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Fathers' Involvement in Child Health Care: Associations with Prenatal Involvement, Parents' Beliefs, and Maternal Gatekeeping

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Abstract

Using data from 182 dual-earner couples experiencing the transition to parenthood, this study examined associations between prenatal involvement, gender role beliefs, and maternal gatekeeping and new fathers' involvement in child health care. Results indicated that prenatal father involvement was associated with both fathers' direct engagement in child health care and fathers' perceived influence in child health-related decision-making. Fathers also demonstrated greater direct engagement in child health care when mothers held more nontraditional beliefs about gender roles. Moreover, when mothers were more encouraging of fathers' involvement in childrearing, fathers felt more influential in child health-related decision-making, whereas when mothers engaged in greater gate closing behavior, fathers with more traditional gender role beliefs felt less influential in child health-related decision-making. This study suggests that fathers' prenatal involvement, mothers' beliefs, and maternal gatekeeping may play a role in the development of new fathers' involvement in child health care at the transition to parenthood.

Keywords

Father involvement; child health; prenatal involvement; gender role beliefs; coparenting; maternal gatekeeping

Fathers' involvement in their child's health and health care has been identified by health professionals and scholars alike as a key direction for empirical research (Coleman & Garfield, 2004; Garfield & Isacco, 2012). Although greater father involvement in multiple aspects of children's lives is associated with better social, emotional, and physical health for children (Carr & Springer, 2010), relatively little research has explored fathers' involvement in child health care, and especially factors that may influence the extent of fathers' involvement (Isacco & Garfield, 2010). However, when new fathers are more involved in child health care, children not only experience better health but also more positive father-child relationships (Levy-Shiff, Hoffman, Mogilner, Levinger, & Mogilner, 1990). Thus,

understanding why some new fathers are more involved than others in their child's health care is imperative.

Using data from a community sample of first-time parents, this study examined the role of three factors in new fathers' involvement in child health care: prenatal involvement, beliefs about gender roles, and maternal gatekeeping. Two facets of fathers' involvement in child health care were studied: fathers' direct engagement in child health care (i.e., taking child to the doctor, staying home when the child is ill) and fathers' perceptions of influence in child health-related decision-making. Unlike most existing research, which has relied on mothers' reports of fathers' behavior, our study used fathers' reports of their own involvement, which have more consistent predictive validity than mother reports of father involvement (Hernandez & Coley, 2007).

Father Involvement and Child Health

There is little consistency in the ways in which "father involvement" in child health has been conceptualized and studied. Some research has included very general measures of father involvement in the child's life, and examined indirect associations with child health via maternal behavior. For instance, using data from the Millennium Cohort Study in the United Kingdom, Kiernan and Pickett (2006) reported that mothers were more likely to continue to smoke during pregnancy and less likely to initiate breastfeeding when they were less closely connected to their child's father (i.e., cohabiting with their child's father or single versus married). In another study, Teitler (2001) tested associations between father involvement (e.g., whether the father's name was on the child's birth certificate, fathers' provision of financial support during pregnancy) and health outcomes using data from the Fragile Families and Child Well-Being study in the United States. Results revealed that when fathers were more involved, mothers were more likely to have sought prenatal care and to have refrained from unhealthy behaviors while pregnant. Additional research has considered fathers' role in health-related decision making. For instance, when fathers are supportive of breastfeeding, mothers are more likely to breastfeed (Sharma & Petosa, 1997).

Other studies have focused more specifically on fathers' involvement in child health care and examined direct associations with child outcomes. For example, in their study of pediatric chronic illness management and its associations with family functioning, Wysocki and Gavin (2006) found that for children with chronic health conditions, such as asthma or type 1 diabetes, greater direct paternal involvement in disease management was associated with greater treatment adherence and overall quality of life. Levy-Shiff et al. (1990) reported that more frequent visits by fathers to the hospital to see their preterm infants fostered higher infant weight gain, and were associated with more positive subsequent father-infant interactions and better child social development and adaptation.

Consistent with Garfield and Isacco (2012), we drew from the widely-used model of father involvement outlined by Lamb, Pleck, Charnov, and Levine (1987) to define important aspects of father involvement in child health care. This model conceptualized three types of involvement: (a) *accessibility* (parent is physically and psychologically available to child), (b) *engagement* (parent participates with child in one-on-one activity), and (c) *responsibility*

(parent assumes responsibility for care of child). For the present study, we focused on two facets of fathers' involvement in child health care: fathers' direct engagement in child health care and perceptions of influence in child health-related decision-making. With respect to fathers' direct engagement, we measured the frequency with which fathers reported taking their children to the doctor and staying home with their child when the child was ill. Fathers' attendance at well-child visits, which constitute a significant portion of doctors' visits for infants, is considered to be a critical component of fathers' involvement in their child's health care as these visits represent opportunities to learn valuable information about the health and development of the child (Garfield & Isacco, 2006; Moore & Kotelchuck, 2004). Moreover, parents' involvement in care for their ill children is critical to children's rapid recovery from illness (Heymann, Toomey, & Furstenberg, 1999). Our assessment of fathers' perceptions of influence in child health-related decision-making was considered to be an aspect of the responsibility component because when fathers believe they have influence over parenting decisions, they are more involved in child-related decision making (Minton & Pasley, 1996).

Determinants of Father Involvement

Despite the apparent benefits of father involvement in child health, little research has examined predictors of fathers' involvement in child health care. In their study of urban fathers' involvement in their children's health care, Moore and Kotelchuck (2004) reported that fathers endorsed a number of reasons for not attending doctors' visits, including the belief that it was the mother's responsibility, work schedule conflicts, or because they expressed a lack of confidence in their own parenting skills, although few of these barriers were associated with fathers' actual attendance at visits. In a qualitative study of resident and non-resident fathers, Isacco and Garfield (2010) reported that residential fathers who were romantically involved with their child's mother were more likely to discuss health-care decision-making for their child as a process that both parents participated in. Although these studies provided valuable insight into factors that may affect father involvement in child health care, further research is needed.

According to Lamb and colleagues' (1987) model of determinants of father involvement, a number of factors shape fathering behavior, including motivation, or fathers' desire to be involved with their children, skills and self-confidence, or fathers' actual possession of the skills required to care for children as well as their perceptions of their own competence, social supports and stresses, or the extent to which important individuals such as mothers are supportive of or resistant to the father's involvement, and institutional factors such as fathers' employment characteristics and workplace policies. In the current study, we examined the role of three specific factors in fathers' direct engagement in child health care and fathers' perceptions of influence in child health-related decision-making: prenatal involvement, beliefs about gender roles, and maternal gatekeeping. Prenatal involvement and fathers' beliefs about gender roles were conceptualized as aspects of fathers' motivation, and mothers' beliefs about gender roles and maternal gatekeeping were conceptualized as aspects of social supports and stresses.

Prenatal involvement

Studies indicate that fathers' prenatal involvement is associated with their postpartum involvement, although the primary focus of this work has not been on predicting father involvement in child health care. Cabrera, Fagan, and Farrie (2008) found that fathers' prenatal involvement (i.e., providing money or buying things for the baby's mother during pregnancy, providing transportation/doing chores for baby's mother, presence at the child's birth) was associated with fathers' subsequent engagement with their children up to 3 years postpartum. Bronte-Tinkew, Ryan, Carrano, and Moore (2007) assessed fathers' prenatal involvement using a composite measure of pregnancy-related questions (e.g., whether the father discussed with the mother how the pregnancy was going, saw a sonogram or ultrasound of the baby, bought things for the child), and found that those fathers who were more involved prenatally were more involved in five aspects of father engagement at 9 months postpartum. However, to date, no research has considered how fathers' prenatal involvement specific to child health care (i.e., attendance at prenatal doctors' visits) is associated with his postpartum involvement in child health care. We posited that this type of prenatal involvement should be associated with fathers' postnatal involvement in child health because it both reflects and fosters fathers' motivation through the opportunities it provides for fathers to develop an early commitment to the father role via experiences such as hearing the heartbeat, viewing an ultrasound, etc.

Fathers' beliefs about gender roles

Another key influence on fathers' involvement in child health care may be his gender role beliefs. Gender ideologies represent what individuals view as appropriate roles for men and women, and these beliefs affect individual behavior (McHale & Huston, 1984). From a role perspective, it stands to reason that fathers who hold more traditional beliefs that specify different family roles for men and women are less likely to be directly involved in childrearing, whereas fathers who endorse more nontraditional beliefs that specify a less gender-differentiated view of family roles are likely to be more directly involved in childrearing (Hofferth, 2003). Consistent with this perspective, men with more egalitarian beliefs about gender roles are more involved with child care and housework than those with more traditional views (Coltrane & Ishii-Kuntz, 1992). Although little research has considered relations between fathers' gender role beliefs and their involvement in child health care, Moore and Kotelchuck (2004) did report that fathers were less likely to attend well child visits (WCV) when they believed that it was the mother's role to do so. We hypothesized that fathers with more nontraditional gender role beliefs would be more involved in their child's health care, likely because such fathers have higher levels of motivation.

Coparenting and maternal gatekeeping

Family systems theory (e.g., Minuchin, 1974) is used as a framework for conceptualizing the coparenting relationship, or the relationship between parents with respect to parenting (Feinberg, 2003). Family systems theory gives special importance to the coparenting relationship – referring to it as the family's executive subsystem, because the couple subsystem has important implications for the parent-child subsystem (Krishnakumar &

Buehler, 2000). Coparenting relationships are related to yet distinct from marital and parent-child relationships (McHale, Kuersten, & Lauretti, 1996; Schoppe-Sullivan, Mangelsdorf, Frosch, & McHale, 2004).

Scholars have highlighted the extent to which parents support versus undermine each other's parenting as one important component of the coparenting relationship (Feinberg, 2003). Supportive coparents respect and value each other's contributions to parenting and are cooperative and warm when interacting with their child. In contrast, parents who undermine each other do so through criticism, blame, by disparaging the other parent, or by disregarding the other's authority. According to Feinberg's ecological model of coparenting, the coparenting relationship is an important influence on parenting and the parent-child relationship.

Consistent with the view that father-child relationships are especially sensitive to the social context (Marsiglio, Roy, & Fox, 2005), and with Lamb et al.'s (1987) ideas about the importance of social supports and stresses to father involvement, some have argued that a supportive coparenting relationship provides encouragement for father involvement in childrearing, whereas a conflictual coparenting relationship hinders fathers' involvement (McBride & Rane, 1998). In particular, family researchers have observed that mothers seem to play a pivotal role in supporting or undermining the father-child relationship (DeLuccie, 1995; Fagan & Barnett, 2003), a particular aspect of the coparenting relationship known as "maternal gatekeeping" (Schoppe-Sullivan, Brown, Cannon, Mangelsdorf, & Sokolowski, 2008).

Maternal gatekeeping has been defined as a set of beliefs and behaviors that may make it difficult for men and women to collaborate in family work (Allen & Hawkins, 1999). In their seminal paper, Allen and Hawkins noted that mothers have been culturally recognized as the center of nurture and care in family life, and for many women caring for and nurturing their families allows them to feel as if they are good mothers. When both parents become collaborative partners in housework and child care, some mothers may fear loss of self-respect or self-identity as a woman. Gatekeeping beliefs include endorsement of differentiated family roles for mothers and fathers, and behaviors include assuming primary responsibility for child care or criticizing the father's child rearing efforts. Against the backdrop of cultural expectations and gatekeeping beliefs, particular mothers may engage in gatekeeping behavior because they need to feel validated as mothers, believe fathers are not competent in caring for children, or hold unrealistically high standards for child care (Allen & Hawkins, 1999; Fagan & Barnett, 2003; Schoppe-Sullivan et al., 2008). It should be noted, however, that the notion of gatekeeping is controversial, with some scholars arguing that other factors play a larger role in father involvement and that the gatekeeping construct places an unfair burden of responsibility on mothers for low levels of father involvement (Walker & McGraw, 2000).

Because a "gatekeeper" can both close *and* open a gate, our conceptualization of gatekeeping encompasses "gate opening" as well as "gate closing" behaviors (Cannon, Schoppe-Sullivan, Mangelsdorf, Brown, & Sokolowski, 2008). Research supports the notion that maternal gatekeeping beliefs and behaviors affect father involvement (Fagan & Barnett,

2003; Schoppe-Sullivan et al., 2008), and, in particular, that maternal gatekeeping may moderate relations between fathers' beliefs about their roles and their involvement with their children. However, no prior study has examined whether maternal gatekeeping beliefs or behaviors are associated with father involvement in child health care, although Isacco and Garfield (2010) highlighted the critical role of the quality of the coparenting relationship with the child's mother in the extent to which fathers participated in child health-care decision-making. Thus, in the current study we hypothesized that we would observe higher levels of father involvement in child health care when mothers endorsed more nontraditional beliefs about gender roles and engaged in greater gate opening and less gate closing behavior.

The Present Study

Using data from a sample of first-time mothers and fathers, this study examined the association between fathers' direct engagement in child health care and fathers' perceptions of influence in child health-related decision-making and three factors: prenatal involvement, beliefs about gender roles, and maternal gatekeeping. The target population for this study was dual-earner, male-female couples in which both partners were expecting the birth of their first biological child. This population was selected because in these families the demand for involved fathering is arguably greatest (Buckley & Schoppe-Sullivan, 2010), as mothers in this population are planning to return to work shortly after the birth of the child.

We anticipated that fathers would show greater direct engagement in child health care and perceive themselves as having more influence in child health-related decision-making when the following were also observed: (a) fathers were more involved prenatally, (b) fathers and their partners held more nontraditional beliefs about gender roles, and (c) mothers engaged in greater gate opening and less gate closing behavior. We further examined whether maternal gatekeeping behavior interacted with fathers' prenatal involvement and beliefs in relation to father involvement in child health care (Schoppe-Sullivan et al., 2008). We expected that maternal gatekeeping would be more strongly associated with fathers' postnatal involvement in child health care when fathers were more vulnerable to low involvement – in other words, when fathers showed lower levels of prenatal involvement or held more traditional beliefs about gender roles.

Employment or demographic characteristics – many of which fit under the “institutional factors” component of Lamb et al.'s (1987) model – such as parents' work hours, education, and family income have also been associated with father involvement (Pleck & Masciadrelli, 2004). In particular, the demands of a father's employment can facilitate or prohibit their involvement with their children (Bulanda, 2004). Fathers who work longer hours spend less time with their children, particularly on weekdays (Yeung, Sandberg, Davis-Kean, & Hofferth, 2001), and Moore and Kotelchuck (2004) found that work-related reasons were the most commonly reported barriers to fathers attending well-child visits. In contrast, when mothers work more hours outside the home, fathers may increase their involvement with their children to compensate (Pleck & Masciadrelli, 2004). Thus, in our analysis of correlates of father involvement in child health care we controlled for fathers' and mothers' work hours, education, and family income.

Method

Participants

182 married or cohabiting dual-earner couples were recruited for this study primarily from childbirth education classes, newspaper ads, and via word-of-mouth in a large Midwestern U.S. city and surrounding area in 2008-2009. In order to be eligible for participation, couples had to be 1) expecting their first child, 2) the biological parents of the child they were expecting, 3) both contributing to the household income and planning to return to work after their infant was born, 4) at least 18 years of age, and 5) able to read and speak English.

In the third trimester of pregnancy, 86% of couples reported being married. The median level of education for mothers and fathers was a bachelor's degree, with 75% of mothers and 65% of fathers having obtained at least a college degree. The median annual family income was \$79,500. U.S. census data indicate that the median income in the geographic location from which the sample was recruited was \$80,884 for households with two earners (regardless of the presence of children in the household), suggesting that our sample was representative of the target population for the study with respect to family income (U.S. Census Bureau, 2011).

Mothers were between the ages of 18 and 42 years ($M = 28.24$ years; $SD = 4.02$). Fathers were between the ages of 18 and 50 years ($M = 30.20$ years; $SD = 4.81$). The majority of participants were White (85% of mothers and 86% of fathers), with the remaining participants coming from other racial backgrounds (6% of mothers and 7% of fathers self-identified as Black, 3% of mothers and 3% of fathers self-identified as Asian, 2% of mothers and 4% of fathers self-identified as other races, and 4% of mothers and 1% of fathers self-identified as more than one race). In addition, 4% of mothers and 2% of fathers identified themselves as Hispanic.

Of the full sample, 179 couples provided data at Phase 2 of the study, which occurred at 3 months postpartum. At 3 months postpartum 62% of mothers worked at least 31 hours per week, with the remainder working 21-30 hours (8%), 11-20 hours (10%), or 0-10 hours per week (5%). An additional 15% of mothers were not in the work force. Of the fathers, 87% worked at least 31 hours per week, with the remainder working 21-30 hours (4%), 11-20 hours (1%), or 0-10 hours per week (2%). Only 6% of fathers were not in the work force.

Of the children born to participating couples, 51% were male. Sixty-nine percent were delivered vaginally, and 31% were delivered by Cesarean section. Eighty percent of mothers reported that their infant's health was "excellent", with the remainder reporting "very good" (18%) or "good" (2%) infant health. At 3 months postpartum, no mothers reported that their infants had discernible physical disabilities.

Procedure

Mothers and fathers completed surveys and interviews independently during the third trimester of pregnancy and at 3, 6, and 9 months postpartum. At the third trimester, 3 and 9 months postpartum, couples were also videotaped interacting together and with their infants. For the purposes of this study, we focused on survey measures completed by parents at 3

months postpartum assessing fathers' prenatal involvement, parents' beliefs about gender roles, and fathers' direct engagement in child health care and perceptions of influence in child health-related decision-making.

Measures

Independent variables

Prenatal involvement: Fathers' prenatal involvement was measured using the father's report on the following question: "How often did you attend your partner's doctor's visits during pregnancy?" (4 = *every visit*; 3 = *most of the time*; 2 = *some of the time*, and 1 = *never*).

Beliefs about gender roles: Mothers' and fathers' beliefs about gender roles were measured using the two items from the Differentiated Family Roles subscale of Allen and Hawkins' (1999) measure of maternal gatekeeping. The two items were: "Most women enjoy caring for their homes, and men just don't enjoy that stuff" and "For a lot of reasons, it's harder for men than for women to do housework and child care." Respondents rated these items on the following scale: 1 = *strongly disagree*; 5 = *strongly agree*. The two items were reverse scored and then averaged separately for mothers and fathers such that higher scores reflected more nontraditional beliefs about gender roles. The significant and moderate correlations between the two items supported averaging them ($r = .47, p < .01$ for mothers, and $r = .44, p < .01$ for fathers).

Maternal gatekeeping: Mothers' gate opening and gate closing behavior was measured using an adapted version of Van Egeren's (2000) Parental Regulation Inventory, which asked fathers to report on their partner's gatekeeping behavior. Fathers used a 6-point scale (1 = *never* to 6 = *several times per day*) to describe the frequency with which the mother responded to his parenting behaviors with gate opening behavior (e.g., "compliments you"; "tells you how happy you make your child") or gate closing behavior (e.g., "looks exasperated and rolls her eyes"; "takes over and does it her own way"). Summary scores measuring maternal gate opening (7 items; $\alpha = .89$) and gate closing (8 items; $\alpha = .86$) were created by averaging across items.

Dependent variables

Fathers' direct engagement in child health care: Father engagement in child health care was measured using the father's report on two items. These items asked fathers how often (5 = *always*; 4 = *often*; 3 = *sometimes*, 2 = *rarely*; 1 = *never*) they were the one who did various child-related activities when they needed to be done. The two items used here were selected because their content focused on child health-related activities: "Take your baby to the doctor" and "Stay home to care for your baby when s/he is ill". The significant and moderate correlation between these two items supported averaging them, $r = .52, p < .01$.

Fathers' perception of influence in child health-related decision-making: Fathers' perceptions of their influence in child health decision-making were measured using fathers' reports on the following item: "How much influence do you have in making major decisions about things such as health care for your baby?" Fathers responded using the following

scale: 1 = *no influence*; 2 = *very little influence*; 3 = *some influence*; 4 = *a lot of influence*; 5 = *full influence*.

Results

Preliminary Analyses

Descriptive statistics and intercorrelations for all variables are reported in Table 1. Means on the prenatal involvement and postnatal direct engagement in child health care variables revealed that the typical father in this sample was fairly involved with his child's health care. In particular, on average, fathers reported attending their partner's prenatal doctor's visits most of the time. During the postpartum period, fathers reported "sometimes" engaging in child health care behaviors. These fathers perceived themselves as having "a lot of influence" over child health-related decision making. In addition, gate opening behavior was fairly frequent, and gate closing behavior was present but less frequent.

Given that father's education, mother's education, and family income were significantly and moderately correlated, these variables were standardized and averaged to create a "family SES" variable for use as a control in subsequent analyses. Father direct engagement in child health and fathers' perceptions of influence in child health-related decision-making were positively but modestly correlated, supporting their examination as separate indicators of father involvement in child health care.

Regression Analyses

Hierarchical linear regression analyses were used to examine the associations between prenatal involvement, parents' beliefs, and maternal gatekeeping behavior and father direct engagement in child health care and perceptions of influence in child health-related decision-making. We controlled for family socioeconomic status and fathers' and mothers' work hours at 3 months postpartum in Step 1. On Step 2 we entered fathers' prenatal involvement, on Step 3 we entered fathers' and mothers' beliefs about gender roles, and on Step 4 we entered mothers' gate opening and gate closing behavior. Finally, on Step 5, the four two-way interactions of prenatal involvement and fathers' beliefs with maternal gate opening and gate closing were entered. Variables were mean centered prior to the computation of interaction terms, and significant interactions were graphed and probed using an SPSS script created by Hayes and Matthes (2009).

Results of these regression analyses are shown in Table 2. In the equation predicting father direct engagement in child health care, none of the demographic controls explained significant variance on Step 1. On Step 2, fathers' prenatal involvement was a significant predictor of father engagement, $\beta = .38, p < .01$, such that greater prenatal involvement was associated with greater postnatal engagement in child health care. On Step 3, mothers' (but not fathers') nontraditional beliefs were significantly associated with greater father direct engagement in child health care, $\beta = .18, p < .01$. Neither the set of gatekeeping variables on Step 4 nor the interaction terms on Step 5 explained significant variance in father direct engagement in child health care.

In the equation predicting fathers' perceptions of influence in child health-related decision-making, the demographic controls did not explain significant variance on Step 1. On Step 2, greater prenatal father involvement predicted greater paternal perception of influence in child health-related decision-making, $\beta = .24, p < .01$. Neither mothers' nor fathers' beliefs about gender roles explained significant variance when entered on Step 3. On Step 4, mothers' gate opening behavior was a significant predictor of fathers' perceptions of influence in child health-related decision-making, $\beta = .23, p < .01$, such that when mothers engaged in greater gate opening behavior, fathers reported that they had greater influence in child health-related decision-making. Mothers' gate closing behavior was not directly associated with fathers' influence in child health-related decision-making. However, on Step 5, mothers' gate closing behavior interacted with fathers' beliefs in predicting fathers' perceptions of influence, $\beta = .24, p < .01$. This significant interaction was graphed and probed (Figure 1). Simple slopes analysis indicated that at low levels of father nontraditional beliefs (i.e., traditional beliefs), mothers' gate closing behavior was negatively and significantly associated with fathers' perceptions of influence in child health-related decision-making, $\beta = -.25, p < .05$. In contrast, at high levels of father nontraditional beliefs, the association between mothers' gate closing behavior and fathers' perceptions of influence in child health-related decision-making was nonsignificant, $\beta = .17, p = .08$. None of the other interaction effects entered on Step 5 were statistically significant.

Discussion

The current study extended the literature on father involvement in child health care in dual-earner families by examining the association between fathers' prenatal involvement, parents' beliefs about gender roles, and maternal gatekeeping in fathers' own views and their direct engagement in child health care and their influence in child health-related decision-making. Although fathers' prenatal involvement was the most consistent correlate of father involvement in child health care, results support the perspective that father involvement in child health care is multiply determined. In particular, beyond fathers' own prenatal involvement, mothers' beliefs about gender roles and maternal gatekeeping were also associated with fathers' involvement in child health care.

Prenatal father involvement – specifically, attendance at doctors' visits during the partner's pregnancy – was the strongest correlate of fathers' direct engagement in child health care that we examined and was also associated with the father's sense of his influence in child health-related decision-making. These findings were consistent with our hypothesis, and with prior research in the larger fathering literature that has shown associations between prenatal and postnatal father involvement (Bronte-Tinkew et al., 2007; Cabrera et al., 2008). We suspect that this type of prenatal involvement was associated with fathers' postnatal involvement in child health because it both reflected and fostered fathers' motivation to be involved. Given barriers to fathers' involvement in these types of health care visits (Moore & Kotelchuck, 2004; Wells & Sarkadi, 2012), fathers who attended more of their partner's prenatal visits were likely the most motivated. However, these fathers also had greater opportunities to have important prenatal experiences such as hearing the heartbeat and viewing ultrasounds, which may help fathers develop an early and persistent commitment to the father role (Marsiglio, 2008). Moreover, attending prenatal doctors' visits, which are

directed at the mother and developing child, may also increase fathers' attention to children's health care needs and allow fathers to articulate their thoughts and questions early in the process of becoming a parent. Thus, by the time the baby is born, fathers who have been involved in the health of their children from the earliest moments may feel less tangential and more confident regarding their role in child health care.

Mothers' beliefs about gender roles were also associated with new fathers' direct engagement in child health care. Consistent with theory and research on maternal gatekeeping (Allen & Hawkins, 1999), mothers who hold nontraditional beliefs about gender roles may make opportunities available for fathers to take a more active day-to-day role in child health care, whereas mothers with traditional beliefs likely take their child to the doctor and stay home when their child is ill – assuming that child health care is their responsibility. That mothers', but not fathers', beliefs were associated with fathers' engagement is consistent with research indicating a closer link between mothers' perceptions of the father role and father involvement than between fathers' perceptions of their role and father involvement (McBride et al., 2005).

Although fathers' beliefs were not associated with their direct engagement in child health care, fathers' beliefs were relevant to their perceptions of their influence in child health-related decision-making. As anticipated, when fathers had more traditional beliefs, they appeared more vulnerable to the potential impact of maternal gate closing on their perceptions of their influence. Indeed, maternal gate closing behavior – characterized by undermining of fathers' parenting – may feed into the insecurities of fathers with more traditional beliefs, leading them to perceive that they are not as well suited for active parenting as mothers are. In turn, these fathers may come to feel like they have less influence in health-related decision-making for their child. Recall that Moore and Kotelchuck (2004) found that fathers endorsed a number of reasons for not attending WCVs, including the belief that it was the responsibility of the mother to do so and a lack of confidence in their own parenting skills. Our results suggest that more nontraditional beliefs about gender roles may buffer fathers from the potential for maternal gate closing to have a negative impact on their perceptions of their influence in child health-related decision-making, emphasizing the important role ascribed to fathers' motivation by the Lamb et al. (1987) model and prior research (Coltrane & Ishii-Kuntz, 1992; Schoppe-Sullivan et al., 2008). Perhaps as a function of his belief that men's and women's roles in families are more interchangeable, a father with nontraditional beliefs does not interpret his partner's criticism as evidence of his unsuitability for the role of active parent.

Mothers' gate opening behavior was also directly associated with fathers' perceptions of their influence. In other words, when mothers were more encouraging of fathers' involvement in childrearing in general, fathers felt like they had more influence in decisions regarding child health. Previous research supports the view that strong coparenting relationships foster greater father involvement (McBride & Rane, 1998), and that maternal encouragement in particular may be important (Schoppe-Sullivan et al., 2008). This study confirms the association of maternal encouragement with father involvement, in this case involvement in child health care, regardless of fathers' or mothers' beliefs about gender roles. In fact, the strength of the association between maternal encouragement and fathers'

perceptions of their influence in child health-related decision-making was comparable to the strength of the association between fathers' prenatal involvement and their perceptions of their influence. Thus, consistent with Isacco and Garfield (2010), a high-quality coparenting relationship with the child's mother may play an important role in fathers' sense that their opinions and desires regarding their child's health care matter.

The findings of this study need to be considered in light of its limitations. In particular, the data used were drawn from a single time point. Thus, causal relations between the variables could not be determined. For instance, it is not only possible but likely that mothers are more apt to encourage fathers' involvement in childrearing when fathers demonstrate their motivation through participation in child health-related decision-making. Moreover, relations among parents' beliefs, maternal gatekeeping, and father involvement in child health care may change as children grow and develop, and the weight of these factors in comparison to prenatal involvement, for example, may evolve. Future research should expand on this study to examine associations among these variables over time.

It is especially important to acknowledge that characteristics of our sample affected the approach we took to conceptualization and measurement and likely also affected our findings. The participants in this study of dual-earner couples experiencing the birth of their first child were married or cohabiting couples with high levels of social and financial capital. As such, we focused more on individual and relational determinants of father involvement than on contextual factors such as poverty or culture. In populations with fewer resources, other factors may have a greater influence on father-child relationships than parents' beliefs or maternal gatekeeping. The "father-friendliness" of child health care services (Wells & Sarkadi, 2012), especially for fathers from non-dominant cultures, should be considered in future research. For example, Garfield and Isacco (2006) reported that one reason fathers gave for not participating in their child's health care was due to system barriers such as inconvenient office hours that conflicted with employment schedules. In sum, much additional work is needed to determine whether patterns similar to those found in the present study apply to other family configurations (e.g., nonresident fathers) and populations with greater socioeconomic, racial and ethnic diversity.

We also assessed only a small subset of important aspects of father involvement in child health care. Although no comprehensive model of father involvement in child health exists, future research should draw from the qualitative work of Garfield and Isacco (2012) and assess fathers' day-to-day involvement in child health (e.g., play and exercise, provision of nutritious meals), as well as aspects of involvement that may be more closely associated with child health problems (e.g., administration of medication). Future work should also assess multiple aspects of prenatal involvement relevant to child health in addition to attendance at prenatal doctors' visits. For instance, expectant fathers may read health-related literature on pregnancy and childbirth or breastfeeding and have discussions about health-related issues (e.g., nutrition during pregnancy, benefits of breastfeeding) with expectant mothers. It will also be critical to delve deeper into fathers' experiences at prenatal doctors' visits (e.g., fathers' *reactions to* hearing the heartbeat, viewing an ultrasound; Marsiglio, 2008). Future research that builds a more nuanced understanding of the conditions and

processes that define men's prenatal and postnatal experiences will increase dialogue about what is still missing from the current literature on fathers and child health.

Notwithstanding its limitations, this study provides evidence that fathers' prenatal involvement and mothers' support via their roles as coparents may be important facilitators of fathers' involvement in child health care, which has been linked to better child health and more positive father-child relationships (Levy-Shiff et al., 1990). Given that father involvement and coparenting relationships show significant stability from early infancy forward (Cabrera et al., 2008; Schoppe-Sullivan et al., 2004), researchers and practitioners should continue to focus on the transition to parenthood as a potential "critical period" for the establishment of father involvement in child health care. Practitioners (including childbirth educators) working with expectant parents may find it worthwhile to ask expectant mothers and fathers to explicitly examine their beliefs and expectations about father involvement in child health care with the goal of helping couples understand and appreciate their joint contributions to the health care of their child. When possible, health care providers should encourage fathers' active participation in prenatal doctors' visits, and provide flexible scheduling so fathers are able to attend. Understanding parents' expectations about father involvement in child health and entertaining fathers' questions and concerns will provide practitioners valuable information on how best to facilitate father involvement in child health, which could lead to physically and emotionally healthier children.

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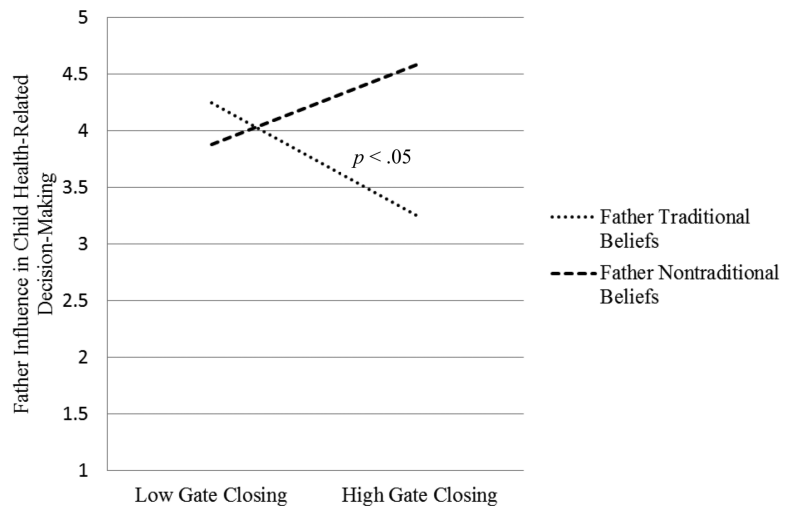


Figure 1. Association between maternal gate closing and fathers' perceptions of their influence in child health-related decision-making varies as a function of fathers' gender role beliefs.

Table 1

Intercorrelations and Descriptive Statistics

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.
1. Father Education		.61 ^{***}	.50 ^{**}	.07	.01	-.20 [*]	.02	.02	-.18 [*]	-.07	-.09	-.02
2. Mother Education			.46 ^{**}	.05	.07	-.15	.07	.08	-.10	-.02	-.11	.01
3. Family Income				.14	.14	-.19 [*]	-.07	.09	-.16 [*]	-.09	-.05	-.03
4. F Work Hours					-.01	-.08	.05	.04	.04	.05	-.14	.04
5. M Work Hours						.05	.07	.17 [*]	.07	-.08	.08	.07
6. F Prenatal Involvement							.07	.14	.09	-.09	.41 ^{**}	.25 ^{**}
7. F Nontraditional Beliefs								.23 ^{**}	.11	-.16 [*]	.08	.16 [*]
8. M Nontraditional Beliefs									.08	-.13	.19 [*]	.05
9. Gate Opening										-.33 ^{**}	.10	.25 ^{**}
10. Gate Closing											-.14	-.11
11. F Direct Engagement in Child Health Care												.25 ^{**}
12. F Influence in Child Health-Related Decision-Making												
<i>M or Mdn</i>	5.45	5.86	79500	41-50	31-40	2.97	3.70	3.43	3.96	2.27	2.99	3.99
<i>SD</i>	1.54	1.37				.72	.74	.90	1.00	.84	1.15	.68

Note. *N*s vary from 161 to 181 as a function of missing values.

M = Mother; F = Father.

* $p < .05$

** $p < .01$.

Table 2

Hierarchical Regressions Predicting Father Involvement in Child Health Care

Predictors	<i>Father Direct Engagement in Child Health Care</i>			<i>Father Influence In Child Health-Related Decision-Making</i>		
	β	R^2	F	β	R^2	F
Step 1		.05	2.59		.01	.35
Family SES	-.15			-.05		
F Work Hours	-.12			.02		
M Work Hours	.09			.07		
Step 2		.14	26.53 **		.05	8.71 **
F Prenatal Involvement	.38 **			.24 **		
Step 3		.03	3.14 *		.02	1.35
F Nontraditional Beliefs	.02			.13		
M Nontraditional Beliefs	.18 *			-.05		
Step 4		.01	.85		.06	5.11 **
Gate Opening	.01			.23		
Gate Closing	-.09			-.04		
Step 5		.00	.12		.06	2.49 *
F Inv X Gate Opening	.05			.11		
F Inv X Gate Closing	.01			.03		
F Beliefs X Gate Opening	-.03			.10		
F Beliefs X Gate Closing	-.03			.24 **		

Note. $N = 158$ for the full model predicting father direct engagement and $N = 160$ for the full model predicting fathers' perceptions of influence.

F = Father; M = Mother; Inv = Involvement.

* $p < .05$

** $p < .01$.