

## Parenting Teamwork: The Impact of a Fathering Intervention on Mothers and Infants in Vietnam

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A multifaceted, relationally focused intervention involving group and individual pre- and postnatal counseling, print resources, and community resources encouraged 390 fathers of newborn infants in Vietnam to responsively support mothers and work with them as a parenting team. Both partners completed questionnaires pre-birth and 1-, 4-, and 9-months postbirth on measures of breastfeeding support, exclusive breastfeeding duration, relationship quality, and infant development. Compared to 412 comparison group couples, intervention couples evidenced greater father support, especially in terms of helping and responsiveness to the mother's needs. This support predicted longer exclusive breastfeeding duration, improved relationship quality, and higher levels of infant development at 9 months. Sensitively working together with mothers as a coordinated team enhanced couple's relationship functioning and improved children's developmental outcomes.

Consider the key elements of a high-functioning two-person team (e.g., beach volleyball, doubles badminton). Effective two-person teams do not allow for the level of specialization common in multiplayer teams—with only two people, both partners must have a generalized, flexible skillset, regardless of their specific strengths or weaknesses. Nonetheless, effective teammates do not take over for one another, even when both are capable. Rather they trust each other and stay out of the way when the partner has matters under control. At the same time, teammates continue to coordinate their activities—they are constantly observing, communicating, and adjusting. They are aware when

there is a need and they are prepared to step in and assist if necessary.

This two-person teamwork analogy formed a focal message of an intervention project carried out in Vietnam directed at improving the physical, nutritional, emotional, and cognitive health and development of infants by increasing father involvement with the mother and with their child. Direct intervention effects on father–infant interaction have been reported previously (Rempel, Rempel, Khuc, & Vui, 2017). This article focuses on indirect intervention effects via the father's support of the breastfeeding mother. Father breastfeeding support was encouraged using a theoretically grounded intervention based on psychological principles of sensitive, responsive, teamwork-based support and provided a meaningful context in which to test the effects that implementing these principles has on the parental relationship and parenting outcomes. Positive tangible and socioemotional support provided by the father to the mother can enhance the mother–child relationship, ease the mother's workload, and improve the mother's ability to directly affect their child's development (e.g., Lamb, 2010); thus, this article examines the effect of

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the intervention on the parental relationship, exclusive breastfeeding, and infant development.

### *Father Involvement Intervention in Vietnam*

Traditionally, Vietnamese fathers have been more involved with their children during the school and adolescent years than during infancy and young childhood (Locke, Hoa, & Tam, 2012). However, in contemporary Vietnam, as in many other low and middle-income countries, cultural norms are in transition and many fathers are now expected to be more involved in caring for infants and young children (Bich, 2006; Hoang & Yeoh, 2011; Nguyen, 2011). Yet, because these cultural shifts are relatively recent, fathers may have limited information and experience in how to interact with their infants (UNICEF [United Nation Children's Fund], 2010). Similarly, fathers in Vietnam often have limited information and experience in supporting new mothers to exclusively breastfeed and efforts to enhance breastfeeding support are also quite recent (Bich, Hoa, & Málqvist, 2014).

Breastfeeding is an internationally valued activity with a notable impact on physical and psychological development (e.g., Jedrychowski et al., 2012; Quigley, Moore, Propper, Goldman, & Cox, 2017). The World Health Organization (2003) recommends that infants be exclusively breastfed, (i.e., receive no other food or liquids other than medications or vitamins) for the first 6 months and continue to be breastfed for at least 2 years. A variety of breastfeeding support interventions have focused on new mothers (Kim, Park, Oh, Kim, & Ahn, 2018; McFadden et al., 2017), but fathers can also significantly influence breastfeeding outcomes. Rempel and Rempel (2004) found that, when fathers were strongly supportive of longer breastfeeding duration, many mothers breastfed longer than they originally intended. Moreover, a small number of intervention studies have indicated that educating fathers regarding the importance of breastfeeding and ways to support breastfeeding can increase breastfeeding exclusivity and duration (Mitchell-Box & Braun, 2013; Tadesse, Zelenko, Mulugeta, & Gallegos, 2018).

In Vietnam, most mothers breastfeed beyond 1 year, but Vietnam has among the highest rates of child undernutrition and the lowest prevalence of *exclusive* breastfeeding in the world (UNICEF, 2010). Traditionally, in the first days, mothers prefer to express and discard colostrum and feed other liquids such as honey, herbal tea, or commercial infant formula prior to initiating breastfeeding (Bich et al.,

2016). An innovative intervention by Bich et al. (2014, 2016) focused on increasing breastfeeding exclusivity in Vietnam by teaching fathers to successfully support exclusive breastfeeding for the first 6 months of the infant's life. In an antenatal group counseling session and home visits before birth and in the first 3 months after birth, trained health workers taught fathers how to encourage and support their wives to exclusively breastfeed for 6 months. In addition, a public message about the importance of exclusive breastfeeding was broadcast over the community loudspeakers each week, and a fathers contest was held to demonstrate fathers' learning to the community. This intervention successfully increased exclusive breastfeeding initiation on the first day (Bich et al., 2016) and exclusive breastfeeding duration (Bich et al., 2014).

The present project used all of the components in Bich et al.'s (2014) original intervention and added fathers clubs to enhance peer support for father involvement. However, Bich et al.'s intervention was more directive in specifying actions that fathers should take to support breastfeeding, whereas the present project added content in each component that encouraged and taught fathers to responsively provide the type and amount of support that mothers needed as part of an interactive, coordinated *parenting team*. A focus on encouraging fathers to interact directly with their newborn infants was also a significant addition (see Rempel, Rempel, Khuc, et al., 2017 for details).

### *The Parenting Team*

The parenting team model of partner support that we developed and taught to fathers was based on research by Rempel and Rempel (2011) and Rempel, Rempel, and Moore (2017), which found that effective breastfeeding support was associated with an approach in which the father participated as a team member, rather than feeling excluded from the feeding experience, being too directive, or providing support that the mother might not have needed. Breastfeeding provides an advantageous context for testing the impacts of a social support intervention such as our parenting team model. Although support in couples is invariably a mutual process, breastfeeding support behaviors flow primarily from father to mother, thereby providing greater clarity regarding the direction of effects. Furthermore, it is a health practice that allows longitudinal data to be gathered within a manageable timeframe, and it affords definitive behavioral

outcomes for testing the efficacy of a support intervention.

The expanded two-person team analogy used in the current project shares key features with many coparenting theories (e.g., Feinberg, 2003; McHale & Fivaz-Depeursinge, 2010; Pruett & Pruett, 2009) while simultaneously emphasizing some distinct elements. First, for partners who are jointly parenting a constantly growing and changing child, the need for cooperation, coordination of actions and signals, and regular communication (e.g., Rouyer, Huet-Gueye, Baude, & Mieyaa, 2015) requires ongoing vigilance, adaptation, and dialog. Yet, the ongoing nature of negotiating how best to parent and raise a child and fairly divide parenting responsibilities is rarely made explicit. Indeed, in attempting to foster cooperation between adolescent or divorced parents, some coparenting programs (e.g., Cookston, Braver, Griffin, De Luse, & Miles, 2007; Fagan, 2008) have, by necessity, focused on the negotiation of longer term, comparatively static, parenting plans. Although all coparenting theories identify the need for parents to communicate and revise their plans as needed, the image of a two-person team conveys a more fluid, dynamic process of ongoing interactions. For example, all successful two-person teams create and enact coordinated plans but, like their sporting team counterparts, parenting teammates need to maintain an ongoing sensitivity to what is happening in their own and their partner's environment and be ready to work together to adjust and adapt to changes.

Another concept that is central to virtually all theoretical and empirical coparenting frameworks is partner support. Van Egeren and Hawkins (2004) have claimed that "many of the self-report measures of coparenting are, at their core, assessments of coparenting support" (p. 169) and Feinberg, Brown, and Kan (2012) note that their "intervention work has focused largely on coparental support/undermining, because research indicates that these dynamics are linked to parenting and child outcomes" (p. 3). In many coparenting theories, partner support is simply characterized as a phenomenological experience of felt support from a partner, but when specific support behaviors are mentioned, they usually involve aspects of partner affirmation and validation, and emotional and instrumental assistance in times of stress (e.g., Feinberg et al., 2012). Yet social support is a complex, and sometimes paradoxical, process. A significant body of literature highlights the notable benefits that come from having meaningful relational connections to close others (e.g., Holt-Lunstad & Smith,

2012) and there are clear benefits that come from *perceiving* that support is available if needed (e.g., Holt-Lunstad, Smith, & Layton, 2010), but numerous studies have found negative health consequences associated with actually *receiving* tangible support (e.g., Selcuk & Ong, 2012). However, the paradoxically negative effects associated with receiving support can be reduced or eliminated when support is sensitive and responsive to the recipient's needs (e.g., Rafaeli & Gleason, 2009).

The components of successful two-person teams—be sensitive and aware, communicate, coordinate, respond when needed, and otherwise stay out of the way and trust your partner—capture the key elements of effective social support. Effective supportive actions align with what the recipient wants and needs without undermining the recipient's sense of efficacy and personal control (e.g., Collins, Ford, Guichard, Kane, & Feeney, 2010; Rafaeli & Gleason, 2009). A teamwork analogy more intuitively conveys the actions required from a support provider to coordinate with the recipient's needs while still retaining the recipient's autonomy.

Finally, a number of coparenting theories highlight concepts of "coparenting solidarity" (Van Egeren & Hawkins, 2004) and "coparenting closeness" (Feinberg, 2003), which emphasize that coparenting partners can also share the joys of parenthood, watch their partner grow as a parent, and grow closer to each other. Our teamwork metaphor similarly highlights that team outcomes are shared. As supportive partners in a parenting team, fathers are likely to receive, as well as provide, positive emotional and relational benefits that extend beyond the specific benefits associated with being parents.

#### *Coparenting and Social Support Interventions*

Correlational studies have provided strong evidence for the "value added" benefits of an effective coparenting alliance over and above those found in individual parent-child relationships (e.g., McHale & Fivaz-Depeursinge, 2010), but intervention studies provide even stronger empirical support (Pruett, Pruett, Cowan, and Cowan (2017).

#### *Coparenting Interventions*

Feinberg and Kan (2008) tested Family Foundations, an eight-session pre- and postnatal program designed to foster positive joint parenting by teaching emotional self-management, conflict management, problem solving, communication, and mutual support strategies. Infant development was not

independently assessed but, compared to 80 control couples, the 89 intervention couples reported better infant regulation, less distress in the parent-child relationship, more coparental support, and less maternal depression and anxiety.

In a longitudinal intervention study of 141 couples, Doherty, Erickson, and LaRossa (2006) emphasized father inclusion, parenting knowledge and skills, increased maternal support for father involvement, and coparental teamwork. Couples in the intervention group received three prenatal group sessions and an initial home visit, and four group sessions 2–5 months after birth. Compared to the control group, intervention fathers at 6- and 12-month postnatal assessment periods spent more time interacting with their infants based on time-diary data and demonstrated improved quality in their interactional skills in a videotaped in-home parent-child play session.

In a study of young African American and Hispanic fathers aged 16–25 (Fagan, 2008), 44 expectant fathers received the five-session Minnesota Early Learning Design prenatal coparenting curriculum, 46 control group fathers received a five-session childbirth curriculum and 64 fathers dropped out of treatment. Compared to the control and dropout groups, fathers and mothers in the coparenting intervention prenatally reported a stronger coparenting alliance and increased father's communication and involvement with the mother. At 3 months postbirth, both fathers and mothers reported higher levels of father-infant engagement.

In a study of 289 couples with children aged birth to 7 years (average 2.25 years), Cowan, Cowan, Pruett, Pruett, and Wong (2009; see also Cowan, Cowan, Pruett, Pruett, & Gillette, 2014) randomly assigned couples to a "couple" intervention, a "fathers-only" intervention, or a low-dose comparison group. At the 18-month follow-up, those in the couples intervention group maintained their relationship satisfaction over the period of the study, whereas satisfaction in the fathers-only and low-dose comparison groups declined. Men in both the couples and fathers-only intervention groups reported greater involvement with and more positive feelings toward their young child than did men in the comparison group. In addition, parents in both intervention conditions reported that their children had developed fewer behavioral problems than those in the comparison group.

Finally, in an intervention focused on the impact of coparenting on relationship quality, Doss, Cicila, Hsueh, Morrison, and Carhart (2014) compared the relationship quality of 30 couples who attended

two pre- and two postnatal sessions focused exclusively on improving their relationship, with 30 couples who focused exclusively on developing a joint coparenting plan and 30 couples who attended a one-session prenatal information control group. Women in the two interventions showed small or no declines in relationship satisfaction compared to the control group 1 and 2 years after birth. Men did not show similar results.

### *Breastfeeding Support Interventions*

The promising outcomes found in coparenting interventions are mirrored in interventions designed to improve partner breastfeeding support. In these interventions, fathers have typically received didactic antenatal education, sometimes alongside mothers, about the importance of breastfeeding, why the father's support is important, and strategies for support (Mitchell-Box & Braun, 2013). One intervention also provided information about ways to reduce breastfeeding barriers to both parents via fathers for 5 weeks following birth (Tohotoa et al., 2009). However, only Abbass-Dick, Stern, Nelson, Watson, and Dennis (2015) directly addressed the relational aspects of support provision. In a randomized controlled trial of a coparenting breastfeeding support intervention with couples recruited on a postpartum unit, intervention parents were provided with a brief information session and a breastfeeding coparenting video, booklet, and website, and received two emails and a phone call in the first 3 weeks postpartum. The intervention resulted in more exclusive breastfeeding at 6 weeks, more mothers breastfeeding at 12 weeks, and more maternal satisfaction with the general postpartum support received from fathers.

Overall, the results of coparenting and breastfeeding support interventions indicate that increasing partner teamwork and support can improve couple and child outcomes. Numerous intervention studies show clear benefits for the couple in terms of their coparenting relationship and overall relationship quality. Similarly, coparenting interventions have shown benefits for child behavior and the parent-child relationship. However, child-related measures are typically based on parental reports of specific child behaviors rather than independent observation of the child's overall development and studies have not assessed different forms of father support or tested whether intervention effects are related to that support. With many studies showing that increased father involvement is associated with improved cognitive

and socioemotional development in children (e.g., Allen, Daly, & Ball, 2012), we would expect interventions that strengthen parenting teamwork to also lead to improvements in infant development.

### *Hypotheses*

#### *Partner Breastfeeding Support Hypotheses*

A key aspect of our teamwork intervention encouraged fathers to work together with mothers to improve exclusive breastfeeding. Our first four hypotheses related directly to testing the effectiveness and impact of our intervention on father breastfeeding support. In line with results in North American samples (Rempel, Rempel, & Moore, 2017), we expected our teamwork-focused intervention to encourage intervention fathers to provide higher levels of effective breastfeeding support to mothers than fathers in the comparison group (Hypothesis 1). To the extent that intervention fathers provided more effective breastfeeding support, we expected intervention mothers to exclusively breastfeed longer than mothers in the comparison group (Hypothesis 2). Additionally, regardless of condition, we expected higher levels of effective partner breastfeeding support to predict longer exclusive breastfeeding duration (Hypothesis 3), and this support was expected to mediate the intervention effects on the duration of exclusive breastfeeding (Hypothesis 4).

#### *Relationship Quality Hypotheses*

We also expected a teamwork mindset to have effects beyond the breastfeeding context. Specifically, in line with the idea that teamwork-based support brings benefits to both the recipient and provider, three hypotheses related to the impact of breastfeeding support on relationship quality. First, we expected intervention group couples to experience comparatively higher levels of relationship quality during the transition to parenthood than couples in the comparison group (Hypothesis 5). We further expected breastfeeding support behaviors, especially responsiveness, to predict changes in relationship quality (Hypothesis 6) and to mediate the intervention effect on relationship quality (Hypothesis 7).

#### *Child Development Hypotheses*

Ultimately, the goal of our intervention was to “save brains” in Vietnam. On the basis of the

developmental benefits associated with increased father-involvement, we expected that increased father engagement with mothers as part of a parenting team would be associated with improved infant physical, cognitive, and socioemotional development. Thus, we expected infants in the intervention group to have higher levels of motor, language, and socioemotional development scores at 9 months (Hypothesis 8), and we expected father support behaviors to mediate the intervention effect on 9-month developmental outcomes (Hypothesis 9). Similarly, we expected improvements in relationship quality to predict subsequent improvements in infant development scores at 9 months (Hypothesis 10) and to mediate the intervention effect on infant development (Hypothesis 11).

## **Method**

### *Study Design*

This 10-month intervention, beginning in May 2014 and culminating with a Fathers’ Contest in March 2015, was father focused, community based, and integrated into the local health care system. Using a quasi-experimental longitudinal design, two districts of Hai Duong Province that do not share a boundary—Kim Thanh and Cam Giang—were assigned to the intervention and comparison groups, respectively. The districts are similar in population size, geographic features, socioeconomic backgrounds, and mixture of rural and industrial sectors. Two-thirds of the rural and semirural communes of each district—13 of 21 communes in Kim Thanh and 12 of 19 communes in Cam Giang—were included in the study. Selected communes in each district were required to be accessible, have commune health center facilities in good condition, and be strongly committed to project activities.

Experienced data collectors, who had been trained to work in the Chililab Health and Demographic Surveillance System at Hanoi School of Public Health, used face-to-face interviews and self-administered questionnaires to gather data during visits at the participants’ homes. Demographic, family composition, household economic status (HES), and relationship quality data were collected at recruitment. Childbirth information was assessed at 1 month and relationship quality was assessed at 4 months postpartum, respectively. Both the mother’s and father’s ratings of the father’s breastfeeding support were assessed at 1, 4, and 9 months postpartum. Exclusive breastfeeding duration data were collected at the 1 and 4 month

postpartum visits and in a 6 month telephone interview. Infant development was assessed during a home visit when children were 9 months of age. We received research ethics clearance for this project from University of Waterloo (19727), Brock University (13-193-BICH), and Hanoi School of Public Health (014-007-DD-YTCC) prior to recruitment.

### *Participants*

The commune health centers in the selected communes provided a list of all couples whose pregnancy was between 12 to 27 weeks gestation in March 2014. Couples were visited in their homes and both partners were invited to participate; approximately 90% of eligible couples in each district agreed. As shown in Figure 1, the retention of participating couples between recruitment and 9 months postpartum was exceptionally high. Participants in the two districts were quite similar. All participants were ethnic Vietnamese. Fathers' age (intervention  $M = 30.32$ ,  $SD = 5.68$ ; comparison  $M = 30.38$ ,  $SD = 5.48$ ) and mothers' age (intervention  $M = 26.74$ ,  $SD = 5.13$ ; comparison  $M = 27.20$ ,  $SD = 4.95$ ) did not differ significantly by district. The majority of fathers and mothers had a middle school or high school level of education and education levels in the comparison district were significantly higher for mothers (Mann-Whitney  $U$  test,  $p = .019$ ,  $\eta^2 = .007$ ) and marginally higher for fathers (Mann-Whitney  $U$  test,  $p = .074$ ). Most couples lived in rural rather than semiurban areas, with more rural couples in the intervention (93.2%) than in the comparison district (85.0%),  $\chi^2(1, N = 767) = 12.84$ ,  $p < .001$ ,  $\phi = .13$ . Comparison district couples also had a higher average HES score as measured by a survey of household structure and contents (intervention  $z$ -score,  $M = -0.59$ ,  $SD = 3.40$ , comparison  $z$ -score,  $M = 0.52$ ,  $SD = 1.91$ ),  $t(604.2) = 5.61$ ,  $p < .001$ ,  $d = .40$ .

Infants were also similar in both districts. This was most couples' first or second child. There were more male than female infants overall (54.3% male; 45.7% female), one sample binomial test,  $p = .02$ , but proportions did not differ by district. Birth weight was modestly but significantly higher in the intervention group ( $M = 3,189$  g,  $SD = 414.18$ ) than in the comparison group ( $M = 3,099.0$  g,  $SD = 426.14$ ),  $t(766) = 2.96$ ,  $p = .003$ ,  $d = .21$ .

### *Fathering and Partner Support Intervention*

In line with ecological theories (e.g., Cabrera, Fitzgerald, Bradley, & Roggman, 2007) and interventions (e.g., Doherty et al., 2006; Fagan, 2008),

our fathering intervention was designed to promote change at individual, relationship, and community levels (Rempel, Rempel, Khuc, et al., 2017). The *relationship* level, with its emphasis on fathers working with mothers as part of a coordinated team, is central to this intervention. One or two physicians or physician's assistants from each of the 13 intervention commune health centers received a 2-day training program on using a nondirective, client-centered approach to counsel fathers. The training included information on the importance of exclusive breastfeeding and on the principles of good quality father involvement, with a recurring emphasis on the importance of using a teamwork approach. An intervention manual gave detailed examples of approaches and content for each counseling interaction.

The health workers first conducted a prenatal group session at the commune health clinic where fathers were given information on the importance of supporting exclusive breastfeeding and an introduction to father-infant interaction. Fathers were given a brochure highlighting the breastfeeding content. Health workers then reinforced the group session information during a prenatal home visit and at individual postnatal counseling home visits when the infants were approximately 1, 6, and 15 weeks old. They discussed ways of being a responsive, involved father who works together with the mother as part of a parenting team. Using culturally familiar images such as a badminton team, health workers explained the key elements of an effective, supportive parenting team—be aware, communicate, coordinate, respond when needed, and otherwise stay out of the way and trust your partner to do her part. In the first postpartum visit, fathers were given a father-infant relationship calendar with information about infant development, ideas for ways to interact with their infants throughout the first year, and reminders about the importance of supporting exclusive breastfeeding.

The commune health workers modeled teamwork behavior during the group sessions and home visits by working together with the father, helping him to refer to the calendar for ideas and identify ways that he could work with his wife to find their own relationship-specific ways of supporting exclusive breastfeeding and interacting with their infant. The research team member responsible for managing personnel regularly checked in with commune health workers to discuss how they were managing the group sessions and home visits and assess the extent to which they had been carrying out the intervention.

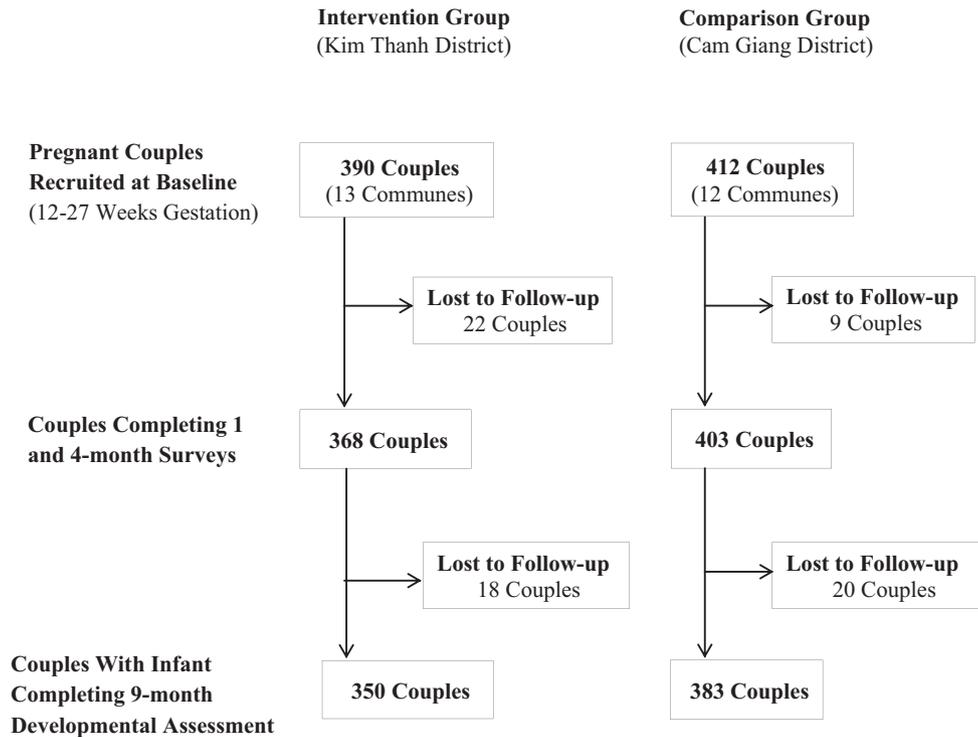


Figure 1. Participant recruitment and retention.

In order to create a supportive societal context for changes in father involvement, the intervention also targeted household members, peer group members, and broader community networks. Community knowledge and awareness were raised by broadcasting two 5- to 10-min messages—one about father involvement in breastfeeding and a second about the value of father–infant interaction—weekly over the community loudspeaker system.

#### *Additional Intervention Components*

In the first 2 days after the birth of their infant, as many fathers as possible also received a brief session in which a midwife or health worker assisted fathers to learn about and physically interact with their infants (see Rempel, Rempel, Khuc, et al., 2017 for details). Breastfeeding support was not discussed during these interactions.

Research team members also worked with community agencies in Vietnam to create a Fathers Club within each local commune where fathers could meet to share parenting joys and concerns of mutual interest. Discussions were facilitated by a peer father who was chosen from among the club participants and trained in a 1-day club leadership workshop. Clubs started meeting 4 months after

the intervention began so, although breastfeeding support was discussed, the main focus was on father–infant interactions. Club members also planned how their group would participate in a friendly Fathers Contest that was held approximately 6 months after the inception of the clubs. They developed fun and informative skits, songs, poems, art, or photo displays that demonstrated how a father can show love to his wife by supporting breastfeeding and love for his infant through positive, responsive interactions. By being open to the public, the contest had the potential to further shift community norms about father breastfeeding support and father–infant engagement (see Rempel, Rempel, Khuc, et al., 2017 for details).

#### *Measures*

##### *Partner Breastfeeding Support Behaviors*

At 1 and 4 months, father and mothers independently completed the Partner Breastfeeding Influence Scale (PBIS) by rating the frequency with which fathers engaged in 25 breastfeeding support behaviors on a 5-point scale ranging from 0 (*never*) to 4 (*very frequently*). The behaviors on this scale were originally identified in a content analysis of

interviews conducted with 21 couples (Rempel & Rempel, 2011) and the resulting questionnaire was validated in two additional samples (Rempel, Rempel, & Moore, 2017). The scale was translated for meaning by team members who were bilingual in English and Vietnamese and piloted by several new fathers. Based on feedback from those fathers and discussions about the cultural relevance of the items, the research team made minor changes to six items and deleted nine items to shorten the scale and make room for five items that were not part of the original PBIS but had been used in previous research in Vietnam. The latter items are not included in the analyses presented in this article.

On the basis of Rempel, Rempel, and Moore (2017), we expected certain support behaviors to cluster together in theoretically meaningful subscales. In order to assess how the removal of some items and scale administration in the Vietnamese context might have altered this subscale structure, responses were factor analyzed using principle axis factoring with promax rotation for men and women separately by district at each time point. Comparisons across the various factor analyses showed some sample-to-sample variation, but overall there was a consistent tendency for conceptually related items to cluster together. We removed items from their conceptually intended subscale if the bulk of the factor analytic results showed no support for item retention. This process resulted in four subscales: (a) *Savvy*—seeking out and conveying knowledge about the value and means to achieve successful breastfeeding; (b) *Helping*—active physical caretaking behavior for mother and child that facilitates exclusive breastfeeding; (c) *Presence*—being together and working directly with the mother in ways that support her to successfully breastfeed; (d) *Responsiveness*—being sensitive and understanding of what the mother wants and needs in order to successfully breastfeed. Subscale alphas ranged from .71 to .84 for women and .73 to .83 for men.

#### *Exclusive Breastfeeding Duration*

At 1, 4, and 6 months, exclusive breastfeeding status was assessed by a single question that asked mothers to report, "From the time your baby was born was your baby fed anything other than breastmilk?" A second question, "If your baby was given something other than breastmilk, when was the first time that your baby was given something other than breastmilk?" identified the point at which the infant was no longer being exclusively breastfed. At 1 and 4 months, data collectors asked

these questions directly in face-to-face interviews and at 6 months a research team member asked these questions in a telephone interview. When comparing responses at each time point, we noted some anomalies in the reported duration of breastfeeding exclusivity. Perhaps due to memory inaccuracies or self-presentation biases, numerous women reported contradictory points at which they stopped exclusive breastfeeding. Consequently, we felt more confident using a 4-point ordinal index in which women who had clearly stopped exclusive breastfeeding by the first month assessment point were assigned a "0," women who stopped between the 1- and 4-month assessment points received a "1," women who stopped between 4- and 6-month assessment points received a "2," and women who were still exclusively breastfeeding at 6 months were assigned a "3."

#### *Parental Relationship Quality*

Coparenting closeness was defined as relationship quality and was measured at baseline and at 4 months postpartum using an internationally validated 16-item self-report measure developed by Gere and MacDonald (2013) that assessed relationship *intimacy, satisfaction, trust, and commitment* on an 11-point scale ranging from 0 (*not at all*) to 10 (*completely*). The subscales were very highly correlated, so results are reported for the full scale (baseline alpha = .94 for mothers and .95 for fathers).

#### *Infant Developmental Status*

Developmental status was measured at 9 months of age with the Developmental Milestones Checklist-II (DMC-II; Prado et al., 2014). The DMC-II measures development in three areas: The *Motor* subscale measures locomotor and fine motor skills; the *Language* subscale measures understanding and using words; and the *Personal-Social* subscale measures reactions to others, play, dressing, and eating and drinking. Each item on the DMC-II is scored as 0 = *child has not yet started doing the activity*, 1 = *child has been able to do the activity in the past 4 weeks but not continually*, and 2 = *child has been able to do the activity continually for the past 4 weeks*. Extensively trained data collectors were required to ask specific questions as dictated on each item and, when possible, record child responses as observed. The overall score is a sum of the scores on all items within the subscale.

Initial testing and revision of the DMC and DMC-II were conducted in Africa. Inter-rater and

test-retest reliability were quite strong, and the DMC-II scores were demonstrated to be sensitive to age, malnutrition, and environmental variables (Prado et al., 2014). The DMC-II was translated into Vietnamese by three translators who independently translated the measure and then met together to compare, review, and develop an agreed-upon final version. A few items (e.g., the type of utensil used for eating) were adapted for appropriateness to Vietnamese infants (with input from Prado). For more details on the validity of this measure see Rempel, Rempel, Khuc, et al. (2017).

### *Data Analysis*

Given the high participant retention rates, there was comparatively little missing data, so, for a given analysis, cases with missing data were simply excluded. Analyses controlled for fathers' and mothers' education, HES, number of children in the family, the target infant's birth weight, delivery type (vaginal or cesarean), and sex of the infant. Differences between intervention and comparison group (Hypotheses 1, 2, 5, 8) were analyzed with analyses of variance (ANOVAs). Multilevel modeling analyses indicated that including commune as a clustering variable did not significantly affect the results, so we present the simpler analysis of variance results. The effects of each type of breastfeeding support on exclusive breastfeeding duration, parental relationship quality, and infant developmental outcomes were analyzed using multiple regression with intervention and comparison groups combined (Hypotheses 3, 6, 10). Because the outcome variable of exclusive breastfeeding duration was coded as a four-level ordinal variable we also ran the analyses using ordinal regression. The pattern of results was functionally identical, so we present the more familiar regression analyses. Analyses testing whether breastfeeding support behaviors mediated the intervention effect on exclusive breastfeeding duration, parental relationship quality, and infant developmental outcomes (Hypotheses 4, 7, 9, 11) were conducted using Hayes' PROCESS bootstrapping procedure with 5,000 samples (Hayes, 2018).

## **Results**

### *Intervention Reach*

The intervention components most directly related to exclusive breastfeeding were the prenatal group session, the four home visits, and the breastfeeding loudspeaker broadcasts. Of the 370 fathers

who completed follow-up measures, 93% received the group session, 92% received all four home visits, 85% heard the radio broadcast, and 64% received all six components. Fathers also rated the extent to which the health worker gave them useful breastfeeding support information in the group session and home visits on a 5-point scale. Between 95% and 99% were satisfied or very satisfied with the information received. There were no significant correlations between the overall intervention dose or receipt of individual components and father breastfeeding support, relationship quality, or exclusive breastfeeding. However, father's reports of overall breastfeeding support correlated significantly with their satisfaction with the prenatal group session and the 1, 6, and 15-week home visits ( $r_s = .34, .37, .27$ , and  $.29$ , respectively, all  $p_s < .01$ ), and with the number of loudspeaker broadcasts heard  $r = .25$ ,  $p < .01$ . Dose information for intervention components focused on father-infant interaction is presented in Rempel, Rempel, Khuc, et al. (2017).

### *Partner Breastfeeding Support Behaviors*

Our first four hypotheses centered on the effect of our teamwork intervention on exclusive breastfeeding. In Hypothesis 1 we predicted that fathers in the intervention group would provide higher levels of breastfeeding support to mothers than would fathers in the comparison group and that our intervention would especially encourage fathers to provide more sensitive, responsive support to the mother. As shown in Table 1, at both 1- and 4-month measurement points, fathers in the intervention group rated themselves significantly higher than fathers in the comparison group on all four subscales, and mothers in the intervention group rated fathers significantly higher on Helping and Responsiveness than did mothers in the comparison group.

The higher levels of Responsiveness and Helping reported by mothers in the intervention group provide at least partially independent validation for the elevated levels of support claimed by fathers, but a stronger test of our support intervention rests with demonstrating an impact on the intended outcome—exclusive breastfeeding duration (Hypothesis 2). Consistent with the cultural norms in Vietnam for mothers to discard colostrum and feed newborn infants other liquids right after birth (Bich et al., 2016), the overall rates of exclusive breastfeeding were quite low. Nonetheless, as predicted in Hypothesis 2, whereas fewer than 6% of the

Table 1

Descriptive Statistics and Analysis of Variance (ANOVA) Results for Partner Breastfeeding Influence (BFI) Subscales by Group

BFI subscale	Group						F	Partial $\eta^2$
	Intervention			Comparison				
	M	SD	n	M	SD	n		
1 Month								
Fathers								
Savvy	2.80	.57	350	2.61	.62	382	23.39***	.03
Helping	3.13	.50	350	2.89	.51	382	49.31***	.06
Presence	2.45	.88	350	2.23	.84	382	14.01***	.02
Responsiveness	2.92	.54	350	2.63	.55	382	61.16***	.08
Mothers								
Savvy	2.78	.65	355	2.75	.65	393	0.66	
Helping	3.09	.55	355	2.94	.59	393	14.96***	.02
Presence	2.16	.94	355	2.24	.81	393	0.97	
Responsiveness	2.90	.54	355	2.80	.57	393	7.03**	.01
4 Month								
Fathers								
Savvy	2.82	.53	348	2.61	.61	375	27.40***	.04
Helping	2.98	.51	348	2.90	.57	375	4.74*	.01
Presence	2.51	.72	348	2.27	.81	375	15.54***	.02
Responsiveness	2.92	.44	348	2.76	.53	375	20.04***	.03
Mothers								
Savvy	2.68	.66	351	2.64	.65	388	1.79	
Helping	2.84	.61	351	2.74	.70	388	4.32*	.01
Presence	2.18	.88	351	2.26	.85	388	1.53	
Responsiveness	2.87	.54	351	2.76	.61	388	6.82**	.01

Note. ANOVA controlling for household economic status, father's education, mother's education, number of children, birth-weight, sex of infant.

\* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

mothers in the comparison group had exclusively breastfed for 1 month, 35% of the mothers in the intervention group breastfed exclusively for 1 month or longer,  $\chi^2(1, N = 771) = 104.5, p < .001, \phi = .37$ .

In Hypothesis 3 we predicted that higher levels of partner breastfeeding support, especially support that is sensitive and responsive to the mother's wants and needs, would be associated with longer exclusive breastfeeding duration. In order to examine the impact of father's support behaviors on exclusive breastfeeding duration, we averaged the 1- and 4-month ratings of the father's claimed and the mother's experienced Savvy, Helping, Presence, and Responsiveness, and used these to predict exclusive breastfeeding duration in multiple-regression analyses.

An analysis of each support subscale individually showed that all forms of the father's claimed support behavior were associated with longer exclusive breastfeeding (Savvy,  $B = 0.168, t = 3.01,$

$p = .003, 95\% \text{ CI } [0.06, 0.28]$ ; Helping,  $B = 0.140, t = 2.36, p = .022, 95\% \text{ CI } [0.02, 0.26]$ ; Presence,  $B = 0.084, t = 2.06, p = .040, 95\% \text{ CI } [0.00, 0.17]$ ; Responsiveness,  $B = 0.159, t = 2.54, p = .011, 95\% \text{ CI } [0.04, 0.28]$ ). When all four types of father reported breastfeeding support were entered into a regression analysis simultaneously, none were uniquely predictive of longer exclusive breastfeeding. Mother's reports of experienced father support were also all associated with longer exclusive breastfeeding (Savvy,  $B = 0.166, t = 3.42, p = .001, 95\% \text{ CI } [0.07, 0.26]$ ; Helping,  $B = 0.174, t = 3.44, p = .001, 95\% \text{ CI } [0.08, 0.27]$ ; Presence,  $B = 0.118, t = 3.19, p = .013, 95\% \text{ CI } [0.05, 0.19]$ ; Responsiveness,  $B = 0.251, t = 4.44, p < .001, 95\% \text{ CI } [0.14, 0.36]$ ). However, when all subscales were entered simultaneously into a regression analysis, the mother's experience of greater Responsiveness uniquely predicted longer exclusive breastfeeding duration ( $B = 0.217, t = 2.27, p = .023, 95\% \text{ CI } [0.030, 0.40]$ ).

Hypothesis 4 predicted that fathers' support behaviors would mediate the intervention effects on the duration of exclusive breastfeeding. As seen in Figure 2, no significant mediation effects emerged for the father's reports of breastfeeding support behaviors, but the mother's reports of the father's Helping, ( $ab = .01$ , 95% CI [0.01, 0.03]) and Responsiveness ( $ab = .02$ , 95% CI [0.01, 0.04]) significantly mediated the intervention effects on exclusive breastfeeding duration. When all four subscales were analyzed simultaneously, no one type of support emerged as a unique mediator.

*Parental Relationship Quality*

Three hypotheses related to the impact of the fathers' breastfeeding support on the fathers' and mothers' relationship quality. In Hypothesis 5 we predicted that our intervention would result in

comparatively higher levels of relationship quality during the transition to parenthood for intervention couples compared to couples in the comparison group. As is often the case, overall mean ratings of relationship quality were extremely high, averaging between 8.9 and 9.4 on a 10-point scale. Even so, repeated measures ANOVAs comparing changes in relationship quality from baseline to 4-months postpartum for fathers and mothers in the intervention and comparison groups showed significant interactions for both fathers,  $F(1, 711) = 19.64, p < .001, \eta_p^2 = .027$ , and mothers,  $F(1, 730) = 4.22, p = .040, \eta_p^2 = .006$  (see Figure 3).

Previous studies have frequently found declines in relationship quality following the birth of a child, especially among women (e.g., Doss, Rhoades, Stanley, & Markman, 2009). Consistent with these findings, mothers and fathers in the comparison group showed significant declines in relationship

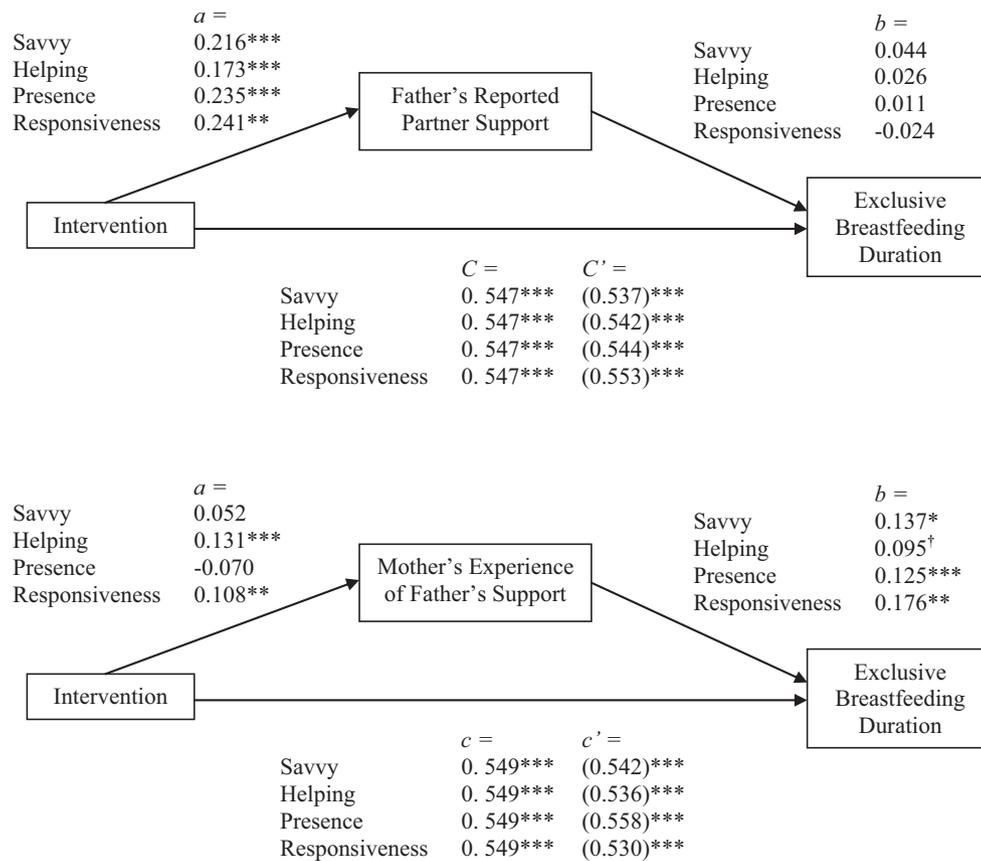
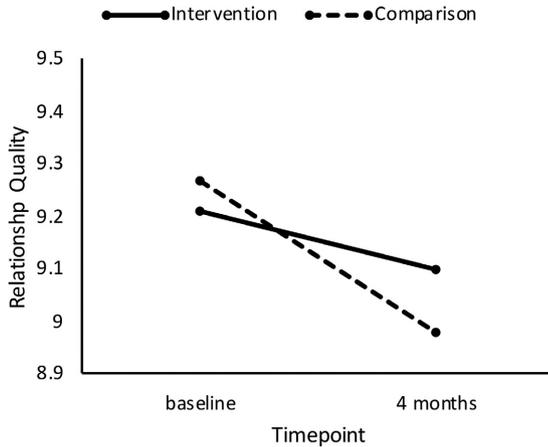


Figure 2. Mediation analysis of the intervention effect on exclusive breastfeeding duration. Standardized regression coefficients for the relationship between intervention condition and changes in the father's and the mother's relationship quality as mediated by the father's reported and the mother's experienced report of each type of the father's breastfeeding support individually. The standardized coefficient between intervention condition and changes in exclusive breastfeeding duration, controlling for claimed/experienced breastfeeding support is in parentheses.

<sup>†</sup> $p < .10$ . \*\* $p < .05$ . \*\*\* $p < .01$ . \*\*\*\* $p < .001$ .

## Change in Mother's Relationship Quality



## Change in Father's Relationship Quality

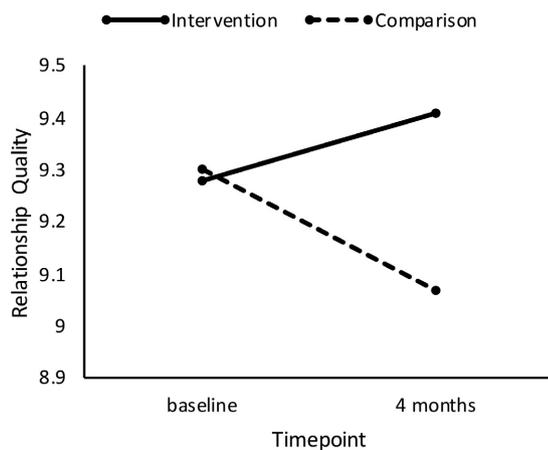


Figure 3. Change in mother's and father's relationship quality.

quality compared to their prenatal ratings (mothers' baseline  $M = 9.27$ ,  $SD = 0.84$ , 4-month  $M = 8.98$ ,  $SD = 1.02$ ; fathers' baseline  $M = 9.30$ ,  $SD = 0.86$ , 4-month  $M = 9.07$ ,  $SD = 0.85$ ). However, women in the intervention group showed significantly smaller declines (baseline  $M = 9.21$ ,  $SD = 0.85$ , 4-month  $M = 9.10$ ,  $SD = 1.14$ ), and fathers in the intervention group showed improved relationship quality at 4 months (baseline  $M = 9.28$ ,  $SD = 0.93$ , 4-month  $M = 9.41$ ,  $SD = 0.84$ ). Thus, despite already high levels of reported relationship quality in our samples, our intervention ameliorated or even reversed the postpartum decline in relationship quality seen in the comparison group.

On the basis of the expectation that the effects of our teamwork intervention would generalize

beyond the breastfeeding domain, we hypothesized that father breastfeeding support behaviors, especially Responsiveness, would predict changes in relationship quality (Hypothesis 6). Regression analyses were used to test if the averaged 1- and 4-month father support behaviors predicted changes in the father's and mother's relationship quality. For each analysis, baseline relationship quality and the control variables were entered in the first step followed by each individual breastfeeding support subscale in step 2. All types of support reported by fathers were associated with increases in their own relationship quality (Savvy,  $B = 0.313$ ,  $t = 5.02$ ,  $p < .001$ , 95% CI [0.19, 0.44]; Helping,  $B = 0.352$ ,  $t = 5.16$ ,  $p < .001$ , 95% CI [0.22, 0.49]; Presence,  $B = 0.146$ ,  $t = 3.20$ ,  $p = .001$ , 95% CI [0.06, 0.25]; Responsiveness,  $B = 0.380$ ,  $t = 5.49$ ,  $p < .001$ , 95% CI [0.24, 0.52]). When we repeated the analysis entering all four measures simultaneously in the second step, father's reported Responsiveness uniquely predicted changes in his relationship quality over and above the other forms of support ( $B = 0.215$ ,  $t = 2.06$ ,  $p = .04$ , 95% CI [0.01, 0.42]).

The results for changes in mothers' relationship quality paralleled those for fathers. Improvements in the mother's own relationship quality were significantly related to her experience of all types of father support (Savvy,  $B = 0.507$ ,  $t = 7.73$ ,  $p < .001$ , 95% CI [0.38, 0.64]; Helping,  $B = 0.585$ ,  $t = 8.60$ ,  $p < .001$ , 95% CI [0.45, 0.72]; Presence,  $B = 0.347$ ,  $t = 7.00$ ,  $p < .001$ , 95% CI [0.25, 0.44]; Responsiveness,  $B = 0.669$ ,  $t = 8.79$ ,  $p < .001$ , 95% CI [0.52, 0.82]). When all support types were entered simultaneously in a regression, the mother's perceptions of the father's Helping ( $B = 0.260$ ,  $t = 2.48$ ,  $p = .014$ , 95% CI [0.05, 0.47]) and Responsiveness ( $B = 0.315$ ,  $t = 2.55$ ,  $p = .011$ , 95% CI [0.07, 0.56]) each uniquely predicted changes in her relationship quality.

We also expected the father's claimed and mother's experienced breastfeeding support behaviors to mediate the intervention effect on changes in each partner's own relationship quality (Hypothesis 7). Figure 4 presents the mediation results for each support subscale. All forms of father-reported support significantly mediated the intervention effect on changes in his relationship quality (Savvy,  $ab = .05$ , 95% CI [0.02, 0.09]; Helping,  $ab = .05$ , 95% CI [0.02, 0.09]; Presence,  $ab = .03$ , 95% CI [0.00, 0.06]; Responsiveness,  $ab = .07$ , 95% CI [0.03, 0.11]). However, no one form of support was uniquely predictive when all four subscales were tested simultaneously. The mother's reports of the father's Helping ( $ab = .08$ , 95% CI [0.04, 0.14]) and Responsiveness ( $ab = .08$ , 95% CI [0.03, 0.14]) were the only significant

individual mediators, and both remained uniquely predictive when all forms of support were tested simultaneously (Helping,  $ab = .04$ , 95% CI [0.00, 0.08]; Responsiveness,  $ab = .04$ , 95% CI [0.01, 0.08]).

*Child Development*

A central goal of encouraging the father to work together with the mother in a parenting team was to foster indirect improvements in infant development. As predicted in Hypothesis 8, at the 9-month developmental assessment, children in the intervention group had higher scores on Motor, Language, and Personal-Social development, with the largest effect occurring for language development (Rempel, Rempel, Khuc, et al., 2017).

*Father Breastfeeding Support Behaviors*

To test the effects of father support on child development we used the averaged the 1- and

4-month ratings of father breastfeeding support in regression analyses to predict the infant's 9-month Motor, Language, and Personal-Social development with the infant's age at the time of testing added as an additional control variable (Table 2). When each support subscale was tested separately, increases in the father's reported Helping significantly predicted improvements in Motor development scores (marginal for Responsiveness). Likewise, the mother's higher ratings of the father's Helping, and Responsiveness (and Savvy marginally) significantly predicted improved Motor development. When all four types of support behaviors were entered simultaneously in a regression analysis, the father's report of greater Helping ( $B = 1.91$ ,  $t = 3.47$ ,  $p = .001$ , 95% CI [0.83, 2.99]) uniquely predicted increased infant Motor scores. However, higher unique Presence ratings were associated with lower Motor scores significantly for fathers ( $B = -0.779$ ,  $t = -2.30$ ,  $p = .022$ , 95% CI [-1.44, -0.11]) and

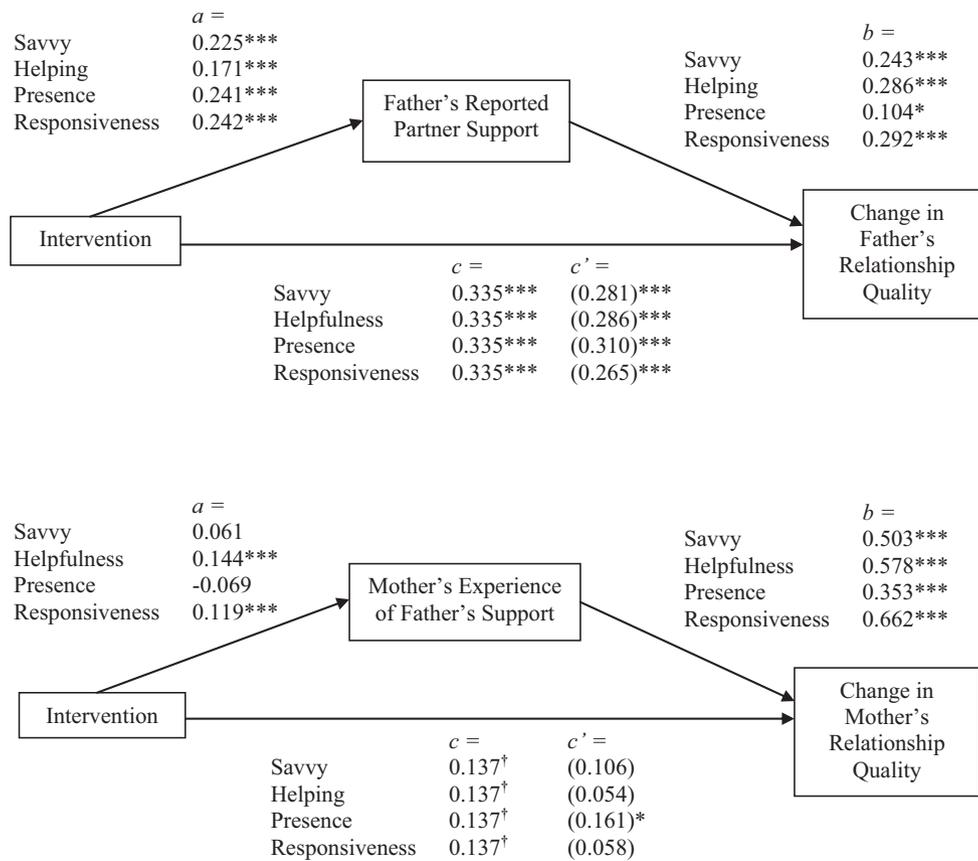


Figure 4. Mediation analysis of father's and mother's changes in relationship quality. Standardized regression coefficients for the relation between intervention condition and changes in the father's and the mother's relationship quality as mediated by the father's and the mother's reported type of breastfeeding support. The standardized coefficient between intervention condition and changes in relationship quality, controlling for claimed/experienced breastfeeding support is in parentheses.

† $p < .10$ . \* $p < .05$ . \*\*\* $p < .001$ .

marginally for mothers ( $B = -0.634$ ,  $t = -1.82$ ,  $p = .069$ , 95% CI [-1.32, -0.05]).

Both father and mother reports of all four types of support significantly predicted increases in their child's Language scores. When all four types of support behaviors were entered simultaneously in a regression analysis, higher infant Language scores were uniquely predicted by mother's reports of greater father Responsiveness ( $B = 1.029$ ,  $t = 2.44$ ,  $p = .015$ , 95% CI [0.20, 1.86]) and marginally by

Table 2  
Results of Individual Multiple Regressions of Fathers' ( $n = 727$ ) and Mothers' ( $n = 734$ ) Breastfeeding Support Subscales Predicting Infant Development at 9-Months Postpartum

Predictor	<i>B</i>	<i>SE</i>	<i>t</i>	95% CI [lower, upper]
<b>Motor</b>				
<b>Fathers</b>				
Savvy	0.433	.356	1.22	[-0.27, 1.13]
Helping	1.281	.376	3.41***	[0.54, 2.02]
Presence	[-0.033	.257	[-0.52	[-0.64, 0.37]
Responsiveness	0.668	.392	1.71 <sup>†</sup>	[-0.01, 1.44]
<b>Mothers</b>				
Savvy	0.596	.308	1.93 <sup>†</sup>	[-0.01, 1.20]
Helping	0.894	.323	2.77**	[0.26, 1.53]
Presence	0.148	.236	0.23	[-0.32, 0.61]
Responsiveness	0.98	.361	2.70**	[0.27, 1.68]
<b>Language</b>				
<b>Fathers</b>				
Savvy	0.744	.248	3.01**	[0.26, 1.23]
Helping	0.839	.263	3.19***	[0.32, 1.36]
Presence	0.617	.178	3.46***	[0.27, 0.97]
Responsiveness	1.066	.271	3.93***	[0.53, 1.60]
<b>Mothers</b>				
Savvy	0.625	.216	2.89**	[0.20, 1.05]
Helping	0.879	.226	3.89***	[0.44, 1.32]
Presence	0.320	.166	1.93 <sup>†</sup>	[-0.01, 0.65]
Responsiveness	1.10	.252	4.37***	[0.61, 1.59]
<b>Personal-social</b>				
<b>Fathers</b>				
Savvy	0.216	.287	0.75	[-0.35, 0.78]
Helping	0.817	.304	2.69**	[0.22, 1.41]
Presence	0.001	.207	0.01	[-0.41, 0.41]
Responsiveness	0.646	.315	2.05*	[0.03, 1.26]
<b>Mothers</b>				
Savvy	0.632	.249	2.54*	[0.14, 1.12]
Helping	0.591	.262	2.26*	[0.08, 1.11]
Presence	0.437	.190	2.29*	[0.06, 0.81]
Responsiveness	1.158	.291	3.99***	[0.59, 1.73]

Note. Analyses controlled for age of the child at the time the test was administered, household economic status, mother's and father's education level, number of siblings, birth weight, sex of infant.

<sup>†</sup> $p < .10$ . \* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

father's reports of greater Responsiveness ( $B = 0.757$ ,  $t = 1.83$ ,  $p = .068$ , 95% CI [-0.06, 1.57]).

Higher father-reported ratings of Helping and Responsiveness significantly predicted increases in their infant's Personal-Social scores, as did higher ratings of all four types of father support behaviors reported by mothers. When all four types of support behaviors were entered simultaneously in a regression analysis, increases in the father's reported Helping ( $B = 1.054$ ,  $t = 2.36$ ,  $p = .019$ , 95% CI [0.18, 1.93]) and the mother's reported father Responsiveness ( $B = 1.507$ ,  $t = 3.10$ ,  $p = .002$ , 95% CI [0.55, 2.81]) uniquely predicted higher infant Personal-Social scores.

We conducted a mediation analysis to test the extent to which the averaged 1- and 4-month measures of the father's claimed and mother's experienced breastfeeding support behaviors mediated the relation between intervention condition and total infant developmental outcome scores (Hypothesis 9). The results for fathers (Figure 5) indicate a significant indirect effect of the intervention on the infant's total 9-month developmental score through the father's reported average Helping score,  $ab = .31$ , CI [0.06, 0.64]. When all four types of support were analyzed simultaneously, the father's reported Helping continued to uniquely predict child developmental outcomes,  $ab = .59$ , CI [0.20, 1.09]. For mothers (Figure 5), the results indicate that the intervention effect on child outcomes was mediated by experiences of the father's Helping,  $ab = .22$ , CI [0.04, 0.47] and Responsiveness,  $ab = .28$ , CI [0.08, 0.54]. When all forms of support were analyzed simultaneously, the mother's report of the father's Responsiveness emerged as the only unique predictor of child developmental outcomes,  $ab = .27$ , CI [0.01, 0.63].

### Relationship Quality

For Hypothesis 10, we expected improvements in relationship quality to predict subsequent improvements in 9-month infant development scores. Changes in the father's relationship quality during the transition to parenthood predicted improvement in all types of infant development (Motor,  $B = 0.531$ ,  $t = 2.44$ ,  $p = .015$ , 95% CI [0.10, 0.96]; Language,  $B = 0.497$ ,  $t = 3.29$ ,  $p = .001$ , 95% CI [0.20, 0.79]; Personal-Social,  $B = 0.382$ ,  $t = 2.19$ ,  $p = .029$ , 95% CI [0.04, 0.73]). Changes in the mother's relationship quality predicted higher infant Language scores ( $B = 0.315$ ,  $t = 2.59$ ,  $p = .01$ , 95% CI [0.08, 0.56]) but not higher Motor ( $B = 0.281$ ,  $t = 1.62$ ,  $p = .11$ , 95% CI [-0.06, 0.62]) or

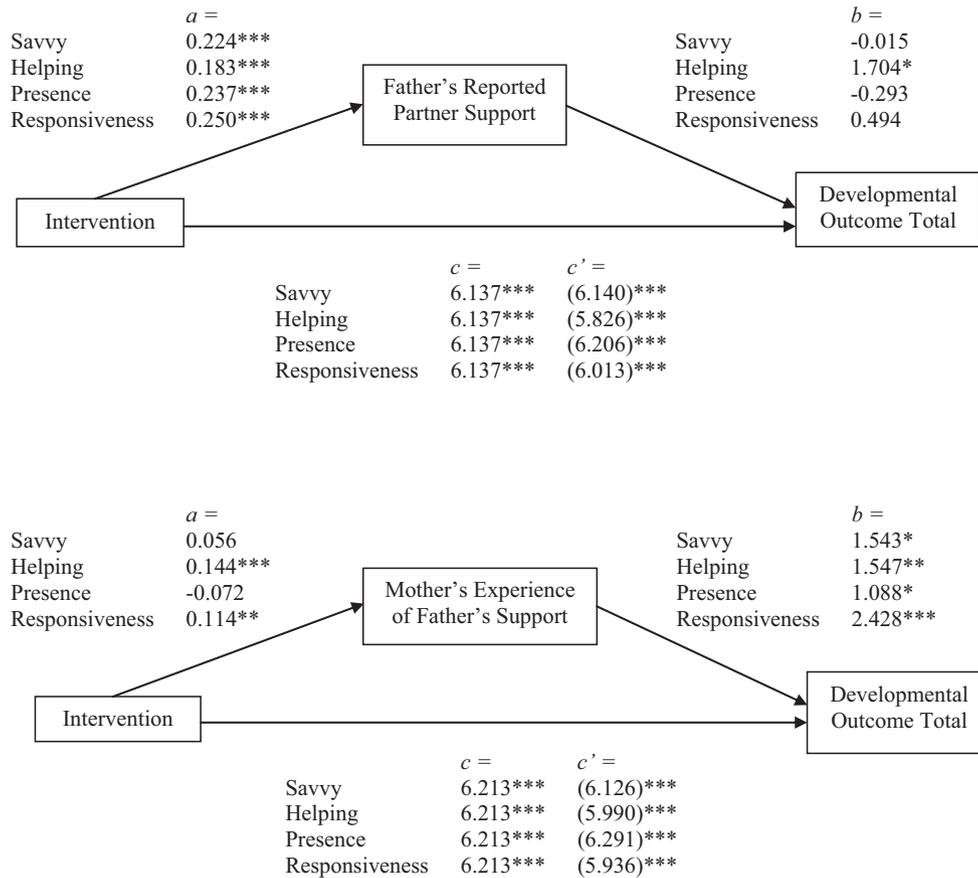


Figure 5. Mediation analysis of the intervention effect on child developmental outcomes. Standardized regression coefficients for the relation between intervention condition and infant developmental outcomes at 9 months as mediated by father's and mother's reported type of father breastfeeding support. The standardized coefficient between intervention condition and developmental outcomes, controlling for claimed/experienced breastfeeding support is in parentheses. \* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

Personal-Social ( $B = 0.118$ ,  $t = 0.84$ ,  $p = .40$ , 95% CI  $[-0.16, 0.39]$ ) scores. In examining if changes in relationship quality mediated the intervention effect on total infant development scores (Hypothesis 11), we found no significant effects for fathers or mothers.

### Discussion

This project demonstrates that a multifaceted, community-based intervention that teaches and encourages fathers to be more involved with mothers and infants as part of a parenting team can have a significant impact on couples' relationships and on the lives of their infants. Our intervention was based on theoretical constructs drawn from relationship science (Reis, Clark, & Holmes, 2004). Concepts of sensitive responsiveness, autonomy, and interactive coordination were taught to fathers using an

accessible and intuitive teamwork image that highlights processes found in theories of coparenting and social support. The image of a two-person team conveys a fluid, dynamic process of ongoing interactions involving sensitive awareness, communication, responsiveness, autonomy, and trust. We believe that these relational processes are universal but may manifest themselves in diverse ways across couples and cultures. Thus, fathers were taught and encouraged to enact these concepts within the context of their own unique relationship.

This project featured a number of noteworthy strengths. First, we were able to engage a large locally representative sample of participants and obtain longitudinal data from both partners at four measurement points. Second, rates of participant involvement and retention were extremely high, with the vast majority of couples participating in all intervention components. Third, we influenced meaningful outcomes relevant to couple and

parent–child relationships—partner support, relationship quality, exclusive breastfeeding duration, and infant development. Finally, with a longitudinal study from prebirth through 9 months postpartum, we could track changes across the transition to parenthood that allow us to draw tentative causal inferences.

Our intervention effectively changed the amount of support that fathers provided to mothers, especially in terms of helping with physical caretaking for the mother and child and in terms of sensitivity and responsiveness to the amount and kind of support that mothers needed. Furthermore, as predicted by theories of perceived responsiveness (Reis et al., 2004), the mother's perceptions of father's helpfulness, sensitivity, and responsiveness were associated with longer exclusive breastfeeding duration, as intended, but also ameliorated or even reversed the typical reductions in relationship quality associated with the transition to parenthood seen in the comparison group. Moreover, responsive and helpful forms of father support significantly predicted improved infant development at 9 months. Previous research has shown that parenting programs with prenatal and new parents can enhance child development (e.g., Piquart & Teubert, 2010). We show that these effects can be detected as early as 9-months of age. As Lamb (2010) suggested, it is likely that mothers who were effectively supported enhanced their ability to effectively parent their infant. Although other forms of involvement that mothers experience as positive may have an impact as well, encouraging fathers to work together with mothers as a coordinated team clearly had direct benefits for the couple and indirect benefits for their child.

#### *Partner Support in Vietnam and North America: Similarities and Differences*

This study builds on breastfeeding team theory and research using the PBIS in North American samples (Rempel, Rempel, & Moore, 2017) and allows us to compare the effects of breastfeeding support behaviors in two different cultural contexts. Rempel, Rempel, and Moore identified five forms of breastfeeding support—Savvy, Helping, Appreciation, Presence, and Responsiveness—using a somewhat longer version of the PBIS. Four of these—Savvy, Helping, Presence, and Responsiveness—emerged in our current study, despite using a translated measure in a different cultural context. Furthermore, although several Appreciation and Presence items identified in the North American

samples were removed from the Vietnamese measure, a Presence subscale emerged combining some of the retained Appreciation and Presence items. The strong similarity in subscale content suggests that the identified forms of support may be common across cultures.

Rempel, Rempel, and Moore (2017) found that all forms of breastfeeding support were potentially helpful depending on the mother's needs, but Responsiveness uniquely predicted positive breastfeeding outcomes. There were no negative effects associated with Helping, but, depending on the context, fathers' provision of emotional, practical, or informational assistance (i.e., Appreciation, Presence, and Savvy), was sometimes associated with *decreases* in intended or actual breastfeeding duration. Rempel, Rempel, and Moore suggest that, rather than feeling supported, mothers may have sometimes experienced these behaviors as pressuring or intrusive. Broadly speaking, our current Vietnamese results are consistent with results found in North America, although none of the father's reported supportive behaviors negatively affected exclusive breastfeeding duration.

#### *Responsiveness*

Although all forms of the mother's experienced support were associated with longer exclusive breastfeeding, the experience of greater father Responsiveness was uniquely associated with longer exclusive breastfeeding duration. Moreover, the mother's experiences of greater Responsiveness uniquely mediated the intervention effect on exclusive breastfeeding duration. For fathers, all forms of breastfeeding support were individually predictive of longer exclusive breastfeeding duration, but no one type of support was uniquely predictive. Thus, as in North America, perceiving her partner to be sensitive and responsive to her needs had a particularly pronounced impact on mother's breastfeeding behavior.

Looking beyond breastfeeding behavior, we see that the mother's experience of the father's Responsiveness uniquely predicted smaller declines in relationship quality across the transition to parenthood and uniquely mediated the intervention effects on relationship quality. In addition, the mother's reports of father Responsiveness uniquely predicted higher infant Motor, Language, and Personal-Social development scores and uniquely mediated the intervention effect on 9-month total infant development scores. Although the effects for fathers' reported Responsiveness were less pronounced,

they uniquely predicted improvements in his relationship quality and were the only form of father-reported support to uniquely predict higher infant Language scores, albeit only marginally. Thus, father's responsive behaviors, especially as experienced by mothers, predicted enhanced relationship quality and infant development.

### *Helping*

In line with North American results, father's Helping behaviors in Vietnam did not uniquely predict exclusive breastfeeding duration. However, in this Vietnamese sample, the father's reported Helping uniquely mediated improvements in overall infant development and were specifically predictive of improved Motor and Personal-Social scores. Experience of the father's Helping was also important for mothers. Along with Responsiveness, intervention mothers reported significantly more helping behaviors and mother's reports of Helping uniquely predicted improvements in, and uniquely mediated the intervention effect on, her relationship quality. Mother's Helping and Responsiveness ratings both individually predicted improved infant Motor development and significantly mediated the intervention effect on overall infant development. Thus, as coparenting theories would predict (McHale & Fivaz-Depeursinge, 2010), encouraging fathers to work with mothers as a parenting team produced a more satisfying division of labor and resulted in improved outcomes for mothers and infants.

It is important to note that all of the father's support behaviors, as reported by both mothers and fathers, were predictive of improved child developmental outcomes. Yet, whereas fathers' reports of Helping were most predictive, the uniquely predictive behaviors for mothers were reports of father's Responsiveness. It is possible that mothers and fathers may simply have focused on different types of support, but it is equally possible that there is overlap in the behaviors reported by fathers as helping and mothers as responsive. That is, fathers may be more aware of the tangible help that they provide as part of a parenting team, whereas mothers may be interpreting many of the same behaviors as sensitive and responsive acts of caring.

### *Savvy and Presence*

Savvy and Presence ratings were significantly related to exclusive breastfeeding and relationship

quality for both fathers and mothers at a bivariate level and might be important in some contexts. However, in this project they did not have a unique role over and above that played by Responsiveness and Helping in predicting exclusive breastfeeding duration, relationship quality, or child development. This too is broadly consistent with North American results where these forms of support were rarely uniquely predictive of breastfeeding outcomes and, in some cases, were actually associated with reduced breastfeeding intentions and duration. Indeed, there is some evidence in this study that increased Presence was associated with decreased Motor outcomes—perhaps father overinvolvement may have kept some children from pushing themselves physically—but overall there was little in the way of negative effects.

The overlap in the findings and conclusions from two distinct cultural contexts is striking. Whether in Vietnam or North America, mothers appreciated their partner's helpful acts but most strongly valued support that enhanced open communication and was sensitive and responsive to their needs. Thus, the elements of sensitive awareness, communication, responsiveness, respect, and trust reflected in our teamwork analogy appear to transcend cultural contexts.

### *Limitations*

#### *Quasi-Experimental Design*

Because resource limitations required employing a quasi-experimental design, we cannot fully rule out the effects of pre-existing differences between intervention and comparison groups. However, results remained significant after controlling for numerous variables, even when most of these, such as parental education and HES, actually favored improved outcomes in the comparison group. Although, pre-existing differences between the intervention and comparison groups did not appear to account for the observed results, future studies involving randomized controlled trials with a larger and more diverse range of participants would provide stronger support for the effectiveness of our multilevel fathering intervention. Trials are also needed to determine the most effective intervention components. Currently, we have tentative evidence that fathers who were more satisfied with the counseling and heard more public broadcasts provided more breastfeeding support, but we cannot determine if all components are required to produce similar outcomes.

*Social Desirability and Demand Effects*

Health workers delivering the intervention knew the hypothesized study outcomes and were personally acquainted with some participants. Similarly, the data collectors could not be blind to condition and were aware that they were gathering data related to a fathering intervention. Additionally, at various points in the intervention, fathers received rewards (e.g., mugs, t-shirts) and incentives (e.g., public awareness of their performance in the fathering contest). Thus, there are numerous reasons to look carefully for evidence of social desirability or demand effects, and some results suggest that they may have been present. Fathers in the intervention group rated themselves consistently higher than comparison fathers on reported breastfeeding support, which could suggest that, as the intervention recipients, they may have inflated their reports because they knew what was expected of them. However, intervention mothers, whose reports would have been less subject to demand effects, corroborated more frequent father behaviors in the two forms of support that predicted improved relationship quality and infant developmental outcomes. In addition, child development at 9 months was independently assessed with a tool that includes data-collector observation. The fact that fathers' ratings of Helping and mothers' ratings of Responsiveness uniquely mediated the effect of the intervention on infant development provides further evidence that differences in fathers' reported behavior between the groups were genuine.

*Effect Size*

The majority of our hypotheses were supported, but the effects themselves were often small to moderate in size. However, given that variance in children's development is strongly related to genetics and the direct influence of the mother as primary caregiver, any intervention directed at enhancing fathers' support for mothers can only influence a limited portion of the variance in a child's development. Thus, in terms of the variance available to account for, we believe that our intervention effects are noteworthy. Similarly, we explained meaningful changes in relationship quality based on fathers' support behaviors despite the fact that relationship quality ratings were extremely high and consistent across couples at both pre- and postnatal measurement points, leaving comparatively little variance to account for. It is also important to highlight that the factors affected in our study—partner support

for an important health behavior, relationship quality in the transition to parenthood, and early child development—are of considerable importance and even modest changes could have a substantial impact were the effects to be scaled up to the population level. Thus, despite modest effect sizes, we consider the results of our study to have practical value.

*Conclusion*

Like many interventions that address real-world issues, our teamwork-focused father involvement intervention integrated content that crossed numerous disciplinary boundaries—infant development, coparenting relationships, social support, health behavior, breastfeeding exclusivity, and the transition to parenthood. Yet, at its core, this project was built on the idea of promoting sensitive, responsive, mutually cooperative teamwork in the context of close partner and parent-child relationships. As such, our intervention allowed us to directly examine the vital impact that teamwork-based support can have on meaningful family relationships.

Importantly, our teamwork image highlighted the centrality of responsive mutual support that maintains partner independence and autonomy. In addition to promoting equality and autonomous decision making for women, this metaphor emphasizes principles for fostering a coordinated, interdependent process of mutual collaboration and is transferable to other contexts using any two-person team example that is culturally relevant. Furthermore, as our relationship quality results suggest, effectively involving fathers in this way may assist in reducing family dysfunction. Thus, including fathers and inspiring them to be more sensitive, responsive partners and parents promises to be a valuable addition to any interventions designed to enhance relationship support, parental effectiveness, and child development.

**References**

- Abbass-Dick, J., Stern, S. B., Nelson, L. E., Watson, W., & Dennis, C. (2015). Coparenting breastfeeding support and exclusive breastfeeding: A randomized controlled trial. *Pediatrics*, *135*, 102–110. <https://doi.org/10.1542/peds.2014-1416>
- Allen, S., Daly, K., & Ball, J. (2012). Fathers make a difference in their children's lives: A review of the research evidence. In J. Ball & K. Daly (Eds.), *Father involvement in Canada: Diversity, renewal, and transformation* (pp. 50–88). Vancouver, BC: UBC Press.

- Bich, T. H. (2006). *Father's involvement and child development outcomes in a rural area of Vietnam*. Doctoral dissertation. Retrieved from ProQuest Dissertations and Theses. (3210910)
- Bich, T. H., Hoa, D. T. P., Ha, N. T., Vui, L. T., Nghia, D. T., & Mälqvist, M. (2016). Father's involvement and its effect on early breastfeeding practices in Viet Nam. *Maternal and Child Nutrition, 12*, 768–777. <https://doi.org/10.1111/mcn.12207>
- Bich, T. H., Hoa, D. T. P., & Mälqvist, M. (2014). Fathers as supporters for improved exclusive breastfeeding in Viet Nam. *Maternal and Child Health Journal, 18*, 1444–1453. <https://doi.org/10.1007/s10995-013-1384-9>
- Cabrera, N., Fitzgerald, H. E., Bradley, R. H., & Roggman, L. (2007). Modeling the dynamics of paternal influence on children over the life course. *Applied Developmental Science, 11*, 185–189. <https://doi.org/10.1080/10888690701762027>
- Collins, N. L., Ford, M. B., Guichard, A. C., Kane, H. S., & Feeney, B. C. (2010). Responding to need in intimate relationships: Social support and caregiving processes in couples. In M. Mikulincer & P. R. Shaver (Eds.), *Prosocial motives, emotions, and behavior: The better angels of our nature* (pp. 367–389). Washington, DC: American Psychological Association. <https://doi.org/10.1037/12061-000>
- Cookston, J. T., Braver, S. L., Griffin, W. A., De Luse, S. R., & Miles, J. C. (2007). Effects of the Dads for Life intervention on interparental conflict and coparenting in the two years after divorce. *Family Process, 46*, 123–137. <https://doi.org/10.1111/j.1545-5300.2006.00196.x>
- Cowan, P. A., Cowan, C. P., Pruett, M. K., Pruett, K., & Gillette, P. (2014). Evaluating a couples group to enhance father involvement in low-income families using a benchmark comparison. *Family Relations, 63*, 356–370. <https://doi.org/10.1111/fare.12072>
- Cowan, P. A., Cowan, C. P., Pruett, M. K., Pruett, K., & Wong, J. J. (2009). Promoting fathers' engagement with children: Preventative interventions for low-income families. *Journal of Marriage and the Family, 71*, 663–679. <https://doi.org/10.1111/j.1741-3737.2009.00625.x>
- Doherty, W. J., Erickson, M. F., & LaRossa, R. (2006). An intervention to increase father involvement and skills with infants during the transition to parenthood. *Journal of Family Psychology, 20*, 438–447. <https://doi.org/10.1037/0893-3200.20.3.438>
- Doss, B. D., Cicila, L. N., Hsueh, A. C., Morrison, K. R., & Carhart, K. (2014). A randomized controlled trial of brief coparenting and relationship interventions during the transition to parenthood. *Journal of Family Psychology, 28*, 483–494. <https://doi.org/10.1037/a0037311>
- Doss, B. D., Rhoades, G. K., Stanley, S. M., & Markman, H. J. (2009). The effect of the transition to parenthood on relationship quality: An 8-year prospective study. *Journal of Personality and Social Psychology, 96*, 601–619. <https://doi.org/10.1037/a0013969>
- Fagan, J. (2008). Randomized study of a prebirth coparenting intervention with adolescent and young fathers. *Family Relations, 57*, 309–323. <https://doi.org/10.1111/j.1741-3729.2008.00502.x>
- Feinberg, M. E. (2003). The internal structure and ecological context of coparenting: A framework for research and intervention. *Parenting, 3*, 95–131. [https://doi.org/10.1207/S15327922PAR0302\\_01](https://doi.org/10.1207/S15327922PAR0302_01)
- Feinberg, M. E., Brown, L. D., & Kan, M. L. (2012). A multi-domain self-report measure of coparenting. *Parenting: Science and Practice, 12*, 1–21. <https://doi.org/10.1080/15295192.2012.638870>
- Feinberg, M. E., & Kan, M. L. (2008). Establishing family foundations: Intervention effects on coparenting, parent/infant well-being, and parent-child relations. *Journal of Family Psychology, 22*, 253–263. <https://doi.org/10.1037/0893-3200.22.2.253>
- Gere, J., & MacDonald, G. (2013). Assessing relationship quality across cultures: An examination of measurement equivalence. *Personal Relationships, 20*, 422–442. <https://doi.org/10.1111/pere.12001>
- Hayes, A. F. (2018). *Introduction to mediation, moderation, and conditional process analysis* (2nd ed.). New York, NY: Guilford.
- Hoang, L. A., & Yeoh, B. S. A. (2011). Breadwinning wives and “left-behind” husbands: Men and masculinities in the Vietnamese transnational families. *Gender & Society, 25*, 717–739. <https://doi.org/10.1177/0891243211430636>
- Holt-Lunstad, J., & Smith, T. B. (2012). Social relationships and mortality. *Social & Personality Psychology Compass, 6*, 41–53. <https://doi.org/10.1111/j.1751-9004.2011.00406.x>
- Holt-Lunstad, J., Smith, T. B., & Layton, B. (2010). Social relationships and mortality: A meta-analysis. *PLoS Medicine, 7*, e1000316. <https://doi.org/10.1371/journal.pmed.1000316>
- Jedrychowski, W., Perera, F., Jankowski, J., Butscher, M., Mroiz, E., Flak, E., . . . Sowa, A. (2012). Effect of exclusive breastfeeding on the development of children's cognitive function in the Krakow prospective birth cohort study. *European Journal of Pediatrics, 171*, 151–158. <https://doi.org/10.1007/s00431-011-1507-5>
- Kim, S. K., Park, S., Oh, J., Kim, J., & Ahn, S. (2018). Interventions promoting exclusive breastfeeding up to six months after birth: A systematic review and meta-analysis of randomized controlled trials. *International Journal of Nursing Studies, 80*, 94–105. <https://doi.org/10.1016/j.ijnurstu.2018.01.004>
- Lamb, M. E. (ed.). (2010). *The role of the father in child development* (5th ed.). Oxford: Wiley.
- Locke, C., Hoa, N. T., & Tam, N. T. (2012). Visiting marriages and remote parenting: Changing strategies of rural-urban migrants to Hanoi, Vietnam. *Journal of Development Studies, 48*, 10–25. <https://doi.org/10.1080/00220388.2011.629650>
- McFadden, A., Gavine, A., Renfrew, M. J., Wade, A., Buchanan, P., Taylor, J. L., . . . MacGillavray, S. (2017). Support for healthy breastfeeding mothers with healthy term babies (Review). *Cochrane Database of Systematic*

- Reviews*, 2, CD001141. <https://doi.org/10.1002/14651858.CD001141.pub5>
- McHale, J. P., & Fivaz-Depeursinge, E. (2010). Principles of effective co-parenting and its assessment in infancy and early childhood. In S. Tyano, M. Keren, H. Herрман, & J. Cox (Eds.), *Parenthood and mental health: A bridge between infant and adult psychiatry* (pp. 357–371). Chichester, UK: Wiley. <https://doi.org/10.1002/9780470660683>
- Mitchell-Box, K., & Braun, K. L. (2013). Fathers' thoughts on breastfeeding and implications for a theory-based intervention. *Journal of Obstetric, Gynecologic, Neonatal Nurses*, 41, 41–50. <https://doi.org/10.1111/j.1552-6309.2012.01399.x>
- Nguyen, T. V. H. (2011). The relationship among parents and children in the Vietnamese families nowadays. *Revista de Cercetare Si Interventie Sociala*, 32, 131–139. Retrieved from [http://www.rcis.ro/images/documente/rcis32\\_08.pdf](http://www.rcis.ro/images/documente/rcis32_08.pdf)
- Pinquart, M., & Teubert, D. (2010). A meta-analytic study of couple intervention during the transition to parenthood. *Family Relations*, 59, 221–231. <https://doi.org/10.1111/j.1741-3729.2010.00597.x>
- Prado, E. L., Abubakar, A. A., Abbeddou, S., Jimenez, E. Y., Jerome, W. S., & Ouedraogo, J. (2014). Extending the developmental milestones checklist for use in a different context in Sub-Saharan Africa. *Acta Paediatrica*, 103, 447–454. <https://doi.org/10.1111/apa.12540>
- Pruett, K., & Pruett, M. K. (2009). *Partnership parenting*. Philadelphia, PA: Da Capo Press.
- Pruett, M. K., Pruett, K., Cowan, C. P., & Cowan, P. A. (2017). Enhancing father involvement in low-income families: A couples group approach to preventive intervention. *Child Development*, 88, 398–407. <https://doi.org/10.1111/cdev.12744>
- Quigley, K. M., Moore, G. A., Propper, C. B., Goldman, B. D., & Cox, M. J. (2017). Vagal regulation in breastfeeding infants and their mothers. *Child Development*, 88, 919–933. <https://doi.org/10.1111/cdev.12641>
- Rafaelli, E., & Gleason, M. E. (2009). Skilled support within intimate relationships. *Journal of Family Theory & Review*, 1, 20–37. <https://doi.org/10.1111/j.1756-2589.2009.00003.x>
- Reis, H. T., Clark, M. S., & Holmes, J. G. (2004). Perceived partner responsiveness as an organizing construct in the study of intimacy and closeness. In D. Mashek & A. Aron (Eds.), *The handbook of closeness and intimacy* (pp. 211–236). Mahwah, NJ: Erlbaum.
- Rempel, L. A., & Rempel, J. K. (2004). Partner influence on health behavior decision-making: Increasing breastfeeding duration. *Journal of Social and Personal Relationships*, 21, 92–111. <https://doi.org/10.1177/0265407504039841>
- Rempel, L. A., & Rempel, J. K. (2011). The breastfeeding team: The role of involved fathers in the breastfeeding family. *Journal of Human Lactation*, 27, 115–121. <https://doi.org/10.1177/0890334410390045>
- Rempel, L. A., Rempel, J. K., Khuc, T. N., & Vui, L. T. (2017). Influence of father-infant relationship on infant development: A father-involvement intervention. *Developmental Psychology*, 53, 1844–1858. <https://doi.org/10.1037/dev0000390>
- Rempel, L. A., Rempel, J. K., & Moore, K. (2017). Relationships between types of father breastfeeding support and breastfeeding outcomes. *Maternal and Child Nutrition*, 13, e12337. <https://doi.org/10.1111/mcn.12337>
- Rouyer, V., Huet-Gueye, M., Baude, A., & Mieyaa, Y. (2015). Presentation of the French adaptation of the Parenting Alliance Inventory: Issues in defining and measuring coparenting. *Family Science*, 6, 194–200. <https://doi.org/10.1080/19424620.2015.1082051>
- Selcuk, E., & Ong, A. D. (2012). Perceived partner responsiveness moderates the association between received emotional support and all-cause mortality. *Health Psychology*, 32, 231–235. <https://doi.org/10.1037/a0028276>
- Tadesse, K., Zelenko, O., Mulugeta, A., & Gallegos, D. (2018). Effectiveness of breastfeeding interventions delivered to fathers in low- and middle-income countries: A systematic review. *Maternal and Child Nutrition*, 14, e12612. <https://doi.org/10.1111/mcn.12612>
- Tohotoa, J., Maycock, B., Hauch, Y., Howat, P., Burns, S., & Binns, C. W. (2009). Supporting mothers to breastfeed: The development and process evaluation of a father inclusive perinatal education support program in Perth, Western Australia. *Health Promotion International*, 26, 351–361. <https://doi.org/10.1093/heapro/daq077>
- UNICEF (United Nation Children's Fund). (2010). *An analysis of the situation of children in Vietnam 2010*. Retrieved from [https://www.unicef.org/sitan/files/SitAn-Viet\\_Nam\\_2010\\_Eng.pdf](https://www.unicef.org/sitan/files/SitAn-Viet_Nam_2010_Eng.pdf)
- Van Egeren, L. A., & Hawkins, D. P. (2004). Coming to terms with coparenting: Implications of definition and measurement. *Journal of Adult Development*, 11, 165–178. <https://doi.org/10.1023/B:JADE.0000035625.74672.0b>
- World Health Organization. (2003). *Global strategy for infant and young child feeding*. Geneva, Switzerland: Author. Retrieved from [http://www.who.int/nutrition/topics/global\\_strategy/en/](http://www.who.int/nutrition/topics/global_strategy/en/)