INFLUENCE OF MOTHER’S DEPRESSION ON HER REPORTS OF FATHER INVOLVEMENT AND CHILD BEHAVIORAL PROBLEMS: A LATENT STATE-TRAIT APPROACH

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ABSTRACT: Research on father involvement has shown positive effects on child development. Because fathers in high social risk samples may be hard to recruit or retain in studies, the literature often has relied on maternal report of father involvement. A major limitation of this approach is that unobserved traits of the reporting mothers may distort the real associations between father involvement and children’s development. Using maternal data from a large, longitudinal sample (N = 704) of low-income, young mothers, we evaluated the degree to which a stable depressive trait affected the link between mother-reported measures of father involvement and child problems. Three waves of maternal depression data were used to fit a latent state-trait model of depression, allowing for separate estimates of occasion-specific symptoms and stable depressive trait. A latent regression analysis which did not control for this trait revealed a link between father involvement and child problems similar in magnitude to the links reported in the literature. However, this association disappeared once we accounted for the effect of maternal depressive trait. Results suggest that studies using maternal reports of father involvement should control for such confounding effects. We elaborate on these findings in the conclusion and offer suggestions for future research on the role of fathers in child development.

RESUMEN: La investigación sobre la aportación del papá demuestra efectos positivos en el desarrollo del niño. Como resulta difícil reclutar o retener en un estudio a papás en grupos muestras de alto riesgo social, la literatura investigativa a menudo confía en reportes maternos sobre la participación del papá. Una considerable limitación en este acercamiento es que las características no observadas de las madres que reportan pudieran distorsionar las verdaderas asociaciones entre la participación del papá y el desarrollo del niño. Usando información de las madres en un grupo muestra longitudinal extenso (n = 704) de madres jóvenes de bajos recursos, evaluamos el grado al cual una característica depresiva estable afectó el lazo entre las medidas reportadas por la madre acerca de la participación del papá y los problemas del niño. Se usaron tres procederes de información de la depresión maternal para adecuar un modelo de característica estable latente de depresión, lo cual permitiría estimados separados de síntomas de una ocasión específica y características depresivas estables. Un análisis que no fue parte del control de esta característica reveló un vínculo entre participación del padre y problemas del niño. Sin embargo, esta asociación desapareció una vez se tomó en cuenta el efecto de la característica depresiva maternal. Los resultados revelan que los estudios que usan reportes maternos tanto de conductas del papá como del niño deben proveer control para tales confusos efectos. En la conclusión, elaboramos sobre estos resultados y ofrecemos sugerencias para la futura investigación sobre el papel de los papás en el desarrollo del niño.

RÉSUMÉ: Les recherches sur l’implication du père ont eu des effets positifs sur le développement de l’enfant. Parce que les pères dans des échantillons à haut risque social peuvent s’avérer difficile à recruter ou à garder dans des études, les recherches reposent souvent sur les compte-rendus que font les mères du degré d’implication du père. Une limite importante à cette approche se trouve dans le fait que les traits inobservés du rapport des mères peuvent déformer les liens réels entre l’implication du père et le développement de l’enfant. En utilisant des données maternelles d’un grand échantillon longitudinal (n = 704) de jeunes mères de milieu défavorisé, nous avons évalué le degré auquel un trait dépressif stable affectait le lien entre les mesures rapportées par les mères de l’implication du père et les problèmes de l’enfant. Trois vagues de données de dépression maternelle ont été utilisées pour correspondre à un modèle de dépression d’état-de trait latent, permettant d’avoir des estimations séparées de symptômes occasionnels-spécifiques et d’un trait dépressif stable. Une analyse qui n’a pas contrôlé ce trait a révélé un lien entre l’implication du père et les problèmes de l’enfant. Cependant, ce lien a disparu une fois que nous avons inclu l’effet du trait dépressif maternel. Les résultats suggèrent que les études utilisant des compte-rendus maternels des comportements d’à la fois le père et l’enfant devraient contrôler de ces effets confondants. Nous élaborons sur ces résultats dans la conclusion et offrons des suggestions pour les recherches à venir sur le rôle des pères dans le développement de l’enfant.

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View this article online at wileyonlinelibrary.com.
DOI: 10.1002/imhj.21487

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ABSTRACT: The involvement of fathers in the development of children has been associated with positive effects for the children’s development. However, this is often assessed based on maternal reports, which may suffer from methodological limitations. In this study, we used maternal reports from a large longitudinal sample of women (n = 704) with low income, to investigate the effects of maternal depressive symptoms on the relationship between paternal involvement and the children’s development. The data were collected at different time points, and a latent state-trait model of depression was used to estimate separate effects for situational symptoms and stable depression. The results suggest that maternal depressive symptoms may be a confounding factor in the relationship between paternal involvement and the children’s development. Further research is needed to understand the role of paternal involvement in the children’s development.


CHALLENGES IN RESEARCH ON HIGH-RISK FATHERS

During the last several decades, researchers and practitioners have devoted increased attention to the role of fathers in the development of children. Studies have documented that fathers play a significant role in children’s developmental functioning, including socioemotional, behavioral, and academic domains. Most research documenting the benefits of involved father–child relationships has arisen primarily from studies of low-risk families; however, the influence of fathers on their young children’s development applies quite broadly across a range of socioeconomic and family structure configurations (e.g., married, divorced, nonresidential). There is some suggestion that father involvement is even more critical in low-income or in higher risk contexts (Fitzgerald, Bocknek, Cabrera, & Tamis-LeMonda, 2013; Howard, Lefever, Borkowski, & Whitman, 2006; Martin, Ryan, & Brooks-Gunn, 2010).

CHALLENGES IN RESEARCH ON HIGH-RISK FATHERS

A major challenge in studying fathers in socially disadvantaged families (e.g., unwed couples, low SES, or adolescent parents) is that these fathers often are hard to recruit or retain in studies...
(Carlson & McLanahan, 2010; Costigan & Cox, 2001; Hernandez & Brandon, 2002). Many unwed fathers are less likely to live with their children or to be involved in parenting, given that their relationships with the mothers of their babies are often unstable (Hoffferth & Goldscheider, 2010; Kalil, Ziol-Guest, & Coley, 2005). If the primary study contact is the mother, she may not provide access to contact information about the father of the child. Further, employment hours of parents working outside the home may make it relatively more difficult for fathers to participate (since women are more likely to curtail their employment when they have young children). As a result, there is a concern that the current literature on fathers may be biased toward lower risk families and more involved fathers (Roggman et al., 2013). In particular, fathers who are nonresidental or unmarried are underrepresented in studies that use paternal reports of their own parenting; therefore, this research likely does not characterize all men’s involvement in the lives of their children.

For reasons outlined earlier, studies of nonresident fathers often have to rely on paternal reports of parental involvement (Cabrera, Mitchell, Ryan, Shannon, & Tamis-LeMonda, 2008). Maternal reports of fathers’ involvement can be an effective research tool (Martin, Brazil, & Brooks-Gunn, 2013; Mitchell et al., 2007). However, the validity of maternal report of father involvement is a methodological and conceptual concern in fathering research (Hernandez & Coley, 2007). Especially among unmarried couples living apart, discrepancies between maternal and parental reports can be large (Coley & Morris, 2002; Kitterød & Lyngstad, 2014).

CONCERNS ABOUT REPORTER DISCREPANCIES

The fact that maternal and paternal reports on the same measures are often discrepant has been a known issue in child development literature, extending to topics far beyond the question of father involvement. Mothers’ and fathers’ ratings of their children also tend to be quite different (Achenbach, Edelbrock, & Howell, 1987; Grigorenko, Geiser, Slobodskaya, & Francis, 2010; Thurber & Sheehan, 2012). For example, fathers tend to rate children’s internalizing behavior and psychiatric symptoms lower than do mothers (Huberty, Austin, Harezlak, Dunn, & Ambrosius, 2000; Jensen, Xenakis, Davis, & Degroot, 1988; Seiffge-Krenke & Kollmar, 1998), especially when reporting on sons (Luoma, Koivisto, & Tamminen, 2004).

Various explanations for the discrepancies in mother and father reports have been proposed. Parents might differ in their willingness to report problems; their answers might be influenced by the quality of their relationship with the child, the amount of time they spend with the child, or the situations in which they typically interact with the child (Treutler & Epkins, 2003; Youngstrom, Loeber, & Stouthamer-Loeber, 2000). Gender roles and socialization may affect both the actual behaviors of the children and how these behaviors are perceived by the parents of each gender (Thompson, MacLaren, Harris, & Kain, 2009). De Los Reyes and Kazdin’s (2005) theoretical model combines these differences under an overarching category of informant attributional bias. Attributional biases are cognitive processes that affect memory recall and influence how individuals perceive others.

The concept of rater attributional bias is at the core of the depression-distortion hypothesis (Jensen et al., 1988), one of the most investigated explanations for informant discrepancies in child and adolescent psychiatric literature. This hypothesis postulates that a caregiver’s depression promotes negative bias and causes parents to overstate or overreport problems in their children. This framework is grounded in cognitive theories of depression, which suggest that affected individuals are characterized by attentional biases for negative material, mood-congruent memory recall, and cognitive deficits in how they process information (Dalgleish, Hill, Golden, Morant, & Dunn, 2011; Gotlib & Joormann, 2010). These cognitive difficulties have been proposed to be a stable trait of depression-vulnerable individuals, as they characterize even asymptomatic individuals who were depressed in the past (Ehring, Tuschen-Caffier, Schnüll, Fischer, & Gross, 2010). In clinical literature, this trait has been referred to as a “depressogenic cognitive style” (Hankin, Fraley, & Abela, 2005) or a “depressive attributional style” (Abela & Seligman, 2000; Peterson et al., 1982; Sweeney, Anderson, & Bailey, 1986), and is characterized by negative processing and impaired judgment that manifests across multiple self-referent domains.

The depression-distortion hypothesis generally has been applied to a depressed mother’s overreporting of child behavior problems (Mowbray, Lewandowski, Bybee, & Oyserman, 2005; Ordway, 2011; van der Toorn et al., 2010); however, it also might apply to mothers’ perceptions of father involvement. Some authors have suggested that a mother’s perceptions of paternal involvement and her satisfaction with the relationship could be affected by her emotional well-being (Coley & Morris, 2002; Fagan & Lee, 2010; Lamb & Lewis, 2010). Several correlational studies have found associations between greater maternal depression and lower maternal perceptions of father involvement (Malik et al., 2007; Mezulis, Hyde, & Clark, 2004).

STATISTICAL APPROACHES TO ACCOUNTING FOR REPORTER EFFECTS

Modern statistical techniques allow researchers to separately model various sources of variance, including the variance that is due to reporter effects (called method-related variance; see Eid & Diener, 2006). These modeling techniques are grounded in classical test theory, which postulates that research measurements can be decomposed into the true score and measurement error (Campbell & Fiske, 1959; Carmines & Zeller, 1979; DeVellis, 2011; Kline, 2005). The true score is the quantity that would have been obtained if there was no measurement error; it is a theoretical (unobserved) construct and is commonly referred to as the “latent” variable. Measurement error is a broad term that refers to deviations from the true scores due to two sources: nonrandom (i.e., confounding) and random (i.e., chance) influences.

Researchers model latent variables by measuring multiple indicators of the same construct, which are commonly referred to as “observed” or “manifest” variables. An example of manifest
variables would be a set of questionnaire items that a researcher develops to tap into the same latent construct (e.g., a questionnaire in which all items pertain to symptoms of depression). Multiple indicators of the same phenomenon also could be obtained from structurally different raters (e.g., behavior problems reported by the child’s mother, father, and teacher) or from the same raters over multiple occasions.

It is conjectured that manifest variables designed to measure the same construct will be intercorrelated and that the variance shared by these items is a reflection of a common cause (i.e., the influence of the latent construct; T.A. Brown, 2006). The remaining variance can be further decomposed into (a) method-specific variance (e.g., effect of the reporter, if more than one reporter); (b) occasion-specific variance (e.g., effect of time, if measurements occurred on more than one occasion); (c) indicator-specific variance (e.g., the effect of specific questions chosen to assess the behavior); and (d) random error (Little, 2013).

For illustrative purposes, we present a simplified model of variance decomposition for a study involving two raters (e.g., mother and father) reporting on the same three-item questionnaire about child behavior problems (see Figure 1). As shown in the figure, the construct of child behavior problems is shared by each rater and is modeled as a “true trait” by extracting the common variance from all six indicators. The variance due to specific vantage points of the mother and father perceptions is modeled as separate factors to account for any variance in the three item scores that is unique to the rater (Little, 2013). Finally, the variance due to the indicator-specific effects also is partitioned out. This practice is recommended because the same questionnaire items share idiosyncratic components with themselves that may not be shared with remaining items (Geiser & Lockhart, 2012; Pohl & Steyer, 2010). As such, if this indicator-specific variance is not modeled, it may lead to correlated error terms, which would interfere with model estimation (LaGrange & Cole, 2008).

The modeling of rater effects is motivated by the concern that reports by different informants are confounded by systematic, person-specific characteristics (Pohl & Steyer, 2010). However, rater effects can be separated from the true score and other sources of variance only if a researcher has data from multiple raters (as in Figure 1). For this reason, the use of multiple informants has been proposed as a best practice since Campbell and Fiske’s (1959) seminal publication on the multitrait-multimethod (MTMM) matrix (Cole, Ciesla, & Steiger, 2007; Grigorenko et al., 2010). However, often researchers do not have access to multiple raters reporting on the same construct. A major concern in such cases is that the true scores on all constructs in the study are “contaminated” (i.e., confounded) by the variance related to the informant, which leads to overestimated associations between constructs (Little, 2013). In other words, the strength of association between two variables will be stronger than it is in reality because both variables share additional common variance attributable to person-specific characteristics of the informant.

Although it is impossible to investigate the degree of rater bias in single-reporter studies the way that it can done in multimethod studies, assessing the same reporter over multiple occasions can help mitigate the concern about confounding by person-specific variance (Eid, Geiser, & Nussbeck, 2009). Specifically, by collecting longitudinal data on the characteristics believed to bias the informant’s responses, a researcher can explicitly model, and then control for, the stable person-specific variance due to this trait. This task can be accomplished by using latent state-trait (LST) modeling.

LST models are a class of longitudinal models that attempt to partition variance of a variable into components that remain stable over time (traits) and factors that change over time (states). These models allow researchers to determine the degree to which differences in scores on a given measure depend on occasion-specific effects versus stable person-specific effects. The LST theory (Steyer, Ferring, & Schmitt, 1992; Steyer, Majcen, Schwenkmezger, & Buchner, 1989; Steyer & Schmitt, 1990; Steyer, Schmitt, & Eid, 1999) recognizes that self-reports may be distorted systematically by stable response dispositions that remain consistent across situations whereas fluctuation in occasion-specific effects, on the other hand, reflects variance that is independent of this trait. LST theory has been widely applied in research on personality, emotion, subjective well-being, psychopathology, and other fields of psychology (Geiser & Lockhart, 2012).

An illustrative example of an LST model is shown in Figure 2. As shown, the model decomposes the variance in the scores measured at three time points into the variance that is due to stable individual differences (trait) and the variance that is due to the situation effects at each occasion of measurement (state). Figure 2 also shows three indicator-specific factors. Multiple approaches to modeling indicator-specific variance have been proposed (e.g., Geiser & Lockhart, 2012; LaGrange & Cole, 2008); here, we illustrate the approach that has been developed to overcome technical and interpretative problems of MTMM designs (Geiser, Eid, & Nussbeck, 2008; Geiser & Lockhart, 2012). In this technique (called the M – 1 approach), one indicator is chosen as a reference method against which other method factors are contrasted. As such, the nonreference indicator-specific factors are modeled to represent the part of the variance of these indicators that is not shared with the state factors (see Coffman & MacCallum, 2005; Little, Cunningham, Shahar, & Widaman, 2002).

THE PRESENT STUDY

In this article, we seek to address the issue of possible report bias induced when mothers provide information on both the fathers and their children. Statistically, we are guided by the LST modeling framework, which postulates that stable response dispositions (traits) can be modeled explicitly as the variance shared by indicators assessed over time. Theoretically, this article is guided by the cognitive theories of depression, and specifically by the depression-distortion hypothesis which postulates that a stable depressive trait may negatively bias the way a caregiver describes both her child’s behavior and her partner’s father involvement.

*Infant Mental Health Journal* DOI 10.1002/imhj. Published on behalf of the Michigan Association for Infant Mental Health.
We use data on maternal depressive symptoms measured three times over the course of 2 years to evaluate our proposed model. Specifically, our conceptual model (illustrated in Figure 3) postulates that the symptoms mothers report on any given occasion are simultaneously influenced by the occasion (e.g., mood during the interview) and the stable depressive cognitive bias (trait) said to describe depression-vulnerable individuals. By explicitly modeling the variance due to these factors, we will be able to control for their effect on mother-reported father involvement and child behavioral problems as well as on the link between these constructs. Given the earlier literature reviewed, we hypothesize that higher father involvement will predict lower child problems 1 year later. Second, we hypothesize that after we control for the mother’s depressive cognitive trait, the magnitude of the association between father involvement and child problems will be substantially reduced.

METHOD

Sample and Procedures

Data were derived from a longitudinal randomized control trial evaluation of a statewide newborn home-visiting program for first-time parents ages 20 years and under at childbirth. The program is an adaptation of the Healthy Families America and is designed to (a) prevent child abuse and neglect by supporting positive, effective parenting; (b) promote optimal child health, growth, and development; (c) encourage parental educational attainment, job, and life skills; (d) prevent repeat teen pregnancies; and (e) promote parental health and well-being.

Eligibility criteria for study participation included being female, 16 years of age or older, not having previously received Healthy Families America services, English or Spanish fluency, and being cognitively able to provide informed consent. Women seeking Healthy Families Massachusetts services (N = 837) were randomly assigned to either the home-visiting group or the control group (who received referrals to other service programs for young parents and monthly child development information). A total of 704 mothers (61% home-visiting group, 39% control group) participated in evaluation activities (response rate = 84%), which included, at a minimum, an agency data release or an initial (Time 1, T1) telephone interview. Most participants also completed follow-up telephone interviews at 12 months’ (Time 2, T2) and at 24 months’ postenrollment (Time 3, T3).
The number of mothers who completed the telephone interview at T1 was 684; of them, 82% (n = 564) participated at T2, and 87% (n = 594) at T3. Details on the methodology of the larger evaluation study are presented elsewhere Jacobs, Easterbrooks, Mistry, Bumgarner, Fauth, Goldberg, Greenstone, Raskin, Contreras, Coskun, Fosse, Kotake, & Scott (in press). Next, we briefly describe measures used in the present study.

**Measures**

**Demographic characteristics (T1).** Demographic characteristics of the mothers, fathers, and children were collected through maternal interviews and included mothers’ and fathers’ age and ethnic background; child age and sex; fathers’ education, employment, military service, incarceration, and number of children with other partners; and mothers’ current relationship status and levels of support received from the father.

The Center for Epidemiological Studies-Depression (T1, T2, and T3; CES-D, Radloff, 1977). The 20-item CES-D assesses symptoms experienced during the past week (e.g., “I felt that I could not shake off the blues even with help from my family or friends”) rated on a Likert scale of 0 (not at all) to 3 (a lot). The CES-D has demonstrated strong psychometric properties in both clinical and epidemiological studies (Radloff, 1977) with diverse groups (Naughton & Wiklund, 1993), including adolescents 14 years of age and older (Sharp & Lipsky, 2002) and postpartum women (Radloff, 1991; Weinberg et al., 2001).

An overall score, reflecting severity of symptoms, typically is created by summing the 20 items. However, studies have found support for a four-factor structure of the measure, dividing the items into the following four subscales (Radloff, 1977; Wong, 2000): (a) Depressed Affect (seven items: e.g., “I felt depressed.” “I had crying spells.”); (b) Lack of Well-Being (four items: e.g., “I felt hopeful about the future;” reverse-coded), “I was happy”
tests) comparing .65 for the Competence subscale.

In two instances, parents reported on the following aspects of fathers’ involvement in their lives: (a) the amount of time he spent with the mother in the past month, rated on a Likert scale ranging from 0 (none) to 5 (daily); (b) mother’s satisfaction with the quality of shared time on a Likert scale ranging from 0 (not at all) to 3 (very); and (c) three dichotomous (“yes” or “no”) questions about whether he provided financial or material support, emotional support, and physical help with pregnancy or parenting. Answers to the dichotomous questions were summed to obtain a count of types of supports offered by the father that ranged from 0 to 3.

Three indicators (presence, quality of shared time, and degree of support) were rescaled to range from 0 to 15 and used as manifest variables in the latent model of father involvement. Additional variables also collected at intake (maternal relationship status: single or in a relationship with father or another partner, and whether she co-resided with the father) were used in the descriptive analyses to contextualize the nature of father involvement.

The Brief Infant-Toddler Social and Emotional Assessment (T3) (BITSEA; Briggs-Gowan & Carter, 2006). The BITSEA was used to assess child socioemotional and behavioral problems or delays, and competence at T3. This 44-item questionnaire covers a broad range of socioemotional behaviors in young children (1–3 years), including internalizing, externalizing, and regulatory domains; and competence (Briggs-Gowan & Carter, 2002). Problem behavior items inquire about behaviors that are both typical of development (e.g., aggression, sadness, or fear) and those that are not developmentally appropriate (e.g., self-injurious behaviors).

To complete the BITSEA, parents endorse problem and competency statements (e.g., “Has trouble falling asleep or staying asleep”) using a Likert scale of 0 (not true/rarely), 1 (somewhat true/sometimes), and 2 (very true/often). In two instances, parents indicate how worried they are about a particular problem using a Likert scale of 1 (not at all worried), 2 (a little worried), 3 (worried), and 4 (very worried).

Four subscales were calculated: Externalizing (six items: e.g., “Hits, shoves, kicks, or bites children (not including brother or sister”), Internalizing (eight items: e.g., “Cries or hangs onto you when you try to leave”), Dysregulation (eight items: e.g., “Cries or has a tantrum until he or she is exhausted”), and Competence [11 items, e.g., “Can pay attention for a long time (other than watching TV)”). Higher externalizing, internalizing, and dysregulation scores indicate greater levels of socioemotional or behavioral problems; lower competence scores indicate a possible deficit/delay. Scores are created by summing the item responses from respective subscales. In our sample, Cronbach’s α were: α = .65 for the Externalizing Problems subscale; α = .52 for the Internalizing Problems subscale; α = .58 for the Dysregulation Problems subscale; and α = .66 for the Competence subscale.

The BITSEA was standardized on 600 children (Briggs-Gowan & Carter, 2006). Age and sex differences were found, specifically for competence, and authors recommended percentile-based cut scores to create Age-Band × Sex norm groups for the total problem and competence scores. No norm groups were provided for the subscales; we controlled for the effects of child age and sex on the subscales.

Analytic Approach

We began our analyses by exploring mother, child, and father characteristics in our sample. To contextualize these descriptive, we conducted bivariate analyses (χ² statistic and t tests) comparing mothers who reported daily father presence to all other mothers. These analyses were conducted in Stata 13/SE (Kohler & Kreuter, 2012).

We then proceeded to fit a series of latent models to test our study hypotheses. Figure 3 illustrates our conceptual model. We first performed a latent regression analysis to test whether father involvement at T1 predicted child behavioral problems at T3 (Model 1; illustrated in the top part of Figure 3). A latent regression analysis estimates the association between dependent and independent variables that are latent. We then fit an LST model of maternal depression (Model 2; see the bottom part of Figure 3). We chose the Depressive Affect subscale as the reference indicator, given that it was shown to be the most reliable factor. In our final step, we fit the entire model pictured in Figure 3, which tested the latent regression model predicting child behavioral problems from father involvement, controlling for the effect of maternal depressive trait (Model 3). The analytic steps described earlier follow the logic of hierarchical regression analysis, in which predictors are entered as blocks and then nested models are compared (specifically, Models 1 and 3). This analytic approach reflected the hypotheses that father involvement will predict child problems, but that the strength of the relation between these mother-reported measures would become less robust once we control for mothers’ depressive bias. Both latent regression analyses controlled for the effects of child’s age and sex.

In the latent framework, results are evaluated in three steps. The first step involves examining the structural components of the proposed models (i.e., the measurement model). Specifically, factor loadings are evaluated to examine whether manifest indicators
supported the proposed unobserved (latent) constructs. The second step involves evaluating the structural model (i.e., the latent path model testing the study hypotheses). Finally, model fit statistics are explored to identify models with the best fit to the data. We used the following model fit statistics. First, the \( \chi^2 \) statistic was examined, which tests whether estimated matrices are statistically equal to the observed matrices (A nonsignificant \( \chi^2 \) is desired). Because this test is sensitive to sample size (Little, 2013) we evaluated several additional indices: the Comparative Fit Index (CFI), the Tucker–Lewis Index (TLI), the root mean square error of approximation (RMSEA), and the standardized root mean square residual (SRMR). These are commonly interpreted relative to cut-off values for acceptable fit (Geiser, 2013). Lower values of the RMSEA and the SRMR (<.08) and higher values of the CFI and the TLI (> .90) indicate good fit (Hu & Bentler, 1999; Little, 2013). We conducted all latent analyses in Mplus Version 7.11 (Muthén & Muthén, 1998–2012).

**Missing Data**

The primary reason for missing data was wave attrition or intermittent missingness (18% at T2, 13% at T3). Bivariate analyses used listwise deletion to handle missingness. Full-information maximum likelihood (FIML) estimation was used to account for missing data in latent model analyses. In FIML, a likelihood function for each individual is estimated based on the variables that are present (Enders, 2008, 2010).

**RESULTS**

**Descriptive Analyses**

As shown in Table 1, ours was a diverse sample of young women, a large proportion of whom (40%) already were parenting at T1. Mothers who reported daily father presence did not differ from the rest of the mothers on such characteristics as mother’s place of birth, membership in the home-visiting group, and depression at T1; child’s sex, age, and level of internalizing and externalizing problems; and father’s age, level of education, employment, current military service, and number of other children. Some differences between the groups were found. Mothers who reported daily father presence were slightly older, were less likely to be Black or Hispanic, and were less likely to report their relationship status as single or to be in a relationship with another partner. Fathers who were described as present were more likely to be White or Hispanic and less likely to be incarcerated; they were more likely to coreside with the mother, and to provide financial, emotional, and physical support. Most mothers (61%) who described fathers as present daily were very satisfied with the quality of shared time.

**Latent Models**

Table 2 summarizes estimates and model fit statistics of the latent regression model predicting mother-reported child behavior problems from father involvement (Model 1), the latent state-trait model of depression (Model 2), and the full model, in which child problems are predicted by father involvement, controlling for the effect of mothers’ depressive trait (Model 3).

The results shown in Model 1 indicate that the three observed indicators of father involvement capture quite well common variance in the latent factor (factor loadings range = .85–.92). The three manifest variables of the latent factor of child behavioral problems (internalizing, externalizing, and dysregulation) also had moderately high loadings (.61, .59, and .83, respectively). The latent regression analysis revealed that lower father involvement at T1 significantly predicted more child behavioral problems at T3, \( p < .05 \).

Model 2 in Table 1 summarizes the results of the LST analysis of the longitudinal depression data. As shown, indicators had satisfactory (moderate to high, .52–.95) loadings onto the state factors, which in turn loaded highly onto the trait factor, indicating high stability over time in mothers’ depressive symptomology (.72 for depression state factor at T1, .77 for T2, and .59 for T3). Converted into \( R^2 \), these factor loadings indicate that at each time point, 52, 59, and 35%, respectively, of true individual differences in depression states were explained by a stable trait, and the remaining 48, 41, and 65%, respectively, were due to occasion-specific effects.

Factor loadings for indicator-specific factors ranged from .28 to .54, which means that between 8 and 29% of the observed variability in depression data was due to the indicator-specific effects. These effects are relatively high, indicating that a model without these factors likely would have had correlated residuals, which would lead to estimation problems. The highest loadings were for the lack of well-being factor (.40, .54, and .52, respectively), which is to be expected given that this subscale was comprised of the only four items of the CES-D that are positively worded and must be reverse-coded. Method factors were intercorrelated, suggesting that mothers who endorsed high values on the somatic subscale items also endorsed high values on the items describing interpersonal problems and low values on the items describing lack of well-being; and mothers who had high values on interpersonal problems had low values on lack of well-being.

Model 3 in Table 1 summarizes the results of the conceptual model, exploring the effect of father involvement on child problems after controlling for the effect of maternal depressive trait. As shown, after such accounting, the association between father involvement and child problems was no longer significant. In particular, the point estimate of the association was reduced from a \( \beta = -.11 \), \( p < .05 \), in Model 1 to \( \beta = -.07 \) in Model 3, although the \( SE \) of the point estimate remained unchanged at .05. There was a strong, statistically significant association between maternal depressive traits and child problem behaviors, \( \beta = .35 \), \( p < .001 \). Moreover, mothers with a higher depressive trait also reported lower father involvement, \( \beta = -.16 \), \( p < .01 \). In other words, maternal depressive trait was related to both the predictor and the outcome in the model and, as such, acted as a confound
TABLE 1. Descriptive and Inferential Statistics of Study Variables (N = 704)

<table>
<thead>
<tr>
<th></th>
<th>Father Involvement With Mother (Time 1)</th>
<th>Total</th>
<th>Yes, daily</th>
<th>No, not daily</th>
<th>χ² (df)</th>
</tr>
</thead>
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<td>n = 330</td>
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<tr>
<td>Place of Birth</td>
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<tr>
<td>U.S. Mainland</td>
<td></td>
<td>536</td>
<td>(82.2%)</td>
<td>273 (84.8%)</td>
<td>263 (79.7%)</td>
</tr>
<tr>
<td>Puerto Rico</td>
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<td>(6.6%)</td>
<td>22 (6.8%)</td>
<td>21 (6.4%)</td>
</tr>
<tr>
<td>Foreign Born</td>
<td></td>
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<td>(11.2%)</td>
<td>27 (8.4%)</td>
<td>46 (13.9%)</td>
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<tr>
<td><strong>Mother Characteristics (Time 1)</strong></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Time1 Intake Mother age (in years)</td>
<td>18.72 (1.32)</td>
<td>18.84 (1.24)</td>
<td>18.61 (1.39)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Mother Ethnicity</strong></td>
<td></td>
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<tr>
<td>White (Non-Hispanic)</td>
<td></td>
<td>238</td>
<td>(38.0%)</td>
<td>136 (42.2%)</td>
<td>112 (33.9%)</td>
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<tr>
<td>Black (Non-Hispanic)</td>
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<td>(19.0%)</td>
<td>50 (15.5%)</td>
<td>74 (22.4%)</td>
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<tr>
<td>Hispanic</td>
<td></td>
<td>225</td>
<td>(34.5%)</td>
<td>104 (32.3%)</td>
<td>121 (36.7%)</td>
</tr>
<tr>
<td>Other (Non-Hispanic)</td>
<td></td>
<td>55</td>
<td>(8.4%)</td>
<td>32 (9.9%)</td>
<td>23 (7.0%)</td>
</tr>
<tr>
<td>Place of Birth</td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>U.S. Mainland</td>
<td></td>
<td>536</td>
<td>(82.2%)</td>
<td>273 (84.8%)</td>
<td>263 (79.7%)</td>
</tr>
<tr>
<td>Puerto Rico</td>
<td></td>
<td>43</td>
<td>(6.6%)</td>
<td>22 (6.8%)</td>
<td>21 (6.4%)</td>
</tr>
<tr>
<td>Foreign Born</td>
<td></td>
<td>73</td>
<td>(11.2%)</td>
<td>27 (8.4%)</td>
<td>46 (13.9%)</td>
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<td>189 (58.7%)</td>
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<td>In Home-Visiting Group</td>
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<td>396</td>
<td>(60.7%)</td>
<td>197 (61.2%)</td>
<td>199 (60.5%)</td>
</tr>
<tr>
<td><strong>Time1 Intake Mother age (in years)</strong></td>
<td>18.72 (1.32)</td>
<td>18.84 (1.24)</td>
<td>18.61 (1.39)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Child Characteristics (Time 3)</strong></td>
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</tr>
<tr>
<td>Child Age (Months)</td>
<td></td>
<td>24.58</td>
<td>(6.67)</td>
<td>24.52 (6.55)</td>
<td>24.48 (6.42)</td>
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<td><strong>Child Sex</strong></td>
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<td>Boy</td>
<td></td>
<td>344</td>
<td>(53.3%)</td>
<td>174 (54.5%)</td>
<td>170 (52.1%)</td>
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<tr>
<td><strong>Father of Baby Characteristics (Time 1)</strong></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Father Age</td>
<td></td>
<td>20.96</td>
<td>(4.12)</td>
<td>21.08 (4.41)</td>
<td>20.85 (3.82)</td>
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<tr>
<td><strong>Father Ethnicity</strong></td>
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<td>White (Non-Hispanic)</td>
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<td>(21.8%)</td>
<td>51 (16.3%)</td>
<td>89 (28.4%)</td>
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<tr>
<td>Hispanic</td>
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<td>65</td>
<td>(10.1%)</td>
<td>126 (40.3%)</td>
<td>118 (37.7%)</td>
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<tr>
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<td>(40.1%)</td>
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<td>36 (11.5%)</td>
</tr>
<tr>
<td>Completed High School/GED</td>
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<td>(48.5%)</td>
<td>126 (48.5%)</td>
<td>106 (48.6%)</td>
</tr>
<tr>
<td>Completed 1 Year of College</td>
<td>42 (8.8%)</td>
<td>21 (8.1%)</td>
<td>21 (9.6%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employed</td>
<td></td>
<td>351</td>
<td>(57.5%)</td>
<td>196 (61.4%)</td>
<td>154 (53.7%)</td>
</tr>
<tr>
<td>In the Military</td>
<td></td>
<td>16</td>
<td>(2.5%)</td>
<td>6 (1.9%)</td>
<td>10 (3.2%)</td>
</tr>
<tr>
<td>Incarcerated</td>
<td></td>
<td>21</td>
<td>(3.3%)</td>
<td>0 (0.0%)</td>
<td>21 (6.7%)</td>
</tr>
<tr>
<td>No. of Other Children</td>
<td></td>
<td>1.55</td>
<td>(1.11)</td>
<td>1.52 (1.02)</td>
<td>1.56 (1.18)</td>
</tr>
<tr>
<td><strong>Mother–Father Relationship (Time 1)</strong></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Father Lives With Mother</td>
<td></td>
<td>181</td>
<td>(27.8%)</td>
<td>172 (53.6%)</td>
<td>9 (2.7%)</td>
</tr>
<tr>
<td>Mother Is Single</td>
<td></td>
<td>174</td>
<td>(26.8%)</td>
<td>13 (4.0%)</td>
<td>161 (48.9%)</td>
</tr>
<tr>
<td>Mother Is With Another Partner</td>
<td>43 (6.6%)</td>
<td>5 (1.6%)</td>
<td>38 (11.6%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>How Much Time Father Spends With Mother</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>None</td>
<td></td>
<td>142</td>
<td>(21.8%)</td>
<td>0 (0.0%)</td>
<td>142 (43.0%)</td>
</tr>
<tr>
<td>&lt; Daily</td>
<td></td>
<td>188</td>
<td>(28.8%)</td>
<td>0 (0.0%)</td>
<td>188 (57.0%)</td>
</tr>
<tr>
<td>Daily</td>
<td></td>
<td>322</td>
<td>(49.4%)</td>
<td>322 (100.0%)</td>
<td>0 (0.0%)</td>
</tr>
<tr>
<td>Mother Satisfied With the Quality of the Time Father Spends With Her</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not Spending Time Or Not At All Satisfied</td>
<td>156 (24.8%)</td>
<td>2 (0.7%)</td>
<td>154 (48.0%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Somewhat</td>
<td></td>
<td>62</td>
<td>(9.9%)</td>
<td>33 (10.7%)</td>
<td>29 (9.0%)</td>
</tr>
<tr>
<td>Pretty Much</td>
<td></td>
<td>140</td>
<td>(22.3%)</td>
<td>85 (27.7%)</td>
<td>55 (17.1%)</td>
</tr>
<tr>
<td>Very</td>
<td></td>
<td>270</td>
<td>(43.0%)</td>
<td>187 (60.9%)</td>
<td>83 (25.9%)</td>
</tr>
<tr>
<td>Father Provides Financial Support</td>
<td>401 (62.0%)</td>
<td>276 (85.7%)</td>
<td>125 (38.5%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Father Provides Emotional Support</td>
<td>504 (77.8%)</td>
<td>318 (98.8%)</td>
<td>186 (57.1%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Father Provides Physical Help</td>
<td>462 (72.8%)</td>
<td>307 (98.1%)</td>
<td>155 (48.1%)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The total N in our study was 704. However, due to missingness and wave attrition, the ns in the columns may not add up to 704.

*The association between father involvement and child outcomes. Depression state factor at T1 was unrelated with father involvement at T1, suggesting that when variance due to the depression trait is modeled, occasion-specific fluctuation in depression is not related to how mothers characterize father involvement. In contrast, depression state at T3 was strongly correlated with child problems at T3. Even when variance due to the depression trait is modeled, occasion-specific influences on depression symptom...
### TABLE 2. Results of the Latent Regression Analysis Predicting Child Behavioral Problems at Time 3 From Father Involvement at Time 1, as Reported by the Child’s Mother (n = 692) }

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Estimate</th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
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<tr>
<td>Father Involvement</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Support</td>
<td>.92 (.01)**</td>
<td>.92 (.02)**</td>
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<tr>
<td>Presence</td>
<td>.89 (.01)**</td>
<td>.89 (.01)**</td>
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<td></td>
</tr>
<tr>
<td>Quality of Shared Time</td>
<td>.85 (.02)**</td>
<td>.85 (.02)**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Child Behavior Problems</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Externalizing</td>
<td>.59 (.04)**</td>
<td>.63 (.04)**</td>
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<tr>
<td>Internalizing</td>
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<td>.63 (.04)**</td>
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<tr>
<td>Dysregulation</td>
<td>.83 (.04)**</td>
<td>.78 (.03)**</td>
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<td>Depression State (Time 1)</td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>Depressive Affect</td>
<td>.93 (.02)**</td>
<td>.93 (.02)**</td>
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<tr>
<td>Lack of Well-Being</td>
<td>.56 (.03)**</td>
<td>.58 (.03)**</td>
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</tr>
<tr>
<td>Somatic Symptoms</td>
<td>.76 (.02)**</td>
<td>.76 (.02)**</td>
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<tr>
<td>Interpersonal Problems</td>
<td>.61 (.03)**</td>
<td>.62 (.03)**</td>
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<tr>
<td>Depression State (Time 2)</td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>Depressive Affect</td>
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<td>.95 (.02)**</td>
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<tr>
<td>Lack of Well-Being</td>
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<td>.53 (.03)**</td>
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<tr>
<td>Somatic Symptoms</td>
<td>.77 (.02)**</td>
<td>.77 (.02)**</td>
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<td></td>
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<tr>
<td>Interpersonal Problems</td>
<td>.53 (.03)**</td>
<td>.54 (.03)**</td>
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</tr>
<tr>
<td>Depression State (Time 3)</td>
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<tr>
<td>Depressive Affect</td>
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<td>.92 (.02)**</td>
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<td>Lack of Well-Being</td>
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<td>.53 (.03)**</td>
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<tr>
<td>Somatic Symptoms</td>
<td>.77 (.02)**</td>
<td>.78 (.02)**</td>
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<tr>
<td>Interpersonal Problems</td>
<td>.58 (.03)**</td>
<td>.59 (.03)**</td>
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<tr>
<td>Depressive Trait</td>
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<td>.73 (.04)**</td>
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<tr>
<td>Depression State (Time 3)</td>
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<td>.59 (.04)**</td>
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<td>.38 (.05)**</td>
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<tr>
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<td>.54 (.05)**</td>
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<tr>
<td>Method Factor (SS):</td>
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</tr>
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<td>.52 (.05)**</td>
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</tr>
<tr>
<td>Somatic Symptoms (Time 2)</td>
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<tr>
<td>Somatic Symptoms (Time 3)</td>
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<td>.52 (.05)**</td>
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<tr>
<td>Method Factor (IP):</td>
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<tr>
<td>Interpersonal Problems (Time 1)</td>
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<td>.32 (.06)**</td>
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</tr>
<tr>
<td>Interpersonal Problems (Time 2)</td>
<td>.39 (.06)**</td>
<td>.32 (.06)**</td>
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<td></td>
</tr>
<tr>
<td>Interpersonal Problems (Time 3)</td>
<td>.39 (.06)**</td>
<td>.32 (.06)**</td>
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<tr>
<td>Path Models</td>
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</tr>
<tr>
<td>Father Involvement → Child Problems</td>
<td>−.11 (.05)**</td>
<td>−.07 (.05)</td>
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<tr>
<td>Depressive Trait → Child Problems</td>
<td>.35 (.06)**</td>
<td>.39 (.06)**</td>
<td></td>
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</tr>
<tr>
<td>Depressive Trait → Father Involvement</td>
<td>−.16 (.06)**</td>
<td>−.17 (.06)**</td>
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<td>Covariances</td>
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<td>Method Factor (SS) With</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Method Factor (LW)</td>
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<td>−.26 (.09)**</td>
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</tr>
<tr>
<td>Method Factor (IP)</td>
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<td>.31 (.10)**</td>
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<td>Method Factor (LW)</td>
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<td>−.17 (.09)**</td>
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<tr>
<td>Father Involvement</td>
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<td>−.07 (.06)</td>
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<tr>
<td>Depression State (Time 3) With</td>
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</tr>
<tr>
<td>Child Problems</td>
<td></td>
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<tr>
<td>( \chi^2 )</td>
<td>48.78**</td>
<td>42.08</td>
<td>277.08***</td>
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<td>( df )</td>
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<td>39</td>
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<tr>
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<td>0.01</td>
<td>0.04</td>
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<tr>
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<td>0.99/0.99</td>
<td>0.97/0.96</td>
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</tr>
<tr>
<td>SRMR</td>
<td>0.03</td>
<td>0.02</td>
<td>0.05</td>
<td></td>
</tr>
</tbody>
</table>

LW = Lack of Well-Being; SS = Somatic Symptoms; IP = Interpersonal Problems; RMSEA = root mean square error of approximation; CFI/TLI = Comparative Fit Index and the Tucker–Lewis Index; SRMR = standardized root mean square residual.

*Latent regressions (Models 1 and 3) controlled for the effect of child’s age and sex on child problems and child sex on father involvement.

*p < .05, **p < .01, ***p < .001.
were still highly correlated with how mothers characterize their children. In other words, mothers’ reports on their children are impacted by both the stable characteristics of the mothers and situational effects.

**DISCUSSION**

There is bountiful evidence that healthy child development depends not only on mothers but on fathers as well (Cabrera & Tamis-LeMonda, 2013). Changing social norms over the last several decades have led to shifts in both the amount of time that fathers spend in childrearing and the qualitative aspects of fathers’ participation in coparenting (Cabrera et al., 2007; Leidy et al., 2013). The study of father research has evolved considerably from simply focusing on the effects of parental divorce and father absence on children to considering the long-term effects of fathers on the development of their children in large-scale longitudinal studies such as the Fragile Families and Child Wellbeing Study (McLanahan & Garfinkel, 2012; Reichman, Teitler, Garfinkel, & McLanahan, 2001; Sgle-Rushton & McLanahan, 2004). Such increased scientific attention to the role of fathers has been paralleled by broad policy support for programs to promote responsible father involvement, such as the Supporting Healthy Marriage Project (Dion, 2005) and President Obama’s 2009 call for a national conversation to promote responsible fatherhood (Braswell, n.d.).

Despite the great gains made to understand the role of fathers in supporting healthy development of the children, the field of fathering research is complicated by several methodological challenges. One of the main challenges is gaining access to representative samples. Given that fathers from higher risk backgrounds are more difficult to recruit and retain in surveys, many study samples may be skewed toward resident fathers. This issue is of concern, given the dramatic shifts toward higher proportions of children born outside of marriage (41% of births) in the United States today (Carlson & Meyer, 2014). Nonmarital childbirth is more common among disadvantaged families, in which fathers are nonresident, often young, and experience economic difficulties (Cancian & Haskins, 2014; Furstenberg, 2014).

What is currently known about the role of low-income fathers points to great benefits of father involvement for the development of the children, including lower risk for cognitive developmental delays (Tamis-LeMonda, Shannon, Cabrera, & Lamb, 2004) and increased social competence (Kelley, Smith, Green, Berndt, & Rogers, 1998). In addition, it has generally been concluded that low-income and young fathers tend to be less involved with their children (Fagan & Lee, 2010; Roopnarine, Fouts, Lamb, & Lewis-Elligan, 2005). Still, there is considerable variability in patterns of involvement among disadvantaged, nonresident fathers. Several studies have revealed that young fathers hold responsible views of parenting as a set of behaviors comprising financial, social, and emotional obligations (Bishop, Gay, Ledesma, & Garofalo, 2005; Lemay, Cashman, Elfenbein, & Felice, 2010). A study of adolescent mothers (Easterbrooks, Raskin, & McBrian, 2014) found that fathers were generally present for their children, but the link between father involvement and the development of the child was more complex than initially thought.

Clearly, parenting experiences of fathers may not be as uniform as has been suggested by prior research; however, methodological challenges related to accessing representative samples make it harder for researchers to shed light on such complexities. One major obstacle is recruitment of fathers into studies and the need to rely on other informants (e.g., mothers). Although studies in which fathers are participants do exist (e.g., Cabrera et al., 2004; Summers et al., 1999), it is more common to assess low-income, nonresident fathers using maternal report. However, a major concern with this analytic strategy is that such reports may be distorted by perceptions and attributions held by the mother. Specifically, paternal-involvement literature that relies on maternal reports of father involvement suffers from a lack of accounting for the possible confounding effect of some unobserved characteristics of the mothers’ reporting on the fathers. Such unobserved traits may inflate the real associations between father involvement and children’s development.

Our study aimed to address this concern. We investigated the link between mother-reported father involvement and child development in a sample of young, low-income, primarily unmarried families. Using three waves of maternal data from a large sample of low-income, at-risk young mothers, we evaluated the degree to which maternal-report bias related to depression might affect the link between mother-reported measures of father involvement and child developmental problems. Our study used indicators of maternal depression measured over time to model a stable maternal depressive trait, independent of occasion-specific symptoms. Results show that after our model accounted for the effect of the depressive trait on father involvement and child development, the effects of father on child development were reduced by nearly half and to statistical nonsignificance, even as the SEs remain unchanged. In other words, the results of our study suggest that after we draw out the variance in the measures of father involvement and child behavioral problems due to the effect of a maternal depressive trait, we no longer see an association between these constructs.

Several themes emerged from the analyses and are discussed next, including (a) demographic characteristics associated with mother’s tendency to describe the father as more involved, (b) the role of maternal depression as confounds in studies which rely on mother-reported father involvement, (c) clarifications about the contributions of fathers to the development of the child, and (d) additional methodological considerations about the ways of measuring father involvement.

**Correlates of Higher Mother-Reported Father Involvement**

Our investigation began with descriptive analyses of the characteristics of the fathers whom mothers described as involved on a daily basis. Not surprisingly, relationship status and satisfaction with the levels of father support were associated with how mothers tended to report the frequency of father involvement. Specifically, mothers who described fathers as involved on a daily basis were
more likely to coreside with the fathers, not be single, and report
greater levels of father support and higher satisfaction regarding
the quality of the time spent with him. These results suggest that
mothers’ reports of father involvement are not independent from
her perceptions about the quality of the relationship and, as such,
offer support to our call to consider the issue of confounding in
maternal reports of paternal involvement.

**Depressive Trait as a Study Confound**

In our study, we used a measure of a stable depressive trait as
a proxy for reporter bias, although there are many other stable
characteristics that also should be explored in future studies. In our
case, we were guided by the theory that mothers who have a depres-
sive trait might have a tendency to underreport father involvement,
but overreport the level of child problems. This nondependence
between the measures of father involvement and child outcome
would then inflate the degree of the association between them in a
way that lower involvement would be a stronger predictor of de-
velopmental problems than it is in reality. The results of our study
confirmed this hypothesis. In fact, after controlling for the effect
of maternal depressive trait, we found that the link between father
involvement and child outcome disappeared.

The literature on the high prevalence of depression among
postpartum women supports our concern about relying on mater-
nal reports. Depression following childbirth affects 13% of women,
with estimates ranging from 3 to 25% (Surkan, Gottlieb, Mc-
Cormick, Hunt, & Peterson, 2012). Women in high social risk
samples are especially vulnerable, with rates of depression as high
as 26% in women in poor, urban communities (Moses-Kolko &
Roth, 2004). Young, low-income mothers are at even higher risk
for depression than are older mothers, with rates ranging from 30
to 60% (Beers & Hollo, 2009; J. Brown, Harris, Woods, Buman,
& Cox, 2012; Molibborn & Morningstar, 2009; Tizios, Zlotnick,
Raker, Kuo, & Phipps, 2012). These data suggest that research
relaying on maternal reports of both children and father in the early
years of parenting should control for the potential effect that de-
pression might have on mothers’ responses.

**Role of Fathers in Child Development**

Research on fathers has documented that they play a significant role
in children’s development. For example, father–child interaction
has been shown to play a critical role in young children’s social
relationships with peers, through mechanisms of self- and emotion
regulation (Leidy et al., 2013). Fathers’ influence on functioning in
the cognitive domain also has substantial documentation, as early
as the child’s infancy (Pancsofar & Vernon-Feagons, 2010).

At the same time, recent attempts to systematically exam-
ine the strength of associations between father involvement and
children’s development have found the effects to be inconsistent and
small, depending on the way that father involvement was opera-
tionalized and on the domains of child behaviors assessed
(Adamsons & Johnson, 2013; McWayne et al., 2013). For exam-
ple, McWayne et al.’s (2013) meta-analysis of 21 studies pub-
lished in 1998 to 2008 exploring the effect of fathers on children’s
early learning revealed small to moderate associations (mean ef-
fect sizes = .08–.30). In a meta-analysis of 52 studies investigat-
ing nonresident fathers, Adamsons and Johnson (2013) found strongest
effects of father involvement on social functioning (mean effect
size = .15), with much smaller effects on behavioral, academic,
and cognitive domains (effect sizes of .05, .04, and .03, respec-
tively).

Note that in our first latent regression model, in which we did
not control for the effect of maternal depressive trait, the effect
size of father involvement on child outcome was consistent with
the effect sizes found in other studies (Adamsons & Johnson, 2013;
Amato & Gilbreth, 1999). Given how many studies in Adamsons
and Johnson’s (2013) meta-analysis used maternal reports of father
involvement, the fact that our first model found a similar effect size
raises a concern about the issue of unaccounted reporter bias in
previous studies.

Although we expected the magnitude of the association be-
tween father involvement and child problems to be substantially
reduced after controlling for the mother’s depressive trait, we were
surprised to see the link disappear completely. Both our findings
and the recent meta-analyses might suggest that the contribution
of father involvement to the development of the child is trivial.
However, we caution readers from making this conclusion. We
suspect that studies might be failing to detect a stronger effect of
father involvement due to concerns with the validity and reliability
of current measures of father involvement.

**Measurement of Father Involvement**

Various conceptualizations of father involvement have been used
in the field, such as presence and hours of direct contact, direct
childcare tasks, quality of physical care, nature of dyadic play and
stimulation, quality of father–child interactions, and involvement
in child-related activities (Bornstein, 2002; Brooks-Gunn & Mark-
man, 2005; Lamb, Pleck, Charnov, & Levine, 1985; Pleck, 2010).
Our measure of father involvement was based on indicators of the
amount of time and extent of support that the fathers offered to the
mother and her satisfaction with it. While this measure assesses
some important dimensions of paternal involvement, a more elabo-
rated assessment of father involvement may provide the sensitivity
to detect a stronger contribution. Studies employing a multidimen-
sional view of father involvement, examining time spent with the
child as well as other avenues of support (e.g., quality of inter-
actions, taking responsibility for transportation and appointments,
etc.) have provided a more nuanced understanding of the circum-
stances and impact of father involvement.

Further, measures of father involvement which are based on
direct contact are not sensitive to the fact that fathers’ access to
the child might be greatly limited by their employment, incarcer-
ation, or military service, or when mother–father conflict is high,
since mothers often serve as the “gatekeepers” and “gateopen-
ers” in providing access and engagement between fathers and their
children (Allen & Hawkins, 1999; Parke, 2002; Roy, Buckmiller,
& McDowell, 2008; Swisher & Waller, 2008). A father who is not engaged in direct care may still be involved in other ways (e.g., by supporting the mother financially or emotionally) that have measurable impacts on the child (Jia & Schoppe-Sullivan, 2011; Leidy et al., 2013; McHale, Fivaz-Depeusinge, Dickstein, Robertson, & Daley, 2008). Therefore, it is possible that studies that have included both direct and indirect assessments of father involvement would find the larger total father-involvement effects.

**Limitations**

The strength of our study includes the large size and ethnic diversity of the sample. However, our analysis captures only the experiences of socially disadvantaged teenaged mothers in the Northeastern United States. The fact that our findings may not generalize to other social groups or contexts is a limitation. Additional research should examine the variability in the effect of proxy reports that may depend on characteristics of participants and/or their contexts (Hewlett, 1992; Lamb, 1987). A different methodological limitation of our study concerns our measure of maternal depression. Although it is widely used in the mental health field as a screening tool and is associated with a clinical diagnosis (Radloff & Locke, 1986), high symptom scores on the CES-D are not necessarily indicative of a diagnosis of depression. However, it may be more generalizable to nonclinical populations because it captures the milder forms of dysthymia that are common among postpartum mothers.

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