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Parental Emotional Support and Subsequent Internalizing and Externalizing Problems Among Children

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ABSTRACT. This study examined the association between early emotional support provided by parents and child internalizing and externalizing problems, using a nationally representative, longitudinal sample of 1361 children. Parental emotional support was assessed using the Home Observation for the Measurement of the Environment, incorporating both parent report and interviewer observation. We found that, controlling for child externalizing problems at age 6 years, parental emotional support at age 6 years was negatively related to child externalizing problems at age 8 years. A developmental model that assessed the timing of the emergence of this relationship was then analyzed by including parental emotional support at ages 2, 4, and 6 years as predictors of child externalizing problems at age 8 years. The developmental model suggested that less parental emotional support as early as age 2 years is associated with later externalizing problems in children. This study discusses the importance of very early parental emotional support in promoting positive child development. *J Dev Behav Pediatr* 26:267–275, 2005. Index terms: *parenting, emotional support, child internalizing, child externalizing.*

Many theories of child socialization, including cognitive, social learning, and attachment theories, posit a close relationship between parental caregiving patterns and child adjustment and behavior. It is likely that a transaction between child (e.g., dysregulated temperament¹) and parent characteristics contribute to the development of emotional and behavioral problems.² For example, children with more irritable temperaments may evoke certain types of negative parenting that in turn exacerbate behavior problems.³ One dimension of the parent-child dynamic that consistently emerges in the research literature with respect to child emotional and behavioral problems is parental supportiveness.⁴ Parental supportiveness refers to the emotional relationship with the child and ranges from warm, responsive, child-centered behavior to rejecting, unresponsive, unengaging behavior. Retrospective studies suggest that clinically anxious women recall their own childhood home environments as lacking in warmth and support⁵ and that

anxious and depressed adults described their family environments as characterized by low warmth and high control.⁶ Children with significant depression or anxiety perceive their parents to be less accepting and less supportive than children without such problems, and observation of interaction patterns in such families corroborates the reports of youths.^{6–8} Empirical studies have found that lower parental warmth, involvement, and nurturing behavior are linked to children's aggression and externalizing problems.^{9–13} Spanking has been associated with an increase in behavioral problems in the context of low but not high emotional support.¹⁴ Thus, a relationship between parental emotional support in childhood and individuals' psychological adjustment in both childhood and adulthood has been well-established.^{15,16}

Despite the growing body of research suggesting that parental support may play a key role in the development or maintenance of children's internalizing and externalizing problems, there are several limitations to the literature. First, most studies have been conducted with relatively small clinic or school-based populations. Although important in garnering preliminary evidence about the role of parenting in children's mental health, these studies are limited in generalizability. Second, most studies have been cross-sectional in nature, with a few that have examined associations more

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longitudinally. Cross-sectional data do not allow more complex research questions to be answered nor inferences to be made about changes over time. Third, the vast majority of these studies have been with white samples or have not had the power to examine racial differences. Race has been found to be an important moderator of the relationship between harsh parenting and child outcomes in some studies^{17,18} and bears further examination as it pertains to emotional support. Fourth, maternal depression, which has been found to have particularly adverse effects on both parenting and child outcomes, has only been addressed with parenting and child psychopathology in a few studies. Fifth, some studies have combined both internalizing and externalizing into a single “behavioral problems” index when in fact the development of such disorders might be quite distinct. Finally, many studies rely on the same source (e.g., the mother) to provide information about both parenting and the behavioral outcome of interest. The resulting single-method correlations may inflate true associations between variables.¹⁹

Another limitation to the current body of literature is that most studies have assessed parenting only at one time point, usually after the child has reached school age, limiting the ability to determine at what stage in development there is an impact of parental emotional support on childhood behavior problems. The few studies that have assessed parental support with preschool-age children suggest that this relationship may emerge quite early in childhood. One study found that supportive parenting measured before kindergarten predicted school adjustment in grade 6, even after controlling for kindergarten adjustment and harsh parenting.²⁰ A second study, conducted cross-sectionally with identical twin preschoolers, found that the child who received more supportive parenting was lower in negative mood and behavior problems compared with his or her twin.²¹ A third study found that toddlers who had relatively less warm relationships with their caregivers were at risk of later externalizing behavior.²² Thus, there is reason to believe that parental support may be important very early in development, but the particular timing of this effect remains unexplored. Understanding when the role of parental support becomes an important factor in the development of child psychopathology has important implications for prevention and intervention.

In this study, we used a large, nationally representative sample to assess longitudinally the effects of early parenting style on the subsequent development of child psychopathology. We examined the relationship between parental emotional support and child internalizing (e.g., depression and anxiety) and externalizing (e.g., opposition, aggression) problems while addressing many of limitations of previous research. Use of a nonclinical sample allowed significant risk factors to be tested in the population at large and may bolster the development of public health approaches to preventing child psychopathology. Using a longitudinal framework allowed us to assess parental emotional support at age 6 years as it relates to child internalizing and externalizing problems at age 8 years, over and above any continuity in child internalizing/externalizing problems from ages 6 to 8 years. We controlled for other risk factors

that have been associated with children’s behavior problems in childhood in previous studies to attend to potential confounding factors. These included gender, race/ethnicity, gestational age at birth, birth order, maternal substance use during pregnancy, household composition, maternal education level, and maternal depression and self-esteem.^{23–31} Using a data source in which black and Latino respondents were oversampled allowed us to test for moderation by race and ethnicity. We also examined moderation of the effect of parental emotional support on child behavior by gender. We used a measure of emotional support that incorporates both mother and observer report and assessed internalizing and externalizing problems separately. In addition, the current study is innovative in testing emotional support at different stages of early development, corresponding to toddlerhood, preschool, and kindergarten age. We hypothesized that lower levels of parental emotional support during early childhood would be associated with both later internalizing and externalizing problems in children and that the association would emerge early in development.

METHODS

Data Source

Data for this study were drawn from the National Longitudinal Survey of Youth 1979 Children and Young Adults (NLSY-Child), an outgrowth of the original National Longitudinal Survey of Youth 1979 (NLSY79). The NLSY79, sponsored by the US Department of Labor, began with a nationally representative sample of almost 12,700 individuals aged 14–22 years in 1979 who have been interviewed annually or biennially since. Blacks and Latinos were oversampled to provide statistical power for analyses involving these important subgroups, and population weights are available to draw valid national inferences. In 1986, the biennial NLSY-Child was begun as an extensive collection of information for more than 11,000 children of the female respondents to the NLSY79 regarding developmental assessment, family background, home environment, and health history.³² This phase of the data collection was funded by the National Institute for Child Health and Human Development and was designed to enable researchers to answer fundamental questions about the socioeconomic environmental determinants of child development and school achievement. Information for the NLSY-Child is obtained from the mother, the interviewer, and sometimes the child (depending on the child’s age). The records from NLSY79 and NLSY-Child are linkable via the mother’s sample identification number. Data from both the 1986–2000 NLSY-Child and NLSY79 were pulled for this study using the CHRR Database Investigator Software (Center for Human Resource Research, The Ohio State University, Build 1.4.1.57). The initial cohort of respondents constituted a nationally representative sample of the US population. Attrition has been low overall and evenly distributed across relevant subgroups.³³ Follow-up rates for the NLSY range from 85% to 90% by the late 1990s, and these rates are similar across different ethnic groups.³³ As a result, the analysis sample is highly representative of adults in the United States about 30 years old, not counting recent

immigrants. Variables measured in the NLSY include a wide variety of high-quality health, demographic, and economic variables on both the parents and the children.

Our sample consisted of children who were age 7 or 8 years in one of the four most recent survey waves: 1994, 1996, 1998, or 2000. We considered the first interview occurring on or after the age of 7 years (84 months) and before 9 years (108 months) in one of the survey waves as the index interview. Age, in months, was determined by the age reported at the time of the maternal supplement portion of the survey.

Participants

A total of 2940 children had some data at the index survey; however, far fewer (ranging from 981 to 1430) had complete data on all modeled variables, including information regarding emotional support at previous survey waves. Most of the loss in sample size was due to the fact that not all questions were asked in all years rather than to non-response. Additionally, children were excluded who were not reported as living with their mother at the time the maternal supplement was administered during the index year. Two primary analytic models were developed corresponding to the possible pairings of outcome (internalizing or externalizing behavior) and parental emotional support at age 5–6 years. Table 1 depicts the number of subjects with complete data in each of the two models, along with data summarizing the univariate distributions of the modeled variables.

Approximately 50% of the children were male and just less than 60% were non-Hispanic, nonblack. Almost 30% of mothers consumed alcohol while pregnant and more than one fifth used tobacco. Mothers reported an average of 13.5 years of education and roughly three fourths of children were in two-parent households in the survey waves preceding index. Consent was given by all parents enrolled in the study.

Measures

Main Predictor. Our main predictor variable was based on a measure of the emotional support in the household, derived from items on the maternal supplement based on the Home Observation for Measurement of the Environment-Short Form (HOME-SF). In our primary analyses, we examined the effect of this variable roughly 2 years before the measurement of parental emotional support, corresponding to age 5–6 years. The items include a combination of maternal report and interviewer observation and tap both maternal contributions to support and the contributions of other family members, with greater emphasis on the actions of the mother. The HOME-SF has been used both in explaining other child characteristics and as an outcome in its own right³⁴ and is based on a modification of the HOME inventory.^{35,36} One of the originators of the original HOME (Bradley) selected the HOME items that make up the HOME-SF, based on an examination of reliability coefficients, discrimination indices, validity loadings, and factor loadings.³⁷ Documentation associated with the NLSY³⁷ cites several studies that demonstrate good construct validity,

Table 1. Descriptive Statistics of Modeled Variables Measured at Age 5–6 Years

Variables	Externalizing (n = 1365)	Internalizing (n = 1430)
Male	50.5%	50.6%
Race/ethnicity		
Hispanic	17.7%	17.7%
Black	24.9%	25.6%
Non-Hispanic, nonblack	57.4%	56.7%
Gestational age, wk	38.6 (2.0; 26–43)	38.6 (2.0; 26–43)
Birth order		
Only	8.6%	8.5%
Oldest	24.2%	23.7%
Middle	25.7%	26.2%
Youngest	41.5%	41.6%
Alcohol use while pregnant	29.6%	29.7%
Tobacco use while pregnant	22.3%	22.2%
Age at index, yr	7.9 (0.6; 7.0–8.9)	7.9 (0.6; 7.0–8.9)
Index year	1997.7 (1.5; 1996–2000)	1997.7 (1.5; 1996–2000)
Maternal education, yr	13.5 (2.3; 4–20)	13.4 (2.3; 4–20)
Maternal depression in 1992 ^a	9.7 (9.0; 0–55)	9.8 (9.0; 0–55)
Maternal self-esteem in 1987 ^b	3.9 (1.0; 2.4–6.7)	3.9 (1.0; 2.4–6.7)
Two-parent household	77.0%	76.6%
Emotional support ^b	6.0 (1.0; 1.8–7.6)	6.0 (1.0; 1.8–7.6)
Externalizing behavior ^b	6.6 (0.9; 5.4–10.6)	–
Internalizing behavior ^b	–	6.6 (0.9; 5.7–11.7)

SDs given in parentheses, followed by the range.

^aScores higher than 16 indicate clinically significant levels of depression.

^bScores normalized using sample mean and SD.

predictive validity, and reliability of the HOME-SF. Rater checks have shown interrater reliabilities for the HOME-SF in the high 0.80s to low 0.90s.³⁴ Cronbach’s alpha ranges from 0.54 to 0.73 for the emotional support and cognitive stimulation subscales in the age ranges used in this analysis.

The HOME-SF includes some items that are invariant regardless of the child’s age and other items that are based on the age of the child; children younger than age 3 years, 3–5 years, and 6–9 years receive some different items. Table 2 lists the emotional support items by informant and age assessed. Interviewers were carefully trained over a 2½-day period and had to demonstrate mastery rating the items in practice settings before conducting actual interviews. Mother- and interviewer-reported items are translated into dichotomous variables and simply summed to obtain a total score. To facilitate interpretation, we normalized these scores by dividing by the sample standard deviation for each age group.

Covariates. Model covariates included gender, ethnicity/race (Latino, black, or non-Hispanic/nonblack), gestational age at birth, birth order (only, oldest, middle, or youngest child), maternal use of alcohol and tobacco during pregnancy, child age at the index interview (measured in months), calendar year at index, the presence of two parents in the household (mother and mother’s spouse/partner),

Table 2. Emotional Support Subscale

Item	Informant	Younger than Age 3 Years	3–6 Years	6–9 Years
Frequency of eating meals with both parents	M	X	X	X
Frequency of talking to child while working	M	X		
Allows choice in deciding foods	M		X	
Hours that TV is on each day	M		X	
Absence of spanking	M	X	X	X
Frequency that child is expected to clean up after him/herself	M			X
Frequency that whole family gets together with relatives or friends	M			X
Frequency of time spent with father/father figure	M			X
Frequency of time spent outdoors with father/father figure	M			X
Nonharsh response when child expresses anger	M			X
Speaking to/conversing with child during interview (excluding scolding)	I	X	X	X
Verbally responding to child's speech/answering child's questions or requests	I	X	X	X
Caressing, kissing, hugging	I	X	X	
Absence of slapping/spanking child	I	X	X	
Interfered with child's actions 3 or more times	I	X		
Kept child in view/looked at him/her often	I	X		
Introduced interviewer to child by name	I		X	X
Physically restricted or shook/grabbed child	I		X	
Voice conveyed positive feeling about child	I		X	X
Encouraged child to contribute to conversation	I		X	

M, mother; I, interviewer.

maternal education at index, maternal self-esteem as of 1987, and maternal depression as of 1992. Each covariate was chosen for inclusion in the model based on previous literature suggesting a relationship between the covariate and child internalizing/externalizing problems. Because covariates were chosen a priori based on past research, regression models were not modified with respect to covariate inclusion post hoc on the basis of results.

Where gestational age was missing but survey data indicated that the child was born late, gestational age was set at 43 weeks. For prenatal alcohol and tobacco use, ordinal-scale variables indicating graduated levels of substance abuse during pregnancy were recoded as binary variables indicating "some" or "none."

Maternal self-esteem was derived from 10 items on the 1987 NLSY79 survey, the most recent year for which a self-esteem inventory was administered. Five items were asked in a positive form: I am a person of worth; I have a number of good qualities; I am as capable as others; I have a positive attitude; I am satisfied with myself. Five items were asked in a negative form: I am inclined to feel that I am a failure; I feel I do not have much to be proud of; I wish I had more self-respect; I feel useless at times; I sometimes think I am no good at all. Each item had a four-level response ranging from 1 (strongly agree) to 4 (strongly disagree). We reverse coded the negatively worded items, summed the total, and normalized, yielding scores with lower values representing higher levels of self-esteem.

Maternal depression was taken from the 1992 NLSY79 survey, the only year in which the full 20-item Center for Epidemiologic Studies Depression scale (CES-D) was administered. We reverse coded positively worded items then summed to get an overall CES-D score, with higher scores indicating more depressive symptoms. The CES-D

has been used in more than 500 published articles and has been shown to have very good validity and reliability.^{38–40} In a recent study in The Netherlands, the weighted sensitivity of the CES-D was found to be 100% and specificity 88%, using the 1-month prevalence of major depression derived from the Diagnostic Interview Schedule as the criterion.³⁸

Outcome Measures. Our outcome measures involved characterization of the degree to which a mother reported externalizing and internalizing behavior problems exhibited by her child. The maternal supplement of the NLSY-Child contains 28 items that comprise the Behavioral Problems Index (BPI).³⁷ Each item of the index asks the mother to assess the presence of a behavior over the past 3 months in her children aged 4 years and older, such as "argues too much," allowing three possible responses: 1 = often true, 2 = sometimes true, and 3 = not true. After the survey has been administered, the responses are reverse coded such that 0 = not true, 1 = sometimes true, and 2 = often true.

The BPI was derived from the Achenbach Child Behavior Checklist and other child behavior scale items, from which comprehensive factor analysis was performed by NLSY to determine which items to include in the BPI and in its subscales. The overall score was shown to have an alpha of 0.89 for children and 0.91 for adolescents. The 2-week test-retest reliability of the overall scale has been reported at 0.92. Cronbach's alpha for the overall scale has been reported to be 0.88.³⁷

Factor analysis carried out in previous research⁴¹ showed that the overall scale could be represented by two subscales, which have been named internalizing and externalizing.⁴² Internal consistency is high on both scales, with Cronbach's alpha = 0.75 and 0.86, respectively. The externalizing scale includes 20 items such as "cheats or tells lies" and "bullies

or is cruel/mean to others,” whereas the internalizing scale includes 10 items such as “feels/complains that no one loves him/her” and “feels worthless or inferior.” Three of the items load on both scales, reflecting in part the high correlation ($r = .73$) between the two dimensions in a population-based sample.⁴¹ Standardized scores with a mean of 100 and an SD of 10 were created based on the 1981 National Health Interview Survey; these standardized scores were normalized (by dividing by the sample SD) to facilitate interpretation of the effect size.

Data Analyses

After examining the univariate characteristics of the independent variables, our primary analyses entailed running two multivariate linear regression models. The first model related the internalizing problems standard score at age 7–8 years to parental emotional support at age 5–6 years, while controlling for internalizing problems at age 5–6 years. The second model related the externalizing problems standard score as the outcome (age 7–8 years) to parental emotional support at age 5–6 years, while controlling for externalizing problems at age 5–6 years. Both of these analyses included the covariates previously described. We also tested for moderation by ethnicity/race and gender by analyzing models with interaction terms between child gender and parental emotional support and then ethnicity/race and parental emotional support.

To address the question of during which developmental period the effects of emotional support on child behavior problems first emerge, secondary analyses were conducted using emotional support at three previous waves (corresponding to ages 1–2, 3–4, and 5–6 years) together in one model as predictors of child externalizing problems at age 7–8 years. There were not sufficient data to control for child externalizing problems at the earliest time point for this model (due to the BPI not being administered until 1994), but we did control for externalizing problems at age 5–6 years and all other covariates were retained in these models.

Regressions incorporated the sampling weights for the child as of the index interview. Given the possibility of multiple children sharing the same mother, we accounted for the potential lack of independence across observations by adjusting for clustering of data on the mother’s identification number using the Huber-White estimator of variance.

RESULTS

Internalizing Problems

To test the hypothesis that emotional support is associated with later child internalizing problems, we regressed internalizing problem scores at age 7–8 years on parent emotional support at age 5–6 years, along with internalizing problems at age 5–6 years and the other covariates. Overall, this regression model was significant ($F_{17,1161} = 32.71, p < .001$) and accounted for 39.6% of the variance in internalizing problems at age 7–8 years. Table 3 shows the regression coefficients and 95% confidence intervals for the independent variable and the covariates. The association

between parental emotional support and child internalizing problems was nonsignificant ($B = -0.04, p = .11$) but in the expected direction (with higher levels of parental emotional support related to lower levels of child internalizing problems). The significant covariates revealed that more child internalizing problems at age 7–8 years were associated with being non-Hispanic, nonblack, having a mother with more depressive symptoms, and having more internalizing problems at age 5–6 years.

Additionally, the interactions between parental emotional support and child gender, race (black versus nonblack), and ethnicity (Hispanic versus non-Hispanic) were entered into the model. Neither of these terms significantly contributed to the prediction of child internalizing problems ($p > .21$).

Externalizing Problems

Similar to the modeling of internalizing behavior, a linear regression model was run to determine whether there was an association between parental emotional support at age 5–6 years and levels of parent reported externalizing problems at age 7–8 years while controlling for several covariates, including concurrent externalizing problems. The overall model for externalizing behavior was significant ($F_{17,1115} = 54.63, p < .001$), accounting for 50.9% of the variance in externalizing problems at age 7–8 years. The results of the externalizing model are shown in Table 4. Parental

Table 3. Regression Results for Internalizing Model

Modeled Variable	Unstandardized Regression Coefficient (95% CI)	Standard Error
Emotional support age 5–6 yr	–0.04 (–0.10 to 0.01)	0.03
Covariates		
Male (vs female)	–0.05 (–0.14 to 0.03)	0.04
Hispanic ethnicity (vs non-Hispanic)	–0.19 (–0.32 to –0.05)*	0.07
Black race (vs white race)	–0.16 (–0.28 to –0.03)*	0.06
Gestational age	0.002 (–0.02 to 0.02)	0.01
Only child at index (vs oldest sibling)	0.05 (–0.12 to 0.22)	0.09
Middle sibling at index (vs oldest sibling)	–0.10 (–0.23 to 0.02)	0.06
Youngest sibling at index (vs oldest)	–0.03 (–0.14 to 0.08)	0.06
Maternal prenatal alcohol use	–0.01 (–0.11 to 0.09)	0.05
Maternal prenatal tobacco use	0.002 (–0.12 to 0.12)	0.06
Index age, mo	–0.01 (–0.09 to 0.06)	0.04
Index year	–0.03 (–0.06 to 0.002)	0.01
Maternal education at index	–0.003 (–0.03 to 0.02)	0.01
Maternal depression 1992	0.01 (0.00 to 0.01)*	0.002
Maternal self esteem 1987	0.05 (0.00 to 0.09)	0.02
Two-parent household age 5–6 yr	–0.13 (–0.28 to 0.01)	0.07
Internalizing behavior age 5–6 yr	0.04 (0.04 to 0.04)*	0.002

CI, confidence interval.
* $p < .05$.

Table 4. Regression Results for Externalizing Model

Modeled Variable	Unstandardized Regression Coefficient (95% CI)	Standard Error
Emotional support age 5–6 yr	–0.06 (–0.10 to –0.01)*	0.02
Covariates		
Male (vs female)	0.06 (–0.02 to 0.14)	0.04
Hispanic ethnicity (vs non-Hispanic)	–0.12 (0.25 to 0.004)	0.06
Black race (vs white race)	–0.08 (–0.20 to 0.03)	0.06
Gestational age	0.01 (–0.01 to 0.03)	0.01
Only child at index (vs oldest sibling)	–0.03 (–0.18 to 0.11)	0.07
Middle sibling at index (vs oldest sibling)	–0.11 (–0.23 to –0.002)*	0.06
Youngest sibling at index (vs oldest)	–0.03 (–0.13 to 0.06)	0.05
Maternal prenatal alcohol use	0.02 (–0.06 to 0.10)	0.04
Maternal prenatal tobacco use	0.05 (–0.06 to 0.15)	0.05
Index age, yr	0.07 (0.005 to 0.13)*	0.03
Index year	–0.03 (–0.05 to –0.01)*	0.01
Maternal education at index	0.004 (–0.01 to 0.02)	0.01
Maternal depression 1992	0.004 (–0.0002 to 0.009)	0.002
Maternal self-esteem 1987	0.02 (–0.02 to 0.07)	0.02
Two-parent household age 5–6 yr	–0.07 (–0.19 to 0.06)	0.06
Externalizing behavior age 5–6 yr	0.05 (0.045 to 0.05)*	0.001

CI, confidence interval.

* $p < .05$.

emotional support was negatively associated with parent-reported externalizing problems 2 years later ($B = -0.06$, $p = .02$). Additionally, significant covariate effects emerged for middle sibling position and index year (both negatively related to externalizing problems) as well as index age and externalizing problems at age 5–6 years (both positively related to externalizing problems at age 7–8 years).

Next, the model was rerun with the addition of an interaction term between child gender and parental emotional support. Although the overall model retained its significance, the interaction term was nonsignificant ($B = -0.76$, $p = .07$) but suggested a slightly stronger association between emotional support and externalizing problems for boys compared with girls. To test for moderation by race and ethnicity, we also ran a model with the inclusion of interaction terms between parental emotional support and Hispanic ethnicity and between parental emotional support and black race. Neither of these variables was significant in the model ($p > .88$).

Developmental Model

Because the first set of analyses indicated that less emotional support was associated with more parent-reported externalizing problems, we tested a developmental model including three different time points (ages 1–2, 3–4, and 5–6 years) to assess when this relationship emerges and whether independent effects of parental emotional support

would emerge at different ages. Before doing so, however, we assessed the degree of collinearity between emotional support at these three time periods and found that tolerance levels were within acceptable ranges. The Pearson correlation coefficients between the various time points were as follows: 0.44 (ages 1–2 and 3–4 years), 0.49 (ages 3–4 and 5–6 years), 0.38 (ages 1–2 and 5–6 years), all significant at $p < .05$. The regression models included the same set of covariates as described in the primary analyses and were used to predict externalizing problems at age 8 years.

The results of our developmental model for externalizing problems ($n = 981$) showed a significant effect of emotional support at age 1–2 years ($B = -0.06$, $SE = 0.03$, $p = .04$), but the additional effects of emotional support at ages 3–4 and 5–6 years were nonsignificant ($B = 0.03$, $SE = 0.03$, $p = .39$ and $B = -0.04$, $SE = 0.03$, $p = .13$, respectively). The following covariates were significantly related to externalizing problems at age 8 years: non-Hispanic ethnicity ($p = .03$), middle sibling status ($p = .02$), later index year of interview ($p = .01$), and externalizing problems at age 5–6 years ($p = .001$).

DISCUSSION

Developmental theories and research on parenting style suggests that a transactional relationship exists between the level of emotional support provided in the home and child behavior problems. Here we sought to complement this literature by investigating whether this relationship holds true in a larger, more generalizable, prospective sample employing longitudinal assessment and improved methodology and by examining a much earlier developmental time frame than most studies. We found that parents who were less emotionally supportive when their children were age 5–6 years reported higher levels of externalizing behavior problems in their children 2 years later, even while controlling for concurrent externalizing behavior. A 1 SD increase in emotional support was associated with a 1/20 SD decrease in externalizing problems. Although the effect size of this relationship is small, it is robust to the inclusion of many possible confounders: It could not be accounted for by maternal depression, maternal education, single-parent household status, and other covariates. This finding that emotionally supportive parenting is protective against externalizing problems among children is largely consistent with other studies indicating that emotionally responsive caregiving is an important factor in child adjustment.^{43,44} Together, this body of research suggests that children who do not receive warm, responsive, involved parenting in the early years are at risk of more behavioral problems, such as aggression, defiance, and delinquency in subsequent years.

We did not find differences in this effect between boys and girls or between white and black or Hispanic and non-Hispanic parents. The robustness of this association is consistent with Rohner's transcultural parental acceptance-rejection theory in which perceived parental rejection is associated with psychological maladjustment regardless of differences in race, culture, gender, and geography.¹⁶

In contrast to the literature reviewed in the introduction, the regressions failed to provide strong evidence of a linear

relationship between parental emotional support and children's internalizing problems (such as depression and anxiety) in middle childhood, controlling for preexisting levels of these problems. Two differences between this study and much of the extant literature may explain the discrepancy: First, most of those studies were based on clinical or at-risk samples, whereas this sample is community based. Second, we examined parental emotional support and child internalizing problems earlier in the developmental life course than most previous work. It may be the case that the effect of emotional support on the development of internalizing problems occurs later than age 8 years, particularly because depressive disorders do not typically emerge until early adolescence.⁴⁵ There are alternative explanations for our lack of findings that should be considered. It is possible that a different type of parenting is related to children's internalizing behavior or that parents are poor reporters of their children's internalizing problems, as many aspects of internalizing behavior include unobservable phenomena. Certainly, research has demonstrated poorer association across raters for internalizing as compared with externalizing problems.⁴⁶ In any case, if an effect is present, it appears to be smaller and less robust than that found for externalizing behavior. Caution should be used in overinterpreting this trend in the absence of further replication.

Our findings assessing the developmental timing at which parental emotional support is associated with child externalizing behavior were intriguing. Although there was some stability to parental emotional support during the 3 years in which it was assessed, there was also some degree of change, allowing us to test a model in which we could examine emotional support separately at ages 1–2, 3–4, and 5–6 years, predicting child externalizing behavior at age 7–8 years. We found that emotional support measured as early as age 1–2 years is associated with later child externalizing behavior. This is much earlier than most other studies have assessed emotional support or similar psychological constructs; for example, the meta-analysis of Khaleque and Rohner of the relationship between perceived parental acceptance-rejection (a construct similar to our emotional support) and psychological maladjustment has a mean age across studies of 11.4 years. Our results are suggestive of very early parenting potentially having a long-term impact on the behavioral development of the child. Future research should document the extent to which changes in emotional support during the course of development are associated with changes in behavioral problems.

This study is limited by the single measurement of covariates of interest (self-esteem, depression) that likely fluctuate over time. Also, the timing at which each of the covariates was measured may affect its predictive utility.⁴⁷ Our measure of emotional support includes both mother- and interviewer-rated items; thus, rater bias is not completely parsed out. Another limitation posed by our measurement was the assessment of internalizing problems using solely mother report because mothers may not be accurate informants of more covert and internal phenomena. It is important to note that this study cannot be interpreted

causally; even longitudinally the effects of parents and children on each other's behavior are most likely bidirectional.⁴⁸ For example, it may be the case that parents who fail to emotionally support their child also view their child more negatively. Additionally, although analyses focused on a subsample of National Longitudinal Survey of Youth-Child respondents, most of the missing data could be attributed to the design of the study (i.e., not all questions were asked in all years), presumably creating data that are missing at random and less prone to bias.⁴⁹ Although accounting for 40% to 51% of the variance in internalizing and externalizing problems is considerable for outcomes such as internalizing and externalizing problems, a substantial amount of variance is still not accounted for by our model. Our model was not intended to be comprehensive; other aspects of the family environment, such as interparental conflict, likely also affect child behavior.

Taken together, the results of this research demonstrate the importance of very early emotional support of parents. These findings highlight the role of addressing early parenting as a potentially effective strategy for early intervention for child behavior problems. Prevention and early interventions with parents of young children during toddler, preschool, and early elementary ages that specifically help parents provide responsive caregiving and teach them to interact with their children in warm and supportive ways, while at the same time providing specific parenting strategies for dealing with problem behavior, hold some promise for preventing the exacerbation of externalizing problems. Although a limited set of interventions have included a component focusing particularly on the parent-child relationship,⁵⁰ those that have demonstrate positive effects. Programs incorporating prenatal and early childhood home visitation emphasizing appropriate parenting have shown both short-term reductions in problem behavior and long-term impacts on conduct disorder, delinquency, and violence.^{51–53} Parent-child interaction therapy teaches parents the skills of child-directed interaction and has demonstrated efficacy.⁵⁴ Finally, early evidence on the Project TEAM intervention, which includes interaction time in which parents specifically focus on building the parent-child relationship through attending to positives and supporting their children with identification and appropriate expression of feelings, suggests benefits to families of externalizing youngsters.⁵⁵ Future treatment and prevention research should examine more specifically which aspects of these intervention programs are most effective and mediate changes in children's behavior problems. Moreover, public health campaigns to encourage more emotionally supportive parenting could result in a substantial decrease in externalizing problems at a population level. Our results suggest that helping parents learn ways to provide emotional support to the child very early on may be a particularly important facet of efforts to promote positive behavior patterns among children.

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