Journal of Family Issues
http://jfi.sagepub.com/

Fathers' Involvement in Child Care and Perceptions of Parenting Skill Over the Transition to Parenthood

Amy A. Barry, JuliAnna Z. Smith, Francine M. Deutsch and Maureen Perry-Jenkins

Journal of Family Issues published online 25 April 2011
DOI: 10.1177/0192513X11406229

The online version of this article can be found at:
http://jfi.sagepub.com/content/early/2011/04/21/0192513X11406229

Published by:
SAGE
http://www.sagepublications.com

Journal of Family Issues
XX(X) 1–22

DOI: 10.1177/0192513X11406229
http://jfi.sagepub.com
SAGE

Fathers' Involvement in Child Care and Perceptions of Parenting Skill Over the Transition to Parenthood

Amy A. Barry[1], JuliAnna Z. Smith[2], Francine M. Deutsch[1], and Maureen Perry-Jenkins[2]

Abstract

This study explored first-time fathers' perceived child care skill over the transition to parenthood, based on face-to-face interviews of 152 working-class, dual-earner couples. Analyses examined the associations among fathers' perceived skill and prenatal perception of skill, child care involvement, mothers' breastfeeding, maternal gatekeeping, mothers' work hours, fathers' depressive symptoms, and fathers' beliefs about responding to a crying child. Involvement was also examined as a potential mediator between some predictors and perceived skill. Findings suggest that breastfeeding and depressive symptoms were not related to involvement or perceived skill. Maternal gatekeeping was unrelated to skill yet had a negative relationship with involvement, if only at 1-month postpartum. Early father involvement mediated the relationship between perceived skill before and after the birth only for fathers who supported prompt response to a crying child. Finally, involvement at 1 year mediated the positive relationship between mothers' work hours and perceived skill at the same age.

[1]Mount Holyoke College, South Hadley, MA, USA
[2]University of Massachusetts, Amherst, MA, USA

Corresponding Author:
Amy A. Barry, 23 Fort Hill Road, Nottingham, NH 03290, USA
Email: abarry02@hotmail.com

Keywords

fathers, perceived parenting skill, involvement, child care

Much research has been conducted on how women develop parenting skill over the transition to parenthood (Lamb & Lamb, 1976); however, researchers have yet to adequately address fathers' parenting skill development during that time. Expectant parents who believe that they will be competent in the parenting role and new parents who report being competent parents are more likely to be involved with their infants (Fagan & Barnett, 2003; Sanderson & Thompson, 2002). Highly skilled fathers interact well with their children (Ferketich & Mercer, 1995; Hoff, Laursen, & Tardif, 2002) and have children who benefit developmentally (Sigel & McGillicuddy-De Lisi, 2002). But just how is that paternal skill established?

In this study of working-class fathers, we examined how perceived skill is established and associated with paternal involvement in child care, breastfeeding, maternal gatekeeping, mothers' work hours, fathers' depressive symptoms, and fathers' beliefs about responding to a crying newborn. One of our goals was to examine the role of child care involvement in the development of parenting skill. Another aim was to determine which, if any, factors indirectly influence skill through involvement, or by different kinds of involvement.

Perceived Parenting Skill and Involvement in Child Care

Previous studies have established that self-reports of parenting skill are consistent with concrete, observed, and independently rated skillful parenting behaviors (Ferketich & Mercer, 1995; Sigel & McGillicuddy-De Lisi, 2002). Early parenting skill, self-perceived and observed skill alike, is related to future skill (Berman & Pederson, 1987). In fact, one longitudinal study on first-time fathers found that those who felt skilled in the latter portion of their partners' pregnancy were more involved and skilled over a year later (McHale & Huston, 1984). Likewise, mothers' prenatal perceived skill was also related to perceived skill with their newborns (Porter & Hsu, 2003). In assessing pre- and postnatal skill, the distinction to note is that prenatal skill is associated with general child care, whereas postnatal skill is targeted to the care of one's own child.

Furthermore, parenting skill has been consistently and positively related to involvement in child care (Bornstein, 2002; Crouter, Perry-Jenkins, Huston, & McHale, 1987; Shuster, 1994). Involved fathers, including divorced fathers (Ihinger-Tallman, Pasley, & Buehler, 1995), reported more parenting skill

than those who were less involved (Lamb, 1997; Parke, 2002; Shuster, 1994). Beyond these cross-sectional studies, one longitudinal study also showed that fathers' perceived skill was related to their involvement in infant care over time (McHale & Huston, 1984).

Feeding Practices

Mothers' breastfeeding presents a unique challenge for paternal involvement in child care. In breastfeeding families, fathers who are highly motivated to be involved may do so by participating more in other aspects of child care (Deutsch, 1999). In other cases, fathers may interpret their partners' breastfeeding as an unquestioned barrier to their involvement (Deutsch, 1999), excluding them from child care in general, not just feeding (Beitel & Parke, 1998; Deutsch, 1999). Consequently, fathers may be at risk for underdeveloping some parenting skills, such as soothing their infants (Walzer, 1998), if breastfeeding does lead to less involvement.

Maternal Gatekeeping

Some mothers may feel ambivalent about fathers' child care because paternal involvement impinges on the maternal role (Parke, 2002). The term *maternal gatekeeping* refers to the "collection of beliefs and behaviors that ultimately inhibit a collaborative effort between men and women in family work" (Allen & Hawkins, 1999, p. 200). Gatekeeping entails mothers setting rigid standards of care and taking full control of child care responsibilities (Allen & Hawkins, 1999). In some cases, mothers may manage child care because fathers are perceived to be unskilled or resistant to involvement. Resistant or not, when fathers experience maternal gatekeeping they can become less involved in child care (Allen & Hawkins, 1999; Gaunt, 2008) and report low perceived skill (Berman & Pederson, 1987). Of note, some experts criticize the construct of maternal gatekeeping. Walker and McGraw (2000) argue that the incidence of gatekeeping has been exaggerated, and most research evidence suggests that mothers actively promote relationships between fathers and children. The current study will address this debate.

Paternal Depressive Symptoms

Families of low socioeconomic status (SES) are twice as likely to develop depression than people of higher classes (Magnuson & Duncan, 2002; Phares, 1997). Depressed parents are more likely to use maladaptive parenting practices

than their nondepressed counterparts (Lyons-Ruth, Wolfe, Lyubchik, & Steingard, 2002). Depressed fathers, in particular, report lower parenting skill (Ferketich & Mercer, 1994, 1995; McBride, 1989) and take less responsibility for child care than nondepressed fathers (Lyons-Ruth et al., 2002). Not surprisingly, they also have fewer positive learning experiences with their child because of low involvement (Berman & Pederson, 1987; Pleck, 1997). Depression, as a perceptual filter, can cast events in a negative light (Porter & Hsu, 2003) and thus may influence perceptions of skill.

Maternal Work Hours

Women's increased participation in the workforce has led men to take on more child care tasks (Bianchi, 2000), for example, during the early evening hours (Nock & Kingston, 1988). In middle-class families, paternal work hours are related to involvement, however, the effects of maternal employment superseded the effects of paternal work hours on involvement (Jacobs & Kelley, 2006). Unlike the middle-class, working-class families are much more likely to rely on paternal care than day care when mothers return to work (Hill, 1987). As a result, families may arrange their work schedules, for instance, working opposite shifts, so that parents can provide care (Presser, 1989). Therefore, working-class fathers may be relatively more involved than middle-class fathers when mothers work outside the home, providing opportunities for fathers to develop perceived skill.

Beliefs about Responding to a Crying Infant

In his book *The Common Sense Book of Baby and Child Care*, Spock (1957) stated that infants become "tyrannical" in demanding parents' attention when parents regularly respond to their cries (p. 184), thereby mistaking basic infant communication as an act of malicious manipulation (Smyke, Boris, & Alexander, 2002). Consequently, this belief has contributed to parents—including those of low SES status (McLoyd, 1998)—delaying their response to a distressed infant (Bredehoft, Mennicke, Potter, & Clarke, 1998) because quick response is thought to promote crying and spoiling (Garner, 1996).

However, a parent's timely and compassionate reaction to an infant's cries does not spoil or increase crying (Barnard & Martell, 1995). Prompt response promotes the development of secure attachment (Barnard & Martell, 1995), building infants' trust that the parents will meet their needs (Bornstein, 2002; Lamb, 1997). Furthermore, infants typically are unable to effectively self-soothe until about 6 months of age (Burnham, Goodlin-Jones, Gaylor, & Anders, 2002);

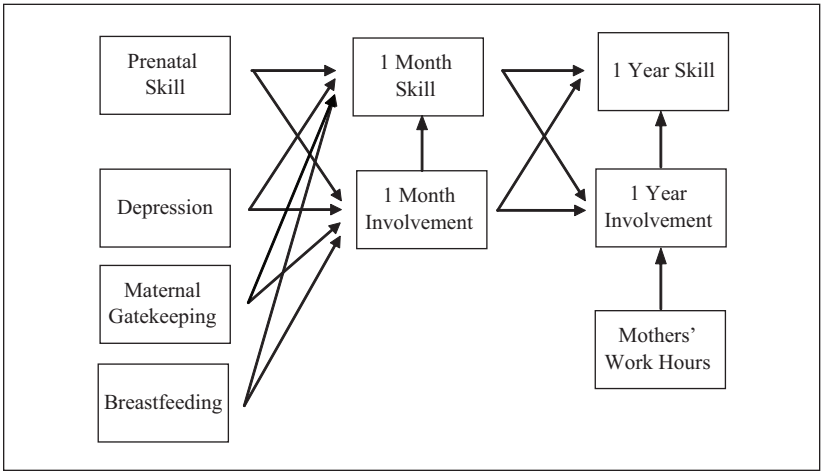

Figure 1. Conceptual model

thus, parental responsiveness may influence emotional regulation early in infancy. When parents delay their response or ignore the cries, infants are likely to cry more persistently and be harder to soothe, whereas infants of prompt parents tend to soothe more quickly (Barnard & Martell, 1995). Fathers who delay their response, and ergo encounter a difficult-to-soothe child, may reap little reward from their involvement and, in turn, lead fathers to think that they are less skilled.

The Current Study

The current study extends the literature by exploring fathers' perceptions of skill during the transition to parenthood in closer detail. We examined first-time fathers from dual-earner, working-class families, a population on which research is limited (Hoff et al., 2002), from the prenatal period to 1-month and 1-year postpartum. The hypotheses we tested are summarized below. (Please see the conceptual diagram provided in Figure 1.)

Direct Relationship Hypothesis 1a: We expect that fathers' prenatal perceived skill will be directly and positively related to their perceived skill at 1-month postpartum. Fathers' depressive symptoms and mothers' gatekeeping at 1 month will be directly and negatively related to fathers' perceived skill.

Direct Relationship Hypothesis 1b: Fathers' perceived skill at 1 month will be directly and positively related to his perceived skill at 1 year. Fathers' involvement at 1 month will be directly and positively related to fathers' perceived skill at 1 year, whereas fathers' depressive symptoms and mothers' gatekeeping at 1 year will be directly and negatively related to fathers' perceived skill.

Indirect Relationship Hypothesis 2a: Fathers' involvement in child care at 1 month postpartum will mediate the relationship between prenatal perceived skill, postpartum paternal depressive symptoms, maternal gatekeeping, and breastfeeding and fathers' perceived skill at 1 month.

Indirect Relationship Hypothesis 2b: Fathers' involvement in child care at 1 year will mediate the relationship between the predictors—1-month perceived skill, involvement, breastfeeding, and 1-year depressive symptoms, maternal gatekeeping, and mothers' work hours—and fathers' perceived skill at 1 year.

Hypothesis 3: We predict that when beliefs about responding to a child are taken into account, involvement will mediate the relationship between prenatal perceived skill and skill at 1 month only for fathers who promptly respond to their crying child.

Method

Sample and Participant Selection

Data are from a larger ongoing study of 152 working-class, dual-earner couples who participated separately in four one-on-one interviews and one mailed questionnaire across the transition to parenthood. We conducted interviews in a manner to reduce the chance that either member could hear the other's interview. Families received $150 for their participation. The following were the eligibility criteria: (a) both members of the couple were employed full-time (32 or more hours per week) prior to the baby's birth, (b) both members of the couple planned to return to full-time work within 6 months of the baby's birth, (c) both members of the couple were "working-class" defined by education (associate's degree or less) and employment in a semi- or unskilled job, (d) both members of the couple were expecting their first child, and (e) the couple was married or cohabiting for at least 1 year at the time of inclusion in the study. Data in this study are from the prenatal and 1-month and 1-year postpartum periods.

Expecting heterosexual couples in the third trimester were recruited from various prenatal classes at hospitals in western New England. Based on data from hospitals, we had access to a fairly representative sample of working-class, first-time parents in these classes. Demographic data collected on the broader population of first-time parents in the classes revealed that this study's sample, as expected given the selection criteria, was less educated, had lower family income, and worked more hours than the full sample of class attendees.

The sample was mostly White (90.1% fathers, 94.7% mothers). Most couples were married (77.6%) and in their late twenties (fathers $M = 28.9$ years, $SD = 0.39$; mothers $M = 27.1$ years, $SD = 0.41$). More than half of the infants were female (54.0%), and all children were healthy and developing normally. Most parents had some vocational or college education (52.6% fathers, 50.0% mothers). During the prenatal period, fathers worked on average of 47.4 hours per week ($SD = 8.26$, e.g., machinist, factory worker); mothers worked on average 40.8 hours per week ($SD = 6.61$, e.g., nurse aide, receptionist). None of the mothers were working at 1 month, and most, less 11, were employed outside the home at 1 year. About a third of families worked alternating shifts prenatally and at 1 year. On enrollment, fathers' gross annual income averaged \$30,214 (SD = \$11,384, median [Mdn] = \$30,000); mothers' income averaged \$23,138 (SD = \$10,388, Mdn = \$21,833; total income M = \$54,403, SD = \$17,920, Mdn = \$53,000).

According to multivariate analyses of variance (MANOVAs), data from participants who dropped out at 1 year and those who remained did not significantly differ on prenatal skill or 1-month skill, depressive symptoms, gatekeeping, beliefs about responding to a child, income, education, age, or years cohabitating (at $p > .10$). However, fathers who did withdraw were more likely to be unmarried prenatally, χ^2 (1,146) = 6.96, $p = .01$; and had partners who were less likely to breastfeed at the level of a trend, 38.9% versus 62.5%; χ^2 (1,146) = 3.56, $p = .06$.

Measures

Fathers reported on their involvement, perceived skill, depressive symptoms, and beliefs about responding to a crying child; mothers reported on their work hours, breastfeeding, and gatekeeping. Although past research has relied on mothers' reports on fathers' behavior, this practice can introduce bias to the understanding of fathers' parenting (Wical & Doherty, 2005). Although that might suggest that a composite measure would be best, in dual-earner, working-class samples, mothers are at risk to inaccurately estimate fathers'

involvement because they are not regularly present when fathers provide care (Wical & Doherty, 2005).

Child care tasks (Barnett & Baruch, 1987). Fathers reported on their involvement in 15 child care tasks (e.g., feeding, bathing) at 1 month and 1 year. Responses assessed fathers' involvement in proportion to mothers' involvement on a scale ranging from 1 (*mostly or always my spouse/0% to 20% father involvement in the task*) to 5 (*mostly or always me/80% to 100% father involvement in the task*). The alpha coefficients were .72 at 1 month and .80 at 1 year.

Skill at child care tasks. The perceived skill measure was composed of the same tasks as the involvement questionnaire by Barnett and Baruch (1987). However, fathers reported on their skill at each activity at all time periods, whereas involvement was assessed only after the arrival of the child. The response scale ranged from 1 (*no skill*) to 4 (*very skilled*). Alpha coefficients prenatally and at 1-month and 1-year postpartum were .92, .89, and .88 respectively.

Feeding practices. At 1 month, mothers reported if they were breastfeeding; more than half were breastfeeding (59.6%). Six mothers (3.9%) did not complete this question.

Gatekeeping (Hawkins, Marshall, & Allen 1998). We adapted eight selected items from the Hawkins et al. (1998) questionnaire to focus on beliefs and behaviors associated with child care. For example, the item "I have higher standards than my husband for how well cared for the house should be" was changed to "I have higher standards than my husband/partner about how the baby should be cared for." Other items included "I frequently redo some child care task (e.g., dressing the baby) that my husband/partner has not done well" and "I like to be in charge when it comes to caring for the baby." Mothers rated items on a scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*) at 1 month and 1 year. Mothers' reports, as opposed to fathers' reports, were used as they are more effective in measuring maternal gatekeeping (Beitel & Parke, 1998). The alpha coefficients were .75 (1 month) and .74 (1 year). Data are limited to 123 families at 1 month because the scale was added to the study protocol after data collection began.

Center for Epidemiologic Studies Depression scale (CES-D; Radloff, 1977). At 1 month and 1 year, fathers responded to 20 items assessing depressive symptoms over the prior week. Responses, ranging from 0 (*rarely or none of the time, less than 1 day*) to 3 (*most or all of the time, 5 to 7 days*), were summed across items. At 1 month 13.1% and at 1 year 12.1% of fathers' scores met the clinical criteria for depression (16 or greater; Radloff, 1977). Alpha coefficients were .86 and .90 at 1 month and 1 year, respectively.

Mothers' work hours. At 1 year, mothers reported their weekly work hours outside the home, including time spent on breaks.

Beliefs about responding to a crying infant. At 1 month, fathers responded to the open-ended question, "How long should/do you let your baby cry before you respond to him or her?" Two coders independently classified fathers' transcribed replies into two groups, delayed or prompt response ideology. Most fathers (68.9%) promptly responded (31.1% delayed). Delayed responders were fathers who explicitly stated that they did not respond quickly to prevent spoiling—the most common response for delayers by far—or they waited 5 minutes or more to respond. Prompt responders were defined as those who did not intentionally wait to respond to their crying child. These fathers typically reported that they would check on the child immediately or in less than a minute, often stating that a quick response does not spoil a child. When classifying responses, the coders had an 88.0% agreement rate and then reviewed the items until they reached full agreement. For nine fathers missing 1-month data, prenatal responses were used as beliefs did not differ significantly from the last trimester to 1-month postpartum.

Results

Descriptive Statistics

Fathers rated themselves as relatively unskilled before the birth of the child, but perceived skill increased over time, $F(1, 1.27) = 183.71$, $p < .001$. Involvement also increased from 1 month to 1 year, $F(1, 1.29) = 29.47$, $p < .001$. Depressive symptoms and gatekeeping did not change significantly over time. See Table 1 for means and standard deviations.

Path Analyses

To examine the relationship between perceived skill and involvement, we fit a series of path analyses using structural equation modeling. Working with LISREL 8, we obtained maximum likelihood estimates of all parameters, including both direct and indirect effects. Estimates of the standard error of indirect paths are based on Sobel tests (Sobel, 1982). Estimation was made using full information maximum likelihood (FIML), also known as direct maximum likelihood, to minimize any bias in estimation due to missing data (Enders, 2001).

Perceived skill at 1 month. To test the first set of hypotheses, we examined a model (see Figure 2) in which prenatal perceived skill, fathers' depressive symptoms, mothers' gatekeeping, and fathers' involvement at 1 month were expected to be directly related to fathers' perceived skill at 1 month. In addition, we tested for mediation by examining whether prenatal perceived skill,

Table 1. Means of Fathering Skill and Predictors

	M (*SD*)	95% Confidence Interval	*n*
Fathering skill			
Before birth	2.39 (0.66)	2.29, 2.49	152
1 month	2.84 (0.49)	2.76, 2.92	144
1 year	3.13 (0.49)	3.05, 3.21	129
Involvement			
1 month	2.45 (0.35)	2.39, 2.51	146
1 year	2.61 (0.39)	2.54, 2.68	132
Maternal gatekeeping			
1 month	2.96 (0.61)	2.85, 3.07	114
1 year	2.98 (0.61)	2.88, 3.08	133
Depressive symptoms			
1 month	9.26 (7.25)	8.08, 10.44	145
1 year	8.49 (7.75)	7.17, 9.81	132
Mothers' work hours			
1 year	35.13 (13.23)	32.87, 37.39	132

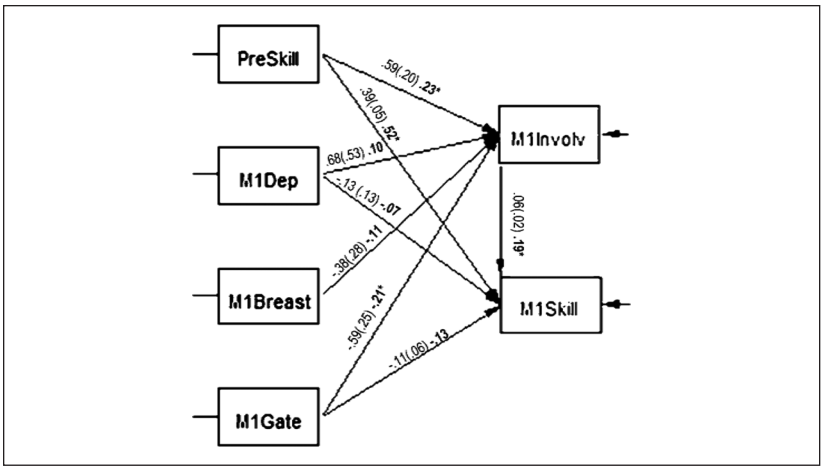

Figure 2. Predictors of new fathers' parenting skill at 1 month after birth
Note. PreSkill = prenatal skill; M1Dep = depressive symptoms at 1-month postpartum; M1Breast = breastfeeding status at 1-month postpartum; M1Gate = gatekeeping at 1-month postpartum; M1Involv = involvement at 1-month postpartum; M1Skill = perceived child care skill at 1-month postpartum. Path coefficients are presented as unstandardized coefficient, standard error, and standardized coefficient.
*$p < .05$ (according to LISREL approximation of *t* values).

depressive symptoms, gatekeeping, and breastfeeding were indirectly related to perceived skill at 1 month through father involvement. No direct link between breastfeeding and fathers' perceived skill was hypothesized. The model showed good fit with FIML, $\chi^2 = 4.30$, $df = 7$, $p = .74$; and a root mean square error of approximation (RMSEA) less than .01, 0.90 CI (<0.001, 0.07).

Analyses of direct effects indicated that fathers' perceived skill before the birth was directly and positively related to fathers' perceived skill at 1 month ($\gamma = 0.388$, $SE = 0.05$, $z = 7.35$). Depressive symptoms and maternal gatekeeping at 1 month were not directly related to fathers' perceived skill. (A follow-up MANOVA comparing clinically depressed with nondepressed fathers also showed no significant difference in involvement or perceived skill; $p > .10$.) However, higher father involvement in child care at 1 month was associated with higher perceived skill at the same time point ($\beta = 0.056$, $SE = 0.02$, $z = 2.61$).

To test whether involvement mediated the relationship between prenatal perceived skill, depression, breastfeeding, and gatekeeping and 1-month skill, we first examined relationships between the predictors and the mediator, father involvement. Higher perceived skill before the birth of the baby predicted greater involvement in child care 1 month after birth, when controlling for paternal depressive symptoms, breastfeeding and maternal gatekeeping ($\gamma = 0.587$, $SE = 0.20$, $z = 2.87$). Surprisingly, neither breastfeeding nor depressive symptoms at 1 month were significantly associated with father involvement in this sample. Maternal gatekeeping, however, was negatively associated with father involvement, such that higher gatekeeping behavior predicted less father involvement ($\gamma = -0.586$, $SE = 0.25$, $z = -2.33$). For those predictors directly related to 1-month involvement, we tested indirect relationships to 1-month skill through involvement. The indirect effect of prenatal skill on 1-month skill through involvement was significant at the level of a trend ($\gamma * \beta = 0.033$, $SE = 0.02$, $z = 1.93$). There was no significant indirect effect of gatekeeping on perceived skill through involvement. Overall, this model accounted for 12.2% of the variance in child care involvement and 37.2% of the variance in perceived parenting skill 1 month after the birth.

Perceived skill at 1 year. The second set of hypotheses were tested in a second path model (see Figure 3) in which perceived skill and involvement at 1 month as well as depressive symptoms, maternal gatekeeping, and involvement at 1 year were expected to be directly related to fathers' perceived skill at 1 year. In addition, we tested for mediation by examining whether there were significant indirect effects of involvement, perceived skill and breastfeeding at 1 month, depressive symptoms, gatekeeping and mothers' work hours at 1 year on 1-year perceived skill through father involvement at 1 year. Direct links between breastfeeding at 1 month and mothers' work hours at

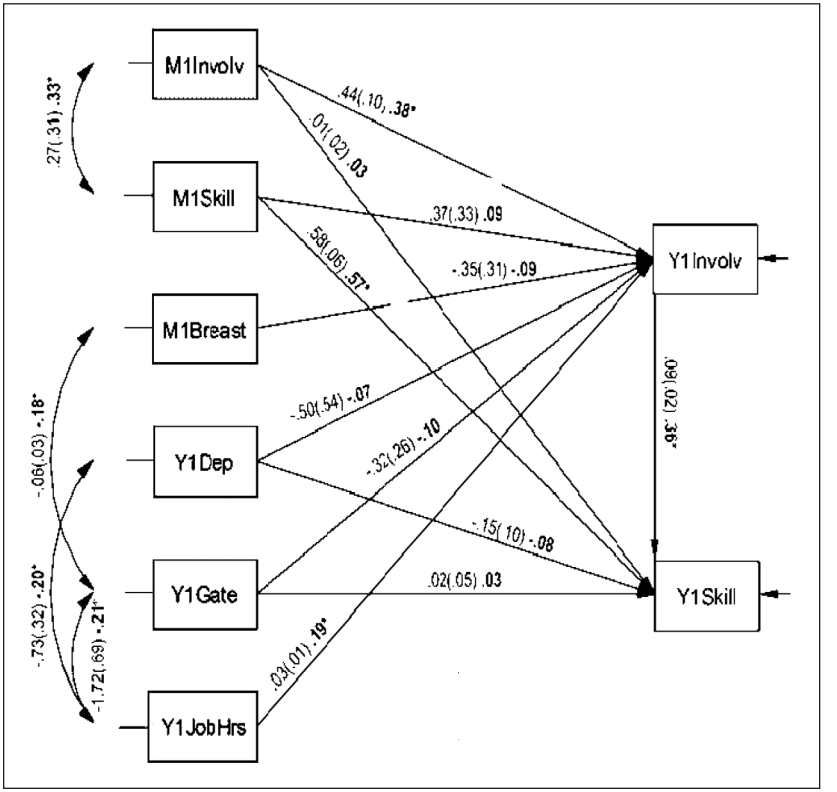

Figure 3. Predictors of new fathers' parenting skill at 1 year after birth
Note. M1Involv = involvement at 1-month postpartum; M1Skill = perceived child care skill at 1-month postpartum; M1Breast = breastfeeding status at 1-month postpartum; Y1Dep = depressive symptoms at 1-year postpartum; Y1Gate = gatekeeping at 1-year postpartum; Y1JobHours = mothers' work hours at 1-year postpartum; Y1Involv = involvement at 1-year postpartum; Y1Skill = perceived child care skill at 1-year postpartum. Path coefficients are presented as unstandardized coefficient, standard error, and standardized coefficient.
*$p < .05$ (according to LISREL approximation of t values).

1 year and 1-year perceived skill were not hypothesized. This model showed excellent fit with FIML, $\chi^2 = 2.706$, $df = 13$, $p = .999$; and RMSEA <.001, 0.90 CI (<0.001, 0.001).

One-month involvement was not directly related to 1-year perceived skill. Higher perceived skill at 1 month predicted higher perceived skill at 1 year

($\gamma = 0.576$, $SE = 0.06$, $z = 9.18$). Similar to earlier analyses, neither depressive symptoms nor gatekeeping at 1 year were directly related to perceived skill at 1 year. (As at 1 month, a follow-up MANOVA comparing clinically depressed with nondepressed fathers showed no significant difference in involvement or perceived skill; $p > .10$.) Higher involvement at 1 year, however, was related to higher perceived skill at 1 year ($\gamma = 0.092$, $SE = 0.02$, $z = 5.42$).

To examine the mediated relationship between the predictors and 1-year perceived skill through 1-year involvement, we first considered the paths between the predictors—perceived skill involvement, and breastfeeding at 1 month, depressive symptoms, gatekeeping and work hours at 1 year—and the mediator, 1-year involvement. More involvement at 1 month strongly predicted more involvement at 1 year ($\gamma = 0.436$, $SE = 0.10$, $z = 4.53$). Perceived skill and breastfeeding at 1 month were not related to involvement at 1 year, nor was gatekeeping at 1 year related to involvement at 1 year. Higher mother' work hours at 1 year were related to more father involvement at 1 year ($\gamma = 0.027$, $SE = 0.01$, $z = 2.27$).

For predictors with direct relationships to 1-year involvement, we tested for indirect relationships to 1-year perceived skill through 1-year involvement. One-year involvement was a significant mediator of the path from 1-month involvement to 1-year perceived skill (indirect effects, $\gamma * \beta = 3.426$, $SE = 0.01$, $z = 3.43$). Involvement at 1 month was positively related to involvement at 1 year, which, in turn, was positively related to perceived skill at 1 year. In addition, mothers' work hours at 1 year were indirectly related to fathers' perceived skill through 1-year involvement (indirect effects, $\gamma * \beta = 0.002$, $SE = 0.001$, $z = 2.06$), such that the mothers' work hours at 1 year were positively related to fathers' involvement, which, in turn, was positively related to 1-year perceived skill. Overall, the model accounted for 25.5% of the variance in fathers' involvement and 57.5% of the variance in fathers' perceived skill.

Response to a crying child. A multisample path analysis tested whether beliefs about responding to a crying child moderated the relationship between perceived skill and involvement. The path model used to examine perceive skill and involvement at 1 month was fit independently for fathers who delayed their response and those who did not (Figure 4).

In the first model (Model 1), all paths were estimated separately for each group. This model showed excellent fit with FIML, $\chi^2 = 4.422$, $df = 14$, $p = .992$; and the RMSEA, <.001, 0.90 CI (<0.001, 0.001). Prenatal perceived skill was a strong predictor of perceived postpartum skill for fathers who believed in delaying their response ($\gamma = 0.471$, $SE = 0.09$, $z = 5.09$) and those who did not ($\gamma = 0.344$, $SE = 0.06$, $z = 5.42$). However, prenatal perceived skill predicted postnatal involvement only in fathers who believed in prompt

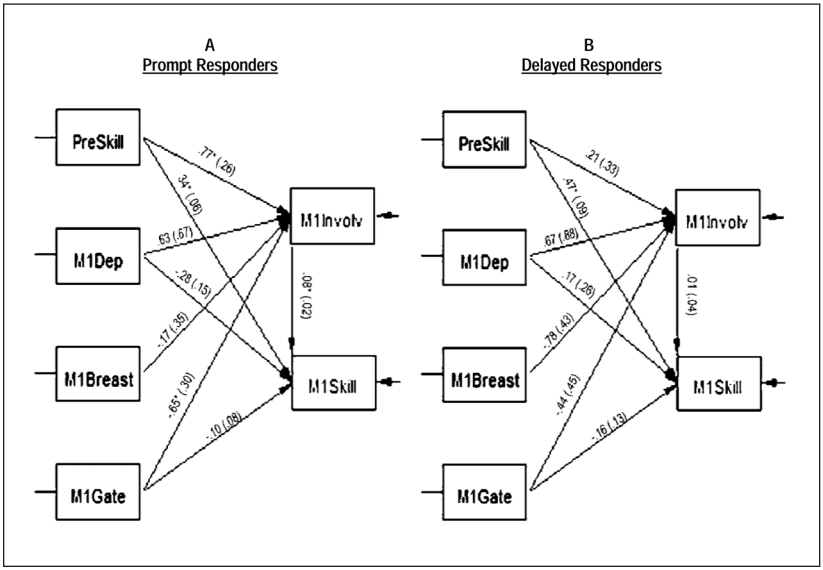

Figure 4. Predictors of new fathers' parenting skill at 1-month after birth for fathers who promptly respond and those who delay their response to a crying child
Note. PreSkill = prenatal skill; M1Dep = depressive symptoms at 1-month postpartum; M1Breast = breastfeeding status at 1-month postpartum; M1Gate = gatekeeping at 1-month postpartum; M1Involv = involvement at 1-month postpartum; M1Skill = perceived child care skill at 1-month postpartum. Only unstandardized coefficients and standard errors are presented as the standardized scores are considered misleading in multigroup analysis (because of differing variances).
*$p < .05$ (according to LISREL approximation of *t* values).

response ($\gamma = 0.766$, $SE = 0.26$, $z = 2.93$). Similarly, involvement was significantly related to perceived skill at 1 month for prompt responders ($\beta = 0.075$, $SE = 0.02$, $z = 3.05$) but not delayed responders. Finally, the indirect effect of prenatal perceived skill on 1-month perceived skill through involvement was significant for prompt responders ($\gamma * \beta = 0.075$, $SE = 0.27$, $z = 2.11$). Breastfeeding and depression remained nonsignificant for both groups.

To test whether these group differences were statistically significant, we conducted model comparison tests using the minimum fit χ^2 indexes (see Table 2). If constraining a path to be the same in both groups' results in a decrement in model fit, the paths can be considered to be significantly different in the two groups. When the path between prenatal perceived skill and

Table 2. Model Comparison Test to Examine Moderation by Spoiling Beliefs

	FIML χ^2	*df*	$\Delta\chi^2$	Δdf	*p*
Model 1: nothing constrained	1.06	14			
Model 2: prenatal skill → 1-month involve	6.21	15	5.14	1	.03
Model 3: 1-month involve → 1-month skill	6.32	15	5.25	1	.02
Model 4: both constrained	8.09	16	7.03	2	.03

Note. FIML = full information maximum likelihood. Each model is compared with Model 1. A significant *p* value indicates a significant decrement in model fit and, consequently, suggests that the constrained paths differ in the two groups.

involvement was constrained to be the same in both groups (Model 2), there was a significant decrement in model fit ($\Delta\chi^2 = 5.14$, $\Delta df = 1$, $p = .03$), indicating that the relationship between perceived parenting skill and involvement significantly differs in the two groups. Similarly, constraining the paths from involvement to perceived skill at 1 month to be the same in both models (Model 3) also produced a significant decrement in model fit ($\Delta\chi^2 = 5.25$, $\Delta df = 1$, $p = .02$). Finally, when both of the above paths were constrained to be equal (Model 4), there was a significant reduction in model fit ($\Delta\chi^2 = 7.03$, $\Delta df = 1$, $p = .03$). These results indicate that involvement mediates the relationship between perceived skill before the birth and perceived skill after the birth only for fathers who believe in promptly responding to a crying child.

Discussion

The goal of this study was to examine fathers' perceived skill, and its relationship with involvement and other factors, over the transition to parenthood. We also set out to determine which, if any, factors may indirectly influence skill through involvement, or by different kinds of involvement. As seen from the results, early perceived skill, even fathers' perception of prenatal skill, is important to involvement and perceptions of skill over the transition to parenthood and may even encourage continued involvement. Prenatal skill is related to both perceived skill and involvement at 1 month. Research has found that *mothers'* prenatal perceived skill was related to perceived skill with a newborn (e.g., Porter & Hsu, 2003); we have extended the research to show support that this is the case for fathers as well. We have also indicated that involvement at 1 month explains the positive relationship between prenatal and 1-month perceived skill.

As hypothesized and consistent with cross-sectional studies (e.g., Lamb, 1997; Parke, 2002), involvement is important in understanding fathers'

perceptions of their parenting skill, as it was related to perceived skill positively and contemporaneously at 1 month and 1 year. One-month involvement does matter, but it only continues to matter to the extent that fathers remain involved. Even if fathers are not involved very early on, all is not lost. Involvement at 1 year is still positively related to perceived skill at the same time. Early involvement facilitates but does not necessarily determine the long-term relationship with involvement.

Next, involvement at 1 year explained the relationship between maternal work hours and 1-year skill such that more maternal work hours were related to higher father involvement, which, in turn, was related to greater perceived skill. The relationship among maternal work hours, involvement, and skill may also be due to fathers' providing unaccompanied care, as is increasingly common in dual-earner families (Bianchi, Robinson, & Milkie, 2006). This is especially pertinent in working-class families where many couples work alternate shifts, similar to a third of the couples in this study, often in an effort to maintain parental care and avoid the cost of day care (Presser, 1989). It is also possible that mothers may be more likely to take on more work hours when fathers are more involved.

Yet not just any involvement is sufficient to enhance perceived skill in fathers. As seen in the results on responding to a crying child, the relationship between 1-month involvement and concurrent perceived skill only held for those fathers who believed that they should promptly respond to a crying newborn. By delaying response, fathers are less likely to gain skill because their actions may contribute to the very behavior they hope to prevent (Barnard & Martell, 1995). The belief about delaying one's response to a crying child is also associated with other less skillful parenting behaviors (Lamb, 1997; Luster, Rhoades, & Hass, 1989) and inappropriate developmental expectations (Smyke et al., 2002), which may be detrimental not only to fathers' perceptions of skill but also his interactions with his child now and in the future.

Contrary to hypothesis, gatekeeping, breastfeeding, and depressive symptoms did not have the anticipated relationship with involvement and skill. Maternal gatekeeping was unrelated to skill, yet it had a negative relationship with involvement, but only at 1 month when mothers were home full-time with the baby. At 1 year, mothers may not have engaged in gatekeeping as much because they perceived fathers to be more skilled, at least after fathers gained experience beyond the neonatal period. Moreover, maternal gatekeeping is more influential on fathers when both parents are home with the child (Gaunt, 2008; McBride et al., 2005). Working-class families often work irregular or opposite shifts (Presser, 1989) potentially giving fathers more

unaccompanied time with the child, thereby reducing potential exposure to gatekeeping.

In our study, breastfeeding at 1 month was not related to involvement or perceived skill. Invoking breastfeeding as an impediment to involvement could, in fact, be more of a pretext than a significant reason for decreased involvement. Fathers in breastfeeding families can be involved in many ways (Deutsch, 1999), for example, soothing their child to sleep (Sherriff, Hall, & Pickin, 2009). Since breastfeeding can be challenging, especially when mothers are planning to return to work (Lindberg, 1996), some breastfeeding mothers may have been using pumped milk or formula. In fact, a study of more than a thousand mothers found that nearly as many mothers supplemented breastfeeding with the bottle as breastfed alone (Shealy, Scanlon, Labiner-Wolfe, Fein, & Grummer-Strawn, 2008); consequently, fathers of breastfed infants could potentially participate in supplementary feedings. On the whole, our study does suggest that breastfeeding is not an insurmountable barrier to fathers' involvement.

Depressive symptomology, having been studied thoroughly in new mothers, has seldom been studied in new fathers. In our sample, just more than one tenth of fathers' symptoms met clinical diagnostic criteria. Consistent with our null results, the follow-up comparisons of "depressed" and nondepressed fathers did not differ on involvement or perceived skill at either 1 month or 1 year. However, given the small number of fathers at risk for depression in our sample, we are cautious to argue conclusively that paternal depressive symptoms do not influence perceived skill. More definitive research is needed to focus on depressed fathers alone to assess the relationship between depression and parenting in dual-earner, working-class families.

Although this study has many strengths, there are a few caveats worth noting. The assessments are based on self-report rather than on objective measure. In that both skill and involvement in child care are based on fathers' reports, there may well be shared method variance. In addition, the measurement of fathers' involvement in proportion to mothers' involvement brings its own limitations. As a proportion, fathers' involvement can appear to increase when mothers' involvement decreases, although fathers may not be spending more time with the child. The combination of a proportional measure and an absolute measure of involvement, such a diary of care hours (Wical & Doherty, 2005) or use of experience sampling method (Lee & Waite, 2005), may provide the ideal comprehensive approach.

Moreover, although the longitudinal nature of this study is an asset, causality cannot be determined. Since many of our analyses included cross-sectional data, the direction of effects cannot be adequately determined. We measured

involvement and skill at the same time points when examining indirect effects; thus, it must be considered that skill may be effecting involvement as much as involvement is effecting skill. Furthermore, future studies would benefit from including additional data collection time points to gain a richer perspective of the transition to parenthood as the family changes greatly over the year after the child's birth. Additional information on spoiling beliefs, too, would enrich our understanding of fathers. Although response to a crying child is a central concept of spoiling beliefs, future research should consider additional spoiling concerns, such as being overly attentive to an infant (e.g., as measured by The Spoiling Questionnaire; Solomon, Martin, & Cottington, 1993). Spoiling beliefs are closely related to maladaptive parenting practices (Luster, 1985) and could have lasting consequences for parent–child interactions and child development. Similarly, future studies on breastfeeding would benefit from information on supplementary feeding with formula or pumped milk (e.g., as measured by the Infant Feeding Practices Study II; Shealy et al., 2008).

The unique characteristics of dual-earner, primarily White working-class couples in this study restrict generalizations to other SES and cultural groups. Nonetheless, our findings suggest that for this unique sample, working-class fathers' involvement is indeed important to understanding fathers' skill over the transition to parenthood. Fathers' prenatal perceptions of parenting skill are related to their involvement with their newborn; however, this relationship can be disrupted by fathers' inappropriate beliefs about infant behavior. This study is one of few that track dual-earner, working-class families over time from which we can glean a richer perspective on the dynamics within such families.

Authors' Note

Amy A. Barry has no current work affiliation (Nottingham, New Hampshire).

Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) disclosed receipt of the following financial support for the research, authorship, and/or publication of this article:

This research was supported in part by Grant R01-MH5677 from the National Institute of Mental Health to Maureen Perry-Jenkins, principal investigator, and the Reese Fund to Amy A. Barry.

References

Allen, S., & Hawkins, A. (1999). Maternal gatekeeping: Mothers' beliefs and behaviors that inhibit greater father involvement in family work. *Journal of Marriage and the Family, 61*, 199-212.

Barnard, K., & Martell, L. (1995). Mothering. In M. Bornstein (Ed.), *Handbook of parenting* (Vol. 3, pp. 3-26). Mahwah, NJ: Lawrence Erlbaum.

Barnett, R., & Baruch, G. (1987). Determinants of fathers' participation in family work. *Journal of Marriage and the Family,49*, 29-40.

Beitel, A., & Parke, R. (1998). Paternal involvement in infancy: The role of maternal and paternal attitudes. *Journal of Family Psychology,12*, 268-288.

Berman, P., & Pederson, F. (1987). Research on men's transitions to parenthood: An integrative discussion. In P. Berman & F. Pederson (Eds.), *Men's transitions to parenthood: Longitudinal studies of early family experience* (pp. 217-242). Hillsdale, NJ: Lawrence Erlbaum.

Bianchi, S. (2000). Maternal employment and time with children: Dramatic change or surprising continuity? *Demography,34*, 401-414.

Bianchi, S., Robinson, J., & Milkie, M. (2006). *Changing rhythms of American family life*. New York, NY: Russell Sage Foundation.

Bornstein, M. (2002). Parenting infants. In M. Bornstein (Ed.), *Handbook of parenting* (2nd ed., Vol. 1, pp. 3-43). Mahwah, NJ: Lawrence Erlbaum.

Bredehoft, D., Mennicke, S., Potter, A., & Clarke, J. (1998). Perceptions attributed by adults to parental overindulgence during childhood. *Journal of Family and Consumer Sciences Education,16*(2), 1-15.

Burnham, M., Goodlin-Jones, B., Gaylor, E., & Anders, T. (2002). Nighttime sleep-wake patterns and self-soothing from birth to one year of age: A longitudinal intervention study. *Journal of Child Psychology and Psychiatry and Allied Disciplines, 43*, 713-725.

Crouter, A., Perry-Jenkins, M., Huston, T., & McHale, J. (1987). Processes underlying father involvement in dual-earner and single-earner families. *Developmental Psychology,23*, 431-440.

Deutsch, F. (1999). *Having it all: How equally shared parenting works*. Cambridge, MA: Harvard University Press.

Enders, C. (2001). The impact of nonnormality on full information maximum-likelihood estimation for structural equation models with missing data. *Psychological Methods,6*, 352-370.

Fagan, J., & Barnett, M. (2003). The relationship between maternal gatekeeping, paternal competence, mothers' attitudes about the father role, and father involvement. *Journal of Family Issues,24*, 1020-1043.

Ferketich, S., & Mercer, R. (1994). Predictors of paternal role competence by risk status. *Nursing Research,43*, 80-85.

Ferketich, S., & Mercer, R. (1995). Predictors of role competence for experienced and inexperienced fathers. *Nursing Research,44*, 89-95.

Garner, P. (1996). Does hearing a lecture on attachment affect students' attitudes about "spoiling" infants? *College Student Journal,30*, 168-172.

Gaunt, R. (2008). Maternal gatekeeping: Antecedents and consequences. *Journal of Family Issues,29*, 373-395.

Hawkins, A., Marshall, C., & Allen, S. (1998). The Orientation Toward Domestic Labor Questionnaire: Exploring dual-earner wives' sense of fairness about family work. *Journal of Family Psychology,12*, 244-258.

Hill, M. (1987). Social class, area of residence and sharing care. In M. Hill (Ed.), *Sharing child care in early parenthood* (pp. 121-149). London, England: Routledge & Kegan Paul.

Hoff, E., Laursen, B., & Tardif, T. (2002). Socioeconomic status and parenting. In M. Bornstein (Ed.), *Handbook of parenting: Biology and ecology of parenting* (Vol. 2, pp. 231-252). Mahwah, NJ: Lawrence Erlbaum.

Ihinger-Tallman, M., Pasley, K., & Buehler, C. (1995). Developing a middle-range theory of father involvement postdivorce. In W. Marsiglio (Ed.), *Fatherhood: Contemporary theory, research, and social policy: Vol. 7. Research on men and masculinities series* (pp. 57-77). Thousand Oaks, CA: SAGE.

Jacobs, J., & Kelley, M. (2006). Predictors of paternal involvement in childcare in dual-earner families with young children. *Fathering,4*, 23-47.

Lamb, M. (1997). The development of father-infant relationships. In M. Lamb (Ed.), *The role of the father in child development* (3rd ed., pp. 104-120). New York, NY: Wiley.

Lamb, M., & Lamb, J. (1976). The nature and importance of the father-infant relationship. *The Family Coordinator, 25*, 379-385.

Lee, Y., & Waite, L. (2005). Husbands' and wives' time spent on housework: A comparision of methods. *Journal of Marriage and Family,67*, 328-336.

Lindberg, L. (1996). Women's decisions about breastfeeding and maternal employment. *Journal of Marriage and the Family,58*, 239-251.

Luster, T. (1985). *Parental beliefs survey*. Ithaca, NY: Cornell University Press.

Luster, T., Rhoades, K., & Hass, B. (1989). The relation between parental values and parenting behavior: A test of the Kohn hypothesis. *Journal of Marriage and the Family,51*, 139-147.

Lyons-Ruth, K., Wolfe, R., Lyubchik, A., & Steingard, R. (2002). Depressive symptoms in parents of children under age three: Sociodemographic predictors, current correlates, and associated parenting behaviors. In N. Halfon, K. McLearn, &

M. Schuster (Eds.), *Child rearing in America: Challenges facing parents with young children* (pp. 217-259). New York, NY: Cambridge University Press.

Magnuson, K., & Duncan, G. (2002). Parents in poverty. In M. Bornstein (Ed.), *Handbook of parenting* (Vol. 4, pp. 95-121). Mahwah, NJ: Lawrence Erlbaum.

McBride, B. (1989). Stress and fathers' parental competence: Implications for family life and parent educators. *Family Relations,38*, 385-389.

McBride, B., Brown, G., Bost, N., Shin, N., Vaughn, B., & Korth, B. (2005). Paternal identity, maternal gatekeeping, and father involvement. *Family Relations,54*, 360-372.

McHale, S., & Huston, T. (1984). Men and women as parents: Sex role orientations, employment, and parental roles with infants. *Child Development,55*, 1349-1361.

McLoyd, V. (1998). Socioeconomic disadvantage and child development. *American Psychologist, 53*, 185-204.

Nock, S., & Kingston, P. (1988). Time with children: The impact of couples' work-time commitments. *Social Forces,67*, 59-85.

Parke, R. (2002). Fathers and families. In M. Bornstein (Ed.), *Handbook of parenting* (2nd ed., Vol. 3, pp. 27-73). Mahwah, NJ: Lawrence Erlbaum.

Phares, V. (1997). Psychological adjustment, maladjustment, and father-child relationships. In M. Lamb (Ed.), *The role of father in child development* (3rd ed., pp. 261-283). New York, NY: Wiley.

Pleck, J. (1997). Paternal involvement: Levels, sources, and consequences. In M. Lamb (Ed.), *The role of father in child development* (3rd ed., pp. 66-103). New York, NY: Wiley.

Porter, C., & Hsu, H. (2003). First-time mothers' perceptions of efficacy during the transition to motherhood: Links to infant temperament. *Journal of Family Psychology,17*, 54-67.

Presser, H. (1989). Can we make time for children? The economy, work schedules, and child care. *Demography,26*, 523-543.

Radloff, L. (1977). The CES-D scale: A self-report depression scale for research in the general population. *Applied Psychological Measurement, 1*, 385-401.

Sanderson, S., & Thompson, V. (2002). Factors associated with perceived paternal involvement in childrearing. *Sex Roles,56*, 99-111.

Shealy, K., Scanlon, K., Labiner-Wolfe, J., Fein, S., & Grummer-Strawn, L. (2008). Characteristics of breastfeeding practices among US mothers. *Pediatrics,122*, S50-S55.

Sherriff, N., Hall, V., & Pickin, M. (2009). Fathers' perspectives on breastfeeding: Ideas for intervention. *British Journal of Midwifery,17*, 223-227.

Shuster, C. (1994). First-time fathers' expectations and experiences using child care and integrating parenting and employment. *Early Education and Development,5*, 261-276.

Sigel, I., & McGillicuddy-De Lisi, A. (2002). Parent beliefs are cognitions: The dynamic belief systems model. In M. Bornstein (Ed.), *Handbook of parenting* (2nd ed., Vol. 3, pp. 485-508). Mahwah, NJ: Lawrence Erlbaum.

Smyke, A., Boris, N., & Alexander, G. (2002). Fear of spoiling in at-risk African American mothers. *Child Psychiatry and Human Development,32*, 295-307.

Sobel, M. (1982). Asymptotic confidence intervals for indirect effects in structural equation models. In S. Leinhardt (Ed.), *Sociological methodology* (pp. 290-312). San Francisco, CA: Jossey-Bass.

Solomon, R., Martin, K., & Cottington, E. (1993). Spoiling an infant: Further support for the construct. *Topics in Early Childhood Special Education,13*, 175-183.

Spock, B. (1957). Problems of infancy. In B. Spock (Ed.), *The common sense book of baby and child care* (pp. 182-188). New York, NY: Duell, Sloan, & Pearce.

Walker, A., & McGraw, L. (2000). Who is responsible for responsible fathering? *Journal of Marriage and the Family, 62*, 563-569.

Walzer, S. (1998). Bonding with the baby: Biology and social meanings. In S. Walzer (Ed.), *Thinking about baby: Gender and transitions to parenthood* (pp. 68-99). Philadelphia, PA: Temple University Press.

Wical, K., & Doherty, W. (2005). How reliable are fathers' reports of involvement with their children? A methodological report. *Fathering,3*, 81-93.