Effect of Father Engagement on Child Behaviors

Ronald Mincy, Hyunjoon Um and Jo Turpin

Secular changes in labor force participation, especially among married women, mean that both parents in poor and working class families are involved in child rearing. Although mothers still play the primary role in meeting children's basic needs (Presser, 2003; Waldfogel, 2006), fathers and mothers may share more equally in other aspects of child rearing, especially as children transition to school (Presser, 2003). We know much about mothering and its effects on child well-being at many stages of the life course, and our knowledge about the role of fathers in the development of infants and toddlers has been expanding (Lamb, 2010; Lamb & Lewis, 2010; Leidy, Schofield, & Parke, 2013; Roggman, Bradley, & Raikes, 2013; Tamis-LeMonda, Baumwell, & Cabrera, 2013). Yet, we know less about how fathers contribute to the rearing of school age children, and how these activities might affect child well-being, independent of the activities of mothers.

The purpose of this chapter is to estimate the independent effects of father engagement in a broad range of child-focused activities with 5-year-old children on behavioral outcomes when the child is 9 years old. No longer infants or toddlers, and on the cusp of school, 5-year-old children have received less attention by researchers. Early school years are an important time in which the developmental gains reached in earlier periods begin to establish patterns of behavior that are critical as children learn and grow (Waldfogel, 2006). How important is parental engagement, especially that of fathers, in reinforcing these behaviors at this stage?

The outcome of interest is the externalizing and internalizing behaviors of children, measured by the Child Behavioral Checklist (CBCL), a questionnaire completed by parents to identify problem behavior in children at age 9 (Achenbach & Rescorla, 2001). We focus on the extent to which fathers' engagement in activities known to promote success in school differs from the activities of mothers, and whether fathers' engagement in these activities affect childhood behavior, independent of mother, father and child characteristics and level of engagement.

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Our study relies upon data from the Fragile Families and Child Wellbeing Survey (FFS), a longitudinal cohort survey collecting data from parents after the birth of their child with follow up interviews at specified intervals as the child matures. The survey thus provides a unique tool for accessing behaviors and the effect of such behavior as the child grows and develops in a variety of family living arrangements. We limit our sample to children born to married and cohabiting households. Though children born to single mothers and nonresident fathers are a large and growing population, by virtue of their physical separation from their children, nonresident fathers are engaged in activities with their children at much lower levels than their resident counterparts (Amato, 1998; Mincy, Jethwani, & Klempin, 2015). As a result, nonresident fathers are hardly expected to sustain a level of engagement in activities that promote positive behavior approaching equality with engagement of mothers. Despite this limitation, our study contributes to the literature by delineating differences in mothers' and fathers' engagement at a critical point in children's development, and estimating the independent effects of fathers' engagement on children's behavior in middle school.

We organize our chapter as follows: Section 2 examines the role of fathers and mothers, and how parental engagement has changed over time, while considering the increases in mothers' labor force participation and their complex work schedules. Additionally, this section explores what children need and whether equality in child engagement between the mother and father is possible or even desirable. Section 3 describes our data and methods. Section 4 describes the extent to which father engagement in activities known to affect children's behavior differs from mother engagement in the same activities, and whether father engagement affects childhood behavior, independent of the mother's characteristics and her level of engagement. Section 5 summarizes our findings, discusses study limitations, and considers implications for research and policy.

Parental Engagement: Role of Mothers and Fathers

Historical Perspective

Dramatic changes in childrearing practices have occurred over the past four centuries yet their objectives remain unchanged. Parents want to prepare their children to be self-supporting and contributing members of society. During the colonial period, this required that children learn a trade, so that they could follow in the footsteps of their fathers, who were mostly farmers, artisans, and tradesmen (Demos, 1986; Mintz, 1998). In this period, characterized by hierarchy and patriarchy, work centered on the family home, with all family members contributing to the economic well-being of the household. Wives and children remained dependent, with husbands and fathers responsible for overseeing all aspects of their lives. The father led the family in prayer, supervised the education and training of their children, directed their courtships and marriages, and was responsible for maintaining order in the

household (Mintz, 1998). Though a father orchestrated the activities of those within his household, he was not directly involved with the care and feeding of infants and very young children; this remained the domain of the mother (Demos, 1986; Mintz, 1998). Change occurred at the end of the eighteenth century, when the Industrial Revolution moved the work of most men from production in a cottage industry to a factory away from home. Children attended public schools to prepare them to succeed their fathers as factory workers. As a result, fathers became less involved in day-to-day child-rearing activities, including those related to schooling, and the home became the domain of mothers.

From the late nineteenth century to the 1920s, labor force participation among women increased, but the increase consisted primarily of unmarried women, with most leaving the workforce upon marrying (Goldin, 2006). From the 1930s through the 1950s, women's participation in paid labor increased, even among married women. The growth of female workers paralleled the increase in high school graduation rates among women, and new office technologies further increased demand for labor (Goldin, 2006). World War II contributed to the overall trend of more women entering the labor force, but its impact was somewhat limited (Goldin, 1991; Goldin, 2006). Another surge of women entering the labor force occurred between the 1950s and the 1970s, and was accompanied by an increase in part time work, with both phenomena increasing the participation of married women (Goldin, 2006; Stacey, 1997). Since the late 1970s, coinciding with the stagnation of male earnings (Leibowitz & Klerman, 1995; Mattingly & Smith, 2010), participation of women, especially among those with children under 1 year, grew (Goldin, 2006). These latest changes were driven by the increased numbers of women attending university, choosing areas of study with high job demand, and delaying the age of first marriage (Goldin, 2006; Stacey, 1997). Together, these changes have fueled the growth of dual earner households. Less than 5% of married women were employed in 1890 (Goldin, 1991); today, that figure exceeds 56% (U.S. Bureau of Labor Statistics, 2014). As of 2000, 53.5% of all married couples rely on the income of both husband and wife (Meteyer & Perry-Jenkins, 2010; Presser, 2003). Of those households, 57.7% have children under 6 years of age (Presser, 2003).

A more recent trend affecting dual earner households is the increased number of jobs with nonstandard hours, including rotating schedules and weekend work. For many married and cohabiting couples with children, this has created a further layer of complexity in managing household chores and childcare (Mintz, 1998; Presser, 2003). Working mothers must serve the competing interests of work and caring for children. To avoid childcare costs, fathers have also become more involved in child-rearing, especially when one parent works nonstandard hours and families have preschool or school-age children (Presser, 2003; Waldfogel, 2006).

The Needs of Children

Ages 5–8, classified as early school (Barnard & Solchany, 2002), are a time of dramatic change and development, and school represents a major transition point.

During this period, children still need some parental caregiving but much less than they required at earlier ages. Their language and thought processes begin to develop and grow in what Piaget, (1964) referred to as the pre-operations stage. Despite the development of early reasoning skills at this stage, children are not yet able to translate their knowledge into conceptual thought (Piaget, 1964). Additionally, children must master new vocabulary, which, in turn, develops their language skills and enriches thinking and verbal expression (Waldfogel, 2006).

Leaving the home environment to attend school also requires important changes on the behavioral front, especially for children who have not attended preschool. For these children, school offers a new structure and routine, and for others, it often involves moving into a new school with new children. Secure attachments to parents and other caregivers can help children at this stage manage the new environment successfully. Behavioral and emotional development is a significant part of their overall success. For example, children must learn to engage in healthy competition with their peers, and gain competence and a positive sense of self. They must solidify mental images of family, and must learn how to make decisions (Barnard & Solchany, 2002). One of the more challenging tasks during this period is developing friendships (Waldfogel, 2006), an ability that becomes more important as children move towards their middle school years and adolescence. Forming and maintaining friendships requires that children learn to cooperate and share while respecting the rights of other children and adults in the classroom (Barnard & Solchany, 2002). As children begin to assess the demands of social and nonsocial situations and monitor their behaviors accordingly, they are exhibiting self-regulation, a central developmental achievement (Kopp, 1982).

Self-regulation has been defined by a variety of behaviors including the abilities of the child to self calm and manage emotional distress, to delay in acting upon a goal or desire, and to comply with a request (Kopp, 1982). Early self-regulation can be the result of external monitors, for example, a parent or teacher, but self-regulation is initiated autonomously, with the goal of increased competence as the child matures (Grolnick & Ryan, 1989; Kopp, 1982). In general, poor self-regulation skills can result in external and internal problem behaviors. Negative emotions expressed at others are manifest as externalizing behaviors and are the result of underdeveloped self-regulation skills (Aunola & Nurmi, 2005; Eisenberg et al., 2001). Children with externalizing problem behaviors can exhibit anger, frustration, and aggression. Overly strong self-regulation can produce internalizing problem behaviors. Internalizing problems create the opposite effect, directing feelings inwardly. Externalizing and internalizing behaviors have been found to be comparatively stable through the early school years, and both can lead to a variety of problems impacting a child's later success (Aunola & Nurmi, 2005).

Self-regulation plays an important role in the school environment, as children are working to cooperate with their peers in the classroom, learning to share, taking turns, following directions, and controlling attention. Self-regulation can promote school readiness through fostering a balance between cognition and emotion, potentially averting early school failure (Blair & Diamond, 2008). For example, self-regulation is associated with increased motivation and success in school (Blair & Diamond, 2008; Grolnick & Ryan, 1989) and good attention skills have been shown

to predict later school achievement (Duncan et al., 2007). Poor social and emotional skills of one child can distract other children in the classroom. Therefore, mastery is important, not only for an individual child, but also for the other children in the classroom.

Parent–Child Engagement

Children's needs vary with their developmental stage, and parental activities build upon the skills of the developing child. For infants and very young children, a large number of the childcare tasks involve direct caregiving, in addition to play, reading, and skill development with one or both parents. Though fathers are moving slowly toward equal participation in the care of their children, there remain differences in the type and levels of their involvement (Amato, 1998; Meteyer & Perry-Jenkins, 2010; Parke, 2002). Some fathers are quite involved with their children while others prefer a more traditional arrangement (Bonney, Kelley, & Levant, 1999). Research has shown the benefits of father involvement (Brown et al., 2001; Lamb, 2010; Lamb & Lewis, 2010; Tamis-LeMonda et al., 2013) and that infants form attachments to both parents (Lamb, 2010; Lamb et al., 1987; Marsiglio & Roy, 2012). Yet most studies show that regardless of whether the family is dual or single earner, mothers still have more frequent levels of interaction (Brown et al., 2001; Francis-Connolly, 2000; Meteyer & Perry-Jenkins, 2010; Mintz, 1998; Presser, 2003).

Parental engagement can support the development of cognitive and behavioral skills in the child, beginning in infancy (Brown et al., 2001), and is displayed in a range of activities, from nurturance, parental warmth, and teaching skills, to language use, and disciplinary styles (Brooks-Gunn & Markman, 2005). For infants, engagement focuses on caregiving activities. As children grow, their needs expand to include activities to promote school readiness. These might include storytelling, games and play, shared child/parental reading, and special outings. As children reach school age, the focus remains on the development of behavioral and cognitive skills to help prepare them for a successful transition to school. For a number of children, school may be the first time they spend a significant portion of their day away from home and from their parents, who provide all of the child's resources.

The rise of the dual earner household often means that both parents are involved in childcare, especially in poor and working-class families. The involvement of both parents might offer children an advantage. First, if mothers and fathers each have unique contributions to make, or if their behaviors complement one another, more father involvement may offer benefits. Second, if both parents behave in a similar fashion, father involvement may serve to supplement and reinforce maternal behavior. We also allow for a third possibility, that mothers and fathers may do the same things, but may do them differently, leading to different child outcomes.

Parental interaction with infants and toddlers has been studied extensively. Fathers and mothers are similar in some respects and different in others. Like mothers, fathers are sensitive to infant cues (e.g., cries and smiles) and both parents respond similarly when presented with their infant (Lamb & Lewis, 2010; Lamb

et al., 1987). Mothers and fathers are equally apprehensive about leaving their infant in the care of others, and both adjust their speech patterns when talking to their infant (Lamb & Lewis, 2010). There are also differences in parental behaviors, some of which arise quite early. In a small-scale study in a laboratory setting with young infants, father and mother interactions were examined. Results showed that fathers engaged in more physical play than mothers, including finger tapping games such as running fingers up an infant's arm, while mothers were more verbal and their actions more contained (Yogman et al., 1977). Though there were clear differences in their play, both parents provided a responsive and supportive environment for their young infant. Other studies have also found differences between parental interactions, with fathers providing more physically stimulating play than mothers (Cabrera, Fitzgerald, Bradley, & Roggman (2014), while mothers are a more reliable source of comfort, and are more likely to kiss, hug, smile, and hold their child (Lamb & Lewis, 2010; Lamb et al., 1987). These differences are likely the result of gender socialization rather than inherent physiological characteristics (Lamb et al., 1987).

As children move beyond infancy, behavior by one or both parents can be modeled. By providing emotional and financial support, resolving conflicts through compromise, and communicating clearly and openly, a father can model positive relationship behavior. Children who learn through direct observation are more likely to experience positive relationships themselves, including intimate ones. Additionally, parents who support one another's decisions and establish clear and consistent boundaries can help children learn social norms and values, making it easier to adjust to the demands of school and later, the workplace (Amato, 1998).

In a review of the literature on parental engagement, Cabrera, Fitzgerald, Bradley, and Roggman (2014) acknowledge that biological differences between men and women contribute to differences in maternal and paternal behavior, but they also note the role of values, culture, education, and family structure in these differences. Most importantly, they argue that mothers and fathers complement one another. The varying activities and patterns of interactions of fathers and mothers can benefit children by promoting a wider range of social skills (Yogman et al., 1977). In addition to activities and play offered by parents, the relationship between mother and father can impact their child indirectly. A wife with a supportive husband may feel more confident about her capabilities, improving the quality of her parenting skills and thus, her interactions with their child (Amato, 1998).

There is ongoing discussion about the differences between mothering and fathering of infants and toddlers and how each influence child development (Cabrera et al., 2014). However, there has been less attention paid to the differences between father and mother interactions with early school aged children, and how the effects of paternal engagement might differ from the effects of maternal engagement with children at this critical juncture. Compared to the first 3 years of life when children are learning language, locomotion, physical boundaries, and the beginning of regulation skills, age five seems much less dramatic. However, we would argue that many of the skills and behaviors learned at age five continue to build on earlier development, and may help set the course for later school achievement and

successful relationships in life. If engagement can impact school readiness skills for 5-year-old children, their behavior and academic achievement may improve as a result. We hypothesized that father engagement would impact childhood behaviors independently of the mother and her level of engagement. This study addresses these questions in the following sections.

Data and Methods

Data

Our study uses data from the FFCWS, a longitudinal, birth-cohort survey, which is nationally representative of births in cities of 200,000 or more. The survey includes 4898 newborn children and their parents, of which 3711 were born in nonmarital relationships and 1187 were born to married parents, in 75 hospitals across 20 cities (Reichman et al., 2001). The baseline data were collected at hospitals between 1998 and 2000, and successive interviews were completed by telephone when the focal child was 1, 3, 5, and 9 years of age. The response rates at baseline and in each of the following waves were 100, 89, 86, 85, and 72% for mothers, and 78, 69, 67, 64, and 54% for fathers, respectively (Bendheim-Thoman Center for Research on Child Well-being, 2008, 2010).

The FFCWS provides several benefits for studying the effect of father's involvement on child behavioral problems, the most important of which was the rich information about the father as reported by the mother, as well as responses from fathers. These data facilitate a comprehensive understanding of how father engagement plays a role in the development of children. Second, the FFCWS also provides extensive measures of characteristics of parents and children, helping us to avoid confounding variables. Lastly, the longitudinal data make it possible to examine causal relationships between early paternal involvement, observed at the fourth wave when the child was 5 years old, and later child behavior outcomes, observed at the fifth wave when the child was 9 years old, controlling for predictors at birth that would limit the possibility of reverse causation.

Our study used an analytic sample that measures child behavioral problems, the outcome variable of interest, reported by primary caregivers. In the FFCWS study, primary caregivers were asked about the child's behavior at several waves. Our study relies on the most recent wave when children are age nine. In this wave, the FFCWS research team conducted an in-home interview with the child's primary caregiver, 92.4% of whom were the child's mother, regarding the behavior of the child and family involvement. For children not living with either of their biological parents, their new primary caregiver, often a relative was interviewed.

Our analytic sample included 1113 primary caregivers, after excluding caregivers who reported the following conditions: (1) father is unknown/does not know of child in both years 1 and 2, (2) father is deceased, (3) father has primary custody,

and (4) father is not living with his children's biological mother at year 5. In addition, we excluded observations when the primary caregivers did not participate in the primary caregiver self-administered survey, as well as observations when the primary caregiver provided incomplete information on any father engagement measures.

Measures

Children's Behavioral Problems To measure our outcome of interest, child behavioral problems when the focal children were 9 years of age, we used the Achenbach Child Behavior Checklist/6–18 (CBCL/6–18). CBCL is a widely accepted measure of behavioral problems for children, ages 6–18 (Achenbach & Rescorla, 2001). The primary caregivers were asked 103 items using a Likert-type scale to rate their child's behavior from 0 (not true) to 2 (very true or often true). Among 11 subcategories of CBCL, our study only focused on internalizing problems (anxious/depressed + withdrawn/depressed + somatic complaints, $\alpha = 0.89$), and externalizing problems (rule-breaking behavior + aggressive behavior, $\alpha = 0.92$).

Treatment Variable Our treatment variable, father engagement, is intended as a proxy for age appropriate activities that have been found to promote children's cognitive development and behavior. The variable is an index, comprised of eight separate questions, each measuring an activity that a father may do with his child. All information on engagement is reported by the primary caregiver. Specifically, we attempted to estimate the causal impact of father engagement on internalizing and externalizing behavior problems. To minimize selection bias associated with the relatively lower response rate of fathers, we relied on mother's reports of engagement by fathers. We introduced a control of maternal engagement during the last portion of our analysis to determine if the size or significance of the association between father engagement and child behavior changed as a result.

The engagement measures involved eight age appropriate activities, measured by the number of days per week that the parent engaged in the activity, not the amount of time spent during the actual engagement. Each item was coded 0–7, with 0 indicating that the parent did not engage in the activity during the week, and 7 indicating that they have engaged in the activity every day of the week. The items were: sings songs or nursery rhymes with his/her child, reads stories to his/her child, tells stories to his/her child, plays inside with blocks, toys or Legos with his/her child, tells his child he/she appreciated something child did, plays outside in the yard or park with his/her child, takes his/her child to a special event, activity or outing, and watches a video or television program with his/her child. Scores on the eight items were averaged for an easier interpretation of results. More specifically, our engagement measure is comprised of the total number of days spent in each activity, divided by the total number of activities, in our case, 8. This creates an average.

Control Variables To avoid possible omitted variables bias, we included a number of controls on maternal, paternal, and child characteristics. All control variables were mother reported at baseline. For maternal characteristics, we used five demographic characteristics, including: race, age, educational attainment, household income, and mother's depression. Five dummy variables were created to measure race (white/non-Hispanic, black/non-Hispanic, Hispanic, and other) along with four dummy variables to measure educational attainment (less than high school-, high school or equivalent, some college or technical school, and college or graduate school). Mother's age was a continuous variable, recorded at baseline. We also included a continuous measure of the mother's household income in dollars, a constructed variable that is provided by the research team at FFCWS. In our multivariate analysis, we divided the income into US$5000 increments. Maternal depression was measured based on the Composite International Diagnostic Interview-Short Form (CIDI-SF). Mothers were asked whether they had been feeling sad, blue, depressed (depression), or were losing interest in things that were usually pleasurable (dysphoria) in the past year and whether the feeling had lasted more than 2 weeks. If they answered yes to any of the items, they were asked more specific questions. These included whether they experienced: (1) losing interest, (2) feeling tired, (3) gain or loss in weight, (4) trouble falling asleep (5) trouble concentrating, (6) feeling down, and (7) thinking about death. We used constructed variables for scoring this measure provided by FFCWS. The scale required that mothers have symptoms lasting about half of the day. The constructed variable for the depression measurement is dichotomous, indicating whether or not the mother meets the depression criteria.

To control for paternal characteristics that might affect child behavior, we included two variables: father's employment status at baseline and whether the father was born in the USA. To measure the first characteristic, we constructed a binary variable that was set to 1 if the mother reported that the father was working last week and 0 otherwise. We also included the father's nativity, because a foreign born father might have language or cultural barriers impacting engagement with his USA born child. The variable was based on the father's report at the baseline, but we added more observations of fathers who later reported the status following 1, 3, 5, and 9 years. If the father was born in the USA, we coded the nativity variable as 1 and 0 if otherwise. For child characteristics, we included two binary measures: whether the child was low-birth weight or not (1 = yes, 0 = no, or otherwise) and gender (1 = boy, 0 = girl).

Methods

Before examining the effect of father engagement on child behavioral problems, we considered whether fathers' level of engagement in each domain of activity was different from the mother's level of engagement. The eight engagement activities were categorized into three domains: sing a song, read stories, and tell stories were

called "literacy/language development;" play inside, play outside, take to a special event, and watch TV and video were called "play;" and tells his/her child he/she appreciated something the child did was called "warmth." Then we conducted pairwise t-tests to see whether there were mean differences between father and mother engagement in each of paired domains.

In our descriptive analyses, we wanted a measure of the extent to which fathers and mothers allocated the time they spent with their children across different activities. To accomplish this, we calculated the ratio of engagement in each domain relative to average engagement, as described above. We created separate measures for mothers and fathers. When this ratio is greater than 1 for a particular activity, the parent has above average levels of engagement in that particular activity. When it is less than 1, the parent has below average levels of engagement in that particular activity. Finally, a pairwise t-test was conducted to identify whether the fathers and mothers allocated their time with their children differently across the activities.

Lastly, we used hierarchical multiple regression to estimate the effect of father engagement on internalizing and externalizing behaviors. A common use of hierarchical multiple regression is to understand the effect of an independent variable (or set of independent variables) on a dependent variable when potential covariates have been taken into account. In this situation, the potential covariates (maternal, paternal, and child characteristics) are entered first in the regression equation (Step 1). After this, the independent variable(s) of interest (mother engagement and father engagement in our case) is entered into the equation to see whether the entered independent variable(s) make a significant contribution on the dependent variable (Step 2 and Step 3). Hierarchical multiple regression uses the magnitude of the increase in R^2 to determine if the addition of independent variable(s) improves the prediction of dependent variable.

Surveys with many items, like CBCL/6–18 (103 items) tend to be highly right-skewed and clustered around zero. The same held true for internalizing and externalizing behaviors. We used a logarithmic transformation so the distribution of our residuals approximated normality. Since the log transformation cannot handle the presence of zeros in outcome variables, we added 1 before the transformation in order to make all values positive. As a result, our ordinary least square estimates have the desirable maximum likelihood properties.

Results

Descriptive Statistics of Engagement Measures

Table 1 presents mean values of the eight items included in our engagement measure for both mothers and fathers. Not surprisingly, mothers are more likely than fathers to engage in each of the eight activities with their children, confirming the consensus found in the literature. Table 2 indicates how mothers and fathers allocate

Table 1 Mean values of engagement items for mothers and fathers at age 5

Categories	Activities	Father engagement	Mother engagement	*P*
		M (SD)	M (SD)	
Literacy/language development	Sing a song	3.00 (2.186)	4.76 (2.164)	***
	Read stories	3.05 (2.203)	4.87 (1.981)	***
	Tell stories	3.25 (2.214)	4.36 (2.300)	***
Play	Play inside	3.90 (2.296)	4.85 (2.221)	***
	Play outside	3.31 (2.044)	3.94 (2.102)	***
	Take to a special event	2.66 (1.626)	3.42 (1.724)	***
	Watch TV or video	4.45 (2.258)	5.03 (2.161)	***
Warmth	Word of appreciation	5.64 (1.838)	6.49 (1.126)	***
Total engagement (average)		3.66 (1.379)	4.71 (1.357)	***

Data are from the Fragile Families and Child Wellbeing Study
SD standard deviation
*$p<0.05$, **$p<0.01$, ***$p<0.001$

Table 2 Average amount of time spent per week for engagement activities by each parent

Categories	Activities	Activity over father engagement	Activity over mother engagement	*P*
		M (SD)	M (SD)	
Literacy/language development	Sing a song	0.77 (0.468)	0.99 (0.405)	***
	Read stories	0.78 (0.467)	1.03 (0.382)	***
	Tell stories	0.83 (0.463)	0.89 (0.411)	**
Play	Play inside	1.02 (0.487)	1.01 (0.439)	
	Play outside	0.90 (0.514)	0.82 (0.425)	***
	Take to a special event	0.75 (0.435)	0.73 (0.357)	
	Watch TV or video	1.27 (0.686)	1.09 (0.498)	***
Warmth	Word of appreciation	1.66 (0.671)	1.44 (0.397)	***

Data are from the Fragile Families and Child Wellbeing Study
SD standard deviation
*$p<0.05$, **$p<0.01$, ***$p<0.001$

their time with children across the activities. Fathers and mothers spent average portions of their time playing outside with children and below average portions of their time taking children to special events. In these respects, the engagement of mothers and fathers was the same. Fathers spent below average portions of their time, but more than mothers, playing outside ($M=0.90$, $SD=0.514$), and above average portions displaying warmth ($M=1.66$, $SD=0.671$) and watching TV or video ($M=1.27$, $SD=0.686$) with their children. In contrast, mothers spent average or above average portions of their time singing songs and telling stories to their children, respectively. Father spent below average portions of their time with their children in these activities.

Estimating Effects of Father Engagement on Child Behavioral Problems

A hierarchical multiple regression was conducted to determine if the addition of father engagement improved the prediction of child behavioral problems over and above maternal, paternal, child characteristics, and mother engagement, all of which have shown significant associations with child behaviors (Atzaba-Poria, Pike, & Deater-Deckard, 2004; Baldwin & Cain, 1980; Brooks-Gunn & Duncan, 1997; Cabrera et al., 2004; Furstenberg & Harris, 1993; Hawkins, Amato & King, 2007; Lytton & Romney, 1991; McAdoo, 1978; McCormick, Gortmaker, & Sobol, 1990). Results are given in Table 3 and 4. Before analyzing the results, we conducted a variance inflation factor (VIF) test in each step to check multi-collinearity. We found no variables with values of the test statistic above 3 in any step, indicating that multi-collinearity is not a serious problem in our data. We also examined the normality of residuals using a standardized normal probability (P–P) plot. We found the residuals were quite close to a normal distribution.

Internalizing Behaviors Control variables including paternal, maternal, and child characteristics were initially entered in Step 1, and there was a significant amount of variance explained, $R^2 = 0.045$, F (12, 1100) = 3.834, $P < 0.001$. The standardized coefficient of African American was significant ($p < 0.01$), indicating that being African American was negatively associated with internalizing behaviors problems. Household income (measured in units of $5000) was also significantly and negatively associated with internalizing behavioral problems ($P < 0.01$). Having maternal depression is associated with a statistically significant increase in the child's internalizing behaviors ($P < 0.001$). Next, mother engagement at year 5 was entered in Step 2. Doing so did not contribute significantly to the ability of our model to explain the variation in internalizing behaviors as indicated by the value of the adjusted R^2. By contrast, the addition of father engagement at year 5 in Step 3 led to a significant increase in the adjusted R^2 (0.032 to 0.041), F (1, 1098) = 9.952, $P < 0.01$. The standardized coefficient of father engagement was negative and significant ($P < 0.01$), indicating that the father engagement at year 5 had a significant and negative affect on internalizing behavioral problems.

Externalizing Behaviors Control variables including paternal, maternal, and child characteristics were initially entered in Step 1, and there was a significant amount of variance explained, $R^2 = 0.056$, F (12, 1100) = 4.815, $p < 0.001$. The standardized coefficient of the racial category, Hispanic, was significant ($p < 0.001$), indicating that Hispanic children exhibited fewer externalizing behavioral problems than white children. Household income was also significantly and negatively associated with externalizing behavior problems ($p < 0.01$). Male children were more likely to exhibit externalizing behaviors than female children ($p < 0.001$). Having a mother who is depressed is associated with a significant increase in the child's externalizing problem behaviors ($p < 0.05$)

Next, mother engagement at year 5 was entered in Step 2, which significantly improved our models' ability to explain the variation in externalizing behavior

Table 3 Hierarchical multiple regression predicting children's internalizing behavior from maternal, paternal and child characteristics, mother engagement, and father engagement

		Internalizing behaviors					
		Step 1		Step 2		Step 3	
		B (SE)	β	B (SE)	β	B (SE)	β
Control variables	*Maternal characteristics*						
	Race *(Caucasian)*						
	African American	−0.227 (0.067)	−0.128**	−0.230 (0.067)	−0.130**	−0.223 (0.068)	−0.126**
	Hispanic	−0.084 (0.075)	−0.045	−0.087 (0.075)	−0.046	−0.078 (0.075)	−0.042
	Others	0.046 (0.124)	0.012	0.047 (0.124)	0.012	0.061	0.016
	Mother age	−0.007 (0.005)	−0.048	−0.007 (0.005)	−0.059	−0.007 (0.005)	−0.053
	Mother education *(Less than high school)*						
	High school	−0.103 (0.073)	−0.055	−0.112 (0.073)	−0.055	−0.115 (0.073)	−0.061
	Some college	−0.113 (0.076)	−0.060	−0.112 (0.076)	−0.059	−0.118 (0.076)	−0.062
	College or more	−0.012 (0.101)	−0.006	−0.011 (0.101)	−0.005	−0.027 (0.101)	−0.013
	Household income/$5000	−0.012 (0.004)	−0.107**	−0.012 (0.004)	−0.108**	−0.012 (0.004)	−0.114**
	Maternal depression	0.341 (0.076)	0.136***	0.341 (0.076)	0.136***	0.332 (0.076)	0.132***
	Paternal characteristics						
	Father US born	−0.047 (0.066)	−0.024	−0.044 (0.066)	−0.022	−0.033 (0.067)	0.017
	Father work a week	−0.034 (0.098)	−0.010	−0.033 (0.098)	−0.010	−0.040 (0.098)	−0.013
	Child's characteristics						
	Child male	−0.035	−0.021	−0.037	−0.022	−0.038	−0.022
		(0.051)		(0.051)		(0.051)	
	Child low birth weight	0.085 (0.102)	0.025	0.085 (0.102)	0.025	0.098 (0.102)	0.029
Independent variables	*Engagement*						
	Mother engagement			−0.009 (0.023)	−0.011	0.043 (0.028)	0.056
	Father engagement					−0.072 (0.023)	−0.118**
	R^2	0.045		0.045		0.054	
	Adj R^2	0.033		0.032		0.041	
	F(sig)	3.834***		0.135		9.952**	

Data are from the Fragile Families and Child Wellbeing Study

SE standard error

*$p<0.05$, **$p<0.01$, ***$p<0.001$ the statistic 12.1

Table 4 Hierarchical multiple regression predicting children's externalizing behavior from maternal, paternal and child characteristics, mother engagement, and father engagement

		Externalizing behaviors					
		Step 1		Step 2		Step 3	
		B (SE)	β	B (SE)	β	B (SE)	β
Control variables	*Maternal characteristics*						
	Race *(Caucasian)*						
	African American	−0.130 (0.075)	−0.065	−0.146 (0.076)	−0.074	−0.140 (0.075)	−0.070
	Hispanic	−0.249 (0.084)	−0.119**	−0.263 (0.084)	−0.125**	−0.255 (0.084)	−0.121***
	Others	−0.097 (0.139)	−0.022	−0.087 (0.139)	−0.020	−0.073 (0.138)	−0.017
	Mother age	−0.011 (0.006)	−0.069	−0.012 (0.006)	−0.077	−0.012 (0.006)	−0.080
	Mother education *(Less than high school)*						
	High school	0.087 (0.081)	−0.041	−0.085 (0.081)	−0.040	−0.098 (0.081)	−0.046
	Some college	−0.112 (0.085)	−0.053	−0.108 (0.085)	−0.051	−0.114 (0.085)	−0.054
	College or more	−0.084 (0.113)	−0.037	−0.077 (0.113)	−0.034	−0.095 (0.113)	−0.041
	Household income/$5000	−0.012 (0.005)	−0.098**	−0.012 (0.005)	−0.101*	−0.013 (0.005)	−0.107**
	Maternal depression	0.209 (0.085)	0.074*	0.208 (0.085)	0.074*	0.199 (0.085)	0.070*
	Paternal characteristics						
	Father US born	0.071 (0.074)	0.032	0.091 (0.075)	0.041	0.102 (0.075)	0.045
	Father work a week	−0.134 (0.110)	−0.037	−0.128 (0.110)	−0.035	−0.135 (0.110)	−0.037
	Child's characteristics						
	Child male	0.262 (0.057)	0.139***	0.253 (0.057)	0.134***	0.252 (0.056)	0.133***
	Child low birth weight	0.088 (0.114)	0.023	0.085 (0.114)	0.023	0.099 (0.114)	0.026
Independent variables	*Engagement*						
	Mother engagement			−0.053 (0.026)	−0.074*	0.000 (0.032)	0.000
	Father engagement					−0.074 (0.025)	−0.107**
	R^2	0.056		0.059		0.067	
	Adj R^2	0.044		0.047		0.053	
	F(sig)	4.815***		4.085*		8.376**	

Data are from the Fragile Families and Child Wellbeing Study

SE standard error

*$p<0.05$, **$p<0.01$, ***$p<0.001$

problems ($R^2 = 0.059$, F (1, 1099) = 4.085, $p < 0.05$. The standardized coefficient indicated that mother's engagement at year 5 was negative and significantly reduced ($p < 0.05$). Finally, the addition of father engagement at year 5 in Step 3 led to a significant increase in the adjusted R^2 (0.059 to 0.067), F (1, 1098) = 8.376, $p < 0.01$. The standardized coefficient indicated that fathers' engagement at year 5 significantly reduced externalizing behaviors problems. However, mother engagement was no longer statistically significant. Thus, the addition of fathers' engagement adds to the explanatory power of our model, but it is hard to say to what degree this effect of mother's and father's engagement on externalizing behavioral problems are independent.

Summary and Implications

We know much about the effects of mothers on children at various developmental stages and are learning more about the effects of fathers' engagement with infants and toddlers. The transition to school, which occurs for many children at age 5, is a critical stage of their development as they adjust to adults outside the home and other children. Additionally, increases in labor force participation among women in two-parent families and nonstandard hours worked by at least one parent in such families, is thrusting more fathers into care-giving roles. Unfortunately, we know much less about father engagement with children as they transition to school, how fathers' engagement differs from mothers' engagement at this critical stage, and the effects of father engagement on children's behavior. This chapter examines the extent to which fathers are engaged with 5-year-old children, differences between fathers' engagement and mothers' engagement, and the independent effect of father engagement on children's behavioral problems at 9 years of age.

Not surprisingly, mothers were more likely than fathers to engage in play, warmth, and literacy activities with their child, although as compared with mothers, fathers allocated more of the time they were engaged with children to playing outside, watching TV or video, and displaying warmth to their children. We found that fathers' engagement added significantly to the explanatory power of a model of children's behavior, which already controlled for the demographic characteristics of parents and children, mother's education, and household income. Fathers' engagement had a negative association with internalizing and externalizing behavior problems, although it was difficult to disentangle the latter association from mothers' engagement. We must interpret our findings with caution, because our model lacked controls for mother's employment status, and relied upon mothers' reports of fathers' engagement rather than fathers' direct reports. Thus, our findings were subject to omitted variables and reporter bias, although they were less likely to be subject to selection bias owing to higher nonresponse rates of fathers.

Nevertheless, future studies should examine the effects of father engagement on boys and girls separately, since our study found that fathers' engagement is independently associated with internalizing behavior problems, which girls are more likely

to exhibit in school. Moreover, although it was difficult to disentangle the effects of fathers' engagement on externalizing behavior problems from the effects of mothers' engagement, boys are more likely to exhibit such problems in school. Some studies have shown that fathers are more likely to engage with their male children, who in turn, have stronger responses than girls to father involvement.

There are some limitations in our findings. This study did not control for whether the children had been placed in daycare at any point in their lives. Daycare can provide an enriching experience for children, but evidence suggests that when children are placed in daycare prior to the age of one, behavioral and academic problems can develop as a result, even in high quality centers (Waldfogel, 2006). Some studies have shown that the effects wane over time. However, not all studies have produced similar findings. Alternatively, children in poor quality daycare also suffer consequences. High quality, center based care offers the greatest benefits to families with children, but lack of affordability and standard hours of operation mean that this option is not available to all families.

Another limitation worth noting is that we relied on maternal reports on father engagement. This had the benefit of keeping our sample size larger as a lower number of fathers participated in the study, relative to mothers. However, maternal reports might be affected by relationship quality. In short, mothers with a better co-parenting relationship with their child's father might be more likely to rate higher levels of engagement, while mothers with a poor quality relationship might be inclined to do the opposite. Relying instead on father reports may create selection bias, and fathers may be more generous in detailing their engagement to appear more involved.

Finally, our findings have some implications for policy. First, encouraging and facilitating father involvement in the lives of children has been a deliberate and growing focus of family policies (e.g., child welfare and child support enforcement) directed toward nonresident fathers. By contrast, encouraging and facilitating father involvement has not been a consistent focus of policies geared toward two-parent families. For example, since the 1920s, the Women's Bureau, a division of the U.S. Department of Labor, has been charged with the responsibility, "to formulate standards and policies, to promote the welfare of wage-earning women, improve their working conditions, increase their efficiency, and advance their opportunities for profitable employment" (Our History, para. 1). In pursuit of this charge, the Women's Bureau has worked to increase skills training, pay-equity, and flex-time options for working women and encourage employer-sponsored child care. It has also worked to expand childcare options for women working nonstandard hours. However, an alternative approach is to improve the quality of father–child interactions for those two-parent families in which the mother works nonstandard hours and the husband provides childcare. To our knowledge, the Women's Bureau has not pursued this option, although its mission states, "The Women's Bureau develops policies and standards … to safeguard the interests of working women; to advocate for their equality and economic security for themselves and their families" (Our Mission, para. 1).

Second, family engagement provides a vehicle for Head Start to incorporate fathers in their services to children from 3 to 5 years old. However, Head Start practitioners note several impediments to engaging fathers. Key impediments include staff and leadership resistance and the risk of compromising eligibility for mothers and children served by the program if applications for head start collected information about fathers' earnings. If our findings about the independent effects of father engagement on child well-being are supported by subsequent research, these impediments must be addressed and overcome.

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