

Parental Behavior Patterns and Conduct Disorders in Girls

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Conduct-disordered (CD) girls, 9 to 11 years old, were compared to non-conduct-disordered (NCD) girls of the same age using parental reports about themselves and their children and child reports of themselves and their parents. Correlations were obtained between parental behavior patterns and the behavior patterns of the girls as perceived by three family members: mother, father, and the target child. The results indicated that (1) parents of CD girls were more hostile in some contexts than parents of NCD girls, (2) relationships between parental behavioral characteristics and children's behavioral characteristics were stronger and more numerous for mothers than for fathers, and (3) the children's perception of their own behaviors and the parents' marriages tended to correspond with their parents' perceptions. In general, the pattern of results suggests that, in terms of aggressive behavior patterns, female children may be modeling the behavior of their parents, particularly that of their mothers.

Research on aggressive behavior in children has focused almost exclusively on boys (e.g., Parke & Slaby, 1983). This focus is possibly due to the findings of several early studies that males exhibit more aggression than females, in terms of both their verbal and physical behaviors (see Maccoby & Jacklin, 1974, for a review). The assertion that males are more aggressive than females continues to be challenged, however (e.g., Tieger, 1980), and recent research on gender differences in aggression suggests that females

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may engage in as much aggressive behavior (at least verbal) as males (Archer & Westeman, 1981; Moore & Mukai, 1983). However, research that examines the processes by which aggressive problem behaviors are learned continues to focus primarily on males. Thus, factors related to the development of aggression in females have not been adequately investigated.

There have been several studies that document the association between overt marital discord and behavior problems of boys (Emery & O'Leary, 1982; Porter & O'Leary, 1980; Wolkind & Rutter, 1973). In addition, there are a number of studies that show an association between parental child-rearing practices and behavior problems of boys and girls (e.g., Becker, 1964). However, little or no consistent evidence exists that shows an association between marital problems and childhood problems of girls (O'Leary, 1984). Consequently, the present study was designed to assess a relatively homogeneous group of girls with conduct problems. It was predicted that (1) parents of conduct-disordered girls would display more non-child-directed and child-directed hostility than parents of non-conduct-disordered girls, and (2) parental behavior patterns would relate to the behavioral patterns of their children.

METHOD

Subjects

The target sample consisted of 42 girls between the ages of 9 and 11 and their parents. This sample was selected from a larger sample of 107 girls. Volunteers responded to an advertisement in local community newspapers. The subjects made up two contrasting groups: (1) 25 girls displaying conduct problems (CD), and (2) 17 girls not displaying conduct problems (NCD). Assignment to groups was based upon maternal report of childhood problems as indexed by the Peterson-Quay Behavior Problem Checklist—Revised Version (RBPC; Quay & Peterson, 1987). To be included in the study, the CD group had to receive a score of 11 or higher on the Conduct Disorder subscale of the RBPC (2 standard deviations above the mean of a normal group of girls aged 6 to 12), while the NCD group had to receive a score of 3 or lower on the same subscale (the mean of a normal group of girls aged 6 to 12). All of the present subjects were from intact homes.

The groups of parents were similar on income, education, and number of children.³ The groups differed significantly on only one demographic

³The mean income, mean father education, mean mother education, mean age of father, and mean number of children for each group was as follows: (1) conduct-disordered—\$37,000, 4 years of college, 2 years of college, 38, and 2, respectively; (2) non-conduct-disordered—\$45,000, 6 years of college, 2 years of college, 40, and 2 respectively.

variable, mother's age. The mean age of mothers in the NCD group was 39.4 and for the CD group 36.2, $t(40) = 3.11, p < .003$.

Measures

General marital adjustment was evaluated by parents' self-report on the Short Marital Adjustment Scale (SMAT; Locke & Wallace, 1959).

Open marital conflict displayed in front of the child was indexed by a 10-item inventory, the O'Leary-Porter Scale (OPS; Porter & O'Leary, 1980). In the current study the OPS was significantly modified in format so that each parent provided information for the self, and not the dyad as a unit, so that it could be determined whether mother and father hostility differentially related to the child's behavior.

The Porter Parental Behavior and Feelings Inventory (PPBFI; Porter, 1981) was used to measure parents' own predictions of their feelings and behaviors toward their children in 19 hypothetical situations, as well as the likelihood that the child would engage in such behavior. The inventory consists of both a positive scale (responses to appropriate child behavior) and a negative scale (responses to inappropriate child behavior).

The Aggression subscale from the Personality Research Form—E (PRF—E; Jackson, 1974) was used to assess parents' behavior along this dimension.

The Revised Behavior Problem Checklist (RBPC; Quay & Peterson, 1987) was used to assess parents' perceptions of children's problem behavior. The checklist consists of 89 items describing deviant behaviors, which are rated on a 3-point scale. The instrument has been factor-analyzed into six subscales, with the current study using only the parent's ratings on the Conduct Disorder subscale. Fifteen additional items from the Children's Behavior Checklist (CBC), constituting a Social Competence subscale (Ferguson, Partyka, & Lester, 1974), were included within the RBPC to obtain a measure of the children's prosocial behavior.

Children's perceptions of the parents' marriage were measured by the Children's Perception Questionnaire (CPQ; Emery & O'Leary, 1982). This 38-item inventory consists of items pertaining to the child's experiences at home and school, with 10 items forming the Marital Perception subscale. The present study utilized only the mean from these 10 items in the data analysis.

A structured interview was designed specifically for the present study to assess the children's perceptions of their family life and relationship with the parents. For the present study only those items pertaining to the child's perception of her own aggressive behavior patterns were utilized. The items forming this scale parallel the 22 items that form the Conduct Disorder

subscale of the RBPC; therefore, the children's ratings could easily be compared to the parents' ratings of the same behavioral dimension.

Procedure

Subjects were solicited through advertisements in local community newspapers asking for girls aged 9 to 11 and their parents to participate in a research project examining family relationships. Interested families were sent screening materials consisting of the RBPC for the mother to complete and a demographic questionnaire.

If respondents met inclusion criteria, they were sent a packet of questionnaires that each parent was asked to complete independently.⁴ This packet included (1) two copies each of the SMAT, OPS, PBBFI, PRF—E Aggression Scale, and consent forms for both the mother and father to complete, (2) one copy of the RBPC for the father to complete, (3) a detailed demographic questionnaire, and (4) an instruction sheet. At the time of the telephone contact an appointment was made with at least one parent to bring the daughter to the University Marital and Family Study Center so that she could complete the CPQ and participate in the structured interview. Parents returned their completed questionnaires at this time, and upon receipt of all materials, the child was paid \$10 for her participation.

RESULTS

Both mothers' and fathers' ratings of the child on the RBPC Conduct Disorder subscale very significantly differentiated the two groups of children. The mothers' mean rating for the NCD group was 1.47 and for the CD group 17.20 ($t(40) = -12.12, p < .001$). The means were similar for fathers, with the NCD group mean equaling 3.58 and the CD group mean equaling 13.36 ($t(40) = -4.33, p < .001$).⁵ The parents' mean ratings of the girls on the CBC Social Competence subscale were not significantly different for the two groups.

Pearson product-moment correlations were computed between mothers' and fathers' ratings of the children's behavioral characteristics both

⁴Of the 107 initial respondents, 41 girls were classified conduct-disordered, 24 were deemed non-conduct-disordered, and 42 did not meet inclusion criteria. Ninety-three percent of the CD-classified respondents asked to participate did so, while only 71% of the NCD-classified respondents agreed to participate.

⁵Parents also rated their children on the Aggression subscale of the Child Behavior Checklist (Achenbach & Edelbrock, 1983). Average ratings by mothers and fathers for girls in the CD group were 17.2 and 13.0, respectively, 1.5 and 1 standard deviation above the mean of 7.2 for a normal sample of girls in the same age range. Average ratings by mothers and fathers for girls in the NCD group were 5.0 and 4.3, respectively, slightly below the mean for a normal sample.

combining groups and within groups in order to assess parental agreement. All associations were significant, with the exception that within the NCD group correlations only approached significance. On the RBPC Conduct Disorder subscale correlations ranged from .36 in the NCD group to .73 for the combined group. The magnitude of these correlations is greater than interparental agreement statistics for conduct problems in school-aged girls reported in the past (e.g., Achenbach & Edelbrock, 1983). Agreement between mother and father on the CBC Social Competence scale was approximately .40 both within each group and combining groups.

Parents in the two groups did not differ from one another on global marital satisfaction ($t(40) = .54, p = .59$ —mothers; $t(40) = -.18, p = .86$ —fathers). A multivariate analysis utilizing both the mothers' and fathers' OPS and PRF—E Aggression scores was conducted to determine if children in the two groups differed from one another in amount of exposure to non-child-directed parental hostility (see Table I). There was a significant difference between groups (Hotelling $T^2 = 12.98, df = 4,37, p < .03$). Subsequent analyses revealed that the mothers of CD girls were significantly more hostile toward their spouse (OPS) than mothers of NCD girls ($t(40) = 2.65, p < .01$), while fathers of CD girls tended to report adopting a more aggressive response style (PRF—E Aggression Scale) than fathers of NCD girls ($t(40) = -1.69, p < .10$).

The two child groups did not differ significantly on exposure to child-directed hostility, as indicated by a multivariate analysis utilizing both mothers' and fathers' ratings on the PPBFI Positive Behavior and PPBFI Negative Behavior subscales (Hotelling $T^2 = 1.59, df = 4.37, p = .83$). Interestingly, however, children in the two groups differed in the likelihood of engaging in negative types of behavior, with the CD girls rated as more likely to display negative behaviors ($T(40) = 3.53, p < .001$ —mothers; $t(40) = -2.65, p < .01$ —fathers).

Table I. Means and Standards Deviations of Parents' Overt Hostility and General Aggression^a

	Child behavior			
	Conduct-disordered		Non-conduct-disordered	
	Mean	SD	Mean	SD
Mother OPS— overt hostility	27.8	6.2	32.5	4.7
Mother PRF—E aggression scale	7.8	2.9	6.8	2.7
Father OPS— overt hostility	30.0	5.3	31.6	4.5
Father PRF—E	9.0	3.0	7.6	2.5

^aOn the OPS, low scores indicate high levels of overt hostility, while on the PRF—E, low scores indicate low levels of aggression.

Table II. Correlations Between Parental Self-Report and Ratings of the Child for Both Mothers and Fathers^a

	Mother		Father	
	RBPC conduct disorder	CBC social competence	RBPC conduct disorder	CBC social competence
SMAT—marital satisfaction	-.12	.32 ^b	.20	-.15
OPS—overt hostility	.30 ^b	-.19	.19	-.06
PPBFI positive behavior	-.14	.41 ^c	-.03	.22
PPBFI behavior	.23	-.25 ^b	.18	-.01
PRF—aggression scale	.27 ^b	.01	.14	.09

^aLow scores on the OPS and PPBFI Negative Behavior scale are indicative of high levels of hostility and aggression. The signs of correlations involving these measures have been changed, therefore, in order to interpret the associations accurately.

^b $p < .05$.

^c $p < .01$.

To assess the degree of the relationship between parental behavior patterns and behavior patterns of children, Pearson product-moment correlations were computed between the parents' report of their own behavior and their report of the children's behavior. Combining the two groups, 5 out of 10 correlations were significant at the .05 level or better for mothers (see Table II).

For the CD groups, the children's Conduct Disorder scores were significantly related to the mothers' self-report on the PPBFI Negative Behavior scale ($r = .36, p < .04$) and the PRF-E Aggression scale ($r = .41, p < .02$). Within the NCD group there were significant correlations between the children's Conduct Disorder behavior and the mothers' SMAT scores ($r = -.54, p < .01$) and the mothers' PPBFI Positive Behavior scale ($r = -.53, p < .02$). Unexpectedly, a significant negative correlation emerged between the mothers' PRF-E Aggression scale scores and the children's Conduct Disorder scores ($r = -.42, p < .05$).

Correlations were also computed between the CPQ Marital Perception subscale and both the mothers' and fathers' SMAT and OPS scores, as well as with the mothers', fathers', and children's ratings of the children's behavior. Of seven possible associations, two were significant while four approached significance (see Table III).

Finally, correlation coefficients were calculated between the children's rating of themselves on the Child Interview Conduct Disorder Scale and both the mothers' and fathers' responses on the RBPC Conduct Disorder subscale. The children's perceptions correlated significantly with the fathers' Conduct Disorder rating ($r = .35, p < .01$) (see Table III).

Table III. Correlations Between the Child's Behavior Report and the Parents' Behavior Report

	Child	
	CPQ marital perception	Child interview conduct disorder scale
Mother SMAT—marital satisfaction	.23 ^a	
Father SMAT—marital satisfaction	.22 ^a	
Mother OPS—overt hostility	.23 ^a	
Father OPS—overt hostility	.27 ^b	
Mother RBPC—conduct disorder	.22 ^a	.18
Father RBPC—conduct disorder	.15	.35 ^c
Child interview conduct disorder	-.27 ^b	

^a*p* < .10.^b*p* < .05.^c*p* < .01.

DISCUSSION

Consistent with research predictions, parents of CD girls were more hostile in non-child-directed contexts than were parents of NCD girls. Mothers of CD girls, with mean OPS scores similar to those of mothers of clinic-referred children (Emery & O'Leary, 1982), were more openly hostile toward their spouses than were their NCD counterparts, while fathers of CD girls generally adopted a more aggressive behavioral style than fathers of NCD girls.

Unexpectedly, parents of CD girls did not report that they would respond more negatively than parents of NCD girls to hypothetical situations involving child behavior. The results do indicate, however, that girls in the CD group appear more likely to be exposed to parental discipline since they are more likely to engage in those activities that "elicit" parental discipline.

In general, the mothers' behavior patterns were more closely associated with the children's behavior patterns than were the fathers'. The more maritally satisfied the mother and the more positive she was with respect of child-rearing practices, the more socially competent the mother perceived her child. Additionally, the more hostile the mother was toward her spouse and the more generally aggressive she was, the more likely she was to perceive her child's behavior as problematic. This finding is consistent with social learning theory (Bandura, 1977), which emphasizes the role of modeling and reinforcement in the development of behavior patterns. According to social learning theorists, behaviors of parents and children of the same sex should be more similar to one another than the behavioral characteristics of cross-sex pairs. This is due to children's greater propensity to imitate same-sex models, and the increased likelihood for the child to be reinforced for exhibiting sex-role appropriate behavior.

Given the large differences between groups in the children's conduct problem behavior, it is somewhat surprising that parents in the two groups did not display more behavioral differences, or that the parent and child behavior were not more closely associated. It is important to note that the girls in the two groups did not differ significantly in terms of social competence, and this may account to some extent for the relative lack of significant results.

Consistent with prior research (Emery & O'Leary, 1982), the children's perception of the marriage tended to be related to the parents' perception of the marriage. More difficult to address is the finding that the children's perception of the marriage was positively related to mothers' ratings of the children's conduct-disorder behavior, whereas the children's marital perception was negatively related to their own self-reported conduct-disorder behavior. This former result is inconsistent with previous research (Emery & O'Leary, 1982), and it seems to indicate that the children in the current study may view at least some aspects of the family relationships differently than do the parents. Additionally, it calls into question the validity of asking children to rate their own problem behavior and/or the marital relationship.

Acknowledgment of methodological limitations of the current study is essential to a clear interpretation of the results. First, obtaining subjects by soliciting volunteers from the community limits the generalizability of the study findings. Those people who responded to the advertisement and volunteered to participate in research may differ systematically from non-volunteers. Second, an independent source of information was not collected. While perceptions were obtained from three members of each family, it remains possible that each member views the family in a uniformly biased way. An outside rater may provide a more accurate, unbiased account of the child's and parents' behavior patterns. Finally, owing to the small sample size, all results must be interpreted with caution. Although the number of significant correlations was greater than that expected by chance, the current study should be viewed as preliminary and as an initial attempt to delineate variables associated with conduct problem behavior in girls. The results provide some guidance in terms of family variables to examine in future studies of conduct-disordered female children.

In sum, the relatively weak associations found here between conduct problems in girls and parental variables further highlights the apparent discrepancy between the magnitude of the relationship between family stress and childhood behavior problems for girls versus boys. Hypotheses generated to explain the seemingly differential response of boys and girls to family stress are detailed elsewhere (O'Leary & Emery, 1982; Rutter, 1970; Rutter & Garmezy, 1983). Continued research is necessary to further identify variables that are related to the development and maintenance of conduct problems in females (e.g., peer influences, multiple stressors).

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