
PARENTAL INVOLVEMENT IN HOME VISITING: INTERPERSONAL PREDICTORS AND CORRELATES

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ABSTRACT: Parents' commitment to and usage of early intervention are key variables in understanding discrepancies in families' susceptibility to these services. Although the important role of fathers in infant development is widely recognized, early interpersonal predictors of paternal involvement in home-visiting programs have been understudied. This article aims to fill this gap by regressing parents' postnatal involvement on prenatal partnership satisfaction and quality of the helping relationship in a sample of 124 socially and financially disadvantaged families. Paternal program engagement was predicted by partnership satisfaction whereas the perceived quality of the helping relationship best predicted maternal program engagement, with demographical characteristics controlled. Maternal program engagement also mediated the relationship between partnership satisfaction and paternal program engagement. The results are discussed against the theoretical background.

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Beyond the evaluation of program outcomes in early childhood intervention, the examination of parents' commitment to and usage of program services is important to understand families' different susceptibility to intervention. As most programs are primarily focused on mothers, studies regarding the involvement of fathers have been a distinct minority. The current study aims to investigate interpersonal predictors of both parents' involvement in a home-visiting program providing prenatal and postnatal support to socially and financially disadvantaged mothers. Our predictors not only include the quality of the helping relationship but also the parents' partnership satisfaction as a key determinant of family functioning.

PARENTAL INVOLVEMENT IN HOME VISITATION

Home visitation as a method of early childhood interventions is uniquely designed to address the challenges inherent in serving early learning and health needs of children and families living in poverty (Howard & Brooks-Gunn, 2009). Nevertheless, many families are not involved in home visitation, and either drop out ahead of schedule or receive less than the prescribed number of home-visiting services. Low levels of involvement, or disengagement, are some of the greatest challenges, especially for home-visiting programs serving high-risk populations (Larner, Halpern, & Harkavy, 1992). Therefore, identifying predictors of parental involvement in home visitation is essential for modification of services to better meet the needs of family members who may drop out early.

In general, parents' program involvement includes the major dimensions of quantity and quality (Korfmacher et al., 2008). Quantity of involvement as the most concrete indication of involvement refers to program participation, or how much of an intervention a family receives (e.g., the number and frequency of home visits). Quality of involvement describes how family members feel about the services they receive, and how they emotionally interact with the program and therefore engage in it.

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To date, most studies examining parental involvement in home-visiting programs have been concentrated on mothers (Roggman, Boyce, Cook, & Cook, 2002). This is in contrast to the important role fathers play in child's development, as increasingly recognized in research over the past 3 decades (Belsky, 1996; Lamb, 1997): Children growing up with actively involved and nurturing fathers have more positive cognitive, social, and emotional outcomes from infancy through adolescence (Cowan, Cowan, Cohen, Pruett, & Pruett, 2008; Tamis LeMonda, Shannon, Cabrera, & Lamb, 2004). Likewise, greater attention is given to father and father-figure involvement in early childhood programs (Boller et al., 2006; Fagan, 2007), with most of the studies being based on European American, middle-class samples. Nevertheless, father's involvement in raising the child may be particularly important for families considered "at risk" for social and educational problems because of poverty (Elder, Conger, Foster, & Ardel, 1992). In addition, the vast majority of research on paternal program involvement has dealt with Head Start and similar preschool programs, and have not examined paternal involvement in programs for infants and toddlers (McAllister, Wilson, & Burton, 2004).

Accordingly, the picture of parental involvement, specifically paternal involvement in home-visiting programs, is still incomplete, especially when considering low-income families and the earliest months of a child's life. The following study thus not only focuses on maternal program involvement but also provides insight into how it is possible to involve fathers in home-visiting programs during the first 6 months of their child's life.

PREDICTORS OF PARENTAL INVOLVEMENT

According to ecological (Belsky, 1984; Bronfenbrenner, 1979) or family systems risk-protection-outcome models (Cowan & Cowan, 1999; Pruett, Insabella, & Gustafson, 2005), there are individual (e.g., family members' mental health) and interpersonal aspects (e.g., between partners as well as between the mother and the home visitor) that shape both the quantity and the quality of parental involvement with early intervention programs (also see Korfmacher et al., 2008). Family members' individual characteristics and their influence on parents' involvement have been much studied. For example, parental attitudes (McCurdy & Daro, 2001), sense of control (Olds & Korfmacher, 1998), stressful life events (Josten, Mullett, Savik, Campbell, & Vincent, 1995), psychological well-being, use of social support resources (e.g., Roggman et al., 2002), and parental demographics (age, education, employment, family status; Duggan et al., 2000; Fagan, 2007; Raikes, Summers, & Roggman, 2005; Roggman et al., 2002) were found to predict parents' involvement in home-visiting programs.

Beyond individual characteristics, interpersonal characteristics such as the quality of the helping relationship between mother and home visitor and the quality of parents' partnership may be important predictors for paternal program involvement:

- Despite assessment problems (e.g., strongly positive biased parental reports), the quality of the helping relation-

ship has been identified as a strong predictor of overall parental involvement in and benefit from home-visiting services (Brooks-Gunn, Berlin, & Fuligni, 2000; Korfmacher, Green, Spellmann, & Thornburg, 2007; McCurdy & Jones, 2000). In this context, mothers are often "gatekeepers" for fathers' involvement in the program (Fagan, Newash, & Schloesser, 2000), especially in the first months of a child's life. Thus, mothers' feelings and attitudes toward the helping relationship may influence paternal program involvement.

- Parents' partnership satisfaction can influence parents' involvement with the family, especially in the case of fathers. Previous research has shown that partnership satisfaction positively relates to paternal involvement with the family and the child (e.g., Blair, Wenk, & Hardesty, 1994; Cutrona, Hessling, Bacon, & Russell, 1998). Cowan et al. (2008) found the quality of fathers' relationship with the child's mother to be the most powerful predictor of fathers' engagement, regardless of whether the couple was married, divorced, separated, or never married. Nevertheless, little is known about the influence of partnership satisfaction on paternal involvement in home-visiting programs. As fathers are more prone to get involved when the child's mother is an active participant in the program (McAllister et al., 2004), maternal program involvement could influence paternal program engagement.

RESEARCH QUESTIONS

To investigate interpersonal predictors of parents' program involvement in low-income families, the following research questions are addressed:

- H1:** Is maternal and paternal program involvement predicted by interpersonal variables, partnership satisfaction, and quality of the helping relationship? We hypothesize both variables to be independent predictors of parents' program involvement.
- H2:** Does maternal program involvement influence the relationship between paternal program involvement and interpersonal characteristics? We hypothesize maternal program involvement to be a significant mediator.

METHOD

Participants

Socially and financially disadvantaged, primiparous women were enrolled between their 12th and 28th week of pregnancy in a German home-visiting program. Home visits start during pregnancy and end with the child's second birthday. Social disadvantages in the target group spanned being under age, having no school or vocational education, being poorly socially integrated, having health problems, consuming drugs and/or alcohol, or having experienced

domestic violence or neglect. Financial problems included unemployment and indebtedness. To take part in the program, participants were required to have sufficient knowledge of the German language to be able to follow the material presented in the home visits and a secured residence permit. Between November 2006 and December 2009, 755 women were recruited primarily via gynecologists, job centers, and various counseling services, and were randomized to receive either a program of home visitation ($n = 393$) or usual health or social services ($n = 362$; excluded from current analysis). For the current study, participants were included if the assessment at the child's age of 6 months was completed (M age = 6.4, $SD = 1.2$, range = 6–8) and if their partnership was stable (with stability defined in terms of no partner changes until program enrollment at 20th week of gestation), leaving 124 mothers for current analyses.

At the time of enrollment, the mean age of women was 21 years ($M = 20.8$, $SD = 4.5$, range = 14–39), with 16% being under age. Their educational background was mixed; 58% had less than a high-school diploma while 42% graduated from high school or completed their high-school education. A high percentage (79%) had no vocational training at all, 18% finished a vocational training, and a minority of 3% completed university. The majority (79%) of the program participants were not married, and only 42% resided with their partners. In most cases (92%), the current partner was the biological father of the child.

Partners' mean age was 24 years ($M = 24.1$, $SD = 5.3$, range = 16–43). Sixty-three percent of the partners had less than a high-school diploma while 37% graduated from high school or completed their high-school education. Sixty-three percent had no vocational training whereas 34% had finished a vocational training, and 3% completed college. Forty-three percent of fathers were unemployed.

Intervention

The rationale of the German home-visiting program "Pro Kind" was based on the Nurse–Family Partnership Program (Olds, Kitzman, Cole, & Robinson, 1997) aiming at the improvement of neurodevelopmental, cognitive, and behavioral functioning of the child by enhancing prenatal health, family functioning, and economic self-sufficiency as well as reducing child abuse and neglect in the first 2 years of the child's life. The program was grounded in three theories:

- Human ecology theory (Bronfenbrenner, 1979) emphasizes that children's development is influenced by how their parents care for them, and this in turn is influenced by characteristics of their family members, social networks, neighborhoods, and communities as well as the interrelations among these factors. Drawing from this theory, home visitors attempted to enhance the material and social environment of the family by involving other family members, especially fathers, in the home visits. Father involvement was encouraged in all aspects of the program insofar as the mothers

wanted him incorporated, and there was a constructive basis for a working alliance between father, mother, and home visitor. In particular, specific worksheets are provided to the father, for example, dealing with the paternal role, paternal health behavior, and the couple's relationship after the child's birth as well as the importance of the quality of father–child interaction.

- The concept of self-efficacy (Bandura, 1977) gives a useful framework for understanding parental decision-making about their childcare, personal development, and health. The home visitors helped fathers to define and get used to their parental role and establish realistic and achievable goals that—once accomplished—should increase fathers' reservoir of successful experiences.
- According to the theory of human attachment (Bowlby, 1969), the program explicitly promoted sensitive, responsive, and engaged caregiving in the early years of the child's life. In this context, the home visitors helped parents to understand the importance of a secure and empathic relationship between father and child for the child's development.

Home visits were conducted by specially trained and biweekly supervised midwives and social pedagogues following visit-to-visit-guidelines reflecting the challenges parents are likely to be confronted with during specific stages of pregnancy and the first 2 years of the child's life. Fifty-two home visitors worked for Pro Kind (31 midwives, 20 social pedagogues, 1 nurse), with a mean age at entrance of 40 years (range = 22–53). Most of them had substantial work experience ($M = 15$ years, range = 0–31) and many years of experience dealing with socially disadvantaged families ($M = 11$ years, range = 0–30).

Measures

Assessments of demographic data and interpersonal characteristics were conducted at two time points in pregnancy (Time 0 at ~22 weeks of gestation, Time 1 at ~36 weeks of gestation) using standardized interviews with the mothers. Demographic data were collected at Time 0, and partnership satisfaction was assessed at Time 1. The quality of relationship with the home visitor was recorded at Time 1 by telephone interviews with the mothers. Postnatal data on parental program involvement, including ratings of maternal and paternal participation and engagement, were provided after each home visit by the family attendants during the first 6 months after the child's birth. We only used data on postnatal home visits because it makes interpretation of the findings "cleaner" since the predictor variables were collected prenatally.

Parental program involvement. Quantity and quality of program involvement were assessed using session-by-session encounter forms recorded by the home visitors. Quantity of involvement refers to the number of all home visits with the mothers and the partner. Quality of maternal and paternal involvement was rated

on a scale of 1 (*less engaged*) to 4 (*very much engaged*). For a subsample of 39 visits (5% of the home visits in the first 6 months' postpartum), an additional rating of maternal engagement by the accompanying supervisor was available, yielding an interrater reliability of 71% ($p < .001$; intraclass correlation).

Quality of the helping relationship. The quality of the relationship between mother and home visitor was rated by the mother in telephone interviews on a self-constructed scale with five dichotomous (0 = *not correct*, 1 = *correct*) items ("I believe my home visitor likes me." "I feel that my home visitor appreciates me." "My home visitor is there for me when I needed her." "My home visitor supports me in difficult situations." "I trust my home visitor.") The scores were summed and then divided by 5, yielding a mean score of 0 to 1. The items were derived from the Working Alliance Inventory (Horvath & Greenberg, 1989). Internal consistency was $\alpha = .85$.

Quality of parents' partnership. Partnership satisfaction was measured by the Marriage and Partnership subscale of the Life Satisfaction Questionnaire (Fahrenberg, Myrtek, Schumacher, & Brähler, 2000). The scale is comprised of seven items that are rated on a scale of 1 (*very unsatisfied*) to 4 (*very satisfied*) (e.g., "With the honesty and openness of my partner I am. . ." "With the tenderness and affection from my partner I am. . ."). The scores were summed and divided by 7, yielding a mean score of 1 to 4. Internal consistency was $\alpha = .89$.

Analyses

First, descriptive statistics for all study variables were calculated. Second, potential relationships between variables of parental program involvement and demographical characteristics were assessed using *t* tests for categorical variables (living status, paternal employment) and Pearson correlations for continuous variables (age of parent, education level). Third, bivariate correlations between variables of parental program involvement and interpersonal characteristics were computed. Fourth, two separate multiple regression analyses were run to predict postnatal program involvement of (a) mothers and (b) fathers from (c) partnership satisfaction and (d) the quality of the helping relationship. To control for their influence, demographical variables significantly correlated with the criterion were entered at Step 1 whereas partnership satisfaction and the quality of the helping relationship were entered at Step 2. Fourth, a mediational model including four regression equations was used to investigate whether the relationship between paternal program involvement and interpersonal characteristics would be influenced by maternal program involvement. Therefore, the four-step approach described by Baron and Kenny (1986) was used. In addition, the Sobel test (Sobel, 1982) was performed in a fifth step to test for the significance of the indirect effect between predictor and outcome (MacKinnon, Warsi, & Dwyer, 1995).

TABLE 1. Descriptive Statistics of Study Variables

	<i>n</i>	<i>M</i>	<i>SD</i>	Range
Maternal Participation	124	9.35 (.78) ^a	4.51	1–21
Paternal Participation	119	3.63 (.30) ^a	2.88	1–14
Maternal Program Engagement	121	3.44	.55	1–4
Paternal Program Engagement	85	2.88	.94	1–4
Partnership Satisfaction	123	3.34	.63	1–4
Quality of the Helping Relationship	108	.95	.14	0–1

^aratio of completed to expected home visits.

RESULTS

Descriptive Statistics

The participating families received a mean number of nine home visits in the first 6 months of their child's life (range = 0–21, $SD = 4.5$), with 78% of the expected home visits ($n = 12$) being completed. In general, the mean duration of the visits was 81 min (range = 35–109, $SD = 12.3$). Sixty-two percent of the families had a father involved for at least one home visit. On average, he participated in approximately four home visits (range = 1–14, $SD = 2.9$), with 30% of the expected home visits being completed. Table 1 summarizes the descriptive statistics for all study variables.

Correlational Analyses

Correlational analyses with demographical variables revealed no significant associations between age and parental program involvement variables as well as between paternal program involvement variables and educational level. For mothers, their educational level, $r = .27$, $p < .01$, was related to their program engagement. Mothers having more than a high-school diploma were more engaged in home visitation and participated in more postnatal home visits. Living status was not associated with paternal program engagement but was associated with paternal program participation, such that fathers residing with the mother participated more often in postnatal home visits, $t(117) = -2.79$, $p < .01$. No significant associations with program involvement variables were found for paternal employment.

Table 2 presents the results of the bivariate correlations between variables of parental program involvement and interpersonal characteristics. Partnership satisfaction and quality of the helping relationship were positively related to maternal program engagement, but only father's partnership satisfaction showed a positive correlation with his program engagement. Maternal and paternal program participation were not related to interpersonal characteristics, but both were significantly associated with each other. Moreover, paternal program engagement correlated with maternal engagement and paternal participation.

TABLE 2. Correlations Between Variables of Parental Involvement and Interpersonal Characteristics

	1.	2.	3.	4.	5.	6.
1. Maternal Program Participation	1					
2. Paternal Program Participation	.32**	1				
3. Maternal Program Engagement	.11	-.02	1			
4. Paternal Program Engagement	-.06	.22*	.47**	1		
5. Partnership Satisfaction	-.16	.07	.18*	.27**	1	
6. Quality of the Helping Relationship	.10	-.06	.29**	.14	.21*	1

Prediction of Parental Program Involvement

Separate hierarchical multiple regression analyses were then performed to predict variables of maternal and paternal program involvement (see Table 3). Because program participation showed no significant associations with both interpersonal characteristics, only program engagement was entered as the dependent variable in the regression equations. Given the significant correlations with educational level, this variable was entered on the first block of the model for mothers as an additionally relevant demographic variable. Due to the significant correlations between partnership satisfaction and the quality of the helping relationship, $r = .21$, $p < .05$, analyses to detect collinearity among the predictors were conducted, with the result of high tolerance (.92–.99) for all variables in the model.

For mothers, the final model was statistically significant, $F(3, 89) = 3.83$, $p < .05$, and accounted for 11% of the variance in program engagement. In the first block, the maternal educational level did account for a statistically significant proportion of variance in maternal program engagement, $F(1, 91) = 5.20$, $p < .05$. As expected, the addition of interpersonal characteristics accounted for a statistically significant proportion of variance (8%), $F(2, 89) = 3.03$, $p < .05$, although the quality of the helping relationship was the only significant predictor in this model.

For fathers, the model with interpersonal characteristics entered together was statistically significant, $F(2, 72) = 3.92$, $p < .05$, and accounted for 10% of the variance in program engage-

ment. In contrast to mothers, partnership satisfaction was the only statistically significant predictor.

Mediation Analyses

Regression analyses were used to explore indirect sets of predictors of paternal program engagement. According to the importance of partnership satisfaction for paternal program engagement, the model included partnership satisfaction as the predictor and maternal program engagement as the mediator. When predicting paternal program engagement from partnership satisfaction, maternal program engagement from partnership satisfaction, and paternal program engagement from maternal program engagement, all three simple regression models were significant, $F(1, 83) = 6.59$, $p < .01$; $F(1, 118) = 4.08$, $p < .05$; and $F(1, 83) = 21.10$, $p < .01$, respectively. Fathers demonstrated more engagement in postnatal home visits when the partnership was experienced as more satisfying in pregnancy, $\beta = .27$, $t = 2.57$, $p < .01$, and when the mothers had higher scores on postnatal program engagement, $\beta = .45$, $t = 4.59$, $p < .01$. Mothers who were more satisfied in their partnerships had higher scores on postnatal program engagement, $\beta = .18$, $t = 2.02$, $p < .05$. When predicting paternal engagement from maternal engagement and partnership satisfaction, both predictors remained statistically significant, $R^2 = .24$, $F(2, 82) = 13.09$, $p < .01$, pointing to a partial mediation effect of maternal engagement. The Sobel teststatistic confirmed the significance of the indirect effect of partnership satisfaction on paternal program engagement mediated by maternal program engagement, $Z = 1.92$, $p < .05$.

DISCUSSION

The current study extends previous work (e.g., Fagan, 2007; Rogman et al., 2002) that primarily considered paternal individual characteristics in investigating interpersonal predictors of early parental involvement. Further, it overcomes two limitations of previous studies on paternal involvement: the focus on European American, middle-class samples (Fagan, 2007) and the focus on preschool programs when “at-risk” samples are considered (Elder et al., 1992; McAllister et al., 2004). Our results show that prenatal interpersonal characteristics such as partnership satisfaction and

TABLE 3. Standard Multiple Regressions: Predicting Parental Program Engagement From Interpersonal Characteristics

Predictors	Maternal Program Engagement				Paternal Program Engagement			
	B	β	SE	R ²	B	β	SE	R ²
Step 1								
Maternal Education	.10	.23	.05		–			
Step 2								
Maternal Education	.09*	.21*	.04*		–			
Partnership Satisfaction	.06	.06	.10		.44**	.29**	.18**	
Quality of the Helping Relationship	1.44*	.22*	.67*	.11*	.39	.06	.83	.10*

* $p < .05$. ** $p < .01$.

relationship quality with the home visitor are important predictors for qualitative aspects of early maternal and paternal program involvement in a high-risk sample. First, partnership satisfaction as rated by the mothers significantly contributed to paternal engagement. Thus, the findings of significant associations between partnership satisfaction and father's involvement in the child and the family (e.g., Blair et al., 1994; Cowan et al., 2008) are expanded by supporting the assumption that mothers also act as gatekeepers for paternal program involvement. When the partnership is experienced as satisfied, fathers seem to be encouraged to invest in the family by engaging more actively in the home-visitation program. Therefore, the quality of the parents' partnership seems to influence paternal involvement and should therefore be recognized more intensively in early childhood intervention programs. In particular, programs may need to pay attention to possible prenatal barriers such as parental stress and conflicts that may limit postnatal father involvement (Fagan, 2008). For example, Cutrona et al. (1998) found that fathers were less likely to stay involved with the family if the young mother experienced a large number of stressful life events during pregnancy and in the first 6 weeks after child's birth. Lewin, Mitchell, Burrell, Beers, and Duggan (2011) also illustrated recently that the first months postpartum are a critical time period for the father, as his involvement with the child decreases significantly from pregnancy to 12 months postpartum. Designs of early intervention programs should therefore integrate (prenatal) program components which account for parents' present and past experiences as a couple. In this context, the ability to co-parent as one of the most important tasks for parents (McHale, Kuersten-Hogan, & Lauretti, 2001) deserves some attention in future studies. Furthermore, we found maternal program engagement as a mediating variable between partnership satisfaction and paternal program engagement, indicating that maternal program engagement at least partially explains the link between partnership satisfaction and paternal program engagement. Thus, the mother may not only encourage the father's program participation (McAllister et al., 2004; Roggman et al., 2002) but also his qualitative program involvement such as engagement in the home visits. Contrary to our expectations, the quality of the helping relationship failed to be a significant predictor of paternal engagement in the tested model with partnership satisfaction, and it was the only significant predictor for maternal involvement (besides maternal education). In the first few months after a child's birth, the relationship between mother and home visitor may be very close, and this could lead to more active maternal involvement in the program. Former studies also have identified the quality of the helping relationship between home visitor and participant as a strong predictor of maternal involvement in home-visiting services (e.g., Brooks-Gunn et al., 2000).

There are several limitations of our study. First, parental involvement was assessed only by staff ratings of participation and engagement, which may contain an inherent bias. Nevertheless, home visitors are competent professionals who are more acquainted with the family and program process variables than is an objective observer. Second, maternal ratings of partnership sat-

isfaction and the quality of the helping relationship are typically very positive, a result which also has been shown in previous studies (e.g., Korfmacher et al., 2007). In general, relationship ratings seem to be highly subjective and it would be useful in future studies to assess the partners' as well as the home visitors' perspectives on their relationship with the mother. For example, Wen, Korfmacher, Hans, and Henson (2010) found that mother and staff ratings of the helping relationship are only moderately related and are predictive of different program outcomes. Moreover, paternal ratings on the quality of the helping relationship with the home visitor may be an important predictor of father's program involvement. In this context, Roggman et al. (2002) found significant associations of father's education, mental health, and social support with his relationship to the home visitor, emphasizing the importance of this aspect. The limited variability in relationship ratings also might decrease its correlation with program participation. Third, further studies should take into consideration additional barriers for parental involvement, such as domestic violence, drug abuse, or parental antisocial behavior. Fourth, the sample used in the present investigation may not be fully representative for all home-visiting programs. Some programs have a more pronounced focus on paternal involvement, such as in allocating resources to hire male-involvement coordinators. In a next step, the influence of quantitative and qualitative aspects of paternal involvement on the efficacy of home-visiting programs, such as children's development or parental self-efficacy, has to be carefully and systematically evaluated.

REFERENCES

- Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review*, 84, 191–215.
- Baron, R., & Kenny, D. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 51, 1173–1182.
- Belsky, J. (1984). The determinants of parenting: A process model. *Child Development*, 55, 83–96.
- Belsky, J. (1996). Parent, infant, and social-contextual antecedents of father–son attachment security. *Developmental Psychology*, 32, 905–913.
- Blair, S., Wenk, D., & Hardesty, C. (1994). Marital quality and paternal involvement: Interconnections of men's spousal and parental roles. *Journal of Men's Studies*, 2, 221–237.
- Boller, K., Bradley, R., Cabrera, N., Raikes, H., Pan, B., Shears, J. et al. (2006). The Early Head Start father studies: Design, data collection, and summary of father presence in the lives of infants and toddlers. *Parenting*, 6, 117–143.
- Bowlby, J. (1969). *Attachment and loss: Vol. 1. Attachment*. New York: Basic Books.
- Bronfenbrenner, U. (1979). *The ecology of human development: Experiments by nature and design*. Cambridge, MA: Harvard University Press.

- Brooks-Gunn, J., Berlin, L.J., & Fuligni, A.S. (2000). Early childhood intervention programs: What about the family? In J.P. Shonkoff & S.J. Meisel (Eds.), *The handbook of early childhood intervention*. New York: Cambridge University Press.
- Cowan, C.P., & Cowan, P.A. (1999). *When partners become parents: The big life change for couples*. Mahwah, NJ: Erlbaum.
- Cowan, C.P., Cowan, P.A., Cohen, N., Pruett, M., & Pruett, K. (2008). Supporting fathers' engagement with their kids. In J.D. Berrick & N. Gilbert (Eds.), *Raising children: Emerging needs, modern risks, and social responses* (pp. 44–80). New York: Oxford University Press.
- Cutrona, C.E., Hessling, R.M., Bacon, P.L., & Russell, D.W. (1998). Predictors and correlates of continuing involvement with the baby's father among adolescent mothers. *Journal of Family Psychology*, 12, 369–387.
- Duggan, A., Windham, A., McFarlane, E., Fuddy, L., Rohde, C., Buchbinder, S. et al. (2000). Hawaii's Healthy Start program of home visiting for at-risk families: Evaluation of family identification, family engagement, and service delivery. *Pediatrics*, 105, 250–259.
- Elder, G., Conger, R., Foster, E., & Ardelt, M. (1992). Families under economic pressure. *Journal of Family Issues*, 13, 5–37.
- Fagan, J. (2007). Research on children's environmental programmatic efforts pertaining to fatherhood. *Applied Developmental Science*, 11, 260–265.
- Fagan, J. (2008). Randomized study of a prebirth coparenting intervention with adolescent and young fathers. *Family Relations*, 57, 309–323.
- Fagan, J., Newash, N., & Schloesser, A. (2000). Female caregivers' perceptions of fathers' and significant adult males' involvement with their Head Start children. *Families in Society*, 81, 186–196.
- Fahrenberg, J., Myrtek, M., Schumacher, J., & Brähler, E. (2000). *Fragebogen zur Lebenszufriedenheit (FLZ) [Life Satisfaction Questionnaire]*. Göttingen, Germany: Hogrefe.
- Horvath, A.O., & Greenberg, L.S. (1989). Development and validation of the Working Alliance Inventory. *Journal of Counseling Psychology*, 36, 223–233.
- Howard, K., & Brooks-Gunn, J. (2009). The role of home-visiting programs in preventing child abuse and neglect. *The Future of Children*, 19, 119–146.
- Josten, L., Mullett, S., Savik, K., Campbell, R., & Vincent, P. (1995). Client characteristics associated with not keeping appointments for public health nursing home visits. *Public Health Nursing*, 12, 305–311.
- Korfmacher, J., Green, B., Spellmann, M., & Thornburg, K. (2007). The helping relationship and program participation in early childhood home visiting. *Infant Mental Health Journal*, 28, 459–480.
- Korfmacher, J., Green, B., Staerkel, F., Peterson, C., Cook, G., Roggman, L. et al. (2008). Parent involvement in early childhood home visiting. *Child and Youth Care Forum*, 37, 171–196.
- Lamb, M.E. (1997). Fathers and child development: An introductory overview and guide. In M.E. Lamb (Ed.), *The role of the father in child development*. New York: Wiley.
- Larner, M., Halpern, R., & Harkavy, O. (1992). The Fair Start story: An overview. In M. Larner, R. Halpern, & O. Harkavy (Eds.), *Fair Start for Children: Lessons learned from seven demonstration projects*. New Haven, CT: Yale University Press.
- Lewin, A., Mitchell, S.J., Burrell, L., Beers, L.S.A., & Duggan, A.K. (2011). Patterns and predictors of involvement among fathers of children born to adolescent mothers. *Journal of Family Social Work*, 14, 335–353.
- MacKinnon, D., Warsi, G., & Dwyer, J. (1995). A simulation study of mediated effect measures. *Multivariate Behavioral Research*, 30, 41–62.
- McAllister, C., Wilson, P., & Burton, J. (2004). From sports fans to nurturers. *Fathering: A Journal of Theory, Research, and Practice About Men as Fathers*, 2, 31–59.
- McCurdy, K., & Daro, D. (2001). Parent involvement in family support programs: An integrated theory. *Family Relations*, 50, 113–121.
- McCurdy, K., & Jones, E. (2000). *Supporting families: Lessons from the field*. Thousand Oaks, CA: Sage.
- McHale, J.P., Kuersten-Hogan, R., & Lauretti, A. (2001). Evaluating coparenting and family level dynamics during infancy and early childhood: The Coparenting and Family Rating System. In P.K. Kerig & K.M. Lindahl (Eds.), *Family observational coding systems: Resources for systemic research* (pp. 151–170). Mahwah, NJ: Erlbaum.
- Olds, D., Kitzman, H., Cole, R., & Robinson, J. (1997). Theoretical foundations of a program of home visitation for pregnant women and parents of young children. *Journal of Community Psychology*, 25, 9–25.
- Olds, D., & Korfmacher, J. (1998). Maternal psychological characteristics as influences on home visitation contact. *Journal of Community Psychology*, 26, 23–36.
- Pruett, M., Insabella, G., & Gustafson, K. (2005). The collaborative divorce project: A court based intervention for separating parents with young children. *Family Court Review*, 43, 38–51.
- Raikes, H., Summers, J., & Roggman, L. (2005). Father involvement in Early Head Start programs. *Fathering: A Journal of Theory, Research, and Practice About Men as Fathers*, 3, 29–58.
- Roggman, L., Boyce, L., Cook, G., & Cook, J. (2002). Getting dads involved: Predictors of father involvement in Early Head Start and with their children. *Infant Mental Health Journal*, 23, 62–78.
- Sobel, M. (1982). Asymptotic confidence intervals for indirect effects in structural equation models. *Sociological Methodology*, 13, 290–312.
- Tamis LeMonda, C., Shannon, J., Cabrera, N., & Lamb, M. (2004). Fathers and mothers at play with their 2 and 3 year olds: Contributions to language and cognitive development. *Child Development*, 75, 1806–1820.
- Wen, X., Korfmacher, J., Hans, S., & Henson, L. (2010). Young mothers' involvement in a prenatal and postpartum support program. *Journal of Community Psychology*, 38, 172–190.