

Change in Child Psychopathology With Improvement in Parental Depression: A Systematic Review

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ABSTRACT

Objective: To systematically review current research evidence of associations between improvement in parents' depression and their children's psychopathology. **Method:** Relevant studies were identified using *PsycINFO* (1806–2007) and *Medline* (1950–2007). The search terms used were “depression,” “postpartum depression,” “treatment,” “mothers,” “fathers,” “parents,” “offspring,” “mother child relations,” and “father child relations.” The reference sections of identified articles were also examined for additional relevant articles. Open and controlled clinical trials and observational studies of depressed parents that also included psychological and behavioral assessments of offspring 18 years of age or younger were included in the review. **Results:** Ten studies meeting broad criteria for inclusion were reviewed. These studies varied considerably in sample, treatment, assessment, and analysis. Based on the few studies, there is some evidence of associations between successful treatment of parents' depression and improvement in children's symptoms and functioning, but treatment of postpartum depression may not be sufficient for improving cognitive development, attachment, and temperament in infants and toddlers. **Conclusions:** Due to the public health implications of the findings, further study of the effects of improvement in parental depression on child psychopathology is warranted. These studies need to examine the precise relation between parental and child symptoms, the differential effect of parents' treatment with psychotherapy versus medication, the effect of fathers' as well as mothers' symptomatic improvement on children, and mediators and moderators of the relation between parental improvement and child psychopathology. *J. Am. Acad. Child Adolesc. Psychiatry*, 2008;47(4):379–389. **Key Words:** depression, treatment, mothers, fathers, offspring.

Parental depression represents a significant public health concern due to its negative impact on both the parents and their children. Children of depressed as compared to nondepressed parents are more likely to develop psychiatric illnesses, including depression, anxiety, and

externalizing disorders, and they are at greater risk for social, cognitive, and medical difficulties.^{1–7} Numerous studies have reported the high rate of psychopathology in children of depressed parents as compared to controls. Although there is emerging evidence of the efficacy and effectiveness of psychotherapeutic and psychopharmacological treatments for children,^{8,9} treatment evidence is still scant in comparison to the evidence for the treatment of adult psychiatric illness. Until recently, there has been little study of the impact of improvement in parental depression on children. If successful treatment of a depressed parent leads to improvement in the child's symptoms, then the public health significance would be considerable.

Recently, the child portion of the Sequenced Treatment Alternatives to Relieve Depression (STAR*D) study, a large multisite effectiveness study, showed that successful psychopharmacological treatment of depression in mothers to remission over 3 months was associated with reduced psychopathology

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in their children.¹⁰ Moreover, children who were asymptomatic at the initiation of treatment were significantly more likely to develop symptoms if their mothers did not remit during the 3 months. This study used direct clinician assessments of children as well as mothers' reports on their children. The clinicians who assessed the children were independent of the mothers' treatment team. However, no fathers were included in the study, and the mothers received only citalopram during the first 3 months.

The purpose of this article is to systematically identify and evaluate the published empirical studies examining the relation between improvement in parental depression and child psychopathology. This article includes open and controlled treatment studies and observational studies of depressed parents that also examined outcomes in the offspring. The following questions are addressed: does improvement in parental depression predict child outcomes, which child outcomes are associated with improvement in parental depression, and does the type of treatment that depressed parents receive differentially affect children.

METHOD

Literature Search

Published English language empirical studies were identified using *PsycINFO* (1806–2007) and *Medline* (1950–2007). The search terms used were “depression,” “postpartum depression,” “treatment,” “mothers,” “fathers,” “parents,” “offspring,” “mother child relations,” and “father child relations.” A search of each database found 115 articles in *PsychINFO* and 138 articles in *Medline*. The reference sections of identified articles were also examined for additional relevant articles.

Study Inclusion and Exclusion Criteria

Open and controlled clinical trials testing the efficacy of treatments for parental depression that also included psychological and behavioral assessments of offspring ages 18 and younger, as well as observational studies examining associations between improvement in parental depression and child outcomes were included in the review. Studies were excluded if they did not report treatment-related or naturalistic reductions in parental depression or if they did not include assessments of both parent and child outcomes. We also excluded studies in which mothers received psychopharmacological treatment for depression during pregnancy because it would not be possible to discern whether level of child psychopathology was due to change in mothers' depressive symptoms or children's prenatal exposure to their mothers' medication ($n = 3$). Studies that included only treatments that targeted parenting or parent–child relationships were also excluded because it would not be possible to determine whether change in child psychopathology was due to change in parents' depression or change in parenting skills ($n = 6$).

RESULTS

Ten studies, which varied widely, were identified that examined associations between treatment of parental depression and child psychopathology (Table 1). Because only 10 studies were identified, it was not possible to use meta-analytic techniques to examine the strength of the results. Table 1 illustrates the variability of the studies. Sample sizes in the 10 studies ranged from 10 to 260. Six of the studies were controlled clinical trials testing the efficacy of treatments of parental depression that also assessed child functioning.^{10–15} Two were open trials of treatments for maternal depression.^{16,17} Two studies examined the associations between improvement in parental depression and child functioning after parents had already initiated a nonspecified treatment.^{18–21} Depressed parents were treated using individual psychotherapy, group psychotherapy, and medication. All 10 studies assessed for parental depression using measures that were based on *DSM* criteria. Nine of the studies assessed child psychiatric symptoms and diagnoses,^{10,11,13–21} and six assessed child psychosocial outcomes including attachment, quality of parent–child interactions and relationships, emotionality, temperament, health, and cognitive, academic, and global functioning.^{12–14,16–18,21} Three studies assessed child psychopathology based on parent report only,^{11,16,18,21} and seven used independent evaluators who were blind to parents' treatment and clinical status, in addition to parents.^{10,12–15,17,19,20}

Description of the Parent and Child Samples

Eight of the 10 studies included only depressed mothers. Two studies included both mothers and fathers^{11,18,21}; however, mothers and fathers were combined in the analyses, so specific findings on fathers could not be assessed. Most studies had requirements for level of contact between the depressed parent and child. Three studies included only families in which the depressed parent and child lived in the same home,^{15,16,18,21} two studies required the depressed parent and child to have lived in the same home for at least 1 year,^{17,19,20} and two studies required that the child live with the depressed parent at least 50% of the time.^{10,11} The remaining three studies did not report requirements for parents' and children's living arrangements.^{12–14}

There was variability in the psychiatric symptom and diagnostic inclusion and exclusion criteria for parents to participate in the identified studies (Table 1). The majority of studies (six) required parents to have a diagnosis of major depressive disorder (MDD),^{10,12–14,16,17} two studies required a diagnosis of MDD or dysthymia,^{15,19,20} one study required a diagnosis of MDD or minor depression,^{18,21} and one study required a diagnosis of dysthymia.¹¹ Two studies did not report whether they assessed for or based inclusion/exclusion decisions on comorbid diagnoses,^{12,14} seven studies excluded parents with certain comorbid diagnoses (e.g., substance abuse, bipolar disorder, schizophrenia),^{10,11,13,16–21} and one study excluded parents if they had any comorbid diagnoses.¹⁵ Of the studies that included parents with comorbid diagnoses, only one reported comorbidity rates,¹¹ and no studies controlled for comorbid diagnoses in their analyses.

Children ranged in age from infants to 18 years old when the studies began. Six of the 10 studies did not report whether children were receiving their own treatment.^{12–16,18,21} Of the four that did, one study included only children who were receiving psychiatric treatment,¹⁷ one study excluded families if the parents were receiving parenting training for managing their children's behavior,^{19,20} and in two studies, some of the children were receiving their own treatment.^{10,11} Only one study controlled for children's treatment status in their analyses.¹⁰

Child Outcomes

Of the nine studies that assessed the psychopathology of children whose parents received treatment for depression, five found that treatment of parental depression was associated with improvements in child psychopathology.^{10,11,14,16,18,21} Specifically, treatment of parental depression was found to be associated with reductions in children's symptoms of emotional and behavioral problems,^{10,11,14,16,18,21} and psychiatric diagnoses.¹⁰ Of the six studies that examined children's psychosocial outcomes, five found that mothers' treatment was associated with child improvements. Treatment of maternal depression was predictive of better child academic functioning^{16,18,21} and global functioning,¹⁷ and better mother-child relationships and interactions.^{12,14} Significant associations were not found between treatment of maternal depression and cognitive development,^{12,14} attachment,^{12–14} temperament,¹³ and emotionality.¹³ All of the nonsignificant associations occurred in the postpartum depression studies.

Assessment of Parents' Response to Treatment

A key issue in these studies is whether the focus was on treatment group outcome or whether the parent achieved a symptom reduction or remission regardless of treatment. Studies comparing the outcomes of children of parents receiving one or another treatment assumes that parent outcomes in each treatment group are uniformly different enough to be able to detect differences in the outcomes of children. Four of the 10 studies did not examine change in parents' symptoms.^{12,14,15,19,20} Instead, they tested whether there were significant differences in the outcomes of the children of parents in the active treatment groups versus the control groups, regardless of the parents' clinical outcome. Two of the four studies that used this analytic strategy found that children of mothers in the active treatment conditions demonstrated more positive behaviors posttreatment compared to children of mothers in the control condition.^{12,14}

Six studies specifically examined change in parents' depressive symptoms in relation to child psychopathology.^{10,11,13,16–18,21} Five of these found evidence of significant associations between reductions or remissions in parental depression and improvement in child outcomes.^{10,11,16–18,21} Modell and colleagues¹⁶ found that reductions in maternal depression were associated with fewer internalizing, externalizing, and learning problems. Verdelli and colleagues¹⁷ found that reductions in maternal depression were associated with improved overall functioning in children, but, as noted previously, not improvement in depressive symptoms. Byrne and colleagues¹¹ found that children of parents who demonstrated at least a 40% reduction in depressive symptoms had fewer internalizing symptoms and total internalizing/externalizing symptoms 2 years after their parents' initiation of treatment compared to children of parents who demonstrated less than a 40% reduction in symptoms. The STAR*D Child group examined maternal remission status (HRSD <7) and degree of reduction in depressive symptoms in response to treatment.¹⁰ They found that remissions in maternal depression compared to nonremissions were associated with significantly fewer psychiatric symptoms and diagnoses in children and that at least a 50% reduction in maternal symptoms was needed to see some improvement in the child.¹⁰ Timko and colleagues²¹ examined the outcomes of children of parents whose depression had fully remitted, partially remitted, or showed no improvement. At 1- and 4-year follow-up, children of parents whose depression had fully remitted were functioning better than

TABLE 1

Studies Examining Associations Between Improvement in Parental Depression and Child Outcomes

Authors	Sample (Age and Sample Size)	Study Design	Parents' Baseline Psychiatric Diagnoses	Child Assessments	Parents' Results	Children's Results
Billings and Moos ¹⁸ Timko et al. ²¹	<18 y, <i>N</i> = 249	Assessments of children of depressed parents who had already initiated treatment for depression and children of never- depressed parents	MDD or minor depression (RDC, DSSI) Excluded: current manic symptoms, alcohol abuse	Domains: health, psychological, physical, and behavioral functioning (HDL) Informants: parents	1-y follow-up: 60% remitted, 40% nonremitted 4- and 10-y follow-up: 24% stably remitted, 53% partially remitted, 23% nonremitted	1-y follow-up: children of parents whose depression had remitted had higher psychological, physical, and behavioral functioning than offspring of parents who continued to be depressed, but had lower functioning than children of never- depressed parents 4-y follow-up: children of stably remitted parents were functioning comparably to children of never- depressed parents in all domains; children of nonremitted parents were functioning the most poorly 10-y follow-up: offspring of stably remitted parents were functioning comparably to offspring of nonremitted parents in all domains except physical problems and significantly worse than offspring of never- depressed parents in psychological and physical problems

Byrne et al. ¹¹	4–16 y, N = 260	Random assignment of parents to medication, IPT, or both	Dysthymia (MADRS, SCID) Excluded: bipolar disorder, schizophrenia, psychotic symptoms	Domains: internalizing and externalizing symptoms (CBCL) Informants: parents	66.9% of parents demonstrated at least a 40% reduction in depressive symptoms	Children of parents who demonstrated at least a 40% reduction in depressive symptoms had fewer internalizing symptoms and total internalizing/externalizing symptoms than children of parents who demonstrated a >40% reduction in symptoms
Clark et al. ¹²	1–24 mo (mean 8.9), N = 39	Random assignment of mothers to IPT, M-ITG, or waitlist	MDD (screening measure based on <i>DSM-IV</i> criteria, BDI>16) Inclusion/exclusion of comorbid diagnoses not reported	Domains: quality of mother–child interactions (observational assessment), parenting stress (PSI), cognitive and motor development (BSID) Informants: mothers, independent evaluators	Symptoms: IPT and M-ITG < control	Mothers in the 2 active treatments reported greater child adaptability and reinforcing behavior and displayed more positive affective involvement and verbalization with their children; mothers in the control condition displayed less negative affect and behavior posttreatment than mothers in the M-ITG condition; children's cognitive and motor development was not related to mothers' treatment
Forman et al. ¹³	6 mo, N = 176	Random assignment of depressed mothers to IPT or waitlist; nondepressed control mothers did not receive treatment	MDD (IDD, HRSD >12, SCID) Excluded: lifetime history of bipolar disorder, schizophrenia, antisocial personality disorder; current primary diagnosis of MDD with psychotic features, eating disorder, OCD, substance abuse, panic disorder, somatization disorder, >3 schizotypal features	Domains: Infant emotionality (IBQ, observational assessment), maternal responsiveness (observational assessment), temperament (CBQ), attachment (ASQ), behavior problems (CBCL) Informants: mothers, independent evaluators	Symptoms: IPT < control Remission: IPT > control	None of the child outcomes were related to reductions or remissions in maternal depression

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TABLE 1
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Authors	Sample (Age and Sample Size)	Study Design	Parents' Baseline Psychiatric Diagnoses	Child Assessments	Parents' Results	Children's Results
Lee and Gotlib ¹⁹ Lee and Gotlib ²¹	7–13 y, <i>N</i> = 75	Assessments of children of mothers who had already initiated treatment for depression, another psychiatric illness, or a medical condition, and children of nondepressed mothers	MDD or dysthymia (BDI, HRSD >14, SADS) Excluded: alcohol abuse, psychotic symptoms	Domains: internalizing and externalizing symptoms (CAS, CBCL) Informants: mothers, independent evaluators	Symptoms: posttreatment < pretreatment	Children's internalizing and externalizing symptoms did not significantly change with depressed mothers' treatment
Modell et al. ¹⁶	4–15 y (median = 10), <i>N</i> = 24	Open trial of medication for depressed mothers	MDD (BDI >10, clinical interview using <i>DSM-IV</i> criteria) Excluded: psychotic symptoms, need for inpatient treatment	Domains: internalizing, externalizing, and learning problems (CPRS) Informants: mothers	Symptoms: posttreatment < pretreatment	Improvement in mothers' mood was associated with improvement in child behavior; majority of change in child behavior was accounted for by changes in conduct, learning problems, and impulsivity/hyperactivity
Murray et al. ¹⁴	Newborn, <i>N</i> = 193	Random assignment of mothers to routine primary care, nondirective supportive counseling, CBT, or psychodynamic therapy	MDD (EPDS >12, SCID) Inclusion/exclusion of comorbid diagnoses not reported	Domains: quality of mother–child relationships and interactions (observational assessment), behavioral and emotional problems (BSQ, PBCL), attachment (Ainsworth Strange Situation Procedure), cognitive development (BSID, McCarthy scales) Informants: mothers, independent evaluators	Symptoms: nondirective counseling, CBT, and psychodynamic < control Remission: psychodynamic > control No group differences at 18- and 60-mo follow-up	Posttreatment: women in the 3 active treatments reported fewer problems in the mother–infant relationship than mothers in receiving routine primary care; women in the 3 active treatments who had high levels of social adversity demonstrated more sensitive interactions with their infants; no treatment effects for mothers' perceived ability to manage their infants' behavior 18-mo follow-up: mothers in the nondirective supportive counseling condition reported less problematic behavior in their infants than mothers in the routine primary care condition; no

Verdeli et al. ¹⁷	Mean 14 y, N = 10	Open trial of IPT for depressed mothers of children receiving outpatient psychiatric services	MDD without psychotic features (BDI, HRSD >12, PPQ, SCID) Excluded: current substance use disorder, acute risk for suicide	Domains: depression symptoms (CDI, CGI-SI, HRSD), social functioning (SAICA), global functioning (CGAS) Informants: mothers, children, independent evaluators	Symptoms: posttreatment < pretreatment	effects for attachment or cognitive development 60-mo follow-up: no treatment effects Reductions in maternal depression and improvements in mothers' global functioning were associated with improvements in children's global functioning; reductions in mothers' symptoms were not associated with change in children's depressive symptoms
Verduyn et al. ¹⁵	2–4 y, N = 119	Random assignment of mothers to CBT, support group, or no treatment	MDD or dysthymia (BDI >15, HRSD, SCID) Excluded: any comorbid diagnoses	Domains: internalizing and externalizing symptoms (CBCL, ECBI, PBCL) Informants: mothers, teachers, independent evaluators	Symptoms: CBT = support group = no treatment	No significant treatment group differences; children of mothers in the CBT group showed reductions in behavior problems from pretreatment to posttreatment, 6- and 12-mo follow-up

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TABLE 1
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Authors	Sample (Age and Sample Size)	Study Design	Parents' Baseline Psychiatric Diagnoses	Child Assessments	Parents' Results	Children's Results
Weissman et al. ¹⁰	7–17 y, <i>N</i> = 151	Random assignment of mothers to combinations of medications	MDD (HRSD >14) Excluded: lifetime history of bipolar disorder, schizophrenia, schizoaffective disorder, MDD with psychotic symptoms; current primary diagnosis of eating disorder, OCD	Domains: internalizing and externalizing symptoms (CBCL), psychiatric diagnoses (K-SADS-PL), global functioning (CGAS) Informants: mothers, independent evaluators	33% remitted	Greater maternal responses to treatment were associated with greater decreases in child symptoms and diagnoses; at least 50% maternal response was necessary to discern improvements in child outcomes; remission of maternal depression was significantly associated with reductions in children's symptoms and diagnoses; of the children who did not have diagnoses at baseline, all children whose mothers' depression remitted remained free of psychiatric diagnoses, whereas 17% of the children whose mothers remained depressed developed a disorder

Note: Measures used to assess parent psychopathology, child psychopathology, and child psychosocial functioning are noted in parentheses. Assessment measures: ASQ = Attachment Q-Set; BDI = Beck Depression Inventory; BSID = Bayley Scales of Infant Development; BSQ = Behavioral Screening Questionnaire; CAS = Child Assessment Schedule; CBCL = Child Behavior Checklist; CBQ = Child Behavior Questionnaire; CDI = Children's Depression Inventory; CGI-SI = Clinical Global Impressions Severity of Illness Scale; CGAS = Child Global Assessment Scale; CPRS = Conners Parent Rating Scale; DSSI = Depression Symptoms Severity Index; ECBI = Eyberg Child Behaviour Inventory; EPDS = Edinburgh Postnatal Depression Scale; HDL = Health and Daily Living Form; HRSD = Hamilton Rating Scale for Depression; IBQ = Infant Behavior Questionnaire; IDD = Inventory to Diagnose Depression; K-SADS = Schedule for Affective Disorders and Schizophrenia for School-Age Children-Present and Lifetime Version; MADRS = Montgomery-Asberg Depression Rating Scale; PBCL = Pre-School Behavior Checklist; PPQ = Patient Problem Questionnaire; PSI = Parenting Stress Index; RDC = Research Diagnostic Criteria; SADS = Schedule for Affective Disorders and Schizophrenia; SAICA = Social Adjustment Inventory for Children and Adolescents; SCID = Structured Clinical Interview for *DSM-III-R*. Treatments: CBT = cognitive-behavioral therapy; IPT = interpersonal psychotherapy; M-ITG = mother-infant therapy group. Diagnoses: MDD = major depressive disorder; OCD = obsessive-compulsive disorder.

children of parents who continued to be depressed. In contrast to these studies, Forman and colleagues¹³ found no association between reductions or remissions in postpartum depression and children's behavior problems, attachment, emotionality, temperament, or maternal responsiveness.

Maintenance of Child Outcomes

Five studies examined the stability of child outcomes in response to treatment of parental depression.^{13–15,18,20,21} Follow-up assessments ranged from 6 months to 10 years posttreatment. Three of these studies found that there were long-term benefits for children when their parents received treatment for depression. One study found that within a group of mothers who received cognitive-behavioral therapy, children had fewer behavior problems posttreatment and maintained these gains at 6- and 12-month follow-up.¹⁵ Another study assessed the outcomes of children 18 and 60 months after the completion of their mothers' treatment. At the 18-month assessment, children whose mothers received nondirective supportive counseling demonstrated fewer behavior problems than children of mothers in the control condition.¹⁴ A third study assessed child functioning 1, 4, and 10 years after parents' completion of unspecified treatments.^{18,21} At 1- and 4-year follow-up, children of parents whose depression had remitted were functioning better than children of parents who continued to be depressed. However, at the 10-year follow-up, offspring of remitted parents were functioning comparably to the offspring of nonremitted parents and significantly worse than offspring of never-depressed parents. Two studies did not find that parents' treatment was associated with better outcomes for children either immediately after the parents' completion of treatment or at later follow-up assessments.^{13,20}

Type of Treatment Received by Parents

The depressed parents in the 10 studies reviewed received a variety of treatments. In two studies, mothers were treated with medication only.^{10,16} In five studies, mothers were treated with psychotherapy only, including interpersonal therapy,^{12,13,17} cognitive-behavioral therapy,^{14,15} mother–infant therapy group,¹² psychodynamic therapy,¹⁴ and supportive therapy.^{14,15} One study treated parents with medication, interpersonal psychotherapy, or both; however, the authors did not compare child outcomes based on the type of treatment parents received.¹¹ Two studies assessed parents' and children's

outcomes after parents had already initiated unspecified treatments.^{18–21} None of the studies directly examined the differential treatment effects of medication versus psychotherapy on children.

DISCUSSION

This broadly based review included open and controlled trials and observational studies in which information on parent and child (ages 18 and younger) outcomes was available. Covering published English language studies from 1806 to 2007 yielded only 10 studies. These studies varied widely in design, sample, time of observation, assessment, treatment, and data analysis, making definitive conclusions impossible. However, there was some consistent evidence that reduction or remission of parental depressive symptoms was related to reduction in child symptoms and that these child effects were maintained. There was some suggestion that reduction in postpartum depression had limited effect on infant behavior, but here also the number of studies was limited. Given the high prevalence of psychiatric problems in children of depressed parents and the public health significance of having other strategies to assist children at risk, recommendations for research strategies follow.

Future studies should directly examine parental remission in relation to child psychopathology rather than parents' treatment regardless of the parents' clinical outcome because no treatment is 100% effective in all patients. A controlled clinical trial is preferable to an open trial because other factors that may affect or explain outcomes in children can be avoided by random assignment. However, a controlled clinical trial with random assignment of parents to treatment needs to be of sufficient size and power to look within the treatment for the relation between parental improvement and child symptoms.

There are many efficacious treatments for adult depression with presumed differences in onset of action and targeted outcomes. Different parental treatments could have different effects on children. A study of the direct comparison of treatment of parental depression with medication versus psychotherapy that is of sufficient power to determine whether there are differential effects on children would be of considerable interest.

Although parents' reports on children are useful, child psychopathology and functioning should be assessed by

evaluators who are blind to parents' treatment and clinical status. Direct assessment of children's symptoms will avoid the possible bias of parent report colored by parent clinical status.^{22–25}

There are no data on the effect of treating depressed fathers on children. Future studies should make an effort to include depressed fathers, although this may be difficult due to their lower rates of depressive disorders and lower rates of seeking mental health treatment.^{26,27}

Although the data are limited, treating postpartum depression appears to have little impact on improvements in infants' and toddlers' attachment, temperament, and cognitive development. It is unclear whether this is due to offspring age, quality of assessment available for infants, or the paucity of studies. Future studies should examine the impact of successful treatment of postpartum depression separately from depression at other stages and should examine the attachment, temperament, and cognitive development of older children and adolescents.

None of the studies examined mediators that explain how improvements in parental depression lead to improvements in child outcomes or moderators that influence the extent to which or whether improvements in parental depression lead to improvements in child outcomes.²⁸ Many mediators have been proposed including, but not limited to, parents' cognitive style, displays of affect, parenting behaviors, and exposure to environmental stressors such as marital and family conflict.²⁹ Moderators, such as the timing, chronicity, and severity of parental depression; availability and psychological functioning of other family members; and offspring sex, temperament, and intellectual and social-cognitive skills, have also been proposed.²⁹ Future studies that examine mediators or moderators will need to recruit large samples to have sufficient power to detect significant effects.

Successfully treating parental depression is one potential strategy for improving the health of the children in their care. The minimal data available suggest that this strategy may be effective. There is ample evidence that depression, anxiety, and other psychiatric disorders are complex genetic disorders with strong environmental stress triggers of episodes. Having a depressed parent can be stressful for a youth. Successful symptom reduction of the depressed parent is, of course, not the full story for helping the offspring, but it could be readily available to delay or even prevent

onset in the offspring. Finally, adding an assessment of the children in ongoing clinical trials of depressed patients with children may be one way to obtain the data needed to test this hypothesis.

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Individual and Combined Effects of Postpartum Depression in Mothers and Fathers on Parenting Behavior Paulson JF, Dauber S, Leiferman JA

Background: Pediatric anticipatory guidance has been associated with parenting behaviors that promote positive infant development. Maternal postpartum depression is known to negatively affect parenting and may prevent mothers from following anticipatory guidance. The effects of postpartum depression in fathers on parenting is understudied. **Objective:** Our purpose with this work was to examine the effects of maternal and paternal depression on parenting behaviors consistent with anticipatory guidance recommendations. **Methods:** The 9-month-old wave of data from a national study of children and their families, the Early Childhood Longitudinal Study, provided data on 5089 2-parent families. Depressive symptoms were measured with a short form of the Center for Epidemiologic Studies Depression Scale. Interviews with both parents provided data on parent health behaviors and parent-infant interactions. Logistic and linear regression models were used to estimate the association between depression in each parent and the parenting behaviors of interest. These models were adjusted for demographic and socioeconomic status indicators. **Results:** In this national sample, 14% of mothers and 10% of fathers exhibited levels of depressive symptoms on the Center for Epidemiologic Studies Depression Scale that have been associated with clinical diagnoses, confirming other findings of a high prevalence of postpartum maternal depression but highlighting that postpartum depression is a significant issue for fathers as well. Mothers who were depressed were approximately 1.5 times more likely to engage in less healthy feeding and sleep practices with their infant. In both mothers and fathers, depressive symptoms were negatively associated with positive enrichment activity with the child (reading, singing songs, and telling stories). **Conclusions:** Postpartum depression is a significant problem in both mothers and fathers in the United States. It is associated with undesirable parent health behaviors and fewer positive parent-infant interactions. Reprinted with permission from **Pediatrics** 2006;118(2):659–668 by the AAP.

Risk of Sudden Infant Death Syndrome With Parental Mental Illness King-Hele SA, Abel KM, Webb RT, Mortensen PB, Appleby L, Pickles AR

Context: Sudden infant death syndrome is the leading cause of postneonatal death in developed countries. Little is known about risks linked with parental mental illness per se or how such risks are modified by specific psychiatric conditions and by maternal vs paternal psychopathological abnormalities. **Objective:** To investigate cause-specific postneonatal death, including sudden infant death syndrome, in infants whose parents had been admitted as psychiatric inpatients. **Design:** National cohort study. **Setting:** The entire Danish population. **Patients:** All of the singleton live births registered from January 1, 1973, to December 31, 1998. Linkage to the national psychiatric register enabled identification of all of the parental admissions from April 1, 1969, onward. **Main Outcome Measure:** All of the cases of sudden infant death syndrome in the postneonatal period classified via national mortality registration between January 1, 1973, and December 31, 1998. **Results:** Psychiatric admission history in either parent doubled the risk of sudden infant death syndrome, but there was no difference in risk whether infants were exposed to maternal or paternal admission. Risk was particularly high if both parents had been admitted for any psychiatric disorder (relative risk, 6.9; 95% confidence interval, 4.1–11.6). Among specific parental disorders, the greatest risk was associated with admission for alcohol- or drug-related disorders (mothers: relative risk, 5.0; 95% confidence interval, 3.4–7.5; fathers: relative risk, 2.5; 95% confidence interval, 1.7–3.8). Contrary to prior expectation, parental schizophrenia and related disorders did not confer higher risks than other parental disorders that resulted in admission. **Conclusions:** Infants whose parents have been admitted for psychiatric treatment are at greater risk for sudden infant death syndrome. However, risks may be lower than previously thought with maternal schizophrenia and related disorders. Clinicians should be aware of particularly high risks if both parents have received any psychiatric inpatient treatment or if either parent (but the mother especially) was admitted with an alcohol- or drug-related disorder. **Arch Gen Psychiatry** 2007;64(11):1323–1330.