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Parent and Child Stress and Symptoms: An Integrative Analysis

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This study assessed major and daily stressful life events and psychological symptoms in a sample of young adolescents and their parents. The relation between major life events and symptoms was mediated by daily stressors for parents and their young adolescent children. Children's emotional and behavioral problems were associated with fathers' psychological symptoms but not with mothers' symptoms. Both mothers' and fathers' symptoms were associated with their sons' daily stressors, but girls' daily stressors were related only to their mothers' symptoms. Mothers' symptoms were associated with their husbands' daily hassles in families of young adolescent boys, and both parents' symptoms were associated with their spouses' hassles in families of adolescent girls. Highlights the importance of studying stress processes between individuals.

The study of stressful events during childhood and adolescence has established that major life events are related to emotional and behavioral problems in these age groups (see reviews by Compas, 1987; Johnson, 1986). Although this research has provided a strong foundation for the study of stress processes in adolescents and children, further research is needed to explore (a) the role of daily stressors in the lives of children and adolescents (i.e., clarification of stress processes *within* individuals) and (b) the relation of parents' and children's stressful events and symptoms with one another (i.e., clarification of stress processes *between* individuals).

Minor stressful events or daily hassles may play a critical role in understanding stress and symptoms within individuals. Studies have shown that daily stressors are more closely associated with symptoms than are major life events in adults (e.g., DeLongis, Coyne, Dakof, Folkman, & Lazarus, 1982; Holahan, Holahan, & Belk, 1984; Kanner, Coyne, Schaefer, & Lazarus, 1981; Monroe, 1983) and that daily stress may play a similarly important role in children and adolescents (e.g., Baer, Garmezy, McLaughlin, Pokorny, & Wernick, 1987; Compas, Davis, & Forsythe, 1985; Lewis, Siegel, & Lewis, 1984; Rowlison & Felner, 1988). Many of these studies have attempted to determine which type of stress, major or daily events, is most closely associated with symptoms. Alternatively, several authors have suggested that an integrative model of stress should include both types of events, because major events may lead to an increased number of daily stressors, which in turn may lead to symptoms (e.g., Felner, Farber, & Primavera, 1983; Kanner et al., 1981; Pearlin, Lieberman, Menaghan, & Mullan, 1981). A recent prospective investigation of stress and symptoms in older adolescents during the transition from high school to college found support for this hypothesis (Wagner, Compas, & Howell, 1988). That is, major events were related to daily stressors, which in turn were associated with psychological symptoms, but there was not an independent relation between major life events and symptoms. However, this mediational process has not been examined in a wider age range of adults, adolescents, and children.

A second direction for child and adolescent stress research involves the examination of stress and symptom relations between individuals. That is, from a social ecological perspective on child development (e.g., Bronfenbrenner, 1986), one would expect youngsters' psychological functioning to affect and be affected by levels of stress and symptoms experienced by others in their family. Specifically, the possibility that stressful events experienced by mothers and fathers are related to children's distress has been examined recently by Cohen, Burt, and Bjork (1987), Holahan and Moos (1987), Thomson and Vaux (1986), and Fergusson, Horwood, Gretton, and Shannon (1985). Holahan and Moos and Fergusson and colleagues found that major life events reported by parents were significantly related to mothers' reports of children's behavior problems. In contrast, Cohen and colleagues did not find significant relations between either maternal or paternal major life events and self-reports of depression, anxiety, or self-esteem by their (young adolescent) children. Thomson and Vaux (1986) found a significant relation between paternal major life events and child "affective balance" but no relation between fathers' major events and child depression nor mothers' major events and child depression or affective balance. Furthermore, Thomson and Vaux failed to find an association between parents' reports of daily stressors and child depression or affect. In general, these studies have not found evidence for a *direct* relation between parental major or daily

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stressful events and child or adolescent self-reported emotional problems.

Two factors may be important in further investigation of the relations between stress and symptoms among family members. First, the relation between stress experienced by a parent and children's emotional and behavioral problems may be indirect. Cognitive models of stress and coping (e.g., Lazarus & Folkman, 1984; Moos, 1984; Taylor, 1983) predict that the effects of a stressful event, whether experienced by the self or another, are affected by the *meaning* that the event holds for the individual. Thus, a stressful event experienced by a parent should be related to a child's level of distress if the event implies a significant level of threat to the child's personal well-being or to the functioning of the family as a whole. This level of meaning may not be apparent in the mere occurrence of the event but may depend on the parent's response to the stressor. If mother or father display little or no distress in response to a stressor, a child may perceive the event as relatively benign. If a parent displays symptoms of depression, anxiety, or other signs of psychological upset in association with a stressor, however, this may convey a high degree of threat to a youngster. Thus, the relation between parental stressful events and children's emotional and behavioral problems may be mediated by parental symptoms.

A second focus for research on stress and symptoms in families involves the relation of children's stressful experiences with parents' symptoms and associations between spouses' stress and symptoms. The cues that convey the meaning of a stressful event in the life of another may be different for adults than for children. Adults may have sufficient experience with the types of stressful events typically encountered by their spouse or children for these events to hold meaning for the individual independent of the other person's response to the events. For example, when a woman reports troubles with her employer, her husband may be able to infer that this has implications for her job security and, therefore, for the economic status of the family. As a result, the husband may experience substantial distress in direct response to this event in the life of his spouse. Just as daily stressors may mediate the relation between major life events and symptoms within individuals, it is plausible that ongoing daily stressors are most salient to spouses and account for the relation between spouses' stress and symptoms. Similarly, stressors experienced by a child or adolescent that come to the attention of a parent may be distressing to the parent independent of the relation between the stressor and the psychological distress expressed by the youngster. Prior studies have not investigated these possibilities in the relation between spouses' stress and symptoms or between children's stressful events and their parents' symptoms (e.g., Billings, Cronkite, & Moos, 1983; Billings & Moos, 1984, 1985; Cronkite & Moos, 1984; Thomson & Vaux, 1986).

The present study focused on pathways among family members' stress and symptoms and tested the following hypotheses: (a) Daily stressors mediate the relation between major life events and distress at the individual level, so that major events are related to daily stressors, which in turn are related to symptoms, but a direct link between major events and symptoms was not expected. This pattern was expected for parents and children. (b) Parents' stressful events affect children through the symptoms displayed by the parents. Thus, a direct relation between parents' major life events or daily hassles and children's emotional and behavioral problems was not expected. However, children's emotional and behavioral problems were expected to be directly associated with parental symptoms. (c) Children's stressful events were expected to be directly related to parents' psychological symptoms. (d) Husbands' and wives' psychological symptoms were expected to be related to their spouses' daily stressful events. On the basis of prior findings indicating gender differences in the occurrence of stressful events and in the association between stress and symptoms during adolescence (see Compas, 1987, for a review) as well as gender differences in parent–child relationships during adolescence (e.g., Jurkovic & Ulrici, 1985; Siegal, 1987; Silverberg & Steinberg, 1987; Steinberg, 1987), all analyses were conducted separately for males and females. Because the analyses reported here are based on cross-sectional data, they cannot be used to test true causal relationships among the variables. However, structural equation analyses were used as a first step in the identification of relations within a hypothesized model that warrant further analysis in longitudinal research (cf. Patterson, 1986).

Method

Subjects

Participants were 211 children and young adolescents (116 girls and 95 boys) and their parents living in the rural northeast portion of Vermont. Complete data were obtained from all 211 mothers of these children and from 162 fathers. These families represent a subset of two-parent families drawn from a sample of 309 families participating in a larger study of stress and coping in young adolescents and their parents. Only two-parent families were included because several of the hypotheses involved the relations between mothers' and fathers' stress and symptoms. The children and adolescents ranged from 10 to 14 years of age, with a mean of 12.01 years (SD = 0.97), and were attending the sixth through eighth grades. As is typical of the Vermont population, more than 98% of the families were White. The median family income was in the range from $20,000 to $24,999, ranging from less than $3,000 to more than $40,000. Mothers worked an average of 28.55 hr per week outside the home (SD = 18.14); fathers worked an average of 43.94 hr per week outside the home (SD = 14.11). Mothers had a mean of 13.18 years of school (SD = 2.52) and fathers an average of 12.80 years (SD = 3.21). Family socioeconomic status, as determined on the basis of education, occupation, gender, and marital status (Hollingshead, 1975), was as follows: Level I (unskilled laborer), 3%; Level II (semiskilled worker), 24%; Level III (skilled craftsperson, clerical worker), 28%; Level IV (medium business, minor professional), 34%; and Level V (major business or professional), 15%. The number of children in the families ranged from 1 to 6 with a mean of 2.65 (SD = 1.08).

Procedure

All students in the sixth, seventh, and eighth grades in six rural schools were given a letter of informed consent to take home to their parents. Approximately half of the available families volunteered to take part in the study. Participation was completely voluntary, and a $25 remuneration was given to each family for completion of the forms. Questionnaires were completed anonymously (identified only by a code number for each family).

Students completed their questionnaires at school in small groups of

approximately 10 students each, with a research assistant available to explain directions and answer any questions. The measures were administered in a 50-min session, and additional measures (not reported here) were completed in a second session 1 week later. Students were given an envelope containing questionnaires for their parents and were instructed to take these materials home and return the completed parent forms in a sealed envelope the following week at the second session.

Measures

Adolescent stress. The junior-high-school version of the Adolescent Perceived Events Scale (APES; Compas, Davis, Forsythe, & Wagner, 1987) was used to measure major and daily stressful events in the lives of the adolescents. The junior-high form of the APES contains a list of 164 major and daily life events representative of those experienced during early adolescence (five events related to sexuality were omitted at the request of local school officials, resulting in a measure with 159 items for the present analyses). For each event, respondents indicate whether the event has occurred within the past 3 months. If the event has occurred, subjects then rate the perceived desirability of the event on a 9-point scale (−4 = *extremely undesirable,* 0 = *neutral,* 4 = *extremely desirable*). Total weighted negative event scores were calculated by summing events rated as −4 through −1. Test–retest reliability of the junior-high-school version of the APES has been shown to be adequate over 2 weeks (r = .86; Compas et al., 1987).

In order to determine specific "major life event" and "daily event" scores, the events were categorized into two groups. All items that appear on adolescent major life event measures (Johnson & McCutcheon, 1980; Newcomb, Huba, & Bentler, 1981; Swearingen & Cohen, 1985) were categorized as major life events. The remaining events from the APES were independently categorized as major or daily events by three researchers familiar with this area. Categorization was based on agreement between at least two of three raters. All of the events were classified as either a major life event or a daily event, resulting in 58 major events (α = .73) and 106 daily events (α = .86). (Lists of the events are available from the authors.)

Adolescent behavior problems. Self-reports of adolescents' emotional and behavioral problems were obtained on the Youth Self-Report (YSR; Achenbach & Edelbrock, 1987), a checklist of 102 behavior problem items rated *not true, somewhat or sometimes true,* and *very true or often true* of the respondent. (The YSR also includes 16 socially desirable items that were excluded from the analyses.) Normative data for the Youth Self-Report Profile are based on nonreferred samples of children and adolescents. Test–retest reliability of the total behavior problem score over a 1-week period for clinically referred youngsters 11 to 18 years of age has been found to be excellent (r = .87; Achenbach & Edelbrock, 1987).

Parental stress. Separate measures were used to assess major life events and daily hassles recently experienced by parents.[1] The Life Experiences Survey (LES; Sarason, Johnson, & Siegel, 1978) was used to measure infrequent and dramatic life changes. Subjects rated these events for occurrence during the past year and the impact that they exerted on the respondent's life (either positive or negative). The negative impact scores were summed for a total weighted negative life event score. The test–retest reliability coefficients for negative event scores reported by Sarason et al. ranged from .56 to .88. The Hassles Scale (Kanner et al., 1981) was used to measure frequent and less dramatic events. These events were rated for occurrence during the past month and for the degree of severity to which the hassle was experienced. The severity ratings were summed to create a total hassles score.

Parental symptoms. The Symptom Checklist-90-Revised (SCL-90-R; Derogatis, 1983) was used to assess parental psychological and somatic symptoms. The checklist is a 90-item measure designed to assess a wide variety of symptoms. Respondents rate the extent to which they have been distressed by each symptom during the past week (0 = *not at all,* 4 = *extremely*). Test–retest reliability, internal consistency, and concurrent validity have all been shown to be adequate (Derogatis, 1983). The Global Severity Index (GSI), which is the sum of scores on individual items divided by the total number of items, was used in all analyses. Internal consistency of the GSI for the present sample was high (α = .98 for mothers and .97 for fathers).

Demographic questionnaire. Parents completed a demographic questionnaire concerning their marital status, age, education, income, and number of children in the family.

Table 1
Means and Standard Deviations for Parent and Child Stress and Symptom Measures

Measure	Boys		Girls	
	M	*SD*	*M*	*SD*
Mother				
Major life events	6.33	7.48	5.18	7.01
Daily hassles	32.67	26.47	31.33	24.68
Symptoms	0.59	0.52	0.58	0.46
Father				
Major life events	3.89	5.26	5.33	6.52
Daily hassles	24.12	20.19	28.69	24.32
Symptoms	0.37	0.34	0.39	0.31
Child				
Major life events	10.13	9.09	16.55	16.23
Daily events	25.80	21.77	37.51	26.49
Total behavior problems (T Score)	50.09	9.54	50.80	11.04

Results

Descriptive Statistics

Means and standard deviations for each of the measures are presented in Table 1.[2] Mean SCL-90-R scores were calculated using the formula for the GSI (see Derogatis, 1983). Means for the present sample corresponded to a T score of 60 for mothers

[1] The three measures of stressful events used in this study were designed to assess the occurrence of events during different periods of time: 3 months for the Adolescent Perceived Events Scale, 1 year for the Life Experiences Survey, and 1 month for the Hassles Scale. These time frames have been used in other studies of major events and hassles because the time frame for each is appropriate to the nature of the events being measured (e.g., DeLongis, Coyne, Dakof, Folkman, & Lazarus, 1982; Kanner, Coyne, Schaefer, & Lazarus, 1981; Rowlison & Felner, 1988). Because these formats are used in standard administrations of these measures, they were adhered to in the present study. However, the effect of the varying time frames of these measures on the findings of this and other studies is unclear.

[2] The univariate distributions for major events and daily stressors for mothers, fathers, and children and for symptoms for mothers and fathers were all highly positively skewed. Because LISREL assumes a multivariate normal model, square-root transformations were used on these variables to achieve a closer approximation of normality. The means and standard deviations presented in Table 1, however, refer to raw data to allow comparison with findings from other studies.

Table 2
Pearson Correlations of Parent and Child Stressful Events and Symptoms: Girls

Measure	1	2	3	4	5	6	7	8	9
Mother									
1. Major events	—	.528***	.329***	.487***	.546***	.443***	.138	−.127	.225**[a]
2. Daily hassles		—	.486***	.222*[a]	.524***	.342***	.020	−.128	.198*[a]
3. Symptoms			—	.225*[a]	.383***	.450***	.123	.111	.214*[a]
Father									
4. Major events				—	.546***	.352***	.197*[a]	.028	.125
5. Daily hassles					—	.601***	.171	−.155	.161
6. Symptoms						—	.026	−.226*[a]	.191*[a]
Child									
7. Major events							—	.706***	.436***
8. Daily events								—	.362***
9. Behavior problems									—

[a] Considered significant by chance.
* $p < .05$. ** $p < .01$. *** $p < .001$.

and a T score of 58 for fathers when compared with the nonpatient norms on the measure (Derogatis, 1983). A multivariate analysis of variance (MANOVA) indicated that mothers reported significantly more symptoms than fathers, $F(1, 322) = 5.26, p < .001$. Univariate analyses of variance (ANOVAs) indicated that mothers reported more total symptoms as well as symptoms of interpersonal sensitivity, depression, and anxiety. Mean total behavior problems scores on the YSR Profile for this sample were in the average range (on the basis of the norms for the measure; Achenbach & Edelbrock, 1987), with a T score of 50.09 (SD = 9.54) for boys and 50.80 (SD = 11.04) for girls. The families of young adolescent boys and girls did not differ on any of the parent stress and symptom measures or on demographic variables. Boys and girls differed on weighted negative major life events, with girls (M = 16.55; SD = 16.23) reporting more stress than boys (M = 10.13; SD = 9.09), $F(1, 172) = 8.46$, $p = .004$. They also differed on weighted negative daily events, with girls (M = 37.51; SD = 26.49) reporting more stress than boys (M = 25.80; SD = 26.49), $F(1, 172) = 9.06$, $p = .003$.

Correlational Analyses

Statistical comparison of the intercorrelation matrices for families of boys and girls (using an approach derived by Jennrich, 1970) demonstrated that the two matrices were significantly different, $\chi^2(36) = 52.32$, $p = .039$, providing further support for the decision to conduct all subsequent analyses for the two sexes separately. Because the analyses were in terms of correlations rather than covariances, and because there were no significant differences among the variances for boys and girls on any variables, the comparison of correlation matrices rather than covariance matrices was appropriate. Family-wise error rates were controlled for in each correlation matrix using an ordered Bonferroni procedure (Larzelere & Mulaik, 1977). As expected, for families with young adolescent girls in the home (see Table 2), major events were correlated with daily stressors, and daily stressors were correlated with symptoms for mothers, fathers, and girls.[3] Correlations between girls' emotional and behavioral problems and mothers' symptoms (r = .214) and fathers' symptoms (r = .191) were not considered significant after controlling for error. Girls' daily stressors were not related to mothers' or fathers' symptoms. As hypothesized, mothers' hassles were related to fathers' symptoms (r = .342), and fathers' hassles were associated with mothers' symptoms (r = .383).[4]

[3] Correlations between self-reports of daily hassles and psychological symptoms must be examined cautiously in light of previous concerns about the possible confounds between measures of these two variables (Dohrenwend, Dohrenwend, Dodson, & Shrout, 1984; Dohrenwend & Shrout, 1985; Lazarus, DeLongis, Folkman, & Gruen, 1985). To examine the possibility of confounding in the present data, separate correlations for a subsample of mothers and fathers were run with a set of items on the Daily Hassles Scale identified as being confounded with the Symptom Checklist-90-Revised included in the analyses and excluded from the analyses (see Dohrenwend et al., 1984; Lazarus et al., 1985). The correlations were unchanged for mothers (r = .63 vs. r = .65) and for fathers (r = .64 vs. r = .63). However, the possibility still remains that these measures are confounded in that some hassles may be the result of psychological symptoms.

[4] Several items on the Adolescent Perceived Events Scale (APES) refer to events involving parents and, thus, may be confounded with parents' reports of their symptoms on the Symptom Checklist-90-Revised (SCL-90-R). A total of 24 items on the APES referring to parents were identified, and the correlation of these items with mothers' SCL-90-R Global Severity Index scores (r = .187) did not differ from the correlation of the nonparent-related APES items with mothers' SLC-90-R scores (r = .143); the correlation of APES items referring to parents with fathers' SCL-90-R scores (r = .185) did not differ from the correlation of items not referring to parents (r = .076). The possibility of a similar problem was identified in the correlations between spouses' Daily Hassles and SCL-90-R scores, because some of the items on the Daily Hassles Scale may represent stressors experienced by both spouses. Correlations between the subscales of the Hassles Scale (work, practical, setting, family, economics, and health hassles; Kanner, 1982) and spouses' SCL-90-R scores were run to test whether subscales containing items likely to be experienced by both spouses (practical, setting, family, and economics) were more highly correlated with spouses' symptoms than subscales containing items that were not likely to be experienced by both spouses (work and health). No differences were found for fathers' work or health hassles or mothers' health hassles. Only the correlation of mothers' work

Table 3
Pearson Correlations of Parent and Child Stressful Events and Symptoms: Boys

Measure	1	2	3	4	5	6	7	8	9
Mother									
1. Major events	—	.519***	.375***	.401***	.290**[a]	.332***	.193*[a]	.093	.097
2. Daily hassles		—	.587***	.264*[a]	.467***	.487***	.206*[a]	.154	−.040
3. Symptoms			—	.180	.432***	.608***	.167	.316**	.157
Father									
4. Major events				—	.540***	.369***	−.011	−.007	−.063
5. Daily hassles					—	.757***	.043	.097	.025
6. Symptoms						—	.087	.262	.305***
Child									
7. Major events							—	.648***	.333***
8. Daily events								—	.428***
9. Behavior problems									—

[a] Considered significant by chance.
* $p < .05$. ** $p < .01$. *** $p < .001$.

With regard to the families of young adolescent boys (see Table 3), the correlations between major events and daily stressors and between daily stressors and symptoms were significant for mothers, fathers, and boys. After controlling for chance, boys' emotional and behavioral problems were significantly related to fathers' symptoms ($r = .305$) but not to mothers' symptoms. Mothers' symptoms but not fathers' symptoms were significantly related to boys' daily stressful events ($r = .316$). The correlations between mothers' daily hassles and fathers' symptoms ($r = .487$) and fathers' daily hassles and mothers' symptoms ($r = .432$) were significant.

Causal Modeling Analyses

The hypothesized model of the relations between major events, daily events, and psychological symptoms among mothers, fathers, and their children was represented by a set of simultaneous equations.[5] Each structural equation expresses a variable as a linear function of all prior variables in the model and represents an improvement over simple bivariate correlations by accounting for relations among all of the variables in the model simultaneously. The set of simultaneous equations was solved using maximum likelihood estimation by means of the LISREL VI computer program (Jöreskog & Sörbom, 1986). We selected LISREL over multiple regression in the present analyses for three reasons. First, LISREL can take into account correlations between disturbances of two variables in a model. In this case, it was assumed that other factors (disturbances) affecting mothers' and fathers' daily hassles and symptoms (e.g., economic factors) would be correlated across parents and that this should be reflected in the model. Second, LISREL provides several indicators of the goodness of fit of the data to the hypothesized model. Because we were interested in relations of stress and symptoms among mothers, fathers, and children (i.e., the family was the unit of analysis), we felt it would be important to evaluate the overall status of the hypothesized model rather than only the significance of individual paths within the model. Third, LISREL generates a set of modification indices to reflect paths that, if added to the model, could improve its overall goodness of fit. Although it is important not to modify a model solely on the basis of these indices, given the early stage of research in this area, we believed that the modification indices could be useful in identifying paths that warrant further research. On the basis of findings from prior research (Compas, 1987; Jurkovic & Ulrici, 1985; Siegal, 1987; Silverberg & Steinberg, 1987; Steinberg, 1987) and the significant difference between the correlation matrices for families of boys and girls, models were tested separately for these two groups.

We chose not to take advantage of one of the major strengths of LISREL: the ability to use latent variables that are based on multiple measures of the same construct (see Anderson, 1987, for an example of structural equation analyses with only manifest variables). To obtain multiple measures of parent and child major and daily stressors and symptoms, we would have needed

hassles with fathers' symptoms was significantly lower than the correlations of the other subscales of mothers' hassles. Thus, the association between spouses' hassles and symptoms does not appear to be attributable solely, or substantially, to hassles that were experienced by both spouses.

[5] The analyses were based on correlations computed with pairwise deletion. We chose to use pairwise deletion, rather than the more standard casewise deletion, because there were substantially less data for fathers ($n = 162$) than for mothers and children ($n = 211$). If we were to use casewise deletion, we would sacrifice the greater precision of the estimates of correlations within and between mothers and children. The disadvantages of using pairwise deletion were outweighed by the advantages of greater precision. Furthermore, although the number of subjects necessary for conducting structural equation analyses cannot be set independently of the number of variables and paths tested in the model, several authors have suggested that reliability of the findings decreases substantially with samples under approximately 100 (e.g., Tanaka, 1987). By using pairwise deletion, we were able to retain samples of 116 girls and their mothers and 95 boys and their mothers. All tests of significance in the LISREL analyses were based on the minimum sample size for the calculation of any correlation, thus keeping the tests conservative.

Table 4
Evaluations of Models of Mothers', Fathers', and Girls' Major Events, Daily Events, and Psychological Symptoms

	Model tests				Model comparisons (M_0 vs. M_1)	
Model	χ^2	*df*	R^2	GFI	χ^2	*df*
M_0	236.42**	33				
M_1	37.40*	19	.717	.895	199.02**	14

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

to use brief measures of each construct in order to avoid overburdening the participants in the study (cf. Martin, 1987). We chose instead to use measures of each construct that we believe to be the most comprehensive and psychometrically sound of measures available. Each of these scales is quite long, however, prohibiting the use of multiple indicators of each construct.

The adequacy of each of the models as explanations of the data for the families of girls, as well as for comparisons between the models, is presented in Table 4. The null model, M_0, in which no paths are hypothesized, was not expected to fit the data and clearly does not do so: $\chi^2(33) = 236.42$, $p < .001$. This model serves solely as a base against which to compare a hypothesized model (M_1). As indicated in Table 4, M_1 is a significantly better fit to the data than M_0. The standardized structural coefficients for the hypothesized paths in M_1 are presented in Figure 1. Consistent with the hypotheses, the paths from major to daily events and from daily events to symptoms were significant for mothers, fathers, and girls.[6] The hypothesized relation between girls' daily stressful events and their parents' symptoms was partially supported, because the path from girls' daily stressors to mothers' symptoms was significant but the path from girls' daily stressors to fathers' symptoms was not. The hypothesis that spouses' hassles and symptoms would be related was partially supported, because the path from fathers' hassles to mothers' symptoms was significant but the path from mothers' hassles to fathers' symptoms was not. Finally, the hypothesized paths from parents' symptoms to their children's behavior problems received partial support, because fathers' but not mothers' symptoms were significantly related to girls' self-reported emotional and behavioral problems. As expected, the disturbances for parents' hassles and symptoms were significantly related.

Although M_1 is a significantly better fit than the null model and supports some of the hypotheses, it contains a number of nonsignificant pathways and is not a completely adequate fit to the data, $\chi^2(19) = 37.40$, $p = .007$ (the goodness-of-fit value was .895). The modification indices generated by LISREL suggested a modification of the model so that the direction of the path between girls' daily stressors and fathers' symptoms was from fathers' symptoms to girls' daily stressors and was negative in valence ($\beta = -.244$). The substitution of this path did reduce the chi-square value, $\chi^2 = 30.02$, $p = .049$, and improved the overall Goodness of Fit Index (.917). However, it is important not to give undue weight to paths that are not predicted by the model being tested and are based only on the empirically based indices generated by LISREL (e.g., Biddle & Marlin, 1987). Thus, the adoption of a revised model including this path was not warranted. However, this path between fathers' symptoms and girls' daily stressors deserves attention in future research.

Similar analyses were conducted for the families of young adolescent boys, and the adequacy of the models to explain the data as well as comparisons between the models are presented in Table 5. The null model (in which no paths were hypothesized) did not represent the data as reflected by the highly significant chi-square, $\chi^2(33) = 226.82$, $p < .001$. The hypothesized model (M_1; see Figure 2) was a significantly better fit than the null model and did represent an adequate fit to the data as represented by the nonsignificant chi-square, $\chi^2(19) = 19.42$, $p = .430$ (the goodness-of-fit value was .938). The hypothesized paths from major events to daily events and from daily events to symptoms were significant for mothers, fathers, and boys. The hypothesized paths from boys' daily stressors to both mothers' and fathers' symptoms were significant. The path from fathers' symptoms to boys' emotional and behavior problems was significant, but the path from mothers' symptoms to boys' problems was not significant. Finally, the paths between fathers' daily hassles and mothers' symptoms and between mothers' daily hassles and fathers' symptoms were significant. Again, as expected, the disturbances for parents' hassles and symptoms were significantly related.

Discussion

These findings are useful in clarifying stress–symptom relations within individual family members as well as among family members. The hypothesized model in which daily stressors mediate the relation between major life events and psychological symptoms was supported for mothers, fathers, and their young adolescent children in the structural equation analyses. The paths from major events to daily hassles and from hassles to symptoms were significant in each case. The present findings extend those reported by Wagner et al. (1988) with older adolescents to young adolescents and their parents. It appears that the relation between major life events and psychological distress is mediated, to a great extent, by daily stressors. These daily stressors appear to be more psychologically salient than major events and, thus, more closely related to psychological symptoms. These findings are made more compelling because they do not appear to be the result of possibly confounded items on the Hassles Scale and the SCL-90-R such as those identified by Dohrenwend and colleagues (Dohrenwend et al., 1984; Dohrenwend & Shrout, 1985).

Consistent with previous studies by Cohen et al. (1987) and Thomson and Vaux (1986), a significant relation was not found between parents' stressful events and children's self-reports of emotional and behavioral problems. Partial support was found for the hypothesis that this relation would be mediated by the

[6] When direct paths from major life events to symptoms were added for parents, boys, and girls, these paths were generally not significant. These results support those reported by Wagner, Compas, and Howell (1988).

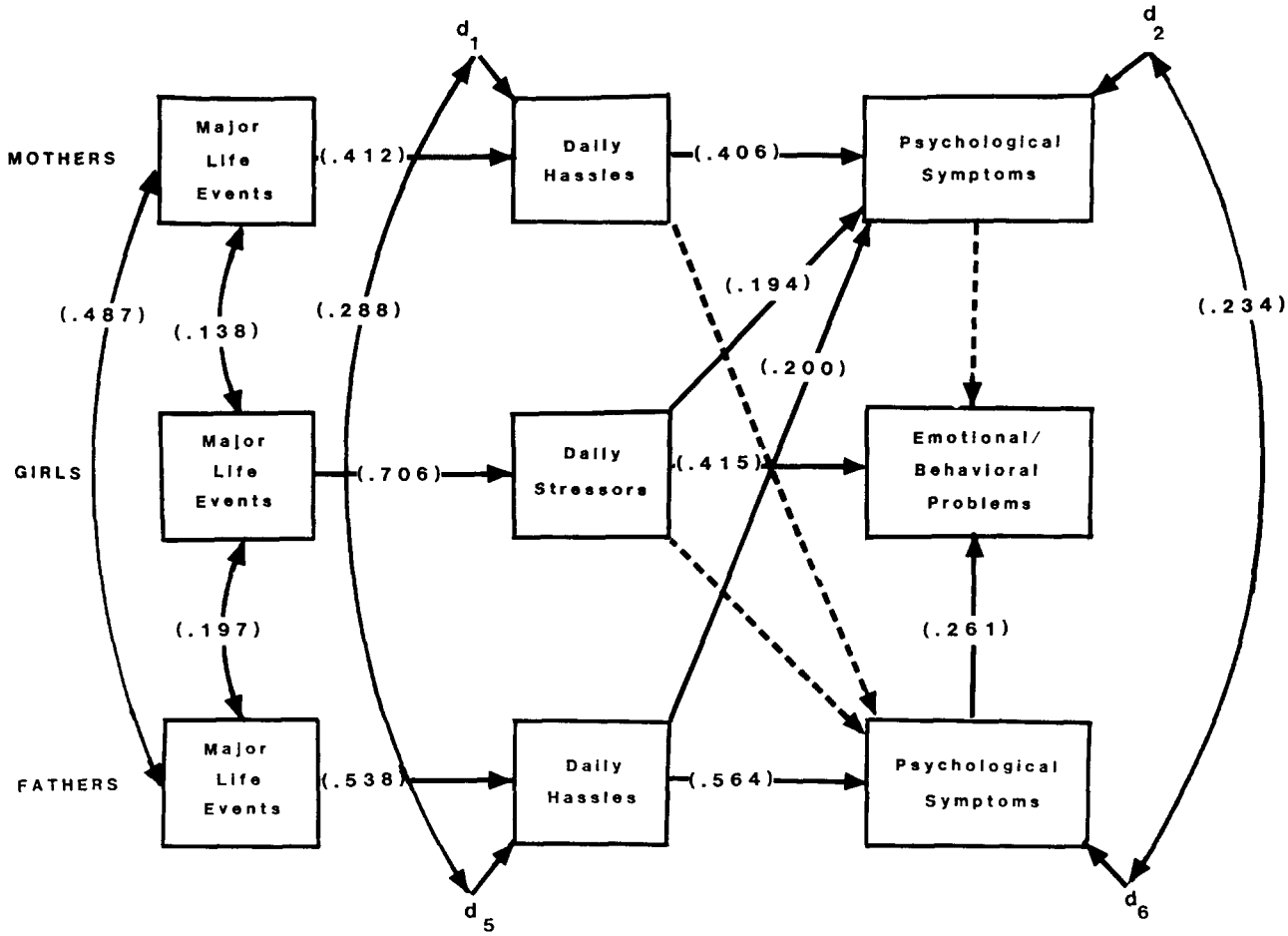

Figure 1. Hypothesized model of mothers', fathers', and girls' major events, daily events, and psychological symptoms. (Significant paths are represented by solid lines and nonsignificant paths by dotted lines. Values in parentheses represent standardized structural coefficients.)

level of psychological symptoms displayed by parents in association with their own self-reported stressful events, because the paths from fathers' but not mothers' symptoms to girls' and boys' emotional and behavioral problems were significant in the structural equation analyses. From the perspective of a cognitive model of stress, these findings indicate that fathers' symptoms held considerably greater emotional meaning for the present sample of young adolescent boys and girls than did symptoms of psychological distress displayed by their mothers. Given the higher base rate of a variety of symptoms reported by mothers in this sample, fathers' symptoms may be more salient and have greater impact because they occur less often. Alternatively, fathers may exert greater influence on the functioning of others in the family because of imbalances in interpersonal power dynamics. Whereas the presence of clinical depression in mothers is associated with increased disturbance in children (e.g., Beardslee, Bemporad, Keller, & Klerman, 1983; Hammen et al., 1987; Orvaschel, 1983), the present findings suggest that subclinical levels of parents' symptoms may relate to children's adjustment in a different manner. The present findings underscore the importance of obtaining data from both mothers and fathers when examining stress and symptoms in families.

Table 5
Evaluations of Models of Mothers', Fathers', and Boys' Major Events, Daily Events, and Psychological Symptoms

	Model tests				Model comparisons (M_0 vs. M_1)	
Model	χ^2	*df*	R^2	GFI	χ^2	*df*
M_0	226.82*	33				
M_1	19.42	19	.648	.938	207.40*	14

* $p < .001$.

With regard to the relations between children's stressful events and parents' symptoms, significant paths were found from boys' daily stressors to mothers' and fathers' symptoms and from girls' daily stressors to mothers' symptoms. These

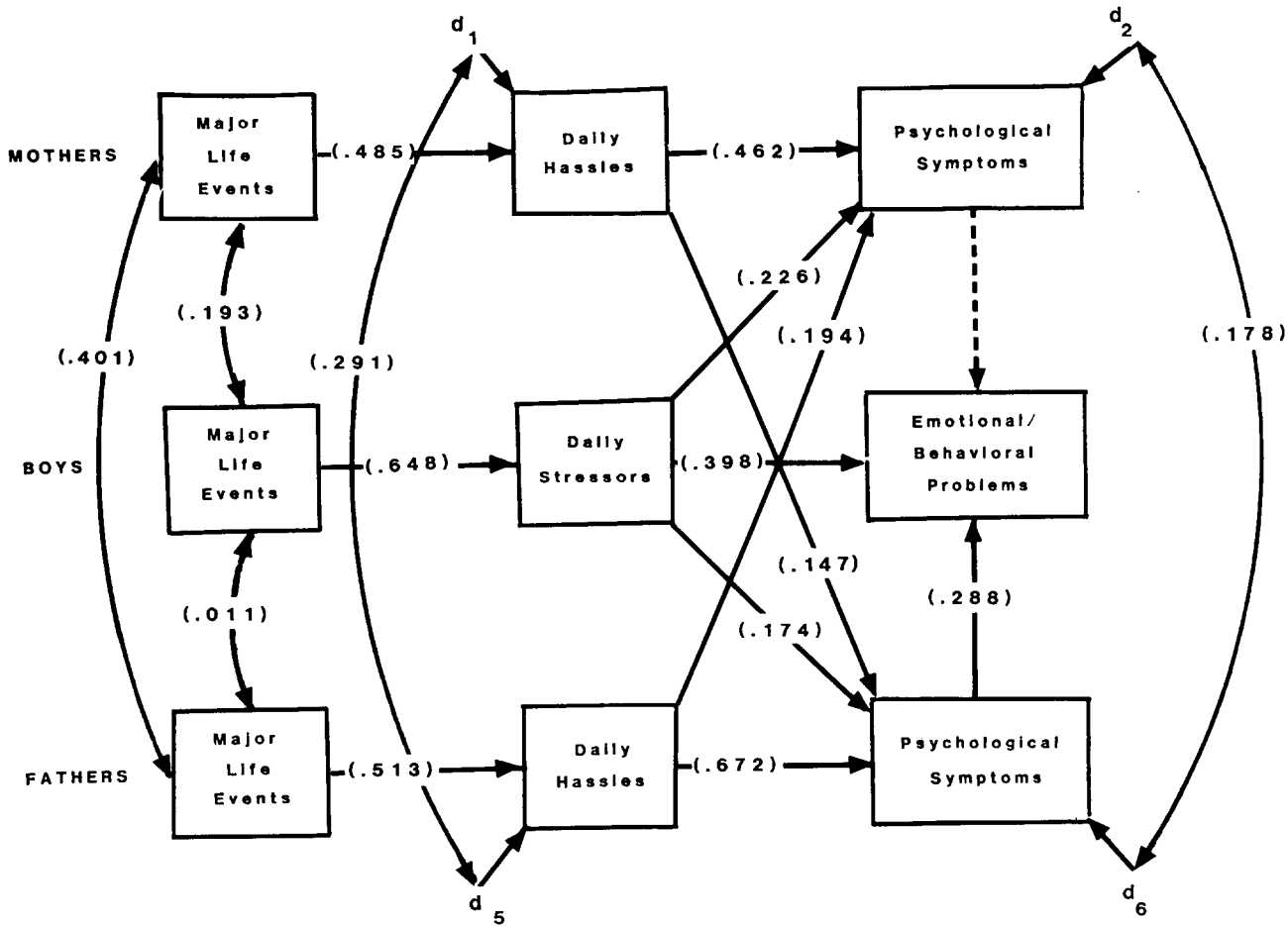

Figure 2. Hypothesized model of mothers', fathers', and boys' major events, daily events, and psychological symptoms. (Significant paths are represented by solid lines and nonsignificant paths by dotted lines. Values in parentheses represent standardized structural coefficients.)

paths provide support for the hypothesis that parents may be able to infer meaning from stressful events experienced by their children and, thus, are directly affected by these events. Modification indices suggested a negative path from fathers' symptoms to girls' daily stressors that was not included in the hypothesized model that we tested in the structural equation analyses. Although we chose not to develop an alternative model including this path, we believe that it is worthy of examination in future research. This pattern may reflect a tendency for young adolescent girls and boys to be affected differently by parental functioning (Siegal, 1987), a finding that would be consistent with evidence indicating that emotional autonomy and independence are encouraged at an earlier age for boys than for girls (Jurkovic & Ulrici, 1985).

The hypothesized paths between spouses' stress and symptoms were also supported in the correlational and structural equation causal modeling analyses. Correlational analyses for the entire sample corroborate earlier findings by Thomson and Vaux (1986), because spouses' daily hassles and symptoms were significantly related. In the structural equation analyses, the paths from fathers' hassles to mothers' symptoms were significant in families of both boys and girls, whereas the path from mothers' hassles to fathers' symptoms was significant only in boys' families. These findings are generally consistent with the notion that parents' symptoms would be directly related to their spouses' stressful events separately from the symptoms displayed by their spouses. Further analyses are needed to identify possible differences between husbands and wives in their sensitivity to various subtypes of hassles. Whereas previous studies have found adult women to be more affected by stress in the lives of others than are men (e.g., Kessler & McLeod, 1984), the present findings indicate that both mothers' and fathers' psychological symptoms may be related to stressors experienced by their spouses.

Although the model for families of young adolescent girls failed to generate a completely adequate fit to the data (as reflected by the significant chi-square and a goodness-of-fit value of .895, slightly below .90), the model for boys' families did achieve an adequate fit to the data, and the models for both boys' and girls' families did explain substantial portions of the variance in stress and symptoms (R^2 = .717, for families of girls, and R^2 = .648, for families of boys). These findings provide gen-

eral support for a model of stress and symptoms in families that includes both intraindividual and interindividual relations and underscore the need to examine the social context—in this case, the family—in which stress and symptoms develop. Although the general appearance of the models is approximately the same for boys and girls, given that research in this area is still at an early stage, we believe it is important to examine data such as these for possible gender differences.

Finally, several limitations of the present study must be noted. First, this investigation focused on triads within the family involving two parents and one child. Studies of stress and symptom relations including all family members will be necessary for the development of a complete model of interindividual stress and symptom processes in families. Second, it was hypothesized that the meaning of stressful events in the lives of parents is communicated to their children, at least in part, through the symptoms displayed by the parents. Direct reports of children's perceptions of the meaning of their parents' symptomatic behavior are necessary to fully validate this hypothesis. Third, because these analyses are based on cross-sectional data, they cannot be used to test true causal relationships among the variables. In fact, prospective studies of adolescents have indicated that symptoms may lead to increased stressful events (e.g., Cohen et al., 1987) or that stress and symptoms are reciprocally related (e.g., Compas, Wagner, Slavin, & Vannatta, 1986). Future studies that make use of prospective-longitudinal designs will be important in examining further this model of stress within families.

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