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Father Involvement Among Nonresident Dads: Does Paternity Leave Matter?

Objective: This article examines whether paternity leave influences father involvement among nonresident fathers, if associations differ by coresidential status, and whether leave is a stronger predictor of nonresident father involvement than other indicators of father identity or interest.

Background: Fathering promotes child development, yet many children are born to unmarried parents and do not live with their fathers. Paternity leave may increase fathering among nonresident fathers, but extant research has largely overlooked these fathers.

Method: Using the Fragile Families and Child Wellbeing Study (N~2,000), a longitudinal birth cohort of largely low-income families, this study examines the link between paternity leave and parenting using regression analyses.

Results: Leave-taking was associated with higher reports of engagement for both coresident and nonresident fathers, but for maternal reports of trust, coparenting, and responsibility, the positive associations with leave-taking were concentrated among nonresident fathers. Nonresident fathers who took leave were more

likely to provide in-kind child support but not monetary support. Although leave, prenatal involvement, and being at the birth were all associated with greater involvement among nonresident fathers, mothers' reports of fathering were more strongly influenced by prenatal involvement and being at the hospital for the birth than leave.

Conclusion: Leave-taking is associated with maternal reports of trust, coparenting, and responsibility for nonresident fathers but not coresident fathers. Leave and prenatal involvement predict nonresident father involvement.

Today, 40% of children are born to unmarried parents (Martin, Hamilton, Osterman, Driscoll, & Mathews, 2017) and about 16% of children are not living with their father at the time of their birth (Manning, 2015). Nonresident fatherhood has implications for children's well-being as father involvement promotes child development (e.g., Lamb, 2010; Tamis-LeMonda, Shannon, Cabrera, & Lamb, 2004) and fathers who do not live with their child are less likely to be engaged parents (Fagan & Barnett, 2003). Thus, there is increasing interest in policies and programs that promote nonresident father engagement (Alamillo & Zaveri, 2018).

One way of increasing father involvement, especially among nonresident fathers, may be through paternity leave (Nepomnyaschy & Waldfogel, 2007) as leave provides fathers with time to spend with the child, can promote attachment, may increase father identity, and

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may show mothers that the fathers are sincere about engaging with their newborn child. The United States does not offer paid paternal leave, yet nearly 90% of U.S. fathers take some time off after the birth of a child (Department of Labor, 2016), suggesting that many nonresident fathers take paternity leave. Although one study found that paternity leave boosts nonresident fathers' engagement and likelihood of looking after the child when the mother needs (Knoester, Petts, & Pragg, 2019), no research has considered associations with mothers' perceptions of coparenting and trust, or fathering measures only relevant to nonresident fathers (like child support). Thus, the unique role of leave-taking among nonresident fathers has been largely overlooked. This is an oversight given the importance of fathers in promoting child development and the high prevalence of nonresident fathers.

Most research on leave-taking has focused on coresident fathers (e.g., Nepomnyaschy & Waldfogel, 2007). Our study builds on earlier work by exploring the unique experience of nonresident fathers using data from the Fragile Families and Child Wellbeing Study (FFCWS), a longitudinal birth cohort study of largely low-income parents and their children. By studying low-income families, we focus on a population of particular policy interest as disadvantaged fathers are more likely to be nonresidential and, thus, less likely to be highly engaged fathers (Marsiglio & Roy, 2012; McLanahan & Percheski, 2008).

The present study addresses a few fundamental gaps in the extant literature. First, we examine the correlates and consequences of paternity leave comparing coresident and nonresident fathers. We study the correlates of leave-taking among nonresident fathers to understand whether they differ from coresident fathers. We also compare the association between paternity leave and a broader array of father involvement measures than previously examined for coresident and nonresident fathers—engagement, trust, coparenting, shared responsibility—indicators that are linked with children's well-being (Lamb, 2000). By examining maternal reports of trust, coparenting, and shared responsibility, we consider indicators of involvement that may be particularly salient to nonresident fathers if they influence their access to their child. Second, our study is the first to examine links between leave and measures of nonresident paternal

involvement that have been shown to improve child wellbeing and increase father involvement over time (Nepomnyaschy, 2007)—days of contact, in-kind support, formal child support, and informal child support. Because prior research has largely focused on coresident fathers, less emphasis has been placed on outcomes that may increase nonresident father involvement in parenting.

Last, we take up emerging findings indicating that paternal involvement prior to the birth may be an effective tool for increasing father involvement in parenting (Walsh et al., 2014). We do this by contrasting paternity leave with other important predictors of father involvement—specifically fathers' own attitudes toward fathering, prenatal involvement, and presence in the hospital at the birth—and their interactions with leave-taking. Although some research has considered father identity as compared to leave (Knoester et al., 2019), nonresident fathers have been overlooked. By including each of these potential predictors in the same model, we can understand the relative importance of paternity leave as compared to other predictors of involvement for nonresident fathers.

BRIEF BACKGROUND ON PATERNITY LEAVE

Currently the only U.S. national policy related to parental leave is the Family Medical Leave Act (FMLA). FMLA guarantees parents 12 weeks of unpaid job-protected leave and continued health insurance coverage for employees who worked at least 1,250 hours in the last year in companies with more than 50 employees (Klerman, Daley, & Pozniak, 2012). Although a few states and localities now offer paid parental leave, coverage is limited and only 19% of the civilian labor force has access to paid leave (Bureau of Labor Statistics, 2019a).

Despite no formal paid leave system, about 90% of U.S. fathers take some time off after the birth of a child (Department of Labor, 2016). In the current study, we follow a long line of prior research (e.g., Knoester et al., 2019; Petts, Knoester & Waldfogel, 2019) and consider any time off after the birth of the child as paternal leave. Time off and leave are frequently used interchangeably in this literature as surveys rarely distinguish formal employer-provided leave from other forms of paid or unpaid leave. In extensions, we examine differences

between paid and unpaid leave, but again cannot distinguish paid vacation from more formal leave policies.

Fathers who take leave are on average more economically advantaged than those who do not take leave and have higher levels of education (Bygren & Duvander, 2006; Nepomnyaschy & Waldfogel, 2007; O'Brien, 2009). Similarly, there are large racial/ethnic disparities in access to paid leave (Bartel, Kim, & Nam, 2019). Research also finds that about 80% of low-income fathers take leave (Pragg & Knoester, 2017), but nonresident fathers are less likely than coresident fathers to take leave (Petts, Knoester, & Li, 2020).

HOW DOES NONRESIDENT FATHER INVOLVEMENT INFLUENCE CHILD WELL-BEING?

Interest in increasing father involvement, and in particular nonresident father involvement, is driven by evidence indicating that involved fathers improve child well-being (e.g. Carlson, 2006; Lamb, 2010; Tamis-LeMonda et al., 2004). Although fathers who live with their children are more likely to be involved than nonresident fathers (Castillo, Welch, & Sarver, 2011), many studies find that nonresident father contact and support improve outcomes for children (e.g., Nepomnyaschy & Garfinkel, 2011; Nepomnyaschy, Magnuson, & Berger, 2012; Nepomnyaschy, Miller, Garasky, & Nanda, 2014).

Father involvement is thought to improve child well-being through three primary pathways: (a) availability, (b) engagement and (c) responsibility (Carlson & Magnuson, 2011; Lamb, 2000). Availability refers to a father's time with the child. In the case of nonresidential fathers, this can mean access to the child or contact (i.e., days the father sees the child), which is linked with better outcomes for children (Nepomnyaschy et al., 2012). Engagement assesses time fathers spend interacting or engaging in enriching activities with their child, and many studies show that engagement improves child learning and emotional well-being (e.g., Sethna et al., 2017). Responsibility refers to the degree to which fathers assist with arranging the child's life (e.g., taking the child to the doctor). Responsibility can affect a child directly, or indirectly through its effect on the child's mother by say, reducing

her stress. Similar to responsibility (or shared responsibility as measured in this study) are coparenting or the extent to which parents work together to raise their child (Carlson, McLanahan, & Brooks-Gunn, 2008; McHale, 1995), and trust, whether mothers have confidence in fathers' parenting abilities. Coparenting is linked directly with child well-being as well as indirectly through improved relationship and parenting quality (e.g., Belsky & Hsieh, 1998; Caldera & Lindsey, 2006; Schoppe-Sullivan, Mangelsdorf, & Frosch, 2001).

Coparenting, shared responsibility, and trust may be particularly important for nonresident fathers as the child's relationship with their father is likely to be mediated by the resident parent, also known as maternal gatekeeping. Puhlman and Palsey (Puhlman & Pasley, 2013) propose a multidimensional definition of gatekeeping wherein mothers may exert control over access to the child to either encourage father involvement or discourage father involvement. Although gatekeeping is often referred to in the context of barriers to father involvement with children, research has also demonstrated that it can act to facilitate father involvement (Fincham & Beach, 2010). Fathers who are more involved may also be more economically invested and provide resources to the child and mother that, in turn, improve child outcomes. For nonresident fathers, this may include formal and informal child support or other forms of in-kind assistance, which may increase involvement and investment (Nepomnyaschy, 2007).

WHY MIGHT PATERNITY LEAVE BE LINKED WITH NONRESIDENT FATHER INVOLVEMENT?

There are two main pathways through which paternity leave might influence nonresident father involvement. First, paternity leave may change the quality of the relationship between the father and the child, thereby increasing involvement. Second, leave-taking may affect father involvement by changing the relationship between the mother and the father—or more specifically, by signaling to the mother the father's interest in fathering.

Paternity leave may affect a father's own father identity and the father-child relationship in a few ways. First, leave itself may influence fathering by increasing men's available time to interact with the child. Research suggests that bonding early in life encourages parenting

engagement over time (Aldous, Mulligan, & Bjarnason, 1998), and that child–father attachment is similar to child–mother attachment (Lamb, 1977). Thus, early paternal engagement and attachment during paternity leave may predict later father involvement. Second, the transformative perspective (Knoester & Eggebeen, 2006) suggests that the transition to parenthood and taking leave may be particularly important if it affects father’s time allocation and changes his priorities (Bunning, 2015a; Bunning, 2015b), leading to greater involvement.

Third, leave may affect men’s identity as fathers. Identity theory (Stryker, 1968; Stryker & Burke, 2000) refers to the meaning that individuals place on specific roles that they play, such as being a father. Identities are affected by social structures, which in turn impact social behaviors. Although commitment to, and salience of, fatherhood identity may be stronger when fatherhood roles are clearly defined (e.g., married partners rather than unmarried fathers; Killewald, 2013), father identity may still increase father saliency for nonresident fathers, influencing men’s engagement in fathering. However, men with strong fatherhood salience may be the men who select into paternity leave (Pragg & Knoester, 2017). This suggests a fourth perspective, whereby paternity leave does not increase father engagement, but rather, fathers who select into taking paternity leave are those who most strongly identify with being fathers, especially among nonresident fathers, and are thus the ones who will likely be highly involved.

Paternity leave may also affect fathers’ involvement with their children indirectly through the mother. This is likely to be especially true for nonresident fathers. Nonresident fathers on average do less fathering than coresident fathers (Berger & Langton, 2011), but research suggests some of this difference is driven by reduced access to the child (Carlson & McLanahan, 2010). If paternity leave signals fathers’ willingness to participate in child rearing activities, then mothers may be more willing to involve fathers in parenting (Fagan & Barnett, 2003).

Thus, overall we hypothesize that leave-taking will increase nonresident fathers’ engagement—especially as it relates to his own reports of fathering. We also expect leave will improve mother’s perceptions of the nonresident father, thereby increasing measures of

engagement, coparenting, shared responsibility, trust, and father’s contact with the child.

Because contact with the child and the relationship quality between the mother and father are both predictors of informal and in-kind support (Nepomnyaschy, 2007), we anticipate that leave-taking will increase both the provision and amount of informal monetary and in-kind support. Less clear are links between leave and formal child support. Formal support orders are relatively uncommon among unmarried nonresident fathers (Nepomnyaschy & Garfinkel, 2010). Child support orders are more common among previously married families as compared to never married families where informal support consisting of both cash and in-kind support is more common (Edin & Nelson, 2004; Nelson, 2004). Low-income fathers may prefer informal child support if it provides leverage to access the child, or if unstable or low-wage work might make it difficult to comply with a formal child support order (Edin, 1995; Edin & Lein, 1997). Low-income mothers may also prefer informal support, especially if they are subject to welfare pass-through regulations (Nepomnyaschy & Garfinkel, 2010). Last, if nonresident fathers’ leave-taking is associated with increased coparenting behaviors, the enactment of a formal child support order may be unlikely. Thus, we do not expect to see an association between paternity leave and formal child support provision or amount, but we do anticipate leave to be associated with informal and in-kind support.

OTHER MEASURES OF FATHER SALIENCY, IDENTITY, AND INTEREST

We also consider how other measures of father identity may be linked to father involvement and compare them to links with paternity leave (Fox & Bruce, 2001). Specifically, we examine whether there are associations between father involvement and being in the hospital at the birth, a father’s positive attitude towards fathering, and prenatal involvement. For nonresident and low-income fathers, these indicators may be particularly important as research has found that the salience of the fatherhood role is an important factor in predicting men’s involvement in parenting and mothers’ willingness to allow them access to the child (Bellamy, Thullen, & Hans, 2015; Edin & Nelson, 2013; Goldberg, 2015). Finally, it is possible there are interaction effects whereby we find stronger links with

father involvement for men who both take leave and have strong father saliency or interest. By examining these additional measures, we can better understand whether paternity leave functions through father identity mechanisms, and the extent to which leave may interact with traditional measures of fathers' intent to parent.

PRIOR RESEARCH

Research on the benefits of paternity leave is limited. Although most fathers take some time off after the birth of a child, it is generally short lived (Huerta et al., 2014). Studies show that paternity leave policies increase take-up of leave (Bartel, Rossin-Slater, Ruhm, Stearns, & Waldfogel, 2018; Ekberg, Eriksson, & Friebe, 2013), affect earnings (Rege & Solli, 2013), and to a lesser extent, increase men's housework (Kotsadam & Finseraas, 2011). In the United States, a few studies have found that paternity leave is associated with greater parenting engagement (Petts & Knoester, 2018; Pragg & Knoester, 2017; Seward, Yeatts, & Zottarelli, 2002) and coparenting (Petts & Knoester, 2020), especially if that leave was 2 weeks or greater (Huerta et al., 2014; Nepomnyaschy & Waldfogel, 2007; Petts & Knoester, 2018). Outside of the United States, paternity leave has been linked with greater fathering and child care (Bunning, 2015a; Bunning, 2015b; Haas & Hwang, 2008; Schober, 2014; Tanaka & Waldfogel, 2007), but also weak links (Hosking, Whitehouse, & Baxter, 2010), and no effects on child care (Ekberg et al., 2013; Kluge & Tamm, 2013; Patnaik, 2015; Rieck & Telle, 2013; Ugreninov, 2013).

To our knowledge, only one study has examined heterogeneity in the associations between paternity leave and fathering by relationship status (Knoester et al., 2019). Knoester and colleagues used data from the FFCWS to examine links between leave-taking and father engagement and frequency with which mothers relied on fathers to care for the focal child. An analysis that examined an interaction between leave and parental relationship status found stronger positive associations among unromantic nonresident fathers who took leave and the two fathering measures.

The current study builds on this earlier work by undertaking a more in-depth analysis of leave-taking among nonresident fathers. First, we compare the characteristics and predictors of leave-taking between coresident and nonresident

fathers. This analysis allows us to understand whether drivers of leave-taking vary between these two populations of fathers. Second, we examine differences in the association by coresidential status between leave and a broader array of father involvement measures (coparenting, trust, shared responsibility for both care and appointments), and in particular, indicators only relevant to nonresident fathers (contact, amount, and receipt of both formal and informal/in-kind child support), not examined in earlier work. Coparenting, trust, and shared responsibility may also be particularly important indicators to consider for nonresident fathers who rely on mothers for access to their child. Third, unlike earlier work, we focus on nonresident fathers to consider how measures of father identity and involvement (attitudes, prenatal involvement, and being in the hospital at the birth) compare with paternity leave, and whether there are interactive links between leave and measures of identity. This analysis also allows us to consider the extent to which signaling interest in fathering to mothers (by helping before the birth, being at the hospital, or taking leave) might influence nonresident father involvement as mothers may promote or hinder access to their children. Overall, the current study builds our understanding of leave-taking among nonresident fathers to better inform how policies might encourage father involvement among this important population.

METHOD

Data

We use data from the FFCWS, a longitudinal birth cohort of about 5,000 children born between 1998 and 2000 and their parents. Nonmarital births were oversampled (3 nonmarital to 1 marital) resulting in a relatively economically disadvantaged sample and making it ideal for studying nonresident fathers. Mothers were sampled from 75 hospitals in 20 large U.S. cities (with populations over 200,000). Although the study tracks children over much of childhood, the current study focuses on the mother and father interviews at the time of the birth of the child and the age 1 follow-up survey.

Our analyses are focused on fathers and mothers who were interviewed at both the baseline and age 1 follow-up survey ($N = 2,975$). We limit the sample to fathers who were employed

at the birth of the child and therefore eligible to take paternity leave ($N = 2,347$; excluding 6 cases who never returned to work). Fathers who were part of the 2-city pilot study were not asked about paternity leave further reducing our sample. Our largest analytic sample includes 2,221 fathers who had non-missing information on leave-taking and our outcome with the largest sample. Most of the measures of father involvement at age 1 come from mother reports as they reported on a larger set of fathering indicators (like coparenting and trust) than fathers did themselves, although we also examine father reports of engagement. We allow the sample to vary by outcome measured to maximize our sample; however, in analyses that restricted to the same sample across all outcomes we found substantively similar results. Our analyses include fathers who had non-missing information on all covariates, as missingness was less than 2% for most variables (with three exceptions which had 7% missing: fathers' health status, fathers' traditional gender-role attitudes, and father considered about abortion).

Fathers were asked retrospectively about leave-taking at the 1-year follow-up survey when the parenting measures were also assessed and some fathers who were eligible for inclusion in our sample at baseline (i.e., were employed, were not in the 2 pilot cities; $N = 470$) left the study. Fathers who attrited between the birth and year 1 were more likely to be single, less likely to be white, more likely to have less than a high school degree, and have lower income-to-needs ratios. We discuss how attrition may have affected our findings in the discussion section.

Measures

Father Involvement. We examine four measures of biological fathers' parenting for both coresident and nonresident fathers. Each measure is standardized to have a mean of zero and an *SD* of 1. The first is fathers' engagement with the focal child. Engagement is assessed by the mean number of days that fathers report engaging in the following five activities with their child (following Carlson, Pilkauskas, McLanahan, & Brooks-Gunn, 2011): (a) read stories, (b) told stories, (c) played games such as peekaboo or gotcha, (d) sang songs/nursery rhymes, and (e) played inside with toys ($\alpha = 0.81$). Mothers

were also asked to report on fathers' parental engagement ($\alpha = 0.85$).

Second, we examine coparenting (sometimes referred to as cooperation in parenting), using the mean of mothers' reports on the fathers' willingness to cooperate (ranging from 1 = *rarely true*, 3 = *always true*) on 6 items including: acts like the kind of parent she would want for her child, can be trusted to take good care of the child, respects her schedules and rules for the child, supports her in the way she wants to raise the child, talks with her about problems related to raising the child, and can be counted on to look after the child for a few hours ($\alpha = 0.86$; following Carlson et al., 2008).

Third, we explore shared responsibility in parenting utilizing the mean score of two items (4-point scale from *never* to *often*) including the father shares responsibility with the mother for looking after the focal child, and the father shares responsibility with taking the child to appointments (following Berger, Carlson, Bzostek, & Osborne, 2008). Last, we examine whether the mother trusts the biological father to take care of the focal child if she had to go away for a week. We use this single item measure (1 = *not at all*, 3 = *very much*) to examine trust. Although a similar item is included in the coparenting scale, this measure is considered a more extreme test of the mother's trust in the father as it refers to a week of care (Berger et al., 2008).

Paternity Leave. We use a binary variable to indicate whether fathers reported taking time off after the birth of the child. In additional analyses, we also examined whether there were differences by weeks of leave where we dummied out the number of weeks (0 = *no leave*, 1 = *1 week*, 2 = *2 weeks*, 3 = *3 or more weeks*) and whether the father reported taking paid leave (where we include indicators for both paid leave and unpaid leave).

Father Identity. We include three measures related to father identity: the father's positive attitude toward fathering, being in the hospital at the birth, and prenatal involvement. Fathers' positive attitude toward fathering is a scale that draws on three questions (4-point scale from *strongly disagree* to *strongly agree*) measuring the father's attitude with regard to his role as a parent. These questions ask fathers the extent to which they agree that (1) being a father is one

of the most fulfilling experiences for a man, (2) I want people to know I have a new child, and (3) not being a part of my child's life would be one of the worst things ($\alpha = 0.73$). A binary indicator was constructed for fathers' prenatal involvement (coded as 1 for married fathers who were not asked, and for nonresident fathers who reported both paying for baby things and helping with transportation/chores). The presence at the birth of the child was coded as one if the father reported being at the hospital at the birth. Correlation between the three identity measures was modest (the highest was 0.25), suggesting that they tap into different aspects of father identity.

For nonresident fathers, we also examine additional measures of involvement: contact, informal monetary support, in-kind support, and formal child support. Contact with the father is defined as the number of days in the past 30 days that the father saw the child. Fathers who had not seen the child during this period were coded as 0. In-kind support was assessed by whether the fathers had provided any in-kind support (receipt, 0/1), including clothes, toys, medicine, child care items, food or formula, or other items. Fathers were also asked whether they had provided informal financial support to the mother and child and how much they actually contributed. Last, fathers reported whether they had provided financial support via a legal agreement or child support order and how much they had actually contributed.

Coresident Status. Most of our analyses stratify by coresidence at the birth, as it was the status when paternity leave was taken, it reflects the correct time ordering of variables, and it avoids conditioning on a later measure that might have been affected by leave-taking (i.e., conditioning on later coresidence might bias our results if leave affects coresidence). We identify fathers who are living with the mother (married or cohabiting) and compare them to fathers who are not living with the mother (findings were unchanged when we controlled for marital status). In our analyses of nonresident fathers, we also include a control for whether the mother and father were romantically involved at the birth. Mothers were not asked about coresidence with new partners at the birth, but only 31 mothers in our sample were residing with new partners at year 1; thus, it is unlikely to have been very prevalent at baseline.

Covariates. Our analyses include an extensive set of covariates linked with paternity leave or parenting in previous studies (e.g., Berger et al., 2008; Nepomnyaschy & Waldfogel, 2007). These include: race/ethnicity (coded as non-Hispanic white, non-Hispanic black, Hispanic, other), education (less than high school, high school, some college, college or greater), father's age, income-to-needs ratio at birth (using official U.S. Census bureau thresholds adjusted for household size and year), whether the father is in fair or poor health, has a substance use problem that affects his ability to work, whether the child is his first birth, whether the child is a boy, and if the child had low birth weight. We also include a number of measures not typically available in survey data including a measure of parental relationship conflict (in extensions we instead included a measure of positive relationship quality and the findings were unchanged), whether the parents considered an abortion as a measure of wantedness of the child, and whether the father has traditional attitudes regarding gender roles (including a scale of whether the father reported that he agreed or strongly agreed that it is better if the husband earns the main living and the wife cares for the family and that the important decisions in the family should be made by the man). For the correlates of leave-taking, we also include several paternal employment characteristics: occupation (professional, sales, service, other), hours worked per week, weeks worked in the past year, and an indicator of whether the father was self-employed. These indicators are not included in the fathering analyses as they have more missing data than our other covariates; however, analyses including these variables did not change the findings. All covariates come from the baseline survey and thus predate the parenting measures. We examined collinearity among the covariates and did not find any problems with collinearity (correlation table available upon request).

Table 1 shows descriptive statistics for the full sample of employed fathers. About one-third were married, 41% were cohabiting, 23% were single, and 4% were nonresident romantic at the birth of the child. Only 26% of fathers were non-Hispanic white, 45% were non-Hispanic black, and 26% were Hispanic. Sixty-three percent of fathers had a high school degree or less and income-to-needs ratios were about three times the poverty line. Differences

between coresident and nonresident fathers are also shown in Table 1. Coresident fathers were much more likely to take leave (82%) than nonresident fathers (61%) and were significantly more involved than nonresident fathers on all of the outcome measures. For father identity indicators, coresident fathers were more likely to be at the hospital for the birth (91% vs. 65%), be involved prenatally (97% vs. 81%) and have positive fathering attitudes than nonresident fathers. Coresident fathers were economically better off and had higher levels of education than nonresident fathers. Coresident fathers were also far more likely to be white (32 vs. 9%) and less likely to be black (36% vs. 69%). Coresident fathers were also much less likely to have considered an abortion (12% vs. 25%) than nonresident fathers.

Analysis

Our first goal was to examine whether the predictors of leave-taking vary between nonresident and coresident fathers. We ran a linear probability regression model (LPM) stratifying by coresidential status at the birth of the child. We used the LPM for ease of interpretation; an analysis using logistic regression yielded similar results. Our second set of analyses was aimed at examining the link between paternity leave and father involvement. We ran the analyses stratified by baseline coresidential status and tested whether the findings were different between coresident and nonresident fathers using chow tests. In addition to the full set of controls described earlier, subsequent analyses also included all of the measures of father identity/salience of the fatherhood role, or measures that signal to the mother a father's interest: being in the hospital at the birth, being involved prenatally and the father's positive attitude toward fathering. Mothers' trust in fathers is an ordinal variable. Following Berger et al. (2008), we present coefficients from ordinary least squares (OLS) models for ease of interpretation and comparison to other outcomes. However, we also re-estimated the models using ordered probits, and the results from these analyses were consistent with our main findings. Note, in all models, we stratified our analyses by baseline coresidence as the coefficients are more readily interpretable than interaction models; however, in supplemental analyses we ran interaction analyses and found qualitatively similar but more muted results.

For analyses that examined monetary outcomes (informal and formal child support amounts), we ran Tobit models to account for the censoring at zero (fathers who do not provide support), but also estimating the association with the positive values of cash support. However, Tobit coefficients are not directly interpretable beyond the significance level and direction (in supplemental analyses, we ran OLS models and found substantively similar results).

RESULTS

Descriptive Differences by Paternity Leave-Taking and Coresidential Status

Table 1 also shows descriptive statistics for fathers who took leave compared to those who did not, stratified by coresidential status. Although the overall levels differed (coresident fathers had higher levels of involvement regardless of leave-taking), irrespective of coresidential status, fathers who took leave had higher engagement, coparenting, shared responsibility, and trust than fathers who did not take leave (differences by leave for coresident fathers were not always significant). On the measures of involvement focused on nonresident fathers, those who took leave were somewhat more likely to have seen their child in the last month, were more likely to provide in-kind support but were less likely to provide informal monetary support. However, among those that provided support, mean dollar amounts of informal support were higher among those who took leave. For formal child support, there were no differences between leave takers and those who did not take leave.

Fathers who took leave were also more likely to be present at the birth and to have positive fathering attitudes, regardless of coresidential status. Nonresident fathers who took leave were much more likely to have been prenatally involved, whereas there were no differences in prenatal involvement for coresident fathers by leave.

Lastly, leave takers differed from nonleave takers in terms of demographic characteristics, but in similar ways for both coresidential and nonresidential fathers. Leave takers across both residential statuses were more likely to be white, to have a college education (or some college for nonresident fathers), to have higher incomes, to be having their first child, and to have lower levels of relationship conflict with the mother. Thus,

Table 1. Sample Descriptives by Coresidential Status and Paternity Leave-Taking Status

	Full sample			Coresident		Nonresident		Cores vs. nonres leave takers
	All	Coresident	Nonresident	Leave	No leave	Leave	No leave	
	<i>M</i> or %			<i>M</i> or %		<i>M</i> or %		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	
Paternity leave	0.76	0.82	0.61*	0.82	0.18***	0.61	0.39***	***
Fathering outcomes								
Engagement (father report)	0.03	0.13	-0.26***	0.17	-0.04*	-0.08	-0.53*	***
Engagement (mother report)	0.03	0.12	-0.26***	0.16	-0.08*	-0.21	-0.44*	***
Coparenting	0.22	0.29	0.03***	0.31	0.21*	0.12	-0.12*	***
Shared responsibility	0.27	0.37	-0.01***	0.38	0.30	0.11	-0.21*	***
Trust father	0.20	0.26	0.02***	0.27	0.21	0.12	-0.15*	***
Nonresident fathers only ^a								
Days seen in last month (M)						13.92	11.28+	
In-kind support receipt						0.98	0.93*	
Informal support receipt						0.63	0.75**	
Informal support (\$, M)						754.3	377.11**	
Formal child support receipt						0.16	0.18	
Formal child support (\$, M)						276.4	254.15	
Father identity								
Present at birth	0.84	0.91	0.65*	0.92	0.84*	0.75	0.50*	*
Positive fathering attitude (M)	3.75	3.77	3.69*	3.78	3.74*	3.74	3.62*	*
(SD)	(0.42)	(0.41)	(0.46)	(0.40)	(0.44)	(0.42)	(0.50)	
Prenatal involvement	0.93	0.97	0.81**	0.98	0.95	0.87	0.72***	***
Relationship status at birth								
Married	0.32	0.44		0.47	0.29			
Cohabiting	0.41	0.56		0.52	0.71*			
Single	0.23		0.85			0.87	0.79**	
Nonresident romantic	0.04		0.16			0.12	0.21**	
Race/ethnicity								
White non-Hispanic	0.26	0.32	0.09*	0.35	0.16*	0.11	0.05*	*
Black non-Hispanic	0.45	0.36	0.69*	0.32	0.57*	0.62	0.78*	*
Hispanic	0.26	0.27	0.21*	0.28	0.25	0.24	0.16	
Other non-Hispanic	0.04	0.05	0.02	0.50	0.03	0.03	0.01	
Education								
Less than high school	0.28	0.25	0.37*	0.24	0.30*	0.34	0.42*	*
High school degree	0.35	0.33	0.40*	0.32	0.42	0.42	0.36	*
Some college	0.24	0.25	0.21*	0.26	0.21	0.22	0.18*	
Bachelor's degree or higher	0.13	0.17	0.03*	0.19	0.08*	0.03	0.04	*
Age at birth (M, in years)	27.87	28.80	25.33*	29.03	27.75*	25.16	25.58	*
(SD)	(6.96)	(6.82)	(6.73)	(6.86)	(6.54)	(6.41)	(7.20)	
Income to needs (M)	3.01	3.13	2.67*	3.35	2.12*	2.76	2.52	*
(SD)	(2.76)	(2.89)	(2.35)	(2.97)	(2.23)	(2.44)	(2.52)	
First birth	0.43	0.40	0.49*	0.42	0.35*	0.51	0.46	*
Fair or poor health	0.06	0.06	0.06	0.05	0.08*	0.05	0.07	
Child is a boy	0.53	0.53	0.54	0.52	0.54	0.55	0.53	
Child was low birth weight	0.09	0.08	0.13*	0.08	0.11	0.12	0.14	*
Relationship conflict (M)	1.42	1.38	1.51*	1.37	1.44*	1.49	1.55*	*
(SD)	(0.35)	(0.34)	(0.40)	(0.34)	(0.35)	(0.38)	(0.42)	
Substance abuse problem	0.05	0.04	0.08*	0.04	0.05	0.08	0.08	*
Considered abortion	0.15	0.12	0.25*	0.11	0.15*	0.07	0.09	*
Traditional attitude	0.23	0.24	0.20*	0.23	0.28	0.21	0.18	
(SD)	(0.42)	(0.43)	(0.40)	(0.42)	(0.45)	(0.41)	(0.39)	
<i>N</i>	2,221	1,630	591	1,336	294	358	233	

Notes. Engagement, coparenting, shared responsibility, and trust outcome variables are standardized (*M* = 0, *SD* = 1). Sample is restricted to fathers who were employed (hence eligible for leave). Coresidence is defined at the birth. *SD* = standard deviation. *M* = mean.

****p* < .001, ***p* < .01, **p* < .05, +*p* < .10 indicate *t* tests/chi-square for statistically significant differences between groups.

^aSample is restricted to fathers who were both nonresident at the birth and at year 1 (and therefore asked these nonresident fathering questions), *N* = 321–436.

although fathers who took leave (either coresident or nonresident) were different from fathers who did not take leave, they differed descriptively from their nonleave-taking counterparts in similar ways.

Do Correlates of Paternity Leave Differ by Coresidential Status at Birth?

Although the coresident and nonresident fathers who took leave looked similar on many characteristics, in Table 2, we examined whether correlates of leave-taking varied by coresidential status in the multivariate context using linear probability models. Besides measures of father identity or saliency, few correlates were significant. Black fathers were significantly less likely to take leave as compared to white fathers—among both coresident and nonresident fathers. Income-to-needs was significantly associated with leave-taking among coresident fathers and being in the service industry was associated with leave for nonresident fathers; however, in neither case were the differences across the two groups significant.

Father identity measures—specifically being present at the birth and being involved prenatally—were associated with greater leave-taking for nonresident fathers in particular, although presence at the birth was also a correlate for coresident fathers. Being present at the birth was associated with a 10 percentage point higher probability of taking leave for coresident fathers, but for nonresident fathers the correlation was even stronger—associated with a 22 percentage point higher probability of taking leave. Having a positive fathering attitude was not significantly associated with leave-taking, but prenatal engagement was significantly associated for nonresident fathers (a 12 percentage point higher probability). For coresident fathers, prenatal engagement was not significantly associated with leave-taking, although the point estimate was relatively large (8 percentage points).

Is Paternity Leave Associated with Father Involvement? Differences by Residential Status

To examine whether there were differences in the association between leave-taking and father involvement by residential status, in Table 3 we present the findings from the multivariate analyses. Leave was significantly and positively

Table 2. *Correlates of Paternity Leave-Taking—Differences Between Coresident and Nonresident Fathers, Linear Probability Model*

	All fathers	Coresident	Nonresident
Present at birth	0.15*** (0.03)	0.10** (0.03)	0.22*** (0.05)
Positive fathering attitude	0.03 (0.02)	0.01 (0.03)	0.06 (0.05)
Prenatal involvement	0.13** (0.04)	0.08 (0.06)	0.12* (0.06)
Relationship status at birth (ref. married)			
Cohabiting	-0.03 (0.02)	-0.03 (0.02)	
Single	-0.18*** (0.05)		
Nonresident romantic	0.09+ (0.05)		0.06 (0.06)
Race/ethnicity (ref. white)			
Black non-Hispanic	-0.15*** (0.03)	-0.14*** (0.03)	-0.21** (0.08)
Hispanic	-0.03 (0.03)	-0.03 (0.03)	-0.05 (0.08)
Other non-Hispanic	0.00 (0.05)	-0.02 (0.05)	0.11 (0.16)
Education (ref. high school)			
Less than high school	-0.01 (0.02)	0.02 (0.03)	-0.07 (0.05)
Some college	0.02 (0.02)	0.04 (0.03)	-0.01 (0.06)
Bachelor's degree or higher	-0.00 (0.04)	0.03 (0.04)	-0.13 (0.13)
Age at birth	0.00 (0.00)	0.00 (0.00)	-0.00 (0.00)
Income-to-needs ratio	0.01+ (0.00)	0.01* (0.00)	-0.00 (0.01)
First birth	0.01 (0.02)	0.02 (0.02)	-0.01 (0.05)
Fair or poor health	-0.06 (0.04)	-0.07 (0.04)	-0.04 (0.09)
Child is a boy	-0.01 (0.02)	-0.02 (0.02)	0.02 (0.04)
Child was low birth weight	-0.03 (0.03)	-0.04 (0.035)	-0.00 (0.06)
Relationship conflict	-0.04 (0.03)	-0.04 (0.03)	-0.02 (0.05)
Substance abuse problem	-0.04 (0.04)	-0.04 (0.05)	-0.06 (0.08)

Table 2. Continued

	All fathers	Coresident	Nonresident
Considered abortion	0.00 (0.03)	0.00 (0.03)	0.00 (0.05)
Traditional attitude	-0.01 (0.02)	-0.03 (0.02)	0.04 (0.05)
Paternal occupation (ref. other occupation)			
Professional	-0.02 (0.04)	-0.02 (0.04)	-0.04 (0.09)
Sales	-0.01 (0.04)	-0.04 (0.04)	0.06 (0.09)
Service	-0.00 (0.03)	-0.05+ (0.03)	0.12* (0.06)
Hours worked	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
Weeks worked	-0.00 (0.00)	0.00 (0.00)	-0.00 (0.00)
Self-employed	-0.02 (0.03)	-0.02 (0.04)	0.02 (0.09)
<i>N</i>	2,096	1,548	550

Notes. Standard errors in parentheses. Sample is restricted to fathers who were employed (hence eligible for leave). Coresidence is defined at the birth. No differences between coresident and nonresident fathers were significant in Chow tests at $p < .05$.

*** $p < .001$, ** $p < .01$, * $p < .05$, + $p < .10$.

associated with fathers' own reports of engagement, for both coresident (0.13 SD) and nonresident fathers (0.36 SD), although the point estimate was nearly three times as large for nonresident fathers as compared to coresident fathers. Leave-taking was associated with higher levels of maternal reports of engagement for both coresident (0.16 SD) and nonresident (0.15 SD) fathers, but the association was not significant for nonresident fathers. When other mother reported measures of father involvement were examined—trust, coparenting and shared responsibility—there were no significant associations for coresident fathers. However, among nonresident fathers, taking leave was associated with a 0.29 SD higher trust score, a 0.27 SD higher coparenting score, and a 0.32 SD higher shared responsibility score as compared to those who did not take leave. Except for maternal reports of engagement, Chow tests suggested that all differences between coresident and nonresident fathers were statistically significant.

Table 3. Associations Between Paternity Leave and Father Involvement—Differences by Residential Status

	Engagement—father's report		Engagement—mother's report		Trust father to care for child		Coparenting		Shared responsibility	
	Coresident	Nonresident	Coresident	Nonresident	Coresident	Nonresident	Coresident	Nonresident	Coresident	Nonresident
Paternity leave	0.13* (0.06)	0.36*** (0.09)	0.16* (0.06)	0.15 (0.10)	0.02 (0.04)	0.29*** (0.07)	0.05 (0.04)	0.27*** (0.07)	0.05 (0.05)	0.32*** (0.08)
<i>N</i>	1,613	560	1,587	544	1,617	557	1,622	557	1,627	587

Notes. Standard errors in parentheses. Outcomes are standardized ($M = 0$, $SD = 1$). Sample is restricted to fathers who were employed (hence eligible for leave). Coresidence is defined at the birth. Chow tests for differences between coresident and nonresident were all significant at $p < .05$ except for mother's report of paternal engagement. All regressions include the full set of covariates: race/ethnicity, education, age, income-to-needs, whether the child is the first birth, if the father is in fair or poor health, child's sex, if the child was low birth weight, a measure of parental relationship conflict, if the father has a substance use problem, whether the parents considered an abortion, and family structure.

*** $p < .001$, ** $p < .01$, * $p < .05$, + $p < .10$.

Table 4. *Paternity Leave, Father Identity, and Father Signaling—Associations with Father Visitation and Formal and Informal Child Support Among Nonresident Fathers*

	# days saw child in last month (OLS)	In-kind support receipt (LPM)	Informal child support		Formal child support	
			Receipt (LPM)	\$ (Tobit)	Receipt (LPM)	\$ (Tobit)
Paternity leave	1.99 (1.29)	0.06* (0.02)	-0.11* (0.05)	317.12* (137.02)	-0.01 (0.04)	14.30 (94.57)
<i>N</i>	322	275	376		364	

Notes. Standard errors in parentheses. Sample is restricted to fathers who were employed (hence eligible for leave) and who were both nonresident at the birth and at year 1 (and therefore asked these fathering questions). All regressions include the full set of covariates: race/ethnicity, education, age, income-to-needs, whether the child is the first birth, if the father is in fair or poor health, child’s sex, if the child was low birth weight, a measure of parental relationship conflict, if the father has a substance use problem, whether the parents considered an abortion, and whether the father has traditional attitudes. LPM = Linear probability model.

****p* < .001, ***p* < .01, **p* < .05, +*p* < .10.

In Table 4, we explore the association between leave-taking and nonresident father involvement focusing on indicators only asked of nonresident fathers. The sample here is smaller as it is restricted to fathers who were nonresident at the birth and at age 1. Leave-taking was associated with fathers seeing their child more often—nearly 2 additional days in the last month—but the association was not significant. Leave was significantly associated with a higher probability of receiving in-kind support (6 percentage points). Although leave-taking was associated with less receipt of informal monetary support (–11 percentage points), among fathers who took leave and gave monetary support, the overall amount was higher – more than \$300. Last, we found little evidence of an association between paternity and formal child support.

How Does Paternity Leave Compare with Other Predictors of Fathering for Nonresident Fathers?

The next set of analyses in Table 5 considers whether the associations between paternity leave and fathering for nonresident fathers observed in Table 3 might be partly explained by other indicators of father saliency and identity that have been shown to be predictive of father involvement in prior research. By comparing leave to these other indicators, we can get a better sense of the relative importance of paternity leave in encouraging nonresident fathers to be involved with their children. We can also compare associations between fathers’ own interest

in parenting (positive fathering attitude) to indicators that might externally convey to mothers their commitment to fathering (leave, being in the hospital, and prenatal involvement).

Overall, we found that the addition of the measures of father identity reduced the magnitude of the association between leave-taking and father involvement shown in Table 3, but they continued to be positive and significantly associated. Starting with fathers’ own reports of engagement, in Table 5, we found that leave (0.30 SD) and prenatal involvement (0.24 SD) were significantly associated with greater engagement. In contrast, neither fathers’ attitudes toward parenting nor being in the hospital at the birth were associated with his own reports of engagement. When other measures of father identity and signaling were examined in relation to fathering as reported by the mother (engagement, trust, coparenting, shared responsibility), we again found that although leave was associated with greater involvement (except for maternal reports of engagement), being in the hospital at the birth and being involved prenatally were both more strongly associated with father involvement. Although the point estimates varied by outcome (0.19 SD, 0.37 SD, 0.26 SD, and 0.45 SD for engagement, trust, coparenting, and responsibility, respectively), being at the hospital at the birth was significantly linked to greater fathering. Likewise, prenatal involvement was associated with a 0.24–0.29 SD higher fathering score as reported by the mother. As was the case with fathers’ engagement, in none of the analyses

Table 5. *Paternity Leave, Father Identity, and Father Signaling—Associations with Father Involvement Among Nonresident Fathers*

	Engagement— father's report	Engagement— mother's Report	Trust father to care for child	Coparenting	Shared responsibility
Paternity leave	0.30*** (0.09)	0.05 (0.10)	0.17* (0.08)	0.16* (0.07)	0.18* (0.08)
In the hospital at the birth	0.06 (0.10)	0.19+ (0.11)	0.37*** (0.08)	0.26*** (0.08)	0.45*** (0.09)
Positive fathering attitude	-0.01 (0.10)	-0.03 (0.11)	0.00 (0.08)	0.05 (0.07)	-0.07 (0.09)
Prenatal involvement	0.24* (0.12)	0.27* (0.14)	0.24* (0.10)	0.29*** (0.09)	0.25*** (0.10)
<i>N</i>	560	544	557	557	587

Notes. Standard errors in parentheses. Outcomes are standardized ($M = 0$, $SD = 1$). Sample is restricted to fathers who were employed (hence eligible for leave) and who were nonresident at the birth of the child. All regressions include the full set of covariates: race/ethnicity, education, age, income-to-needs, whether the child is the first birth, if the father is in fair or poor health, child's sex, if the child was low birth weight, a measure of parental relationship conflict, if the father has a substance use problem, whether the parents considered an abortion, and whether the father has traditional attitudes.

*** $p < .001$, ** $p < .01$, * $p < .05$, + $p < .10$.

was fathers' positive attitude toward fathering predictive of engagement. To examine whether the association was even stronger for those who took leave and were at the hospital or were prenatally involved, we ran a series of interactions (available in Appendix Table 1). We found little evidence of an interaction.

Extensions

Leave Characteristics. In extensions, we also examined two characteristics of leave—length and pay. First, we examined length of leave as prior research suggests longer leave is more predictive of father involvement (e.g., Nepomnyaschy & Walfogel, 2007). In Appendix Table 2, we show the results of an analysis where we create indicators for no leave, 1 week, 2 weeks, or 3 or more weeks of leave. For fathers' reports of engagement, the point estimates were larger the more weeks of leave fathers took (although not statistically different from each other), but this was not true for trust, coparenting, or shared responsibility (in fact more leave was less strongly associated).

Second, we studied paid leave, as it may be more beneficial if fathers are not stressed about finances when on leave. Thus, in Appendix Table 3, we examined if the associations were stronger for fathers who received paid leave (23% of nonresident and 44% of coresident had paid leave). Across the fathering measures, we found

that the point estimates for paid leave were larger for fathers who received paid leave as compared to those who received unpaid leave. However, with the exception of coparenting, none of the differences between paid and unpaid leave were significant.

Later Coresidence. As noted earlier, we focused on coresidence at the birth because leave-taking might be predictive of later coresidence. In Appendix Table 4, we ran an analysis examining whether paternity leave was associated with coresidential status at year 1. We found that taking paternity leave was significantly associated with being coresident at year 1 for fathers who were nonresident at the birth (11 percentage points). Despite the fact that we found that leave affected later coresidence, we ran an additional analysis, where we restricted the sample to those who were nonresident at both the birth and who remained nonresident at age 1. These analyses were less precise/significant as the sample was smaller; however, we found a similar pattern of results.

Selection—Propensity Score Models. Although all fathers in this analysis were employed, and therefore eligible for leave, as we showed in the descriptive analyses, fathers who took leave were a select group of men. To further test the robustness of our findings, we also ran propensity score analyses (with inverse probability

weights using 11 additional measures not used in our main analyses). Findings in Appendix Table 5 showed similar results to those presented here—that the association between leave and father involvement was the strongest for nonresident fathers.

DISCUSSION

Fathers play an important role in the lives of their children (e.g., Lamb, 2000), yet many children are born to parents who are not living together. One way of increasing nonresident father involvement may be through paternity leave, but most studies have overlooked this population of fathers. This study extends our understanding of the role of paternity leave in encouraging father involvement by focusing on a largely low-income sample of nonresident fathers and by comparing them to coresident fathers. We extend other research by studying correlates of leave-taking by coresidential status, examining a broader array of father involvement indicators than previously studied, including those only relevant to nonresident fathers, and by comparing leave to other predictors of father involvement among nonresident fathers.

There were few differences in correlates of leave-taking between coresident and nonresident fathers. In fact, few correlates were significant, but measures of father saliency and identity were most strongly associated with leave-taking (for both groups) especially for nonresident fathers. Specifically, being present at the birth and being prenatally involved were correlated with nonresident fathers' leave-taking. This suggests prenatal involvement and the presence at birth may help transform nonresident fathers' understanding of their impending fatherhood and help establish routines that may encourage leave-taking.

By examining differences in the association between leave-taking and fathering by coresidential status, our study reveals leave-taking is more strongly associated with fathering for nonresident fathers than coresident fathers (except mothers' reports of engagement), especially as it relates to mothers' reports of working together to raise the child (trust, coparenting, sharing responsibilities). Our findings are in keeping with an earlier study that found stronger associations between leave and father engagement among nonresident fathers (Knoester et al.,

2019) and demonstrate these findings across a wider range of fathering indicators.

Why might paternity leave be more important for nonresident fathers than for coresident fathers? It may be that for nonresident fathers, paternity leave helps to establish routines and important relationships with both the child and the mother. Researchers have generally considered fathers' roles as romantic partner and parent to be linked in a "package deal" (Furstenberg & Cherlin, 1991; Tach, Mincy, & Edin, 2010; Townsend, 2002). Taking leave likely signals to the mother the importance of the child in the father's life, even if the mother and father are no longer romantically involved. Prior research that examines the salience of the fatherhood role often finds that the association between fatherhood identity salience and paternal parenting is stronger for nonresident than resident fathers. This may be a result of a more "automatic" process for resident fathers who interact with their children on a daily basis or through the intentional enacting of fatherhood ideals by nonresident fathers (Goldberg, 2015). Bruce and Fox (1999), for example, found that although resident fathers performed more parenting, fatherhood identity was more strongly associated with parenting for nonresident fathers, although Goldberg (2015) largely did not.

In addition to comparing whether leave was associated with fathering differentially for coresident and nonresident fathers, we also examined measures of father engagement that were only relevant to nonresident fathers. We anticipated that leave would increase visitation, informal child support, and in-kind support, but have no effect on formal child support. Our hypotheses were only partly supported. Leave, as expected, did not influence formal child support. Leave-taking was also not significantly associated with greater visitation, which may have been driven by the small sample, as the point estimates were relatively large. Fathers who took leave were more likely to provide in-kind support, but unlike expected, less likely to provide informal monetary support. Conditional on providing monetary support, however, fathers who took leave provided greater amounts. In additional analyses, we re-estimated these models including measures of father saliency and the results were unchanged. These findings suggest that leave-taking may encourage father involvement

among nonresident fathers but they may prefer to provide in-kind support, which is in keeping with many earlier studies of low-income parents (Edin & Nelson, 2013). Future research that can further examine these links is needed, however, as our sample was small.

Our final goal was to examine the relative importance of leave-taking as compared to other indicators of salience and signaling. These findings suggest that for fathers themselves, taking leave and being involved prenatally were similarly related to their time spent with children. For mothers, leave was not as strong a predictor of her reports of engagement, trust, coparenting, and shared responsibility. Rather, both being in the hospital at the birth and greater prenatal involvement were more strongly associated with her ratings of fathers' parenting, suggesting that leave may be associated with increased father engagement through a pathway that is at least partially distinct from father identity. For mothers in particular, demonstrations of father interest may be more powerful than leave-taking. Fathers' presence at the birth (or prenatal involvement) seems to signal to mothers fathers' desire to be involved in parenting, resulting in more involvement a year later. It may also be that fathers' presence at birth and prenatal involvement facilitates the establishment of routines and fathers' comfort with their young children. Exposure to prenatal visits may also give fathers the opportunity to learn about child rearing and develop caregiving skills. It is also worth noting that although paternity leave continued to be associated with higher levels of father involvement even after including other measures of father saliency and early engagement/signaling; this was not the case for mothers' reports of father engagement and there was significant divergence between fathers' and mothers' reports. These findings may suggest, as Edin and Nelson (2013) found among the fathers in their study, that desire to be an involved father does not necessarily translate to being an involved father. Or it may reflect a discrepancy in the perception of what is engaged fathering or inaccuracy in measuring engagement. Unlike trust, coparenting or shared responsibility, engagement is an indicator that requires direct observation (e.g., how many times did you sing to the child). Mothers may underestimate father involvement if they do not observe him or if they compare his level of engagement to her own, which is likely lower given

differences in time with the child. In comparison, fathers may overinflate (or inaccurately estimate) the time they spend, especially if they do not observe the mothers themselves engaging with the child. Thus, it is likely that the link between leave-taking and engagement is somewhere in between the estimates of the two reporters.

Earlier work has focused on coresident fathers and different outcomes and often only finds associations among fathers who take two or more weeks of leave. Although we did not find evidence of this process, we did find suggestive evidence that paid leave was more strongly associated with fathering. The differences between paid and unpaid leave were not significant—likely a result of small samples, as the differences in coefficient sizes were large. In an extension we also found that among fathers who were not coresident at the birth, those who took leave were more likely to live with the mother and their child a year later. This suggests that some of the association we observe between leave and greater fathering may be in part driven by fathers being able to engage more with their children—by living with them. Research that can consider the extent to which leave-taking influences parental relationships and coresidence is needed.

Although we restricted our sample to employed fathers, included many covariates in our models, and tested the robustness of our findings to propensity score matching, the findings may still be driven by selection. Future research that can employ more causal approaches to examining differences between coresident and nonresident fathers is an important next step. It is, however, notable, that both nonresident and coresident fathers who took leave were selected in similar ways; yet the associations between leave-taking and fathering were largely concentrated among nonresident fathers. Expanding this research to include a nationally representative sample of fathers today would be helpful, as this study has limited generalizability. These data were collected between 1998 and 2001, making the data somewhat dated; however, we know of no more recent data sources with similar measures of fathering and as robust information on nonresident fathers. Access to leave has increased slightly over this time period, and work has become more precarious, but it is unclear how this might change our findings (Bureau of Labor Statistics, 2019b;

Kalleberg, 2013). We study lower income families, those who are least likely to have access to paid leave; however, because this sample is for low-income fathers it includes more nonresident fathers and is of particular policy interest. Relatedly, our sample is small, which limits our power to detect associations, and this was especially true for our measures of father contact and informal and formal support. Additionally, some of our fathers also attrited between the birth and the age 1 follow-up. Those who attrited were most disadvantaged, which may skew our sample to a more economically advantaged set of nonresident fathers, potentially biasing our findings, although attrition was minimal and a supplemental analysis using weights that adjusted for attrition yielded similar results.

Despite some limitations, the findings from our study suggest that fathers who are nonresident and who take leave are, on average, more involved as fathers. Leave-taking appears to be especially important for mothers when the fathers are not coresident as ratings of trust, responsibility and coparenting were higher only for nonresident leave-taking fathers. Our findings also suggest that being involved prenatally and being in the hospital at the birth are significantly related to greater father involvement. Our research indicates that leave and father identity may operate through separate pathways. That is to say, that although controlling for father identity reduces the magnitude of the association between leave and father involvement, it does not eliminate it entirely. This suggests two important areas for future research focused on promoting father involvement—studies that examine the impact of (a) increased prenatal involvement and (b) expanded paternity leave. Although in some instances the associations between prenatal involvement or being at the hospital at the birth and father involvement were larger than those for leave, the policy mechanisms for expanding access to leave may be more readily achievable.

NOTE

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SUPPORTING INFORMATION

Additional supporting information may be found online in the Supporting Information section at the end of the article.

Appendix Table 1: Interactions between Paternity Leave and Father Identity/Signaling and Father Involvement - Non-Resident Fathers

Appendix Table 2: Weeks of Paternity Leave, Father Identity and Father Signaling - Associations with Father Involvement by Residential Status

Appendix Table 3: Paid/Unpaid Paternity Leave, Father Identity and Father Signaling - Associations with Father Involvement by Residential Status

Appendix Table 4: Associations between Paternity Leave and Coresidence at Year 1 for Non-Resident Fathers

Appendix Table 5: Propensity Score Results - Associations between Paternity Leave and Father Involvement - Differences by Residential Status

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