

Relationships Between Maternal Parenting Stress and Child Disruptive Behavior

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Abstract:

This study examined statistically the differential relationships among child domain and parent domain scores of the Parenting Stress Index (PSI) and child disruptive behaviors as measured by the problem and intensity scales of the Eyberg Child Behavior Inventory (ECBI). As were 165 children ages 2-10 referred for psychological evaluation. The PSI child domain and parent domain scores were significantly correlated with the ECBI intensity and problem scores and, as hypothesized, child domain scores were significantly more highly correlated with ECBI scores than were parent domain scores. Correlations of the ECBI problem and intensity scores with the PSI were not significantly different. In contrast to a previous study, no differences were found between single- and two-parent families in the number of disruptive child behaviors reported as problems. Analyses of sample differences suggested that, as the frequency of children's disruptive behaviors increases, spouse support may be less effective in buffering maternal parenting stress.

Article:

Child disruptive behaviors have been consistently associated with maternal stressors such as marital distress (Johnson & Lobitz, 1974), depression (Griest, Wells, & Forehand, 1979), anxiety (Patterson, 1980), and isolation (Wahler, 1980). The Parenting Stress Index (PSI; Abidin, 1990) is a widely used instrument designed to measure significant sources of maternal stress in the parent-child system arising from both child characteristics (Child Domain) and from parent characteristics (Parent Domain). Although the previously identified maternal stressors associated with child behavior problems are included within the Parent Domain, and child disruptive behaviors are included within the Child Domain, factor analyses of the PSI suggest that the Child and Parent Domains measure discrete sources of parenting stress.

Few studies have examined relationships between sources of stress on the PSI and disruptive child behavior on independent measures. Mash and Johnston (1983) found significant correlations between both of the PSI Domain scores and the Externalizing Scale score of the Child Behavior Checklist. Bendell and colleagues (Bendell, Stone, Field, & Goldstein, 1989) found significant correlations between the PSI Domain scores and scores on the Eyberg Child Behavior Inventory (ECBI). In both studies, mothers' ratings of the frequency of disruptive child behaviors appeared to be more highly related to sources of parenting stress arising from child characteristics than from parent characteristics, although the differences in correlation magnitude were not tested. Thus, the first purpose of this study was to examine the differential relationship between sources of parenting stress as rated on the PSI and disruptive child behaviors as rated on the ECBI.

The second purpose was to examine the differential relationship between the PSI total stress score and the ECM Intensity and Problem Scales. The Problem Scale measures the number of individual disruptive behaviors reported as problems for the parent, and has been found to correlate more highly with maternal marital distress than does the Intensity Scale, which measures the frequency of occurrence of all disruptive behaviors (Webster-Stratton, 1988). Consistent with this, we found that single-parent mothers reported higher scores on the Problem Scale than did mothers in intact families, despite similar ratings on the Intensity Scale (Boggs, Eyberg, & Reynolds, 1990). Single-parent mothers of handicapped infants have previously been found to experience more stress than mothers in two-parent families (Beckman, 1983). These findings led us to speculate that the ECBI

Problem Scale may be more sensitive to maternal distress (Boggs et al., 1990). Thus we hypothesized that the Problem Scale would correlate more highly than the Intensity Scale with the PSI.

METHOD

Subjects

Subjects were drawn from files of children referred for evaluation between 1986 and 1990 at a university psychology clinic. The PSI and the ECBI are routinely administered during child evaluations in this clinic, and parents of all children evaluated in this clinic sign a consent form allowing data from their records to be used for research purposes. All children between the ages of 2 and 10 years who had a PSI and ECBI completed by the mother or maternal guardian were included.

The sample consisted of 165 children, with an average age of 5.5 years ($SD = 2.1$). Children were 75% male, and racial composition was 77% White, 16% African-American, 4% Hispanic, and 3% other. Information on family composition (single-versus two-parent) was available for 92% of the sample. Forty-seven percent of the children lived with both biological parents, 38% lived with their mother only, and 7% lived with their biological mother and stepfather. Eight percent lived in foster homes or with other relatives. Most children (88%) had two or fewer siblings. Data on family socioeconomic status (SES) were available for 123 (74.5%) children. The sample was primarily lower to middle SES (83.7%), but included all five levels of social class as measured by Hollingshead and Redlich's (1958) Two-Factor Index of Social Position' (Class I = 2%, Class II = 8%, Class III = 24%, Class IV = 29%, Class V = 37%). Mean scores on all measures were above published normal limits in this sample.

Measures

Eyberg Child Behavior Inventory. The ECBI (Eyberg, 1974) is a 36-item parent rating scale of conduct problem behaviors for children between the ages of 2 and 16. Parents rate how often each behavior occurs on a 7-point frequency of occurrence scale ranging from *never* (1) to *always* (7), and the item ratings are summed to yield the Intensity score. Parents also indicate whether the behavior is currently a problem on a yes-no problem-identification scale, yielding the problem score, which is the sum of "yes" responses. Psychometric studies have established the internal consistency and stability of the measure (Robinson, Eyberg, & Ross, 1980). Concurrent validity of the ECBI has been documented (Boggs et al., 1990) and ECBI scores have been found independent of social desirability (Robinson & Anderson, 1983). Studies demonstrating significant differences between non-referred, conduct problem, neglected, and other clinic-referred children support the discriminative validity of the ECBI (Aragona & Eyberg, 1981; Eyberg & Robinson, 1983; Eyberg & Ross, 1978; Robinson et al., 1980).

Parenting Stress Index. The PSI is a 101-item inventory designed to measure stress in the parent-child system. It consists of 13 sub-scales that are grouped into a Child Domain (Adaptability, Acceptability, Demandingness, Mood, Distractibility/Hyperactivity, Reinforces Parent) and a Parent Domain (Depression, Attachment, Role Restriction, Sense of Competence, Social Isolation, Relationship with Spouse, Parent Health). Normative data have been provided for parents of children aged 12 years and younger (Abidin, 1990), internal consistency and retest stability have been demonstrated, and, Abidin (1990) has reviewed numerous studies documenting concurrent validity of the PSI.

RESULTS

Descriptive statistics on each test variable were as follows: ECBI problem score $M = 16.4$, $SD = 9.6$; ECBI intensity score $M = 140.1$, $SD = 41.2$; PSI total score $M = 266.9$, $SD = 49.1$; PSI child domain score $M = 132.6$, $SD = 26.4$; PSI parent domain score $M = 134.2$, $SD = 28.9$. Examination of demographic variables yielded no significant relationship between any of the PSI or ECBI scales and child's age, number of siblings, race, or SES, all $ps > .05$. No significant sex differences were found on the ECBI Problem Scale or the PSI scales, although the ECBI Intensity Scale was higher for boys than girls, $t(163) = 2.18$, $p < .05$. In addition, there were no significant differences on any PSI or ECBI scales reported by mothers in single- versus two-parent households, all $ps > .05$.

Scores used for all analyses were the raw scores of the ECBI Problem and Intensity Scales and the raw scores of the PSI Parent Domain, Child Domain, and Total Scale, The Shapiro-Wilk statistic, measures of skewness and kurtosis, and visual inspection of box plots and histograms indicated that scores on all measures were normally distributed. Therefore, Pearson product-moment correlations were used in all correlational analyses.

Correlations between the ECBI scores and the PSI scores are shown in Table 1. The PSI child domain and parent domain scores are significantly correlated with the ECBI problem and intensity scores and, as hypothesized, child domain scores are significantly more highly correlated with ECBI scores than are the parent do-main scores. In contrast to expectation, correlations of the ECM problem and intensity scores with the PSI were not significantly different, $T(164) = .271$.

DISCUSSION

Results of this study replicate previous findings showing that disruptive behavior is significantly correlated with maternal stress arising from both parent and child characteristics. These results also confirm statistically the stronger relationship between disruptive child behaviors and stress arising from child characteristics measured on the PSI. Because many items of the PSI Child Do-main tap child behavior problems, although different in specific item content and in format from ECM items, these results support the convergent validity between the PSI Child Domain and the ECBI scales.

The hypothesized differences between correlations of the ECBI Problem and Intensity Scales with the PSI were not found. Based in part on our previous results showing that single-parent mothers ,obtained higher problem scores but not higher intensity scores than mothers in intact families (Boggs et al., 1990), and the suggestion that single mothers experience more parenting stress (Beckman, 1983), we expected that the ECBI problem scores would correlate more highly than the intensity scores with the PSI. One striking difference between the Boggs et al. study and the present study was the finding of no significant difference on the ECM Problem Scale between single-and two-parent house-holds.

Table 1.

Correlations Between ECBI and PSI Scores

ECBI	PSI			T ^a
	Total	Parent	Child	
Problem	.60 ^{***}	.45 ^{***}	.62 ^{***}	3.09 ^{**}
Intensity	.59 ^{***}	.45 ^{***}	.59 ^{***}	2.45 [*]

$n = 165$.

^aWilliam's modification of Hotelling's T statistic (see Steiger, 1980) for difference in correlation magnitude between PSI Parent and Child Domains.

^{*}p < .02. ^{**}p < .01. ^{***}p < .0001.

To understand the discrepant findings as they might relate to our hypothesis, we first compared demographic variables between the two samples, which indicated no significant differences except age. The Boggs et al. sample included children aged 4 to 16. Therefore, reanalyses of the Boggs et al. data on single-versus two-

parent families were conducted for the children ages 10 and younger to evaluate whether differences previously found on the Problem scale were accounted for by the presence of children older than those in the present study. However, for these younger children from the Boggs et al. sample, ECM Problem scores were still found significantly higher for single-parent ($M = 15.7$, $SD = 10.4$) than two-parent ($M = 11.3$, $SD = 9.7$) families, $Z = 2.44$, $p < .02$.

Demographic differences (age, sex, race, number of siblings, SES) between the young children in the two study samples were nonsignificant. The only differences found between the young children in the two samples were their ECBI scores. In the Boggs et al. (1M) sample, significantly lower scores were obtained on both the Problem Scale ($M = 13.4$, $SD = 10.2$), $t(285) = 2.55$, $p < .01$, and the Intensity Scale ($M = 125.7$, $SD = 41.2$), $t(285) = 2.93$, $p < .01$. This sample difference may account for the discrepant findings.

It appears that mothers of children whose frequency of disruptive behavior is within the clinically significant range, as in the present study, find the behavior so stressful that they report it as problematic regardless of the availability of spouse support. However, as the frequency of disruptive child behavior approaches the average range (Boggs et al., 1990), single-parent mothers appear to find these behaviors more stressful than do mothers in two-parent homes. In these families, spousal support may serve as a buffer for maternal distress.

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