

Early-Onset Conduct Problems: Does Gender Make a Difference?

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Baseline assessments of 64 girls and 158 boys (aged 4–7 years) diagnosed with oppositional defiant disorder (ODD) or early-onset conduct problems, or both, were examined for gender-linked differences in behavioral symptoms. Child variables, parenting variables, and family variables were correlated with teacher reports of externalizing problems at school and independent observations of externalizing problems at home before treatment to determine whether there were any gender-specific differences in risk factors. Follow-up data (1–2 years posttreatment) were also examined for any gender differences in predictors of treatment outcome. Results indicated significant gender differences in behavioral symptoms according to independent home observations. However, reports of gender differences in behavioral symptoms were influenced by the gender of the reporting agent. The only gender-specific risk factor found was father “negativity,” which was correlated with boys’ behavior at home but not girls’ behavior. Concerning differences in treatment outcome, variables regarding parents’ psychological states and parenting style were the best predictors for girls but not for boys.

Most of the research to date on conduct problems has focused on school-age children and adolescents. However, cumulative evidence now indicates that chronic externalizing problems are already present in the preschool years, particularly in boys (Bates, Bayles, Bennett, Ridge, & Brown, 1991; Pianta & Caldwell, 1990). Data suggest that the percentage of preschool and early school-age children meeting the criteria for the clinical diagnoses of oppositional defiant disorder (ODD) and early-onset conduct disorder (CD) ranges from 7 to 25%, depending on the population surveyed (Campbell & Ewing, 1990; Crowther, Bond, & Rolf, 1981). Developmental theorists have suggested that these “early starters”—children who develop conduct problems in the preschool and kindergarten years—are at high risk for continuing on a trajectory toward further conduct problems, including CD, delinquency, school dropout, and interpersonal violence during adolescence (Loeber, 1991; White, Moffitt, Earls, & Robins, 1990).

Campbell’s (1991) review of a series of longitudinal studies of hard-to-manage preschoolers revealed a surprising convergence of findings. At least 50% of preschool-age children

with moderate-to-severe externalizing problems continued to show some degree of disturbance at school age, with boys’ problems more severe than girls’ behavior. Of those with continuing conduct problems, 67% met the diagnostic criteria for attention-deficit hyperactivity disorder (ADHD), ODD, or CD by age 9. Given the additional evidence that a statistically significant number of children who become chronically antisocial and delinquent first exhibited aggressive symptoms during the preschool years (Loeber, 1991), there is a compelling need to identify these children early and to understand the specific predictors related to escalating externalizing problems and future CD.

Despite these findings regarding the stability of early-onset conduct problems in preschoolers, little is known about developmental pathways for conduct problems in terms of gender. In fact, studies of conduct problems in girls are rare (Olweus, 1979). Most studies have either excluded girls from their sample or included both genders but failed to take gender into account as a relevant factor (Robins, 1986, pp. 385–386). As noted by Robins (1990), there is a dearth of studies of child conduct problems for the period between preschool and early school grades, and this lack is especially true for girls. For example, there has been little attention to potential differences in the types of behavioral symptoms exhibited by young preschool girls versus young boys who develop ODD or other early-onset conduct problems. Nor is it known whether there are gender differences in the specific risk factors or predictors related to the development of conduct problems. Even the criteria for the Diagnostic and Statistical Manual of Mental Disorders (3rd ed., rev.; *DSM-III-R*; American Psychiatric Association, 1987) were derived largely from studies of boys (Spitzer, Davies, & Barkley, 1990).

It is generally agreed that when young children begin along the early starter pathway, at least three important categories of risk factors are initially responsible for their developing CD. These include (a) *child risk variables*, such as a difficult temperament or high rate of disruptive, impulsive, inattentive, and

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aggressive behaviors (e.g., Campbell & Ewing, 1990; Lillenfield & Waldman, 1990); (b) *parenting variables*, such as ineffective parenting strategies and negative attitudes (e.g., Patterson & Stouthamer-Loeber, 1984); and (c) *family variables apart from the parent-child relationship*, including parental psychopathology, marital factors, socioeconomic factors, and other stressors (e.g., Offord, Alder, & Boyle, 1986; Patterson & Stouthamer-Loeber, 1984; Webster-Stratton, 1990). However, because most of the research on risk factors has focused on boys with conduct problems, little is known about the impact of these factors on girls.

Are the correlates for girls with early-onset conduct problems necessarily the same as for boys? Regarding the first category, child variables, it has been shown that externalizing symptoms such as disruptive, impulsive, hyperactive, inattentive, and overtly aggressive behaviors are important risk factors for boys' continuing development of ODD and CD, whereas internalizing symptoms are not. In the absence of evidence, one cannot assume that this is equally true for girls. It is possible that internalizing symptoms are a risk factor for conduct problems in girls equal in importance to externalizing symptoms or perhaps of greater importance. Certainly prevalence data indicating that girls display internalizing problems at least twice as frequently as boys during the adolescent years suggest possible gender differences in the risk factors regarding the early developmental progression of CD (Lewinsohn, Hops, Roberts, Seeley, & Andrews 1993; Offord, Boyle, & Racine, 1989). Regarding our second category of risk factors, parenting variables, research has focused mostly on boys with CD and their mothers' parenting styles (not fathers'); little is known about the parenting styles for girls with conduct problems and the differential effects of maternal and paternal styles on girls and boys. Socialization studies of normative, nonrisk samples have suggested that physical punishment is used more often on boys than girls, that girls are treated with less aggression and more warmth, and that fathers are more involved with sons than daughters (see review by Lytton & Romney, 1991). These findings raise the possibility that gender differences in parenting styles may be related to the development of ODD-CD in boys and girls.

Finally, concerning our third category of risk factors, family variables, studies have consistently shown that paternal antisocial behavior (e.g., criminal history, drug and alcohol abuse) and maternal depression are two of the best predictors of CD in boys (Frick et al., 1992), but does this relation hold true for girls? Perhaps the development of conduct problems in boys and girls is differentially affected by the type of maternal or paternal psychopathology. Modeling theory, for example, would suggest that maternal emotional problems such as depression may be an important predictor of CD in girls; the daughter would be expected to model her mother's negative affect. One might further hypothesize that, in the case of an antisocial father, the presence of a warm, supportive, nondepressed mother would serve as a protective factor for a daughter but not necessarily for a son.

Not only is there a paucity of literature regarding gender-specific risk factors for ODD-CD, but also there is little understanding of how gender affects treatment outcome. Because most treatment studies for children with conduct disorders have focused on training parents (mostly mothers) in child-manage-

ment strategies with boys, we do not know whether girls and boys respond differently to treatment. As I noted previously, normative studies have indicated gender differences in parents' social interactional patterns with their children as well as differences in behavioral symptoms expressed; therefore, one might assume there would be gender differences in responses to treatment.

The lack of intervention studies concerning young girls with early-onset conduct problems, including ODD, may be the result of the common misconception that ODD is rare in girls. Although it is true that this disorder is diagnosed more commonly in boys than girls during the preadolescent phase (Robins & Price, 1991), it does represent a serious problem for large numbers of girls; prevalence ranges from 0.8 to 6%, depending on the study. Moreover, epidemiological studies suggest that by adolescence, there is very little difference in the prevalence rates of CD by gender (e.g., McGee, Feehan, Williams, & Anderson, 1992). CD is the second most common psychiatric disorder in girls (e.g., Offord et al., 1987; Robins, 1986) and is likely to result in persistent mental health problems in adulthood. Perhaps this change in the prevalence ratio from preschool to adolescence is due to the fact that the early behavioral symptoms are different for girls than boys; that is, girls are less overtly aggressive. In short, there are many issues concerning the relevance of gender to developing conduct problems, issues that have hardly been raised, much less investigated. I believe it is time to remedy this gap in the research to determine whether there are different behavioral symptoms, developmental pathways, etiological factors, and treatment outcomes for girls and boys. The understanding of ODD and CD will thereby be advanced, because what professionals have assumed to be true of ODD and CD may turn out to be true only of ODD and CD in boys, representing a partial understanding of these disorders. Moreover, an enhanced understanding can help researchers to design clinical interventions and prevention programs that will be more effective with both genders.

The present study examined several questions in a clinic sample of young girls and boys (aged 3-7 years) who were diagnosed with either ODD or early-onset CD: (a) Are there gender differences in the behavioral manifestations of early-onset conduct problems (as reported by mothers, fathers, and teachers and as noted by independent observers in the home)? I was particularly interested in gender differences in the type of aggression observed (verbal vs. physical deviance) and in rates of externalizing versus internalizing behaviors. (b) Are there gender-specific correlates in the three categories of risk factors (i.e., child variables, parenting variables, and family variables)? For example, are different parenting styles (e.g., maternal and paternal discipline strategies) related to girls' conduct problems as opposed to boys'? (c) Is gender relevant to treatment outcome? Is parent training an equally effective intervention for girls versus boys? (d) Are the predictors of treatment outcome identical for girls and boys?

The dependent variables predicted from the baseline data were externalizing problems as rated by teachers and externalizing problems as observed at home by independent observers 1-2 years after a parent training intervention. I examined the role of child variables (externalizing and internalizing problems), parenting variables (parent criticisms, physical

negative behaviors, and discipline strategies), and other family variables (parent depression, antisocial behavior, marital distress or single-parent status, and negative life stress) as predictors of boys' and girls' externalizing behaviors at baseline and 1–2 years postintervention.

Method

Participants

Participants consisted of consecutive referrals to a university parenting clinic specializing in young children with conduct problems. Criteria for study entry were that (a) the child was between 3 and 7 years old; (b) the child had no debilitating physical impairment, intellectual deficit, or history of psychosis and was not receiving treatment at the time of referral; (c) the primary referral problem was child misconduct that had been occurring for more than 6 months (e.g., noncompliance, aggression, oppositional behaviors); (d) the parents rated their child as having a clinically significant number of behavior problems (greater than 2 SDs above the norm for the child's age) according to the Eyberg Child Behavior Inventory (ECBI; Robinson, Eyberg, & Ross, 1980); (e) the child met *DSM-III-R* criteria for ODD, CD, or both, as determined through a structured diagnostic interview with parents and laboratory observations by highly experienced and reliably trained psychologists and social workers; and (f) the family or child was not currently receiving any other treatment. Families agreed not to seek other mental health treatment for themselves or for their children while they were participating in the parent training program.

The study included 222 children—64 (28.8%) girls and 158 (71.2%) boys—with a mean age of 56.66 months ($SD = 14.35$) for the girls and 60.65 months ($SD = 15.37$) for the boys. The mean number of pretreatment conduct problems according to the ECBI (total problem score) was 21.21 ($SD = 5.46$), indicating that the children were in the clinic range according to Robinson et al. (1980). (For nonclinic samples, $M = 6.8$, $SD = 3.9$.) Over 85% of the children were in either preschool or kindergarten, and the remaining children were in grade 1.

Study parents included 220 mothers and 152 fathers. With the exception of 6 African American mothers, the parents were Caucasian, and 30% were single parents. The mothers of all 64 of the girls and all but 2 of the boys (i.e., 156) participated in the intervention program. Of the 44 fathers of girls (in two-parent homes), 38 (86%) participated, and 114 of the fathers of boys participated (100% of those in two-parent homes). Table 1 describes the subject demographics by gender. There were no significant differences between groups according to any demographic factors.

Measures

Two widely used parent report measures were employed to assess child risk factors: the Child Behavior Checklist (CBCL; Achenbach & Edelbrock, 1991), which provided externalizing and internalizing scores, and the ECBI (Robinson et al., 1980), which provided the total problem score. Child factors were also measured by means of teacher reports on the Preschool Behavior Questionnaire (PBQ; Behar, 1977). The PBQ is specifically designed for children aged 3–7. In addition to a total behavior problem score, it yields three subscale scores, measures of hyperactivity–distractibility, hostility–aggression, and anxiety. In addition, independent observations of child negative behaviors in the home were recorded (these methods are described later in this section).

The following widely used measures were employed to assess family factors: the Marital Adjustment Test (MAT; Locke & Wallace, 1959), the Beck Depression Inventory (BDI; Beck, 1972), and the Parenting Stress Index (PSI; Abidin, 1983). From the PSI, the life stress score was

Table 1

Demographic Variables for Boys and Girls With ODD–CD

Demographic variable ^a	<i>M (and SD)</i>	
	Girls (<i>N</i> = 64)	Boys (<i>N</i> = 158)
Child's age (in months)	56.66 (14.35)	60.65 (15.47)
Age at onset of problems ^b	3.11 (1.59)	3.14 (1.79)
No. of children in family	1.95 (0.83)	1.97 (0.92)
Mother's age	33.44 (5.01)	34.07 (4.69)
Father's age	34.78 (5.00)	36.23 (5.14)
Mother's education	2.70 (0.98)	2.68 (1.06)
Father's education	2.57 (1.06)	2.37 (1.14)
Social position score ^c	35.69 (15.38)	32.49 (16.54)
Income ^d	4.86 (1.85)	5.18 (1.73)
	No. (and %)	No. (and %)
Birth order (firstborn)	44 (68.8)	114 (72.2)
Single parent	20 (31.3)	46 (29.1)
Ethnicity (African American)	0 (0)	6 (4)

Note. ODD–CD = oppositional defiant disorder–conduct disorder.
^aChi-square analyses or *t* tests indicated no significant differences on any of these variables. ^b1 = 0–6 months; 2 = 7–12 months; 3 = 13–24 months; 4 = 25–36 months; 5 = after 36 months. ^cHollingshead and Redlich's (1958) two-factor index of social position. High score denotes low social position. ^d1 = <\$5,000; 2 = \$5,000–8,999; 3 = \$9,000–14,999; 4 = \$15,000–20,999; 5 = \$21,000–28,999; 6 = \$29,000–39,999; 7 = \$40,000–69,000; 8 = \$70,000 or more.

used because it distinguishes between extrafamilial life stressors (e.g., unemployment, move) and parenting stress attributable to the child's problems. Unmarried parents were given a score indicating whether they were partnered or single. Intensive 2-hr interviews were conducted with the parents to obtain information about their prior or ongoing experiences with drugs and alcohol, the criminal justice system, spouse abuse, child abuse, and depression. These were scored as having occurred (yes) or not occurred (no).

Parenting risk factors were measured through telephone interviews and independent observations in the home. The Parent Daily Discipline Interview (DDI) was conducted with parents (the primary caregiver, usually the mother) twice at each of the three assessment phases. The interviewer asked about the occurrence of particular behavior problems in the previous 24 hr; if they had occurred, the parent was asked how she handled them. The responses were coded according to the DDI (Webster-Stratton & Spitzer, 1991), which consists of 66 parenting strategies summarized into five categories: physical negative force, limit setting, empathy, total spanking, and a category called "inappropriate disciplinary strategy." The inappropriate score determined whether the type of discipline strategy used by the parent was appropriate or inappropriate for the type of misbehavior. (For example, to ignore a child's aggressive or destructive actions would have been scored as inappropriate, but to ignore whining would have been appropriate.) Approximately 20% of the interviews were randomly selected and scored by a second independent rater. Pearson product-moment correlations between raters for each summary category were .66 for empathy, .89 for spanking and for inappropriateness, .94 for physical negative force, and .97 for limit setting. The mean percent agreement reliability ranged from 70% for inappropriateness to 88% for physical negative force. Test-retest reliability (1 week between telephone calls) revealed a moderate degree of temporal stability: Physical negative force was .45, limit setting .51, empathy .74, and inappropriateness .62. Internal consistency ranged from .62 for physical negative force to .86 for empathy. The DDI correlates with direct observations of parents' behavior with

their children during home observations (Webster-Stratton & Spitzer, 1991).

Child and parenting factors were also assessed by means of independent home observations. The Dyadic Parent-Child Interaction Coding System-R (DPICS-R; Robinson & Eyberg, 1981; Webster-Stratton, 1984) was used to code mother-child and father-child interactions. For the target child, there were five variables: total child deviance (i.e., externalizing problems), physical deviance (physical negative and destructive behaviors); verbal deviance ("smart" talk, crying, yelling, whining); noncompliance; and positive physical affect (nonverbal and verbal physical affect and physical warmth). Five summary variables were formed for parent behaviors: total praise, positive affect, nonintrusive descriptive statements (communication), critical statements, and physical negative behaviors. These specific coding variables were selected to focus on parent and child behaviors that have been shown to discriminate clinic children with conduct problems from nonclinic, nonproblem children (Patterson & Stouthamer-Loeber, 1984; Webster-Stratton, 1985b) and to be sensitive to treatment. In addition, variables were selected to examine gender differences. For example, in normative nonclinic samples, physical negative behavior, responsive communication, and expression of affect have been shown to differentiate paternal and maternal behavior as well as boys' and girls' behaviors (e.g., Birnbaum, 1991; Lytton & Romney, 1991).

For each assessment, each parent-child dyad was observed for 30 min between 4:30 and 7:30 p.m. on two separate visits. It was randomly determined whether mothers or fathers would be observed first. An attempt was made to impose as little structure as possible to keep the observations "natural." Family members were told to "do what you would normally do" except not to talk to the observers, watch television, engage in computer games, or talk on the telephone. The decision to keep the observation unstructured was based on the desire to avoid imposing requirements on parent behaviors that could potentially differ for boys and girls. Moreover, my group's prior research had indicated significant correlations between unstructured parent and child behavioral interactions in the home and our structured laboratory observations (Webster-Stratton, 1985a). The trained observers were blind to the study hypotheses. To assess reliability, a second observer was present for at least 30% of all home observations. Mean overall interrater reliability (based on occurrence agreements for each 5-min segment) was 82% (range 72–95%). For the parent behavior summary categories, the Pearson product-moment correlations calculated between observers were .80 for positive affect, .81 for communication, .86 for physical negative, .87 for critical statements, and .96 for praise; for child behaviors, the correlations were .95 for total deviance (or externalizing problems), .85 for noncompliance, .90 for physical deviance, .85 for verbal deviance, and .85 for positive physical warmth.

Procedures

All families were assessed on the preceding measures at baseline prior to the parent training program. Intervention attendance was good with 91.8% of the 220 mothers and 82.2% of 152 fathers attending more than 9 of the twelve 2-hr parent training sessions. Immediately posttreatment, all families were reassessed on the same measures, and 1–2 years later, 93% of the families (204 mothers and 138 fathers) were reassessed with home observations and parent reports. In addition, the teachers ($N = 175$) in the children's new classrooms were contacted for their assessments. (Over 85% of the children had moved from preschool settings to new schools, and all the children had teachers other than those they had at pre- and posttreatment.)

Treatment. During the intervention, parents came to the clinic weekly for the 12-week parent training program. Each week, groups of 10–15 parents met for a 2-hr session with a therapist to view the series of 10 videotapes of modeled parenting skills (approximately 25 vi-

gnettes and 25 min of videotape per program). After presenting each 1-min vignette, the therapist led a focused discussion of play skills, praise and rewards, limit setting, handling misbehavior, problem solving, and communication skills. Parents' ideas and problem-solving suggestions were encouraged. A more complete description of the videotape training program and its conceptual basis and group process is available (Webster-Stratton & Herbert, 1994).

Therapists and treatment integrity. The therapists were two social workers and two psychologists. All four had extensive prior clinical experience (10–20 years) with children with conduct problems. Therapists followed a 400-page treatment manual that included the rationale for each session, a description of each videotape vignette accompanied by an interpretation and questions for group discussion, rehearsal exercises, homework assignments, and parent handouts. Over half the sessions were conducted with a second therapist who monitored the treatment to ensure that the manual and treatment protocol were followed. All sessions were videotaped, and over half were peer reviewed. Peer reviews indicated that the integrity of the treatment process was maintained consistently for the four therapists. This consistency of quality was corroborated by the weekly parent evaluations, which did not indicate any significant differences in parent reports of satisfaction levels for different therapists.

Results

Analysis initially consisted of chi-square tests (for dichotomous variables) and t tests at baseline to compare girls and boys according to mother, father, and teacher reports of child behavioral symptoms as well as independent in-home observations of parenting behavior and other family factors. The next analysis consisted of Pearson product-moment correlations between the parent interpersonal variables, family variables, and parenting variables and the boys' and girls' externalizing problems as noted on independent home observations and teacher reports in the classroom.

Baseline Differences in Child Behavior Symptoms According to Gender

Mothers, fathers, and teachers completed reports of the children's behavior symptoms prior to treatment. Mothers reported significantly more total behavior problems for boys than for girls according to the CBCL, $t(218) = -.322, p < .003$, whereas fathers did not, and fathers reported more internalizing problems for girls than for boys, $t(150) = 1.99, p < .05$, whereas mothers did not. On the basis of both mother and father reports, there were no significant gender differences in the numbers of externalizing behaviors according to the CBCL or in the total number of conduct problems on the ECBI.

Teacher reports on boys showed significantly more total behavior problems; more hostile-aggressive problems, $t(205) = -2.66, p < .009$, and more hyperactive behaviors, $t(205) = -2.24, p < .02$, when compared with teacher reports on girls.

In-home observations of parent-child interactions revealed a significant difference in the amount of physical negative behavior on the part of boys interacting with their mothers compared with girls interacting with their mothers, $t(217) = -3.55, p < .001$. The same was true in interactions with fathers: Boys were significantly more physically negative than were girls, $t(148) = -1.99, p < .04$. In fact, the rate of physical negative behavior for

Table 2
Baseline Reports of Child Behavior Symptoms and Independent Home Observations of Parent-Child Interactions According to Gender

Report and score	<i>M (and SD)</i>		<i>t</i>
	Girls	Boys	
Child behavior symptoms			
Mother reports (CBCL) ^a			
Externalizing score	68.09 (11.81)	69.54 (7.69)	
Internalizing score	61.87 (11.43)	61.01 (9.47)	
Total score	63.41 (9.36)	67.48 (8.17)	-3.22**
Father reports (CBCL) ^b			
Externalizing score	67.79 (11.77)	66.17 (7.76)	
Internalizing score	62.34 (11.91)	58.87 (8.27)	1.99*
Total score	64.26 (8.85)	64.13 (7.81)	
Mother discipline (DDI)			
Physical force ratio ^c	0.09 (0.14)	0.11 (0.16)	
Limit-setting ratio ^c	0.36 (0.24)	0.39 (0.26)	
Inappropriateness score	0.65 (0.42)	0.71 (0.37)	
Empathy	0.02 (0.07)	0.02 (0.07)	
Spanking	1.67 (4.74)	1.09 (1.53)	
Teacher reports PBQ ^d			
Hostile-aggressive	6.39 (5.53)	8.77 (6.47)	-2.66**
Anxiety	3.34 (2.73)	3.76 (3.23)	
Hyperactivity	2.93 (2.54)	3.82 (2.62)	-2.24*
Observations of child externalizing behaviors and parenting skills			
Child with mother ^e			
Total externalizing	13.92 (11.87)	14.72 (13.21)	
Noncompliance	3.36 (2.88)	3.54 (3.19)	
Physical deviance	0.37 (7.9)	0.97 (1.67)	-3.55***
Verbal deviance	13.55 (11.76)	13.75 (12.56)	
Positive affect-physical warmth	8.46 (6.73)	8.32 (7.15)	
Child with father ^e			
Total externalizing	13.59 (13.00)	14.99 (11.66)	
Noncompliance	2.76 (2.38)	2.80 (2.80)	
Physical deviance	0.54 (0.67)	0.88 (1.39)	-1.99*
Verbal deviance	13.05 (12.71)	14.11 (11.23)	
Positive affect-physical warmth	9.13 (1.50)	9.33 (.88)	
Mother's parenting (DPICS)			
Praise	5.39 (5.29)	4.67 (4.72)	
Positive effect	7.31 (5.43)	5.89 (4.88)	
Communication	81.26 (52.42)	71.51 (47.28)	
Critical statements	14.58 (13.45)	14.49 (11.34)	
Physical negative	0.50 (.97)	0.85 (1.4)	-2.08*
Father's parenting (DPICS)			
Praise	3.90 (4.04)	2.97 (3.01)	
Positive affect	5.28 (3.47)	4.69 (5.35)	
Communication	59.59 (34.08)	58.52 (35.19)	
Critical statements	13.41 (12.80)	12.59 (9.41)	
Physical negative	0.74 (1.67)	0.78 (1.15)	

Note. CBCL = Child Behavior Checklist; PBQ = Preschool Behavior Questionnaire; DDI = Daily Discipline Inventory; DPICS = Dyadic Parent-Child Interaction Coding System.

^a*n* = 220 children with mother report data. ^b*n* = 152 children with father report data. ^cRatio is based on number of behavior problems reported in previous 24 hr. ^d*n* = 194 children with teacher data. ^eObservations of parent-child dyad for 30 min on two occasions at each assessment phase. Score represents rate per 30 min for the behavior.

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

boys with mothers and fathers was double the rate observed for girls with their parents. However, independent observations revealed no other significant differences between girls and boys for total externalizing behaviors, rate of noncompliance to parental requests, verbal deviance, or physical positive behaviors (see Table 2 for means and standard deviations).

Baseline Differences in Parenting Style According to Child Gender

Comparisons of mothers' reports of discipline (DDI) used with girls versus that used with boys revealed no significant differences in use of physical force, limit setting, empathy, or

appropriateness of discipline strategy according to the child's gender. Independent observations of mothers' interactions with their children in the home indicated that mothers used more physical negative parenting behaviors with boys than with girls, $t(217) = 2.08, p < .03$. There was also a trend for mothers to communicate somewhat less with boys and to show less positive affect with boys than with girls. In contrast, there were no significant differences in fathers' interactions with boys compared with their interactions with girls according to home observations.

Baseline Differences in Family Correlates According to Child Gender

Chi-square analyses were conducted for girls and boys according to "family variables," including parental history of criminal behavior, alcoholism, drug abuse, spouse abuse, or child abuse; parental history of abuse or neglect as a child; and marital status (partnered or nonpartnered), and t tests were conducted for current measures of depression (BDI), marital distress (MAT), and life stress (PSI). Chi-square and t tests indicated no significant differences between girls and boys on any of these variables. In addition, no significant differences were found between girls and boys on any other demographic variables, including birth order; number of children in family; and parental age, education, or socioeconomic background. It is of interest to note that 38.4% of parents reported that the child's problems began in the first year of life, 19% reported they started in the second year of life, and 22% reported that they started in the third year of life. There was no difference in age of onset of problems according to child's gender (see Tables 1 and 3).

Correlations Between Risk Factors and Externalizing Problems at Home and School According to Gender

In considering the family correlates for boys and girls, only correlations at the .01 level were considered significant. For family variables involving mothers, there were no significant correlations with externalizing problems at home or teacher reports of problems at school for either girls or boys. For family variables involving fathers, there was only one significant correlation with girls' externalizing problems at school: history of father being abused as a child ($r = .49, p < .01$).

There were significant correlations between mothers' and fathers' parenting styles (as observed) and externalizing problems at home. Two aspects of mothers' parenting style (critical statements and total negativity) correlated with girls' externalizing problems at home, whereas four aspects of mothers' parenting style (communication, critical statements, physical negative behaviors, and total negativity) correlated with boys' externalizing problems at home. For fathers, one aspect of parenting style (communication) correlated with girls' externalizing problems at home, whereas three aspects of fathers' parenting style (critical statements, physical negative behaviors, total negativity) were correlated with boys' externalizing problems at home. There were trends ($p < .05$) for both mother and father parenting behavior to be associated with teacher reports of girls' externalizing problems at school but not of boys'. Neither

Table 3
Family Background Correlates for Boys and Girls With ODD-CD

Parent interpersonal and family contextual variables ^a	Girls	Boys
	No. (and %)	
Mother abused as child	18 (28.1)	50 (31.6)
Father abused as child	16 (35.6)	27 (21.8)
Mother drug-alcohol history	4 (6.3)	23 (14.6)
Father drug-alcohol history	22 (37.3)	57 (37.3)
Mother depression history	31 (48.4)	77 (48.7)
Father depression history	13 (24.1)	30 (20.7)
Drug, alcohol, or criminal history (immediate family)	24 (37.5)	66 (41.8)
Spouse-abuse history	22 (34.4)	44 (27.8)
Child-abuse history	5 (7.8)	27 (17.1)
	<i>M (and SD)</i>	
Mother BDI ^b	8.63 (6.84)	8.57 (6.39)
Father BDI ^b	4.52 (4.37)	5.18 (4.99)
Mother MAT ^c	101.38 (17.28)	102.77 (17.67)
Father MAT	103.05 (14.79)	104.33 (15.93)
Mother life stress (PSI)	9.14 (9.62)	10.82 (8.82)
Father life stress (PSI)	7.29 (7.49)	7.35 (6.86)

Note. ODD-CD = oppositional defiant disorder-conduct disorder; BDI = Beck Depression Inventory; MAT = Marital Adjustment Test; PSI = Parenting Stress Inventory subscale (raw scores).

^aChi-square analyses indicated no significant differences on any of these variables. ^bThere were 220 mother variables and 152 father variables.

^cNot obtained for single mothers.

mother or father reports of externalizing problems (according to the CBCL) correlated with independent observations at home or with teacher reports of externalizing problems at school. It is interesting to note that teacher reports of anxiety correlated with home observations of externalizing problems for girls ($r = .37, p < .01$; see Table 4).

Changes Over Time in Child Behavior Symptoms (Pretest, Posttest, and 2-Year Follow-Up) According to Child Gender

The next stage of analysis consisted of repeated measures analysis of variance (ANOVA) using one between-group factor (gender of child) and one within-group factor with three levels (time: pre, post, follow-up) to determine gender, time, and interaction effects for the outcome variables. ANOVAs were followed by t tests when there was a significant time or Gender \times Time interaction to contrast the three assessment time points. Nine dependent outcome variables (reflecting different raters and settings) were considered in the analysis: mother and father perceptions of internalizing and externalizing problems (CBCL); teacher reports of hostile-aggressive, hyperactive, and anxiety behaviors at school (PBQ); and independent observations of child externalizing problems, noncompliance, verbal deviance, and positive physical warmth at home. On the basis of the number of analyses, the alpha level was set at .01.

Repeated measures ANOVA for parent reports revealed significant time effects for externalizing behaviors as reported by mothers and fathers on the CBCL, $F(2, 186) = 116.52, p <$

Table 4
Parenting Skills and Discipline Correlates of Externalizing Problems at Home and School

Parenting variable	Observations of externalizing problems at home		Teacher reports of externalizing problems at school	
	Girls	Boys	Girls	Boys
Mother ^a				
Praise	.02	-.07	.19	-.05
Positive effect	-.06	.02	.14	-.02
Communication	.18	.21**	.12	-.04
Critical statements	.56***	.44***	.29*	.01
Physical negative behaviors	.08	.24**	-.06	-.12
Total negativity	.55***	.45***	.28*	-.01
Father ^b				
Praise	.15	-.02	.01	.13
Positive affect	.11	.09	.11	.02
Communication	.45**	.11	.22	.12
Critical statements	.29	.33***	.36*	.19
Physical negative behaviors	.03	.29**	.14	-.16
Total negativity	.28	.35***	.35*	.16

^a*n* = 220 mothers. ^b*n* = 140 fathers.

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

.001, and $F(2, 119) = 42.22, p < .001$, respectively, as well as for internalizing behaviors, $F(2, 186) = 89.39, p < .001$, and $F(2, 119) = 31.89, p < .001$. In *t* tests contrasting the three assessment time points, significant decreases were found from pre- to postintervention on all the parent CBCL report variables, but no significant changes were found from postintervention to follow-up, suggesting stability of the child behavior changes as measured by mother and father reports. There was a gender effect for mother reports of externalizing behaviors, $F(1, 187) = 5.53, p < .02$, and for father reports of internalizing behaviors, $F(1, 120) = 7.79, p < .006$: Mothers perceived boys as having more externalizing problems than girls, and fathers perceived girls as having more internalizing problems than boys. There was no interaction of time and gender, suggesting that girls and boys improved in generally the same way over time and that gender differences between mother and father reports held constant over time.

Repeated measures ANOVAs for teacher reports revealed significant time effects for the following PBQ variables: hyperactivity, $F(2, 156) = 14.18, p < .001$; hostile-aggressive behavior, $F(2, 156) = 11.62, p < .001$; and anxiety, $F(2, 156) = 4.42, p < .01$. As in the parent reports, *t* tests contrasting the three time points indicated that teachers perceived significant decreases in girls' and boys' externalizing behavior problems for all three variables from pre- to postintervention but no significant changes from postintervention to follow-up. Again, there was a gender effect indicating that teachers perceived boys as being more hostile-aggressive than girls, $F(1, 157) = 6.69, p < .01$, and more hyperactive than girls, $F(1, 157) = 6.67, p < .01$. Again, there was no interaction of gender and time.

Repeated measures analysis for the independent home observations of mother-child interactions revealed a significant time effect for both boys and girls in total child externalizing problems, $F(2, 189) = 9.25, p < .001$; in noncompliance, $F(2, 190) = 10.03, p < .001$; in verbal deviance, $F(2, 189) = 8.90, p < .001$; and in physical deviance, $F(2, 190) = 4.06, p < .01$. The *t*

tests showed that these significant decreases in child total externalizing problems, verbal and physical deviance, and noncompliance occurred from pre- to posttreatment and were maintained at follow-up. For child positive physical affect, there was a significant Gender \times Time interaction, $F(2, 190) = 4.22, p < .01$. The *t* tests examining the interaction indicated that girls showed significant increases in positive physical affect (in interactions with mothers) between baseline and immediately posttreatment and that their scores continued to be significantly higher than those of boys on this variable at follow-up, whereas boys did not show any significant changes on this variable over time.

Repeated measures analysis for independent observations of father-child interactions revealed a significant time effect for noncompliance, $F(2, 130) = 1.00, p < .001$; externalizing problems, $F(2, 130) = 17.73, p < .001$; and verbal deviance, $F(2, 130) = 17.78, p < .001$. Analysis with *t* tests showed a significant decrease in boys' levels of noncompliance, externalizing problems, and verbal deviance from pre- to posttreatment and a further significant decrease at follow-up. In addition, there were Gender \times Time effects for total child externalizing behaviors with fathers, $F(2, 130) = 3.30, p < .04$, and for verbal deviance with fathers, $F(2, 130) = 3.56, p < .03$. The *t* tests revealed a significant decrease for boys from pre- to posttreatment as well as a significant decrease from posttreatment to follow-up in total externalizing and in verbal deviance, whereas girls showed a significant decrease from pre- to posttreatment in these variables with no significant change from posttreatment to follow-up. There was no significant time effect for girls' or boys' physical deviance nor were there significant time effects in girls' and boys' levels of positive affect in their interactions with fathers (see Table 5).

Predictors of Treatment Outcome

One primary purpose of this study was to determine which, if any, of the three categories of risk factors obtained at baseline

Table 5
Repeated Measures Analysis of Variance

Score	<i>M (and SD)</i>		<i>M (and SD) immediately</i>		<i>M (and SD) at 1–2-year follow-up</i>	
	Girls	Boys	Girls	Boys	Girls	Boys
Mother ^a (CBCL ^b)						
Externalizing score	67.09 (11.59)	69.24 (7.57)	57.19 (12.17)	60.75 (10.35)	55.81 (11.72)	60.02 (10.24)
Internalizing score	61.80 (10.83)	60.33 (9.45)	52.89 (10.17)	53.19 (9.66)	52.57 (10.65)	52.96 (10.14)
Father ^a (CBCL ^b)						
Externalizing score	68.84 (11.50)	65.78 (7.89)	57.42 (10.47)	59.19 (8.58)	57.03 (13.14)	57.37 (8.92)
Internalizing score	63.81 (11.98)	58.37 (8.20)	54.97 (11.29)	51.96 (8.79)	55.03 (13.18)	50.10 (9.01)
Teacher ^c (Behar)						
Hostile-aggressive	6.75 (5.74)	8.90 (6.54)	4.09 (4.48)	6.90 (6.54)	4.94 (4.98)	7.01 (5.97)
Anxiety	3.31 (2.55)	3.84 (3.40)	2.46 (2.65)	3.00 (2.81)	2.88 (2.90)	3.36 (2.87)
Hyperactivity	3.10 (2.74)	3.67 (2.55)	2.25 (2.18)	2.91 (2.21)	2.25 (2.07)	3.48 (2.52)
Child with mother ^d						
Total externalizing	13.09 (11.11)	14.57 (13.17)	10.61 (10.81)	10.01 (8.96)	10.13 (11.01)	8.38 (7.29)
Noncompliance	3.34 (2.75)	3.52 (3.11)	2.60 (2.54)	2.36 (1.95)	2.59 (2.35)	2.29 (2.07)
Physical deviance	0.33 (0.75)	1.01 (1.74)	0.30 (.82)	0.48 (0.81)	0.29 (0.74)	0.42 (1.07)
Verbal deviance	12.75 (11.07)	13.56 (12.45)	10.32 (10.77)	9.52 (8.69)	9.84 (10.79)	7.96 (6.92)
Positive physical warmth	8.29 (6.90)	8.58 (7.27)	13.86 (10.11)	9.99 (9.92)	14.56 (11.17)	11.61 (8.85)
Child with father ^d						
Total externalizing	12.41 (11.23)	14.88 (10.95)	6.40 (6.40)	8.80 (8.76)	7.79 (5.94)	6.35 (5.89)
Noncompliance	2.49 (1.87)	2.91 (2.90)	1.75 (2.13)	1.90 (1.72)	1.35 (1.16)	1.53 (1.64)
Physical deviance	0.49 (0.60)	0.88 (1.30)	0.40 (1.26)	0.62 (1.20)	0.37 (0.75)	0.45 (1.11)
Verbal deviance	11.93 (11.10)	14.02 (10.48)	6.00 (5.90)	8.18 (8.51)	7.60 (5.70)	5.90 (5.34)
Positive physical warmth	11.49 (9.37)	9.98 (9.44)	10.54 (7.14)	13.75 (11.26)	12.12 (10.43)	12.19 (10.46)

Note. CBCL = Child Behavior Checklist; Behar = Preschool Behavior Questionnaire.

^a*n* = 204 for mother data and 138 for father data at all three time points. ^bCBCL scores are *t* scores. ^c*n* = 169 children with teacher data at all three time points. ^dObservations of parent-child dyad for 30 min on two occasions at each assessment phase. Score represents rate per 30 min for the behavior.

assessments (child variables, parenting variables, and family variables) predicted treatment outcome at follow-up assessments 1–2 years later and whether these predictors differed for girls versus boys. Preliminary analyses involved examining the correlations between the three sets of risk factors at baseline (child, parenting, family) and two criterion variables at follow-up (externalizing problems at school and at home). Four correlation matrices were examined (girls with mothers, girls with fathers, boys with mothers, boys with fathers). For each of the three categories of risk factors, I selected three baseline predictor variables that showed the highest correlations with either of the follow-up outcome variables in any of the four matrices, giving a total of nine predictor variables.

The baseline predictor variables for child behavior variables included (a) externalizing problems as reported by parents on the CBCL (Externalizing subscale); (b) externalizing problems (i.e., Physical Negative and Verbal Deviance subscales) when interacting at home with mothers and fathers as observed by independent raters (DPICS); and (c) externalizing problems at school as reported by teachers on the PBQ (the Hostile-Aggressive and Hyperactive subscales combined).

The baseline predictor variables for parenting style included (a) mothers' and fathers' total praise to child as observed in home (DPICS); (b) mother and father "negativity" (defined as total critical statements and physical negative behaviors) toward child as observed in home (DPICS); and (c) mothers' re-

sponses to child misbehaviors as self-reported on the DDI and subsequently categorized as inappropriate (not obtained for fathers).

The baseline predictors for family variables included (a) partnered or not partnered for mothers, marital satisfaction for fathers (none of them were single; MAT); (b) mother and father depression scores on the BDI; and (c) PSI life stress score. Surprisingly, drug, alcohol, and criminal history were not correlated with outcome; therefore, these variables were not entered in the prediction analyses.

Two dependent variables were defined as indicators of treatment outcome at follow-up assessments: (a) children's externalizing problems at school as reported by teachers (according to the Hostile-Aggressive and Hyperactive subscales of the PBQ teacher measure) and (b) children's externalizing problems at home (i.e., physical and verbal deviance) as observed in their interactions with mothers and fathers. These were considered to be the most unbiased assessments of the children's behavioral adjustment at home and school.

For each of the two dependent variables, four stepwise regression analyses were run: girls with mothers, girls with fathers, boys with mothers, and boys with fathers. Each regression included the nine predictors for children with mothers and the eight predictors for children with fathers as described previously. The criterion for entry of a predictor into the regression equation was set at $p < .05$ (probability of *F* to enter), so that

Table 6
Prediction of Externalizing Problems at School and at Home at Follow-Up

Variables at intake	β	R^2
Prediction of externalizing problems at school at follow-up		
Girls with mothers participating ($n = 52$)		.38***
Teacher externalizing rating	.51***	
Mother inappropriate discipline	.25*	
Girls with fathers participating ($n = 32$)		.43***
Teacher externalizing rating	.45**	
Father externalizing rating	.43**	
Boys with mothers participating ($n = 124$)		.19***
Teacher externalizing rating	.43***	
Boys with fathers participating ($n = 83$)		.26***
Teacher externalizing rating	.43**	
Observed father negativity	.20*	
Prediction of independent observations of externalizing problems at home at follow-up		
Girls with mothers participating ($n = 57$)		.46***
Observed mother negativity	.47***	
Mother depression	.42***	
Girls with fathers participating ($n = 34$)		.35**
Observed father negativity	.42**	
Father life stress	.36*	
Boys with mothers participating ($n = 136$)		.08**
Observed child externalizing with mother	.28**	
Boys with fathers participating ($n = 97$)		.04*
Observed child externalizing with father	.21**	

Note. Asterisks for betas indicate the significance of the beta for the predictor at the final step; asterisks for R^2 indicate significance of overall regression equation.

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

only predictors that explained a significant amount of variance (or additional variance) in the dependent variable were allowed to enter. The results of these analyses are presented in Table 6, with betas indicating the relative contribution of each predictor at the final step, and the overall multiple correlations squared (R^2) for the regression indicating the proportion of variance explained by the combination of predictors.

Predictors of externalizing ratings at school—girls. For the girls, one child risk variable and one parenting risk variable (no family risk variables) emerged as significant predictors of externalizing problems at school 1–2 years later. Hostile–aggressive behavior at preschool (as reported by teachers) accounted for 32% of the variance in this outcome variable and “inappropriate discipline” on the part of mothers explained an additional 6% of the variance. The overall multiple correlation, R , was .62, $F(2, 49) = 14.07$, $p < .0001$.

For girls with fathers participating, two child risk variables emerged as significant predictors of externalizing problems at school at follow-up. Teacher reports of externalizing behavior at school at baseline accounted for 25% of the variance in this outcome variable, and father reports of externalizing problems at home explained an additional 18% of the variance. The overall R was .66, $F(2, 29) = 10.21$, $p < .001$.

Predictors of externalizing ratings at school—boys. Only one child risk variable (no family variables) emerged as a significant predictor of boys' externalizing problems at school at

follow-up. Teacher reports at baseline of hostile–aggressive behavior did significantly predict boys' externalizing problems at school 1–2 years later as reported by other teachers and accounted for 19% of the variance in this outcome variable. The overall R was .43, $F(1, 122) = 26.85$, $p < .0001$.

For boys with fathers participating, one child risk variable and one parenting variable emerged as significant predictors of externalizing behavior at school at follow-up. As found for the girls, boys' hostile–aggressive behavior in preschool and kindergarten (as reported by teachers) was a significant predictor of externalizing problems at school 1–2 years later and accounted for 22% of the variance. Father “negativity” at home explained an additional 4% of the variance. The overall R was .51, $F(2, 80) = 13.31$, $p < .001$.

Predictors of externalizing problems at home—girls. One parenting risk variable and one family variable emerged as significant predictors of externalizing problems at home at follow-up. One aspect of parenting style, mother “negativity,” significantly predicted outcome and accounted for 29% of the variance in this outcome variable, and mother depression explained an additional 17% of the variance. The overall R was .68, $F(2, 54) = 23.00$, $p < .0001$.

For girls with fathers participating, one parenting variable and one family variable emerged as significant predictors of externalizing problems at home at follow-up. Of the parenting variables, father “negativity” significantly predicted outcome and accounted for 22% of the variance in this outcome variable, and fathers' life stress explained an additional 13% of the variance. The overall R was .59, $F(2, 31) = 8.27$, $p < .0001$.

Predictors of externalizing problems at home—boys. For boys, the family factors and the parenting factors did not prove to be predictors of child externalizing problems as observed at home 1–2 years later. For boys, only one child risk variable emerged as a significant predictor of externalizing problems at follow-up. Observed externalizing problems at home (by independent raters) accounted for 8% of the variance in this outcome variable. The overall R was .28, $F(1, 134) = 11.16$, $p < .001$.

For boys with fathers participating, only one child risk variable emerged as a significant predictor of externalizing behavior at home at follow-up. Total externalizing problems observed at baseline accounted for only 4% of the variance. The overall R was .21, $F(1, 96) = 4.29$, $p < .04$.

Discussion

On the basis of the home observations, the differences in behavioral symptoms of boys and girls with early-onset conduct problems are less remarkable than the similarities. Girls and boys were observed to have the same levels of total externalizing behaviors and verbal deviance (yelling, swearing, arguing, whining, crying); moreover, girls were just as noncompliant to parental requests as boys and no more or less affectionate (physical warmth). However, differences between the behavior of girls with conduct problems and the behavior of their normative same-sex peer group seem to be more extreme than is the case for boys. Studies of nonrisk girls indicate that they are normally more compliant and prosocial, easier to manage, and more physically affectionate and that they use less verbal and

physical bullying than nonrisk boys (Zahn-Waxler, 1993). Hence, the similarities in behavior between girls and boys with conduct problems result in greater disparity between these girls and their same-sex peer group.

However, the baseline home observations also indicated that boys with conduct problems are more physically negative in their interactions with their mothers and fathers; that is, they hit more and are more destructive than girls with conduct problems. This finding is corroborated by mother reports of greater externalizing problems for boys than girls, as well as by teacher reports that portrayed the boys as more distractible, hyperactive, and hostile-aggressive than the girls. Generally, these gender differences are consistent with the findings of other investigators who have shown that nonclinic toddler and preschool boys are more aggressive and oppositional than girls in peer play groups (e.g., Fagot, 1984; Fagot & Hagan, 1985). On the other hand, fathers, unlike mothers and teachers, did not perceive boys as having more externalizing problems than girls, yet they perceived girls as having more internalizing problems, suggesting that the gender of the parent and teacher (over 98% of teachers were female) may result in different interpretations of the child's behavior according to gender. Fathers were more tolerant of physical aggression in boys, yet they saw problems in girls' behavior (i.e., internalizing) that mothers and teachers did not see as problematic. Perhaps adults are more tolerant of misbehavior from a child of their own gender, or perhaps male tolerance of physical aggression in boys and female tolerance of internalizing problems in girls are aspects of gender socialization.

These findings offer a possible explanation for the different male:female prevalence ratios of conduct problems in the early preschool and school-age years. Perhaps boys' higher levels of physical negative aggression make them more visible (and more disruptive in a classroom) than girls at an early age and therefore more likely to be referred for treatment. The girls' equally high levels of nonaggressive conduct problems (i.e., noncompliance and verbal bullying) not only may be less detectable but also may seem less serious to parents and teachers, so that girls would be less likely to be referred for intervention. It has been suggested that because conduct problems are so much less prevalent among young girls than boys, when girls are referred for conduct problems, their behavior problems are more severe (Zoccolillo, 1993). These data suggest that girls' behavior symptoms are not more severe than those of boys; in fact, girls differ from boys only in that they display somewhat less overt physical aggression. These data dovetail with Zoccolillo's argument that there need to be gender-specific criteria for identifying boys and girls at risk for conduct disorder, with emphasis placed on detecting nonaggressive conduct problems in girls and allowing for a lower threshold of aggressive behavior in comparison to boys. Early detection and intervention with these girls might prevent an escalation in rates of conduct problems in adolescent girls.

Previous research has suggested that parents of children with conduct problems are more physically negative, critical, inappropriate, and lacking in positive affect and positive reinforcement (e.g., Patterson & Stouthamer-Loeber, 1984). Because most of this research has been with mothers of boys, I was interested in differences in parenting style that were based on child gender. The only significant difference I found was that

mothers were more physically negative (i.e., hitting, spanking, restraining) with boys than girls. These results dovetail with research on normative nonrisk samples indicating that mothers use more physical punishment with boys than girls (Lytton & Romney, 1991) but do not substantiate the common finding of more maternal warmth toward girls. Although fathers were generally less positive, more physically negative, and less communicative with their children than were mothers, their parenting behavior did not differ according to gender. Lytton and Romney's (1991) finding that fathers are more communicative and involved with boys than with girls was not substantiated. These data led to the hypothesis that normal gender-differentiated parenting styles (e.g., greater mother affection toward girls and father involvement with boys) become disrupted in the case of children with conduct problems. I also found that a "negative" parenting style (critical and physical negative behaviors) was correlated with both girls' and boys' externalizing problems at home in the case of mothers but not fathers; father "negativity" was correlated with boys' externalizing problems at home, but not girls.

Regarding family variables, previous research has suggested that it takes a worse environment to produce conduct problems in girls than in boys and that girls referred for antisocial behavior come from somewhat more disturbed homes (i.e., with more psychiatric disturbance in the parents; Robins, 1986). However, the present results suggest that the family variables for girls and boys are quite similar if not identical. I found no significant gender differences on any of the baseline family variables such as parental drug and alcohol abuse, depression, marital conflict, and negative life stressors, nor any significant gender difference in the number of family variables. Correlations indicated only one significant variable: Father abuse as a child was correlated with girls' externalizing problems at school.

Does gender affect treatment outcome? Girls' and boys' responses to treatment were markedly similar (significant reductions in externalizing problems and noncompliance on the basis of mother, father, and teacher reports as well as independent home observations), and these improvements remained stable at 1- and 2-year follow-up assessments. At both posttreatment assessment points, boys' interactions with their mothers were not significantly more physically negative than girls' interactions with their mothers, as they had been at baseline; in fact, boys' physical negative behaviors continued to decrease significantly from posttreatment to follow-up. The improvements in girls' physical negative behaviors with their parents, which had low base rates to begin with, remained stable. It is interesting that girls demonstrated significantly more positive physical warmth with their mothers at both follow-up assessments in comparison with boys and their fathers—findings consistent with socialization studies of normative, nonrisk children. In their interactions with fathers, boys' externalizing problems, noncompliance, and verbal deviance continued to improve more significantly over time than was the case for girls. One implication of these findings is that when there is a father involved in treatment, there may be more lasting improvements for boys. These findings are promising in light of Campbell's longitudinal studies, which have indicated that 67% of untreated preschool children with moderate-to-severe externaliz-

ing problems meet the criteria for ODD-CD at age 9 and that boys do more poorly than girls (Campbell, 1991).

A related question was whether predictors of treatment outcome differed according to gender. The answer was different depending on whether our outcome variable was externalizing problems at school (according to teacher reports) or at home (according to independent observations). For externalizing problems at school, the predictors were markedly similar; teacher reports of externalizing problems at baseline were the best predictors of externalizing problems at school 1–2 years later, for both girls and boys. Among the parenting variables, mothers' inappropriate discipline was a significant predictor for girls' behavior at school, whereas father "negativity" was found to be a significant predictor for boys. Yet parenting variables added little to the prediction equation for boys or girls once teacher reports at baseline were entered in the analysis. These data do not suggest strong gender-specific correlates for predicting externalizing problems for boys and girls in school.

On the other hand, I did find gender differences in predictors of externalizing behaviors at home. Mother "negativity" and depression as well as father "negativity" and life stress significantly predicted girls' externalizing problems at home 1–2 years post-treatment and accounted for 49% of the variance. For boys, no parenting or family variables emerged as predictors; externalizing behaviors at baseline were the best predictors of externalizing problems at home 1–2 years later.

These results provide a strong confirmation of the important role of teacher reports, in this case, primarily preschool teachers, as an important variable in the early identification of both girls and boys at risk for continuing conduct problems at school. Although it may be argued that there are method effects here, it is important to note that in every case the children had different teachers at follow-up than at baseline; in fact, in most cases the children attended a different school. Nonetheless, these results suggest the setting-specificity of children's behavior, particularly because teachers' early identification of children's externalizing problems at school was not a good predictor of child problems at home.

Several limitations of this study deserve attention. First, the findings are generalizable primarily to Caucasian clinic families of young children with early-onset conduct problems. Future research should explore ethnic differences in family and parenting factors associated with conduct problems for boys and girls. Moreover, the longitudinal findings can be generalized only to families who have taken part in this particular parent training program and not necessarily to other interventions, and certainly not to untreated children with early-onset conduct problems. For ethical reasons I did not include an untreated control group of children with conduct problems in our study, but future research could benefit from using at least a normative non-risk control group with which to make comparisons.

Research concerning gender-specific correlates of early-onset conduct problems and treatment outcome is in its infancy. These initial results suggest some directions for further research. First, further exploration is necessary of these gender differences in predictors of treatment. For example, why did mother negativity and depression and father negativity and stress predict girls' externalizing behaviors but not boys' behavior at outcome? Perhaps, as has been recently suggested by Ka-

vanagh and Hops (1994), girls are more influenced than boys by their parents' psychological status and their family context because of the way they are socialized in the family. On the other hand, perhaps boys are equally influenced but do not manifest it in the same way. Or perhaps a child is protected from the effects of the opposite-sex parent's psychological status by a nondepressed and noncritical same-sex parent.

In addition, long-term follow-up assessments of children into their middle school and adolescent years is necessary to see how child behavior, parenting style, and other family factors continue to influence the development of boys' and girls' conduct problems over time. It is possible that a 1- and 2-year follow-up is insufficient to determine reliably whether a child will stay on or get off the trajectory toward conduct disorders. Perhaps the effects of parent and family factors become evident later for boys than for girls. A second area for further research is the question of whether teachers treat children with conduct problems differently according to gender and the role that this factor might play in differences in behavioral outcomes. Unfortunately, I did not observe teachers' classroom behaviors. But on the basis of the observational data on mothers, in combination with their reports of higher levels of aggression in boys, one might suspect that teachers are also more negative in their interactions with boys.

A third area for further research arises from the present finding that fathers' "negative" parenting style and levels of life stress are just as important predictors of girls' continuing conduct problems as are mothers' "negativity" and depression. Further research is needed in this area; the influence of fathers on girls' conduct has scarcely been attended to, and little is known about the differential gender socialization practices that may be related to the development of conduct problems in boys and girls. Such research also offers promise for more successful intervention, intervention that takes into account gender differences in etiology, symptomology, and treatment outcome.

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