

# Fathers' Depression Related to Positive and Negative Parenting Behaviors With 1-Year-Old Children



**WHAT'S KNOWN ON THIS SUBJECT:** Paternal depression affects fathers' interactions with their children. However, little is known regarding the association between paternal depression in fathers of young children and specific parenting behaviors commonly discussed at well-child visits.



**WHAT THIS STUDY ADDS:** Depressed fathers were nearly 4 times more likely to report spanking and less than half as likely to report consistently reading to their 1-year-old children. Notably, 77% of depressed fathers reported talking with their child's doctor in the previous year.

## abstract

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**OBJECTIVE:** To examine the associations between depression in fathers of 1-year-old children and specific positive and negative parenting behaviors discussed by pediatric providers at well-child visits.

**METHODS:** We performed a cross-sectional secondary analysis by using interview data from 1746 fathers of 1-year-old children in the Fragile Families and Child Wellbeing Study. Positive parenting behaviors included fathers' reports of playing games, singing songs, and reading stories to their children  $\geq 3$  days in a typical week. Negative parenting behavior included fathers' reports of spanking their 1-year-old children in the previous month. Depression was assessed by using the World Health Organization Composite International Diagnostic Interview Short Form. Weighted bivariate and multivariate analyses of parenting behaviors were performed while controlling for demographics and paternal substance abuse.

**RESULTS:** Overall, 7% of fathers had depression. In bivariate analyses, depressed fathers were more likely than nondepressed fathers to report spanking their 1-year-old children in the previous month (41% compared with 13%;  $P < .01$ ). In multivariate analyses, depressed fathers were less likely to report reading to their children  $\geq 3$  days in a typical week (adjusted odds ratio: 0.38 [95% confidence interval: 0.15–0.98]) and much more likely to report spanking (adjusted odds ratio: 3.92 [95% confidence interval: 1.23–12.5]). Seventy-seven percent of depressed fathers reported talking to their children's doctor in the previous year.

**CONCLUSIONS:** Paternal depression is associated with parenting behaviors relevant to well-child visits. Pediatric providers should consider screening fathers for depression, discussing specific parenting behaviors (eg, reading to children and appropriate discipline), and referring for treatment if appropriate. *Pediatrics* 2011;127:612–618

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### KEY WORDS

fathers, depression, parenting

### ABBREVIATION

FFCWS—Fragile Families and Child Wellbeing Study

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In 2009, the Institute of Medicine published *Depression in Parents, Parenting, and Children*,<sup>1</sup> which estimated that 15.6 million children (~1 in 5 children) in the United States are living with an adult with major depression. Although most studies of parental depression have focused on mothers, the impact of depression in fathers has received increasing attention.<sup>2,3</sup> Using data from the 2002 National Comorbidity Replication Survey, the Institute of Medicine report also estimated that 4.3% of men with a child under 18 years old had a major depressive disorder within the previous 12 months.<sup>1</sup> In addition, a recent meta-analysis<sup>4</sup> suggested that the prevalence of paternal depression within the first year of a child's life was 10.4%.

Similar to studies on maternal depression, paternal depression has been associated with decreased sensitivity or warmth in parenting, as well as increased conflict, hostility, and rejection.<sup>2,3,5</sup> In addition, depression in fathers has been consistently associated with lower psychosocial functioning in children,<sup>5,6-8</sup> an effect mediated in part by the depressed fathers' parenting behaviors.<sup>9-11</sup>

Notably, the majority of studies regarding the impact of paternal depression on parenting behaviors have been conducted for children older than 1 year of age.<sup>2,9-11</sup> Given the prevalence of depression in fathers during the first year of a child's life,<sup>4,12</sup> and the key developmental processes occurring in very young children, research is needed to understand the impact of paternal depression on parenting during this critical period. Moreover, recent studies<sup>13-15</sup> have suggested that fathers' parenting patterns early in a child's life are predictive of future parenting behaviors.

The limited number of previous studies on paternal depression early in children's lives have primarily used

scales of positive or negative parenting behaviors (eg, engagement or rejection).<sup>2</sup> Although such scales yield important theoretical information, they do not inform pediatric providers about how paternal depression may impact specific parenting behaviors that might be discussed in clinical encounters and, therefore, may have less relevance to practicing clinicians.

Our objective was to examine associations between depression in fathers of 1-year-old children and specific positive and negative parenting behaviors. Research regarding the impact of father involvement with children has demonstrated that direct father-engagement interactions are most strongly associated with child health and development outcomes.<sup>16</sup> Therefore, we focused on parenting behaviors involving direct engagement of fathers with children and that are commonly discussed by pediatric providers at clinical encounters, specifically interactive play, speech and language interactions, and discipline practices. First, fathers' interactive play during toddlerhood has been longitudinally associated with attachment security in later childhood and adolescence.<sup>17</sup> Second, fathers' speech and language interactions with infants have been positively associated with language development, and paternal depression has been shown to adversely impact this process.<sup>18-20</sup> Third, discipline practices, such as corporal punishment, have been longitudinally associated with increased child aggressive behavior.<sup>21</sup> In addition, paternal depressive symptoms have been longitudinally associated with harsh paternal discipline practices in older children and subsequent child and adolescent maladjustment.<sup>11</sup> Finally, as an indicator of fathers' interactions with pediatric providers, we also examined the proportion of depressed fathers that reported talking with their

children's doctor within the previous year.

## METHODS

### Study Design

We performed a cross-sectional secondary analysis using interview data from the 12-Month Father Survey of the Fragile Families and Child Wellbeing Study (FFCWS). FFCWS is an ongoing, nationally representative study following a cohort of children born between 1998 and 2000 in the United States and their parents. Part of the original focus of the study was to understand fathers' interactions with their children, and, therefore, a concerted effort was made throughout the study to interview fathers directly rather than relying on maternal report of fathers' information. The FFCWS was approved by the institutional review boards at Columbia University and Princeton University; additional details are published elsewhere.<sup>22</sup> The institutional review board of the University of Michigan Health System approved this secondary data analysis.

### Sample

Families were recruited at 75 hospitals in 20 large cities (>200 000 people at the time of the child's birth) in the United States. Fathers were enrolled at the hospital if they were present; if they were not present, the father's contact information was collected from the mother for subsequent recruitment. Sixteen of 20 cities enrolled families as part of a national sample. With the use of national sampling weights, data from these 16 cities were designed to be nationally representative of families with children born in large cities in the United States from 1998 through 2000.<sup>22</sup>

Overall, 2726 fathers were enrolled at the time of their children's birth. The first follow-up wave of the study was performed when the child was 1 year

old, with 2458 fathers interviewed. For our study, we included fathers who reported living with their children “all or most of the time,” resulting in a sample of 1773 fathers. Of these, 1746 had complete data on positive and negative parenting behaviors, depression, and other covariates and constitute the analytic sample used in our study.

### Outcome Variables

Positive parenting behaviors were conceptualized in areas of interactive play and speech and language interactions. Fathers reported on activities they did with their child in a typical week. For interactive play, fathers were asked, “How many days a week do you usually play games such as ‘peek-a-boo’ or ‘gotcha’ with your child?” For speech and language interactions, fathers were asked, “How many days a week do you usually sing songs or nursery rhymes to your child?” and, “How many days a week do you read stories to your child?” Fathers answered each item separately, with answers ranging from 0 to 7 days per week.<sup>23</sup>

Fathers were asked a single item regarding negative parenting behaviors related to corporal discipline. “Sometimes children behave pretty well and sometimes they don’t. In the previous month, have you spanked your child because he/she was misbehaving or acting up?” Fathers answered, “yes” or “no.”<sup>23</sup>

Regarding interactions with their children’s pediatric provider, fathers were asked, “During the previous year, did you ever talk to your child’s doctor about how he/she is doing?” Fathers were not asked this question if they had sole custody of the child, which excluded 92 of 1746 fathers (5%) in our sample from this question.

### Predictor Variable

Depression in fathers was assessed using the World Health Organization Composite International Diagnostic Interview Short Form, a validated measure used to identify the presence of a major depressive episode within the previous year.<sup>24</sup> Fathers were asked 2 stem questions: (1) “During the past 12 months, has there ever been a time when you felt sad, blue, or depressed for 2 or more weeks in a row?” and (2) “During the past 12 months, has there ever been a time lasting 2 weeks or more when you lost interest in most things like hobbies, work, or activities that usually give you pleasure?” An affirmative response to either question prompted subsequent questions regarding whether the symptoms were present most of the time and for almost every day in a 2-week period. Fathers who endorsed these symptoms were then asked follow-up questions, according to the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition*, regarding (1) losing interest, (2) feeling tired, (3) change in weight, (4) trouble sleeping, (5) trouble concentrating, (6) feeling worthless, and (7) thinking about death. On the basis of a standardized scoring system, a dichotomous variable was created identifying fathers with symptoms consistent with probable major depression if they responded affirmatively to at least 3 of 7 follow-up questions.<sup>24,25</sup>

### Covariates

We included fathers’ demographic characteristics as covariates in our analyses. These included fathers’ age in years, race and ethnicity, household poverty level (as a percentage of the federal poverty level), educational level (less than high school, high school or equivalent, some college or more), employment status (reporting regular work in the last week), and

marital status with the child’s mother. We also included child gender as a covariate.

We included paternal substance abuse as an additional covariate because it has been associated with paternal depression as well as negative parenting behaviors in previous studies.<sup>26,27</sup> Similar to other studies using the FFCWS, substance abuse was defined as meeting at least 1 of 2 criteria: (1) self-reported functional impairment by use of alcohol or other drugs<sup>27</sup>; and (2) excessive use of alcohol (having  $\geq 5$  drinks on 1 day more than 4 times in the previous month), use of marijuana (almost every day or more in the previous month), or use of cocaine, crack, speed, lysergic acid diethylamide, heroin, or any other “hard drug” in the previous month.<sup>28</sup>

### Statistical Analysis

National sampling weights were applied in all descriptive, bivariate, and multivariate analyses to yield nationally representative results. On the basis of the distribution of the outcome variables and to aid with the interpretation of results, we dichotomized the positive parenting behaviors for fathers reporting these activities  $\geq 3$  days/week versus 2 or fewer days a week. Bivariate comparisons of paternal depression and other variables were analyzed with  $\chi^2$  tests. Multivariate analyses were performed with logistic regression for outcome variables with paternal depression and other covariates as predictors. All analyses were conducted with Stata 10 (Stata, College Station, TX).

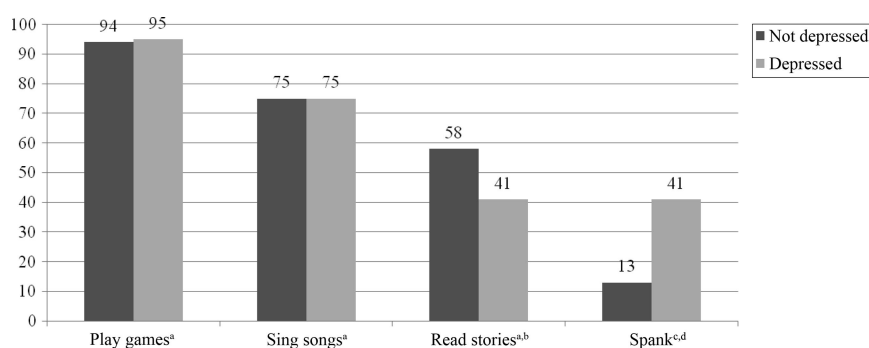
## RESULTS

Sample characteristics are presented in Table 1, categorized by fathers’ depression status. Overall, 7% of fathers reported a major depressive episode within the previous year. Depressed fathers were less likely to be employed

**TABLE 1** Sample Characteristics According to Fathers' Depression Status (*N* = 1746)

	Total Sample ( <i>N</i> = 1746)	Father Depressed ( <i>N</i> = 128)	Father Not Depressed ( <i>N</i> = 1618)	<i>P</i>
Father's age, mean (SE), y	31.8 (0.3)	32.7 (1.4)	31.7 (0.4)	.54
Father's race and ethnicity, %				
Non-Hispanic white	41	44	41	.28
Non-Hispanic black	21	31	20	
Hispanic	33	17	34	
Other	5	8	5	
Household income, percentage of federal poverty level, %				
0–99	24	23	24	.93
100–199	20	23	20	
≥200	56	54	56	
Father's educational level, %				
Less than high school	23	17	23	.15
High school or equivalent	27	44	26	
Some college or more	50	39	51	
Father employed, %	90	69	92	<.01
Father married to child's mother, %	74	66	75	.24
Child gender, female, %	47	62	45	.13
Father with substance abuse, %	7	20	6	.01
Father talked to child's doctor in the previous year ( <i>N</i> = 1654), % <sup>a</sup>	82	77	82	.59

<sup>a</sup> This question was not asked if the father had sole custody of the child (excluded 92 fathers of the total sample).

**FIGURE 1**

Percentage of fathers reporting positive and negative parenting behaviors with their 1-year-old children by depression status. <sup>a</sup> Three or more days in a "typical week"; <sup>b</sup> *P* = .07; <sup>c</sup> in the previous month; <sup>d</sup> *P* = .01.

and more likely to report substance abuse. There was no difference in educational level between depressed and nondepressed fathers. Notably, 82% of all fathers and 77% of depressed fathers reported that they had spoken to their children's doctor in the previous year (Table 1).

Overall, 95% of fathers reported playing games, 75% reported singing songs or nursery rhymes, and 57% reported reading stories to their children on  $\geq 3$  days in a typical week. Fifteen percent of fathers reported spanking their 1-year-old children in

the previous month. Figure 1 compares the proportions of fathers reporting these parenting behaviors by

**TABLE 2** Unadjusted and Adjusted Odds of Depressed Fathers, Compared With Nondepressed Fathers, Reporting Positive and Negative Parenting Behaviors With Their 1-Year-Old Children

Parenting Behavior	Unadjusted Odds Ratio (95% Confidence Interval)	Adjusted Odds Ratio (95% Confidence Interval) <sup>a</sup>
Play games <sup>b</sup>	1.08 (0.10–12.0)	0.97 (0.09–11.1)
Sing songs <sup>b</sup>	0.96 (0.36–2.56)	0.98 (0.36–2.71)
Read stories <sup>b</sup>	0.49 (0.22–1.22)	0.38 (0.15–0.98)
Spank <sup>c</sup>	4.60 (1.57–13.5)	3.92 (1.23–12.5)

<sup>a</sup> Controlled for paternal age, race and ethnicity, poverty level, educational level, employment status, marital status, child gender, and paternal substance abuse.

<sup>b</sup> Three or more days in a typical week.

<sup>c</sup> In the previous month.

fathers' depression status. Although no differences were found between depressed and nondepressed fathers in playing games and singing songs or nursery rhymes, depressed fathers reported reading less frequently to their children. In addition, more depressed fathers reported spanking their 1-year-old children in the previous month, compared with nondepressed fathers.

Table 2 presents the results of multivariate analyses using logistic regression to predict parenting behaviors by depression status while controlling for covariates. Again, there were no differences in fathers' reports of playing games or singing to their children by depression status. However, compared with nondepressed fathers, depressed fathers were less than half as likely to report reading stories to their children and were nearly 4 times more likely to report spanking their children. None of the covariates were independently associated with the outcome variables in multivariate analyses.

## DISCUSSION

In this national study, we identified specific parenting behaviors associated with depression in fathers of 1-year-old children. We found that depressed fathers were much more likely to report spanking their 1-year-old children in the previous month compared with nondepressed fathers.

Although the use of corporal punishment in children has been controversial, evidence continues to emerge highlighting the negative developmental impact of this form of discipline in children.<sup>21,29</sup> Moreover, this finding is particularly concerning given that children were only 1 year of age in our study, a developmental stage when children are unlikely to understand the connection between their behavior and subsequent punishment and when spanking is more likely to cause physical injury.<sup>30</sup>

Although associations between spanking and maternal depression have been previously reported,<sup>31</sup> this is the first study, to our knowledge, to report an association between spanking and paternal depression. Notably, in a national sample of 499 fathers of children under 3 years of age, Lyons-Ruth et al<sup>32</sup> did not find an association between paternal depressive symptoms and spanking but did report an association between a father's depressive symptoms and his report of "hitting, slapping, or shaking" his child. Given the comparatively larger sample of fathers in the FFCWS, our study may have had more power to detect an association between paternal depression and spanking.

Taken together, these studies suggest a concerning pattern of negative parenting behavior in depressed fathers with young children. Similar to the impact of maternal depression on parenting behaviors,<sup>33</sup> the impact of paternal depression on parenting behaviors may be directly related to the symptoms of depression. Irritability and anger, common symptoms of depression, may be implicated in the increased likelihood of depressed fathers spanking their 1-year-old children. In 1 study<sup>34</sup> of 320 middle-class parents who used spanking for discipline, 85% reported feeling "moderate to high anger, remorse, or agitation" while

spanking their children. As such, efforts to prevent fathers' negative parenting behaviors should consider screening for and treating paternal depression.

We also found that depressed fathers were less than half as likely as nondepressed fathers to report reading to their children on  $\geq 3$  days in a typical week. One previous study<sup>18</sup> has reported an association between paternal depression and fathers reading to their children. In this study, Paulsen et al<sup>18</sup> found that that paternal depression was cross-sectionally associated with fathers reading less to young children and longitudinally associated with less expressive vocabulary development in children. Anhedonia (loss of motivation or interest in engaging in activities) is a fundamental symptom of depression and may be directly implicated in depressed fathers reading less to their children.

In contrast to reading stories, we did not find associations between paternal depression and fathers playing games or singing to their children. Consistent with a previous study,<sup>35</sup> most fathers reported regularly playing games and singing or talking to their children, suggesting that these activities may be more normative behaviors for fathers than reading stories. As such, playing games or singing to children may be less affected by depression than reading stories, an activity that may take focused effort.

Importantly, we found that 82% of fathers (including 77% of depressed fathers) reported that they had spoken to their children's doctor in the previous year. Although the quantity and quality of these interactions are unclear in FFCWS data, these findings are consistent with a 2009 national study (unpublished) reporting that 76% of US fathers living in households with children age 0 to 2 years of age reported attending a well child visit

within the past year.<sup>36</sup> As suggested in *Bright Futures*,<sup>37</sup> well-child visits may be an opportunity to screen fathers for depression and refer them for treatment. Similar efforts have been shown to benefit children of depressed mothers.<sup>38</sup>

Finally, in a qualitative study of fathers from the FFCWS, Garfield and Chung<sup>39</sup> found that about half of the fathers they interviewed considered discipline as 1 of their key roles, even in infancy. As such, pediatric providers interacting with depressed fathers should prioritize discussions about appropriate discipline. Pediatric providers should be clear about the inappropriate use of corporal punishment, particularly in 1-year-old children, and suggest alternative methods both for handling challenging childhood behaviors<sup>30</sup> and for coping with feelings of frustration and irritability.<sup>40</sup> Pediatric providers should also consider encouraging fathers, particularly depressed fathers, to read to their children. For example, in clinics participating in the Reach Out and Read Program, pediatric providers could consider modeling appropriate reading interactions and handing the children's book to be given out directly to a child's father.<sup>41</sup>

This study has several limitations. First, we used cross-sectional data and, therefore, can only hypothesize the direction of associations between paternal depression and parenting behaviors. Second, the association between paternal depression and parenting behaviors may be explained by unmeasured confounders. For example, difficult child temperament may lead to adverse parenting behaviors (increased spanking and less reading) as well as paternal depression. However, a recent study<sup>42</sup> suggested that difficult child temperament at a young age was not longitudinally associated with the development of paternal depression. Instead, paternal depression

was longitudinally associated with the development of difficult child temperament in boys. Moreover, as suggested by studies<sup>9–11</sup> in older children, adverse parenting behaviors stemming from paternal depression may be implicated in the development of child behavioral problems and should be further investigated. Third, the FFCWS study used fathers' self-report of parenting behaviors. As such, recall bias or social desirability may have influenced fathers' responses. In addition, depressed fathers may have been more likely to report adverse parenting behaviors because of low mood at the time of the survey (ie, shared-method variance). However, if this were the case, we might have expected to see this pattern across each of the parenting-behavior domains. In contrast, we found no difference in fathers' reports of playing games and singing songs or nursery rhymes

based on depression status. Fourth, although depression was assessed using a validated interview method, a true diagnosis of depression requires a clinical encounter. Finally, fathers who had sole custody of their child were not asked if they had spoken to their child's doctor in the previous year, excluding 92 fathers in our sample (5%) on this question. However, this exclusion may have led to underestimating the number of fathers that had talked with their children's doctor because fathers with sole custody often have increased child-caretaking responsibilities.

## CONCLUSIONS

In a national sample, we found that 7% of fathers living with 1-year-old children reported a major depressive episode within the previous year. By reducing positive interactions and amplifying negative interactions, pa-

ternal depression may be adversely impacting children's health and development as well as father-child relationship formation early in children's lives.

The finding that the majority of depressed fathers reported talking with their 1-year-old children's doctor in the previous year suggests an opportunity for pediatric providers to engage depressed fathers. Pediatric providers should consider screening fathers for depression, discussing specific parenting behaviors with fathers (such as reading to children and appropriate discipline), and referring depressed fathers for appropriate treatment.

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