebecca W. Dahl
University of Washington

Clinicians working with families typically encounter children who exhibit persistent patterns of antisocial behavior—where there is significant impairment in everyday functioning at home or school, or when the child's conduct is considered unmanageable by parents or teachers. The term *externalizing* has generally been used to summarize a set of negativistic behaviors that commonly co-occur during childhood. These include noncompliance, aggression, tantrums, and oppositional-defiant behaviors in the preschool years; classroom and authority violations such as lying and cheating in school years; and violations of community such as shoplifting in adolescence. The referral of children to clinicians for treatment of these externalizing and aggressive behaviors comprises one third to one half of all child and adolescent clinic referrals. These children and their families utilize multiple social and educational services provided to manage such children on a daily basis. Moreover, the prevalence of these behavioral disorders is increasing, creating a need for service that far exceeds available resources and personnel. Recent projections suggest that fewer than 10% of children who need mental health services actually receive them (Hobbs, 1982).

Although most parents at one time or another have problems with children lying, cheating, stealing, hitting, and noncompliance to parental requests, it is the degree of destruction and disturbance, the occurrence of the behaviors in more than one setting (e.g., at home and at school), and the persistence of these behaviors over time beginning at an early age that causes concern for families and clinicians alike.

This chapter deals with features that characterize young children to whom the label of oppositional defiant disorder and/or conduct disorder is frequently applied. These children typically exhibit a “complex” or pattern of behaviors (e.g., lying, cheating, stealing, hitting, and noncompliance to parental requests) and to a lesser extent, display violations of social rules.

The following case description illustrates the type and severity of problems represented by the conduct problem child. Eric is an 8-year-old boy living at home with

his father, mother, younger brother, and an infant sister. He was referred to the clinic because of excessive aggressive behavior. Eric made a recent attempt to stab his younger brother, and makes frequent threats of violence towards both younger siblings. Eric's history reveals an escalation in aggressive activity including the initiation of physical fights with his peers, destruction of household property, and refusal to do what his parents request. Eric's parents express exasperation and exhaustion in dealing with Eric and talk about placing him in a boarding school. They have experienced difficulties managing his behavior since he was a toddler, and although initially they were told by professionals he would "outgrow" these problems, they found he became increasingly aggressive and defiant. He was kicked out of four preschools before he started grade school. The parents reported that they had tried every discipline strategy they could think of, such as time-out, yelling, hitting and spanking, taking away privileges, and grounding him. They felt none of these approaches worked with him. The parents reported feeling isolated and stigmatized by other parents with more "normal" children and felt teachers blamed them for his misbehaviors.

An evaluation of his behavior in Grade 3 reveals inattentiveness and distractibility in the classroom, aggression towards his peers—particularly during recess and frequent reports of teacher calls to his mother to take him home from school because of misbehavior. His intellectual performance is within the normal range (WISC-R full scale IQ = 105) and his academic performance is barely passing. His school absences and physical fights have constituted frequent contact with his parents and threats of expulsion.

Eric's home life includes the following characteristics: a mother with moderate depression and a father who drinks heavily. The father becomes abusive when he drinks, and often the children as well as the mother are targets of the abuse. Less than a year ago, the mother had another child, that has increased the stress in the family in that the mother is unable to take responsibility for the care and supervision of the older children.

CLINICAL DESCRIPTION

DSM-IV Draft Criteria

According to the *DSM-IV*, (American Psychiatric Association, 1994), externalizing behavior problems are referred to collectively as "Disruptive Behavior Disorders and Attention Deficit Disorders." There are three subgroups related to this larger category: Oppositional Defiant Disorder (ODD), Attention-Deficit Hyperactivity Disorder (ADHD), and Conduct Disorder (CD). As Conduct Disorder is rarely diagnosed before age 6, most young children with externalizing symptoms fit the criteria for ODD, ADHD, or a combination of the two disorders. The primary features of conduct disorder are conduct disturbance lasting at least 6 months, the number of conduct problems, and violation of the rights of others. A diagnosis of conduct disorder requires a disturbance lasting for at least 6 months during which three of the following symptoms are present: often bullies, threatens, or intimidates others; often initiates physical fights; has used a weapon that can cause serious physical harm; has stolen with confrontation with a victim; has been physically cruel to people; has been physically

cruel to animals; has forced someone into sexual activity; often lies or breaks promises; often stays out at night despite parental prohibitions, beginning before age 13; has stolen items of nontrivial value; has deliberately engaged in fire setting; has deliberately destroyed another's property; has run away from home overnight at least twice while living in parental home; often truant from school beginning before age 13; has broken into someone else's house, building, or car (APA, 1993).

The *DSM-IV* (American Psychiatric Association, 1994) mentions three subtypes of Conduct Disorder. The childhood onset type that consists of at least one conduct problem occurring before age 10 and the adolescent onset type where there are no conduct problems prior to age 10. Also severity is rated from mild to moderate to severe.

The diagnosis of ODD requires a pattern of negativistic, hostile, and defiant behavior lasting 6 months during which four of the following are present: often loses temper; often argues with adults; often actively defies or refuses to comply with adults' rules; often deliberately does things that annoy other people; often blames others for his or her mistakes; is often touchy or easily annoyed; is often angry and resentful and is often vindictive.

Other Classifications

Another method for classifying conduct disorder is through empirically derived syndromes. Two distinct syndromes that consistently emerge from the literature are undersocialized aggressive and socialized aggressive (Quay, 1986). The undersocialized-aggressive syndrome includes such behaviors as fighting, disobedience, temper tantrums, destructiveness, uncooperative, and impertinence. The socialized-aggressive syndrome includes truancy from school, absence from the home, stealing with peers, loyalty to delinquent friends, and gang involvement (Quay, 1986). It is important to remember that conduct disorder, although relatively stable, is manifested by different patterns of behavior in different age/gender children.

Another method of categorization is known as the salient symptom approach. This method suggests subcategorizing conduct disorder based on the specific behaviors displayed by the child. The dimensions of the subcategorization are the overt dimension (e.g., physical aggression, disobedient, destruction of property) and the covert dimension (e.g., lying, stealing, truancy). The overt-covert dimensions are supported by evidence that certain behaviors tend to cluster together and that the two dimensions differ in their response to treatment (Wicks-Nelson & Israel, 1991).

Comorbidity

There seems to be considerable diagnostic ambiguity between CD, ODD, and ADHD in the young preschool age group as well as true comorbidity (i.e., hyperactive, impulsive, inattentive children have externalizing problems). Current reports suggest that as many as 75% of children who are identified as a attention deficit disorder with hyperactivity (ADHD) can also be identified as conduct disorder (Safer & Allen, 1976). It has been proposed that hyperactivity may influence the emergence of conduct disorder. Loeber (1985) suggested that hyperactivity is inherent in conduct disorder children. However, careful assessment of the child may reveal that the child actually meets the criteria for one and not the other. The criteria for ADHD and conduct

disorder, although similar, are not identical, and it is important that ODD and ADHD be differentiated for both clinical and empirical reasons. Furthermore, those children who display concurrent ODD and ADHD appear to be at heightened risk for development of severe antisocial behavior than children with either single-disorder category.

Developmental Progression from ODD to CD

A number of theorists have shown high continuity between disruptive and externalizing problems in the preschool years and externalizing problems in adolescents (Loeber, 1990; Rutter, 1985). Recently developmental theorists have suggested that there may be two developmental pathways related to conduct disorders: the "early starter" versus "late starter" model (Patterson, DeBaryshe, & Ramsey, 1989). The hypothesized early onset pathway begins formally with the emergence of oppositional disorders (ODD) in early preschool years and progresses to aggressive and nonaggressive symptoms of conduct disorders in middle childhood and then to the most serious symptoms by adolescence (Lahey, Loeber, Quay, Frick, & Grimm, 1992). For the adolescents who develop conduct disorders later in their adolescent years, the prognosis seems more favorable than for the adolescents who have a chronic history of conduct disorders stemming from their preschool years. Adolescents who are most likely to be chronically antisocial are those who first evidenced symptoms of ODD in the preschool years. Thus, the primary developmental pathway for serious conduct disorders in adolescence and adulthood appears to be set in the preschool period. ODD is a sensitive predictor of subsequent CD, in that nearly all CD youths have shown previous ODD.

CAUSES OF THE DISORDER

It is widely accepted that multiple influences and factors contribute to the development and maintenance of child conduct disorder. It is important to briefly review the major categories influencing the establishment of conduct disorder. These include child, parent, and school-related factors.

Child Biological Factors

The "child deficit" hypothesis argues that some abnormal aspect of the child's internal organization at the physiological, neurological, and neuropsychological level—which may be genetically transmitted—is at least partially responsible for the development of externalizing behavior problems.

Temperament has perhaps been researched the most in regard to conduct problems. Temperament refers to aspects of the personality that show consistency over time and across situations, and are identified as constitutional in nature. These personality characteristics include activity of the child, emotional responsiveness, quality of mood, and social adaptability (Thomas & Chess, 1977). It appears that there is support for the mother's objective rating of child temperament and independent observations of the child and that these objective components are not overwhelmed by subjective components. Research has indicated that there are links between specific temperament scales and specific behavior problem scales. For example, there is a

strong correlation between unadaptability and later aggressive problems. Frequent and intensive negative child affect also consistently predicts behavior problems. In one longitudinal study mother reports of infant difficultness (at 6 months) and infant resistance to control (at 1 year) showed significant predictions to maternal report of externalizing problems at ages 6 and 8 years (Bates, Bayles, Bennett, Ridge, & Brown, 1991).

Although studies have shown that early assessments of temperament predict later behavior problems, the amount of variance accounted for in the outcome is relatively small. Factors such as family conflict or support and quality of parent management strategies appear to interact with temperament to influence outcome. Several recent studies have shown that extreme (difficult) infant temperament in the context of favorable family conditions is not likely to increase the risk of disruptive behavior disorder at age 4 (Maziade, Cote, Bernier, Boutin, & Thivierge, 1989). In general the findings on temperament clearly support the notion of Thomas and Chess (1977) that "no temperamental pattern confers an immunity to behavior disorder, nor is it fated to create psychopathology" (p. 4).

In addition to temperament, other organic factors related to cognition have been implicated. It is suggested that conduct disordered children distort social cues during peer interactions (Milich & Dodge, 1984). This distortion includes attributions of hostile intent during neutral situations. Aggressive children also search for fewer cues or facts when determining another's intentions (Dodge & Newman, 1981) and focus more on aggressive cues. The child's perception of hostile intentions from others may subsequently encourage aggressive behavior. There are also data that indicate that deficits in social problem-solving skills contribute to poor peer interactions. These children may generate fewer alternative solutions to social problems, seek less information, define problems in hostile ways, and anticipate fewer consequences for aggression (Slaby & Guerra, 1988).

The findings bearing on the relationship between empathy and aggression also merit some attention. An inverse relationship exists between aggressive children and empathy across a wide age range, although the converse of aggression-prosocial behavior does not reflect as stable a relationship (Feshbach, 1989).

School-Related Factors

Academic performance has been implicated in child conduct disorder. Low academic achievement and low intellectual functioning often manifest themselves in conduct disordered children early on during the elementary grades and continue through high school (Kazdin, 1987). Reading disabilities, in particular, are associated with conduct disorder (Sturge, 1982). One study especially indicated that conduct disordered children exhibited reading deficits defined as a 28-month lag in reading ability, compared with the reading ability of normal children (Rutter, Tizard, Yule, Graham, & Whitmore, 1976). The relationship between academic performance and conduct disorder is not merely unidirectional but is considered a bidirectional relationship. It is unclear whether disruptive behavior problems precede or follow low intelligence, language delay, or neuropsychological deficits. However, there is some evidence that cognitive and linguistic problems may precede disruptive behavior problems (Schonfeld, Shaffer, O'Connor, & Portnoy, 1988).

The school setting has been studied as a risk factor contributing to conduct

disorders. Rutter and his colleagues (1976) found that characteristics such as emphases on academic work, teacher time on lessons, teacher use of praise, emphasis on individual responsibility, teacher availability, school working conditions (e.g., physical condition, size), and teacher-student ratio were related to delinquency rates and academic performance.

Parent Psychological Factors

Parent psychopathology places the child at considerable risk for conduct disorder. Specifically, depression in the mother, alcoholism in the father, and antisocial behavior in either parent have been implicated in increasing the child's risk for conduct disorder. Maternal depression is associated with misperception of a child's behavior. For example, mothers who are depressed perceive their child's behavior as maladjusted or inappropriate. Depression also influences the parenting behavior directed toward a child's misbehavior. For example, depressed mothers often increase the number of commands and criticisms they give to their children. The child, in response to the increase in parent commands, displays an increase in noncompliance or deviant child behavior (Webster-Stratton & Hammond, 1988). Therefore, it is hypothesized that maternal depression and irritability indirectly lead to behavior problems as a result of negative attention reinforcing inappropriate child behaviors, inconsistent limit setting, and emotional unavailability. In a recent community study, maternal depression, when the child was 5, was related to parent and teacher reports of behavior problems at age 7 (Williams, Anderson, McGee, & Silva, 1990).

As might be expected, presence of antisocial behavior in either parent places the child at greater risk for conduct disorders. In particular, criminal behavior and alcoholism in the father are consistently demonstrated as parental factors increasing the child's risk. Grandparents of conduct disordered children are also more likely to show antisocial behavior compared to grandparents of children who are not antisocial.

COURSE OF THE DISORDER

Research has indicated that a high rate of childhood aggression, even in children as young as age 3, is fairly stable over time. Richman, Stevenson, and Graham (1982) found that 67% of children with externalizing problems at age 3 continued to be aggressive at age 8. Other studies have reported stability correlations between between 5 and 7 for externalizing scores. Loeber (1991) contended that these estimates of stability may actually be higher because manifestations of the problems are episodic, situational, and change in nature (e.g., from tantrums to stealing). Early onset of ODD appears to be related to later aggressive and antisocial behavior and the development of severe problems later in life (e.g., school drop out, alcoholism, drug abuse, juvenile delinquency, adult crime, marital disruption, interpersonal problems, and poor physical health, Kazdin, 1987). However, not all conduct disordered children incur a poor prognosis as adults. Data suggest that less than 50% of the most severe conduct disordered children become antisocial as adults. The fact that less than one half of conduct disordered children continue into adulthood with significant problems represents an unusually high percentage; one that cannot be ignored.

Although not all ODD children become CD and not all conduct disordered

children become antisocial adults, certain risk factors contribute to the continuation of the disorder: (a) early age of onset (preschool years), (b) breadth of deviance (across multiple settings such as home and school), (c) frequency and intensity of antisocial behavior, (d) diversity of antisocial behavior (several versus few) and covert behaviors at early ages (stealing, lying, firesetting), and (e) family and parent characteristics (Kazdin, 1987). However, a delineation of contributing risk factors does not convey a complete understanding of the complex nature of variables involved and the relationship of the variables with one another.

FAMILIAL CONTRIBUTIONS

Divorce, Marital Distress, and Violence

Specific family characteristics have been found that contribute to the development and maintenance of child conduct disorder. Interparental conflict leading to and surrounding divorce are associated with, but are not strong predictors of, child conduct disorder (Kazdin, 1987). In particular, boys appear to be more apt to show significant increases in antisocial behaviors following divorce. However, some single parents and their children appear to do relatively well over time postseparation, whereas others are chronically depressed and report increased stress levels. One explanation might be that for some single parents the stress of divorce sets in motion a series of stages of increased depression and increased irritability; such increased irritability leads to a loss of friendships and social support, placing the mothers at increased risk for more irritable behaviors, ineffective discipline, and poor problem-solving outcomes; the poor problem solving of these parents in turn results in increased depression and stress levels, completing the spiraling negative cycle. Irritability simultaneously sets in motion a process whereby the child also becomes increasingly antisocial (Forgatch, 1989).

Once researchers began to differentiate between parental divorce, separation, and discord, they began to understand that it was not the divorce per se that was the critical factor in the child's behavior but rather the amount and intensity of parental conflict and violence (O'Leary & Emery, 1982). For example, children whose parents divorced but whose homes were conflict-free were less likely to have problems than children whose parents stayed together but experienced a great deal of conflict; children whose parents divorce and continue to have conflict have more conduct problems than children whose parents experience conflict-free divorce. In our own studies with conduct problem children, half of the married couples reported experiences with spouse abuse and violence. Taken together, these findings highlight the importance of parents' marital conflict and violence (not family structure per se) as a key factor influencing children's externalizing problems.

Marital conflict is associated with more negative perceptions of the child's adjustment, inconsistent parenting, use of increased punitiveness and decreased reasoning, and fewer rewards with children. Conflictual, unhappy marriages that display aggressive behavior are more likely to incite the formation of conduct disorder. It is consistently demonstrated that if aggressive behavior is present in the marital relationship, the likelihood of conduct disorder is greater than if conflict is present alone (Jouriles, Murphy, & O'Leary, 1989). The explanation here is that the aggressive parent may serve as a model to the child.

Frick, Lahey, Hartdagen, and Hynd (1989) proposed two models to account for the correlation between marital distress and child conduct disorders. One model proposes a direct and an indirect path from marital satisfaction to child conduct disorders, whereas the other model predicts that the significant correlations between marital satisfaction and child conduct problems are more an artifact of the common effects of maternal antisocial personality and social class. They found the relationship between marital satisfaction and child conduct problems was based primarily on the common association with maternal antisocial personality but that social class did not play an important role as a third variable. These findings seem to argue the importance of the parents' psychological adjustment as a primary determinant of the effects of stress on parent-child interactions.

Family Adversity

Research suggests that life stressors such as poverty, unemployment, crowded living conditions, and illness have deleterious effects on parenting and are related to a variety of forms of child psychopathology including conduct disorders (Rutter & Giller, 1983). Families with conduct disordered children report the incidence of major stressors two to four times greater than for nonclinic families (Webster-Stratton, 1990a). Parents of conduct disordered children indicate that they experience more day-to-day hassles as well as major crises than nonclinic families. An accumulation of minor day-to-day chronic life hassles is related to more aversive maternal interactions, for example, higher rates of coercive behavior and irritability in the mothers' interactions with their children. Recent reports have also shown maternal stress to be associated with inept discipline practices, such as explosive discipline and "nattering" with children (Forgatch, Patterson, & Skinner, 1988; Webster-Stratton, 1990a).

The link between social class and child conduct disorder probably does not exist. Often social class includes multiple confounding variables such as overcrowding, poor supervision, and other potential risk factors (Kazdin, 1987). When control is obtained for these risk factors, social status shows little relation to conduct disorder. Social class as a summary label that includes multiple risk factors can influence child conduct disorder (Kazdin, 1987).

Family Insularity

Maternal insularity is another parental factor implicated in child conduct disorder. Insularity is defined as "a specific pattern of social contacts within the community that are characterized by a high level of negatively perceived social interchanges with relatives and/or helping agency representatives and by a low level of positively perceived supported interchanges with friends" (Wahler & Dumas, 1984, p. 387). This definition is important because it appears that rather than the number of social contacts, it is the individual's perception of whether the social contact is supportive or helpful that makes the social contact advantageous. Mothers characterized as insular are more aversive and use more aversive consequences with their children than noninsular mothers. Insularity and lack of support have also been reported to be significant predictors of a family's relapse or failure to maintain treatment effects (Webster-Stratton, 1985).

Parent-Child Interactions

Parenting interactions are clearly the most well-researched and most important proximal cause of conduct problems. Research has indicated that parents of conduct disordered children lack certain fundamental parenting skills. For example, parents of such children have been reported to exhibit fewer positive behaviors; to be more violent and critical in their use of discipline; to be more permissive, erratic, and inconsistent, to be more likely to fail to monitor their children's behaviors; and to be more likely to reinforce inappropriate behaviors and to ignore or punish prosocial behaviors (Patterson & Stouthamer-Loeber, 1984; Webster-Stratton, 1985; 1991; Webster-Stratton & Spitzer, 1991). Patterson and his colleagues called this the *coercive process* (Patterson, 1982), a process whereby children learn to escape or avoid parental criticism by escalating their negative behaviors, that in turn leads to increasingly aversive parent interactions. These negative responses, in turn, directly reinforce the child's deviant behaviors. In addition, it is important to note the affective nature of the parent-child relationship. There is considerable evidence that a warm, positive bond between parent and child leads to a more socially competent child.

Conduct disordered children engage in higher rates of deviant behaviors and noncompliance with parental commands than nonconduct disordered children. Children interacting with their mothers exhibit fewer positive verbal and nonverbal behaviors (smiles, laughs, enthusiasm, praise) than nonconduct disordered children. In addition, conduct disordered children exhibit more negative nonverbal gestures, expressions, and tones of voice in interactions with both mothers and fathers. These children have less positive affect, seem depressed, and are less reinforcing to their parents, thus setting in motion the cycle of aversive interactions for mothers as well as fathers.

Other Family Characteristics

Other family characteristics contributing to the formation of conduct disorder include birth order (delinquency and antisocial behaviors are found more often in middle children; Wadsworth, 1979), and family size (increased family size is associated with higher rates of delinquency but only when there is a greater number of male children, Offord, 1982).

PSYCHOPHYSIOLOGICAL AND GENETIC INFLUENCES

Earlier we noted the cognitive difficulties in relation to CD children's attributions and problem solving as well as their academic and language difficulties. Neurological abnormalities are inconsistently correlated with conduct disorder. An association exists more generally with childhood dysfunction than with conduct disorder in particular (Kazdin, 1987). There is some evidence and much speculation that deficits in verbal functioning, language comprehension, impulsivity, and emotional regulation may be related to the left frontal lobe and its relation to the limbic system in aggressive children (Gorensten & Newman, 1980). However, it is important also to note that conduct disordered children have an increased likelihood of abuse and subsequent head and

facial injuries resulting in neurological abnormalities (e.g., soft signs, EEG aberrations, seizure disorders).

Other psychophysiological variables have been implicated in child conduct disorder. Low resting heart rate (lower vagal tone) among antisocial youth has received some support (Raine & Venables, 1984). Skin conductance responses have been found to differentiate between conduct disordered youth and nonconduct disordered controls in both adolescents and younger children (Schmidt, Solanto & Bridger, 1985).

Longitudinal studies suggest that conduct disorder is stable across generations. However, this does not implicate genetic influences as the cause of conduct disorder. There is little direct evidence as to genetic contributions to child conduct disorder. However, twin studies have shown greater concordance of antisocial behavior among monozygotic rather than dizygotic twins (Kazdin, 1987). Adoption studies, where the child is separated from the biological parent, indicate that offspring show a greater increase in antisocial behavior (Kazdin, 1987). The increased risk due to antisocial behavior in the biological parent establishes some credence for the inclusion of genetics in accounting for a portion of the variance in conduct disorder. Yet, it has also been established that genetic factors alone do not account for the emergence of the disorder. Rather, these studies affirm the effect of genetic influences in conjunction with environmental factors such as adverse conditions in the home (e.g., marital discord, psychiatric dysfunction) and ineffective family problem-solving and coping techniques.

CURRENT TREATMENTS

A variety of interventions have been proposed to decrease the prevalence (i.e., the number of existing cases at a given point in time) and incidence (i.e., the number of new cases) of oppositional-defiant and conduct disorders. The former are directed towards treatment efforts and the latter toward prevention efforts. Treatment and prevention are not separate entities; prevention represents the onset when the child has not yet manifested the disorder, and treatment consists of reducing or eliminating the severity, duration, and manifestation of the disorder. The initial question to ask when considering prevention treatment is whether identified risk factors contributing to conduct disorder can contribute to the development of intervention programs designed to eliminate or curtail the disorder.

Child Training

Several prominent strategies are emphasized as a means of preventing child conduct problems. One view that has received particular attention is the development of child competence. Competence refers to "the ability of the child to negotiate the course of development including effective interactions with others, successful (adaptive) completion of developmental tasks and contacts with the environment (e.g., school performance), and use of approaches that increase adaptive functioning (e.g., problem solving)" (Kazdin, 1990). However, development of competence in children has not been specifically applied to conduct disordered children. Rather, it has been found to be useful in protecting the child against risk factors that can lead to maladjustment and psychopathology (Kazdin, 1990).

Treatment interventions have been aimed toward altering the child's cognitive

processes (e.g., problem-solving skills, self-control, and self-statements) and developing prosocial rather than antisocial behaviors (e.g., play skills, friendship and conversational skills). The first type of intervention is based on a hypothesized skills relationship. Such programs coach children in positive social skills such as greeting, joining, inviting, asking, sharing, cooperating, praising, and apologizing. The second type of intervention relies on verbal instructions and discussions, opportunities to practice the skill with peers, role playing, games, stories, and therapist feedback and reinforcement. Most of these programs have not specifically focused on children with conduct disorders. Those that do specify this population tend to intervene with older school-age children and adolescents (rather than preschool and early school-age children).

Parent/Family Intervention

In many parent/family interventions, the purpose has been to reduce or eliminate the severity, duration, and manifestation of conduct problems. The modification of problematic parenting skills can serve as the primary mechanism for change in child conduct disorder. The rationale for this approach is supplied by research indicating that parents of conduct disordered children have an underlying deficit in certain fundamental parenting skills.

The most highly influential parent training program was developed by Patterson, Reid, and their colleagues at the Oregon Social Learning Center (Patterson, 1982). The parent training program was originally developed for children ages 3 to 12 years, who are engaged in overt conduct disorders. Program content has also been modified for use with adolescents. Parents begin by reading a programmed text, *Living with Children* (Patterson, 1976). They then participate in learning five family management practices that include pinpointing and tacking problem behaviors, social tangible reinforcement techniques, discipline procedures, monitoring or supervision of the children, and problem-solving and negotiation strategies.

A second important parent training program was designed to treat noncompliance in young children, ages 3 to 8 years. Originally developed by Hanf (Hanf & Kling, 1973), the program was later modified and evaluated extensively by McMahon and Forehand (1984). Phase one of the program teaches parents how to play with their children in a nondirective way and how to identify and reward children's prosocial behaviors through praise and attention. Phase two of the program includes teaching parents ways to give direct, concise and effective commands and how to use 3-minute time-outs for noncompliance.

A third example of a comprehensive and extensively evaluated parent training program for young conduct disordered children was a videotape training program developed by Webster-Stratton (1984). The content of the BASIC program, a series of 10 videotapes (250 vignettes) designed for parents with children ages 3-8 years, includes components of Hanf and Kling (1973) as well as the strategic use of differential-attention and effective use of commands. The content incorporates Patterson's (1982) discipline components concerning time-out, logical and natural consequences, and monitoring. Finally, the content includes teaching parents problem solving and communication strategies with their children.

A fourth family-based intervention called *Functional Family Therapy* (FFT); (Alexander & Parsons, 1982) was developed for delinquent adolescents. This approach

integrates family systems and behavioral and cognitive perspectives. The program consists of several components. The first component is concerned with identifying and modifying family members' blaming attributions and inappropriate expectations through relabeling. The next component involves teaching behavioral management strategies such as communication skills, behavioral contracting, and contingency management. During the final component the therapist helps parents generalize and maintain their new skills.

Reviews of these parent training programs are highly promising. The short-term treatment outcome success has been quantified by significant changes in parents' and children's behavior and in parental perceptions of child adjustment. Home observations have indicated that parents are successful in reducing children's levels of aggression by 20%–60%. Generalization of behavior improvements from the clinic setting to the home over reasonable follow-up periods (1 to 4 years) and to untreated child behaviors has also been demonstrated (e.g., McMahon & Forehand, 1984; Patterson, Chamberlain, & Reid, 1982; Webster-Stratton, 1984; Webster-Stratton, Kolpacoff, & Hollinsworth, 1988). Nonetheless, for about one third of the families, these parent management strategies are not enough. Parent and family characteristics, such as marital distress, spouse abuse, lack of a supportive partner, maternal depression, poor problem-solving skills, and high life stress, are associated with fewer treatment gains (Forehand, Furey, & McMahon, 1984; Forgatch, 1989; Webster-Stratton, 1985; 1989; 1990a).

A more comprehensive approach that encompasses parents' cognitive, psychological, marital and/or social adjustment would seem to be more appropriate given the number of issues faced by these families. Several programs have instituted expansions to their standard parent training treatment. Dadds, Schwartz, and Sanders (1987) incorporated Partner Support Training (PST) to their Child Management Training (CMT) program. A parent enhancement therapy designed by Griest, Forehand, Wells, and McMahon (1980) augments general family functioning, marital adjustment, parent personal adjustment, and the parents' extrafamilial relationship. Recently an advanced videotape program (ADVANCE) has been developed by Webster-Stratton and her colleagues to focus on personal parent issues other than parent skills and cognitive perspectives such as anger management, how to cope with depression, effective communication skills, problem solving and conflict resolution skills, ways to give and get support, how to teach children to problem solve and manage their anger, and finally how to support children's education (Webster-Stratton, 1994).

School and Community Interventions.

Several preventive interventions relevant to conduct disorder have focused on the school and the community. The High/Scope Perry Preschool Program was designed to aid children who are considered at-risk for school failure. The parents of these children were low income, living in stressful environments, and had low levels of education. The children began the program at age 3 and participated for a 2-year period (Schweinhart & Weikart, 1988). The program addressed intellectual, social, and physical needs necessary for the development of decision-making and cognitive processes.

Another strategy aimed at preventing conduct disorder emphasizes the development of conventional values and behaviors as a way of protecting the child against

deviance. Social bonding refers to the integration of commitment, attachment, and adherence to the values of the family, school, and peers (Hawkins & Lam, 1987). The intervention included several components. The classroom component addresses issues of deportment, interactive teaching, and cooperative (peer involved) learning techniques. The family component consists of parent management training and assists family members in conflict resolution. Peer social-skills training and community-focused career education and counseling are also included. The multiple contexts of family, school, and peers may increase the bonding necessary to reduce the onset of antisocial behavior (Kazdin, 1990).

The School Transitional Environmental Program (STEP; Felner, & Adan, 1988) was developed to help children through the normal process of entering a new school (e.g., middle to high school). Transitions are associated with decreased academic performance and psychological problems including antisocial behavior. The STEP attempts to reduce the effect of school transitions and increase the child's coping responses.

In addition to prevention programs, efforts have also focused on populations where conduct disorder is evident. One school-based program was designed to prevent further adjustment problems among children who evinced signs of low academic motivation, family problems, and a record of disciplinary referrals (Bry & George, 1980). The program included meetings with students where rewards were given for appropriate classroom behavior, punctuality, and a reduction in the amount of disciplinary action. Meetings were also scheduled with teachers and parents to focus on specific problems with individual children.

Another school-based approach targeted anger control in an Anger Coping Program (Lochman, Lampron, Gemmer, & Harris, 1987). The content includes teaching interpersonal problem-solving skills, strategies for increasing physiological awareness, and learning to use self-talk and self-control during problem situations. Another example for older school-age children with conduct disorders is the Problem-Solving Skills Training (PSST) program (Kazdin, Esveldt-Dawson, French, & Unis, 1987), which was based on the programs developed by Kendall and Braswell (1985) and focuses on the child's cognitive processes (perceptions, self-statements, attributions, expectations, and problem-solving skills) that presumably underlie maladaptive behavior. The primary focus of treatment is on the thought processes rather than on the behavioral acts that result and teaches children a step-by-step approach to solving problems. Shure and Spivak (1982) also developed an interpersonal problem-solving training program that has been used with a variety of populations to train children to be socially competent. Finally, Webster-Stratton (1991) developed a videotape-based curriculum for young children ages 3-8 years that focuses on understanding feelings, problem solving, anger management, how to be friendly, how to talk to friends, and how to succeed in school. This program uses life-size puppets, real (nonacted) videotape examples of children at home and in school situations, cartoons, and homework assignments to parents and teachers.

Community-based interventions address prevention (for those youth at-risk for antisocial behavior) and treatment (those youth identified with signs of antisocial behavior). One extensive program targeted a housing project with over 400 children from poverty stricken families (ages 5 to 15) considered to be at risk for antisocial behavior (Offord & Jones, 1983). Youths were involved in activity programs and

trained specific skill areas (e.g., swimming, hockey, dancing, and musical instruments). Children were evaluated on their progress in the programs and rewards were provided for attendance and participation.

Another program was designed for youth who were identified as delinquent. The intervention assigns the youth to a college student volunteer who works with the youth 6 to 8 hours per week in the community (Davidson & Basta, 1988). Weekly supervision for the volunteers was provided by a juvenile court staff member, and supervision took place in the court worker's office.

Community-based interventions have also addressed both prevention and treatment. One program utilized existing community facilities in order to intervene with delinquent youth and youth who had no history of prior arrests (O'Donnell, Lygate, & Fo, 1979). Adults were recruited from the community and trained to conduct behavior modification programs with the youth. They also involved the youth in various activities (e.g., arts and crafts, fishing, and camping). Individualized reward programs focused on such behaviors as home activity, fishing, and truancy (Kazdin, 1990).

The programs reviewed have provided some evidence to indicate that early preventive interventions can reduce risk factors that place children at-risk for conduct disorders (e.g., abusive child rearing practices) and can reduce the onset of a variety of antisocial behaviors.

Case Illustration

Mr. and Mrs. W. came into the Parenting Clinic with their 7-year-old son Doug. Mrs. W. describes Doug's behavior as unmanageable at home. Her concerns include: (a) hitting and other aggressive behaviors, especially when Doug does not get what he wants, (b) noncompliance with his mother's requests, and (c) intense negative exchanges between Doug and herself.

When the parents were asked how they usually discipline Doug, they reported that they put him in "time-out for a couple of minutes" or take away a privilege. They also yell a great deal, use threats, and administer spankings. Mrs. W., however, expressed concern that none of the discipline techniques have really achieved any success, and she reported feelings of helplessness and discouragement. Mr. W. quickly established himself as a management expert and claimed that it is his wife who lacks the ability to deal with Doug. He felt that she was not a "tough enough" disciplinarian.

Mr. and Mrs. W. stated that Doug's problems hitting other children began in the preschool and that he always has had difficulties in making transitions from one activity to the next. Doug's previous teacher reported frequent conflicts between Doug and his peers. Both parents talked about long months during which they waited for Doug to get older, in the expectation that things would get easier for them. However, they agreed that things had not changed with time and instead their child had become increasingly defiant and noncompliant.

Mrs. W. was working full time and was pregnant with her second child. Mrs. W. stated that she had not had any recent psychological treatment but said she had dealt with depressions several times and had taken antidepressants on one occasion. However, she was not taking medication at the time and stated that she was not depressed. Mrs. W. also admitted that she received very little support from friends with similar aged children and feared rejection from other parents if they "knew what my child really was like."

Mrs. W. also had no support from her own family. She stated that her mother was an alcoholic and was verbally abusive toward her. Also, several years ago Mrs. W. and her mother had a major break in communication, although currently she continued to make contact with her mother once or twice a week. According to Mrs. W., her father was a very capable and responsible man.

Mr. W.'s mother was recently hospitalized and was quite ill. Mr. W.'s father was an alcoholic and continued to drink moderately. Mr. W. described his mother as caring and very giving. He stated that his father "didn't have much in the way of parenting skills" and punished excessively. Mr. W. was completing a graduate degree and was in the process of interviewing for a job that would lead to a family move in the near future.

The stressors that have occurred in this family involved attending graduate school, potential move to a new residence, and responsibility for one difficult child with a second pregnancy. Positive indicators included a supportive marriage, no alcohol or drug use, and no indication of child or spousal abuse.

Assessment of both the parents and child indicated that parent training would be appropriate for this family and plans are made for Mr. and Mrs. W. to attend the 12-week group training sessions. As they participated in the videotape training program, the attitude of Mr. and Mrs. W. at first oscillated between despair and guilt concerning their previous parenting approaches to Doug's problems and the irrational hope that they would have a "quick fix" to his problems, before the new baby arrived.

As Mr. and Mrs. W. participated in the parent training program and learned new parenting strategies such as play skills, effective reinforcement, and nonviolent discipline approaches, they came to realize that different children required different degrees of parental supervision and different parenting skills in order to be successfully socialized. They began to blame themselves less and focused more constructively on which parenting techniques would work to bring out Doug's prosocial behaviors and personality strengths as well as decrease his noncompliance and aggression. Initially they experienced some immediate success with Doug using the play and praise strategies.

As the program progressed, Mrs. W. noticed that Mr. W. appeared to become increasingly critical of the program. Mr. W. believed strongly that spanking was the optimal discipline strategy for Doug and that it worked to manage his behaviors. He had difficulty with the use of strategies such as sticker charts, ignore, logical consequences, and problem solving. This resistance to the program and conflict with his wife's viewpoint resulted in marital stress. Also, Doug's behavior began to regress in spite of the parents' initial hard work. Mrs. W.'s reaction was depression and anger as she experienced setbacks and stated that she was having difficulty motivating herself to complete program assignments. Both parents experienced feelings of resignation as the therapist collaborated with them and helped them realize the chronic nature of Doug's problems requiring them to agree on strategies that would be used consistently by both of them over the "long haul." Mr. W. was helped to understand that many of his attitudes towards discipline came from his father's approach that he readily admitted were an approach that lead to alienation and resentment in their relationship. Working towards the long-term benefits of nonviolent discipline rather than the short-term benefits of spanking became an objective they both agreed on.

In learning to cope more effectively with Doug's problems, the therapist collaborated with Mr. and Mrs. W. to tailor the concepts shown in the standardized

videotape examples to their own family situation and parenting style. Mrs. W. acknowledge difficulty generalizing certain parenting techniques to various problem behaviors. However, the parent group sharing and problem solving provided a variety of different examples for Mrs. W. and helped her understand how to generalize the skills she had learned to new situations and problems.

During the final weeks of treatment, Mr. and Mrs. W. were supportive of each others' efforts and began to discover they could cope successfully with the daily hassles of having a conduct disordered child. They gained confidence in themselves and their ability to cope with future problems. Both parents indicated that they had also gained an acceptance and understanding of Doug's temperament and needs and were better able to emphasize with his feelings and perspectives. Mrs. W. was particularly encouraged because the parent group provided support and a safe place where she could be honest and vulnerable about her feelings and difficulties with Doug. She felt that the parent group provided a tremendous sense of connection with other parents who had experienced similar problems and thereby reduced her feelings of isolation and loneliness.

SUMMARY

Conduct disorder is highly prevalent in our society and has an impact on the school, community, family and peer relationships. Conduct disordered children are characterized by a "complex" pattern of behaviors including lying, cheating, stealing, hitting, and noncompliance to parental requests.

Multiple influences, including child, parent, and school-related factors, contribute to the development and maintenance of child conduct disorder. The association between conduct disorder and psychophysiological or genetic influence is inconsistent. Rather, studies affirm that genetics in conjunction with environmental factors are influential in the development and maintenance of the disorder.

The course of the disorder indicates that early oppositional and conduct problems often persist into adulthood and appear to be related to aggressive and antisocial behavior later in life. The primary factors contributing to the continuation of conduct disorder include age of onset, deviant behavior across multiple settings, several versus few behaviors, and parent and family characteristics.

Current treatments have been proposed to decrease the prevalence and incidence of conduct disorder; the former directed toward prevention efforts. Intervention measures have been proposed on various levels (community, school, family, peer, and child) and have achieved varying success. The importance of developing prevention and treatment programs designed to arrest or curtail child conduct disorder cannot be over emphasized. An integrated approach treating both the child and the family, in the home and in the broader social context—particularly in schools—will produce better results than if multiple factors are not included. Program design must also consider that conduct disorder is often a chronic problem transmitted across generations. Therefore, successful intervention necessitates periodic training and support offered at critical stages throughout the child's and family's development and within a variety of contexts.

REFERENCES

- Alexander, J., & Parsons, B. (1982). *Functional family therapy: Principles and procedures*. Carmel, CA: Brooks/Cole.
- American Psychiatric Association (1994). *Diagnostic and statistical manual of mental disorders* (4th ed.). Washington, DC: American Psychiatric Association.
- Bates, J. E., Bayles, K., Bennett, D. S., Ridge, B., & Brown, M. M. (1991). Origins of externalizing behavior problems at eight years of age. In D. J. Pepler & K. H. Rubin (Eds.), *The development and treatment of childhood aggression* (pp. 93-120). Hillsdale, NJ: Lawrence Erlbaum Associates.
- Bry, B., & George, F. (1980). The preventive effects of early intervention on the attendance and grades of urban adolescents. *Professional Psychology*, 11, 252-260.
- Dadds, M., Schwartz, S., & Sanders, M. (1987). Marital discord and treatment outcome in behavioral treatment of child conduct disorders. *Journal of Consulting and Clinical Psychology*, 55, 396-403.
- Davidson, W., & Basta, J. (1988). Diversion from the juvenile justice system: Research evidence and a discussion of issues. In B. B. Lahey & A. E. Kazdin (Eds.), *Advances in clinical child psychology vol. 12*. New York: Plenum.
- Dodge, K. A., & Newman, J. P. (1981) Biased decision-making processes in aggressive boys. *Journal of Abnormal Psychology*, 90, 375-379.
- D'Zurilla, T., & Nezu, A. (1982). Social problem-solving in adults. In P. C. Kendall (Ed.), *Advances in cognitive behavioral research and therapy 1 (Vol. 1)*. New York: Academic Press.
- Felner, R., & Adan, A. (1988). The school transitional environmental project: An ecological intervention and evaluation. In R. H. Price, E. L. Cowen, R. P. Lorion, & J. Ramos-McKay (Eds.), *14 ounces of prevention: A casebook for practitioners* (pp. 111-122). Washington, DC: American Psychological Association.
- Feshbach, N. (1989). The construct of empathy and the phenomenon of physical maltreatment of children. In D. Cicchetti & V. Carlson (Eds.), *Child maltreatment: Theory and research on the causes and consequences of child abuse and neglect* (pp. 349-373). Cambridge, MA: Cambridge University Press.
- Fo, W., & O'Donnell, C. (1975). The buddy system: Effect of community intervention on delinquent offenses. *Behavior Therapy*, 6, 522-524.
- Forehand, R. L., Furey, W. M., & McMahon, R. J. (1984). The role of maternal distress in a parent training program to modify child noncompliance. *Behavioral Psychotherapy*, 12, 93-108.
- Forehand, R. L., & McMahon, R. (1981). *Helping the noncompliant child: A clinicians' guide to parent training*. New York: Guilford.
- Forgatch, M. (1989). Patterns and outcome in family problem-solving: The disrupting effect of negative emotions. *Journal of Marriage and the Family*, 51, 115-124.
- Forgatch, M., Patterson, G., & Skinner, M. (1988). A mediational model for the effect of divorce in antisocial behavior in boys. In E. M. Hetherington & J. D. Arasteh (Eds.), *Impact of divorce, single parenting, and step-parenting on children* (pp. 135-154). Hillsdale, NJ: Lawrence Erlbaum Associates.
- Frick, P., Lahey, B., Hartdagen S., & Hynd, G. (1989). Conduct problem in boys: Relations to maternal personality, marital satisfaction, and socioeconomic status. *Journal of Clinical Child Psychology*, 18, 114-120.
- Gorensten, E. E., & Newman, J. P. (1980). Disinhibitory psychopathology: A new perspective and model for research. *Psychological Review*, 87, 301-315.
- Goutz, K. (1981). Children's initial aggression level and the effectiveness of intervention strategies in moderating television effects on aggression.
- Griest, D., Forehand, R., Wells, K., & McMahon, R. (1980). An examination of differences between nonclinic and behavior-problem clinic-referred children and their mothers. *Journal of Abnormal Psychology*, 89, 497-500.
- Hanf, E., & Kling, J. (1973). *Facilitating parent-child interactions: A two-stage training model*. Unpublished manuscript, University of Oregon Medical School.
- Hawkins, J., & Lam, T. (1987). Teacher practices, social development and delinquency. In J. D. Burchard & S. N. Burchard (Eds.), *Prevention of delinquency behavior* (pp. 241-274). Newbury Park, CA: Sage.

- Hawkins, J., & Weis, J. (1985). The social development model: An integrated approach to delinquency prevention. *Journal of Primary Prevention*, 6, 73-97.
- Hobbs, N. (1982). *The troubled and the troubling child*. San Francisco: Jossey-Bass.
- Jouriles, E., Murphy, C., & O'Leary, K. (1989). Interspousal aggression, marital discord, and child problems. *Journal of Consulting and Clinical Psychology*, 57, 453-455.
- Kazdin, A. (1986). *Treatment of antisocial behavior in children and adolescents*. Homewood, IL: Dorsey.
- Kazdin, A. (1987). Treatment of antisocial behavior in children: Current status and future directions. *Psychological Bulletin*, 102, 187-203.
- Kazdin, A. (1990, June). *Prevention of conduct disorder*. Paper presented at the National Conference on Prevention Research, NIMH, Bethesda, MD.
- Kazdin, A., Esveltd-Dawson, K., French, N., & Unis, A. (1987). Effects of parent management training and problem-solving skills training combined in the treatment of antisocial child behavior. *Journal of the American Academy of Child and Adolescent Psychiatry*, 25, 416-424.
- Kendall, P., & Braswell, L. (1985). *Cognitive-behavioral therapy for impulsive children*. New York: Guilford.
- LaGreca, A., & Santogrossi, D. (1980). Social skills training with elementary school students: A behavioral group approach. *Journal of Consulting and Clinical Psychology*, 48, 220-227.
- Lahey, B. B., Loeber, R., Quay, H. C., Frick, P. J., & Grimm, J. (1992). Oppositional defiant and conduct disorders: Issues to be resolved for DSM-IV. *Journal of Academy of Child Psychiatry*, 31(3), 539-546.
- Lochman, J., Lampron, L., Gemmer, T., & Harris, S. (1987). Anger coping intervention with aggressive children: A guide to implementation in school settings. In P. A. Keller & S. R. Heyman, (Eds.), *Innovations in clinical practice: A source book* (Vol. 6, pp. 339-356). Sarasota, FL: Professional Resource Exchange.
- Loeber, R. (1985). Patterns and development of antisocial and delinquent child behavior: A review. *Child Development*, 53, 1431-1446.
- Loeber, R. (1990). Development and risk factors of juvenile antisocial behavior and delinquency. *Clinical Psychology Review*, 10, 1-41.
- Loeber, R. (1991). Antisocial behavior: More enduring than changeable? *Journal of the American Academy of Child and Adolescent Psychiatry*, 30, 393-397.
- Maziade, M., Cote, R., Bernier, H., Boutin, P., & Thivierge, J. (1989). Significance of extreme temperament in infancy for clinical status in pre-school years I. *British Journal of Psychiatry*, 14, 535-543.
- McMahon, R., & Forehand, R. (1984). Parent training for the noncompliant child: Treatment outcome, generalization, and adjunctive therapy procedures. In R. F. Dangel & R. A. Polster (Eds.), *Parent training: Foundations of research and practice* (pp. 298-328). New York: Guilford.
- McMahon, R., & Forehand, R. (1988). Conduct disorders. In E. J. Mash & L. G. Terdal (Eds.), *Behavioral assessment of childhood disorders*. New York: Guilford Press.
- Milich, R., & Dodge, K. (1984). Social information processing in child psychiatric populations. *Journal of Abnormal Child Psychology*, 9, 127-140.
- O'Donnell, C., Lygate, T., & Fo, W. (1979). The buddy system: Review and follow-up. *Child Behavior Therapy*, 1, 161-169.
- Offord, D. (1982). Family backgrounds of male and female delinquents. In J. Gunn & D. P. Farrington (Eds.), *Abnormal offenders: Delinquency and the criminal justice system*. Chichester: Wiley.
- Offord, D., & Jones, M. (1983). Skill development: A community intervention program for the prevention of antisocial behavior. In S. B. Guze, F. J. Earls, & J. E. Barrett (Eds.), *Childhood psychopathology and development* (pp. 165-188). New York: Raven.
- O'Leary, K. D., & Emery, R. E. (1982). Marital discord and child behavior problems. In M. D. Levine & P. Satz (Eds.), *Middle childhood: Developmental variation and dysfunction* (pp. 345-364). New York: Academic Press.
- Patterson, G. (1975). *Families: Applications of social learning to family life*. Champaign, IL: Research Press.
- Patterson, G. (1976). *Living with children: New methods for parents and teachers*. Champaign, IL: Research Press.
- Patterson, G. R. (1982). *Coercive family process*. Eugene, OR: Castalia.
- Patterson, G. R., Chamberlain, P., & Reid, J. B. (1982). A comparative evaluation of a parent training program. *Behavior Therapy*, 13, 638-650.
- Patterson, G. R., DeBaryshe, B. D., & Ramsey, E. (1989). A developmental perspective on antisocial behavior. *American Psychologist*, 44, 329-335.

- Patterson, G. R., & Stouthamer-Loeber, M. (1984). The correlation of family management practices and delinquency. *Child Development*, 55, 129-307.
- Quay, H. (1986). Classification. In H. C. Quay & J. S. Werry (Eds.), *Psychopathological disorders of childhood* (3rd ed.). New York: Wiley.
- Raine, A., & Venables, P. (1984). Tonic heart rate level, social class and antisocial class and antisocial behavior in adolescents. *Biological Psychology*, 18, 123-132.
- Richard, B. A., & Dodge, K. A. (1982). Social maladjustment and problem solving in school-aged children. *Journal of Consulting and Clinical Psychology*, 50, 226-233.
- Richman, N., Stevenson, L., & Graham, P. J. (1982). *Pre-school to school: A behavioural study*. London: Academic Press.
- Robins, L. (1981). Epidemiological approaches to natural history research: Antisocial disorders in children. *Journal of Consulting and Clinical Psychology*, 50, 226-233.
- Rose, S. L., Rose, S. A., & Feldman, J. (1989). Stability of behavior problems in very young children. *Development and Psychopathology*, 1, 5-20.
- Rutter, M. (1985). Resilience in the face of adversity: Protective factors and resistance to psychiatric disorder. *British Journal of Psychiatry*, 147, 598-611.
- Rutter, M., & Giller, H. (1983). *Juvenile delinquency: Trends and perspectives*. Harmondsworth, Middlesex: Penguin.
- Rutter, M., Tizard, J., Yule, W., Graham, P., & Whitmore, K. (1976). Research report: Isle of Wight studies. *Psychological Medicine*, 6, 313-332.
- Safer, D., & Allen R. (1976). *Hyperactive children: Diagnosis and management*. Baltimore, MD: University Park Press.
- Schmidt, K., Solanto, M., & Bridger, W. (1985). Electrodermal activity of undersocialized aggressive children: A pilot study. *Journal of Child Psychology and Psychiatry*, 26, 653-660.
- Schonfeld, I. S., Shaffer, D., O'Connor, P., & Portnoy, S. (1988). Conduct disorder and cognitive functioning: Testing three causal hypotheses. *Child Development*, 59, 993-1007.
- Schweinhart, L., & Weikart, D. (1988). The high/scope perry preschool program. In R. H. Price, E. L. Cowen, R. P. Lorion, & J. Ramos-McKay (Eds.), *14 ounces of prevention: A casebook for practitioners* (pp. 53-66). Washington, DC: American Psychological Association.
- Slaby, R., & Guerra, N. (1988). Cognitive mediators of aggression in adolescent offenders: vol. 1. Assessment. *Development Psychology*, 24, 580-588.
- Spivak, G., Platt, J., & Shure, M. (1976). *The problem-solving approach to adjustment*. San Francisco, CA: Jossey-Bass.
- Stonemen, Z., Brody, G., & Burke, M. (1988). Marital quality, depression, and inconsistent parenting: Relationship with observed mother-child conflict. *American Journal of Orthopsychiatry*, 59, 105-117.
- Sturge, C. (1982). Reading retardation and antisocial behavior. *Journal of Child Psychology and Psychiatry*, 23, 21-31.
- Thomas, A., & Chess, S. (1977). *Temperament and development*. New York: Brunner/Mazel.
- Wadsworth, M. (1979). *Roots of delinquency: Infancy adolescence and crime*. New York: Barnes & Noble.
- Wahler, R., & Dumas, J. (1984). Changing the observational coding styles of insular and noninsular mothers: A step toward maintenance of parent training effects. In R. F. Dangel & R. A. Polster (Eds.), *Parent training: Foundations of research and practice* (pp. 379-416).
- Wahler, R., & Dumas, J. (1985). Maintenance factors in coercive mother-child interactions: The compliance and predictability hypothesis. *Journal of Applied Behavioral Analyses*, 19(1), 13-22.
- Walker, J. L., Lahey, B. B., Hynd, G. W., & Frame, C. L. (1988). Comparison of specific patterns of antisocial behavior in children with conduct disorder with or without hyperactivity. *Journal of Consulting and Clinical Psychology*, 55, 910-913.
- Webster-Stratton, C. (1981a). Modification of mothers' behaviors and attitudes through a videotape modeling group discussion program. *Behavior Therapy*, 12, 634-642.
- Webster-Stratton, C. (1981b). Videotape modeling: A method of parent education. *Journal of Clinical Psychology*, 10(2), 93-98.
- Webster-Stratton, C. (1982a). The long term effects of a videotape modeling parent training program: Comparison of immediate and 1-year followup results. *Behavior Therapy*, 13, 702-714.
- Webster-Stratton, C. (1982b). Teaching mothers through videotape modeling to change their children's behaviors. *Journal of Pediatric Psychology*, 7(3), 279-294.
- Webster-Stratton, C. (1984). Randomized trial of two parent-training programs for families with conduct disordered children. *Journal of Consulting and Clinical Psychology*, 52(4), 666-678.

- Webster-Stratton, C. (1985). Comparisons of behavior transactions between conduct disordered children and their mothers in the clinic and at home. *Journal of Abnormal Child Psychology*, 13 (2), 169-184.
- Webster-Stratton, C. (1990a). Stress: A potential disrupter of parent perceptions and family interactions. *Journal of Clinical Psychology*, 19(4), 302-312.
- Webster-Stratton, C. (1990b). Predictors of treatment outcome in parent training for families with conduct problem children. *Behavior Therapy*, 21, 319-337.
- Webster-Stratton, C. (1989). *The advanced videotape parent training programs*. Seth Enterprises, 1411 8th Avenue West, Seattle, WA 98119.
- Webster-Stratton, C. (1991) *The dinosaur videotape social skills and problem-solving curriculum for young children*. Seth Enterprises, 1411 8th Avenue West, Seattle, WA 98119.
- Webster-Stratton, C., & Hammond, M. (1988). Maternal depression and its relationship to life stress, perceptions of child behavior problems, parenting behaviors, and child conduct problems. *Journal of Abnormal Child Psychology*, 16(3), 299-315.
- Webster-Stratton, C., & Hammond, M. (1990). Predictors of treatment outcome in parent training for families with conduct problem children. *Behavior Therapy*, 21, 319-337.
- Webster-Stratton, C., Kolpacoff, M., & Hollinsworth, T. (1989). The long-term effectiveness and clinical significance of three cost-effective training programs for families with conduct problem children. *Journal of Consulting and Clinical Psychology*, 57, 550-553.
- Webster-Stratton, C., & Spitzer, A. (1991). Reliability and validity of a parent daily discipline inventory (DDI). *Behavioral Assessment*, 13, 221-239.
- Webster-Stratton, (1994). Advancing videotape parent training: A comparison study. *Journal of Consulting and Clinical Psychology*, 62, 538-594.
- White, J., Moffit, T., Earls, F., & Robins, L. (1990). Preschool predictors of persistent conduct disorder and delinquency. *Criminology*, 28, 443-454.
- Wicks-Nelson, & Israel, (1991). *Behavior disorders of childhood*. Englewood Cliffs, NJ: Prentice Hall.
- Williams, S., Anderson, J., McGee, R., & Silva, P. A. (1990). Risk factors for behavioral and emotional disorder in preadolescent children. *Journal of the American Academy of Child and Adolescent Psychiatry*, 29, 413-419.