

KIMBERLY J. TURNER *Child Trends*MAUREEN R. WALLER *Cornell University**

Indebted Relationships: Child Support Arrears and Nonresident Fathers' Involvement With Children

Low-income, nonresident fathers owe a disproportionate amount of child support arrears, creating potential challenges for these fathers and their family relationships. This article uses mediation analysis to provide new evidence about how and why child support debt is related to paternal involvement using information from 1,017 nonresident fathers in the Fragile Families Study. Results show that child support arrears are associated with nonresident fathers having significantly less contact with children, being less engaged with them in daily activities, and providing less frequent in-kind support 9 years after the birth. This negative association between child support debt and father involvement is most strongly and consistently mediated by the quality of the relationship between the biological parents. Although child support policies are designed to facilitate fathers' economic and emotional support, these results suggest that the accrual of child support debt may serve as an important barrier to father involvement.

As part of recent reform efforts, the federal Office of Child Support Enforcement (OCSE)

has identified several family-centered policies aimed at improving the reliability of child support payments by low-income, noncustodial parents (NCPs). Some family-centered child support reforms aim to improve child support payments by increasing paternal engagement. For example, new proposals at the federal level would require states to establish visitation and access in all initial child support orders in hope of creating a "double win" for children who would benefit from improved relationships with their fathers and child support collections (U.S. Department of Health and Human Services, 2014). Programs to promote responsible fatherhood have also sought to help low-income fathers overcome economic barriers in meeting their child support obligations while building stronger relationships with children (Solomon-Fears, Smith, & Berry, 2012). Many nonresident fathers have low levels of involvement (Cheadle, Amato, & King, 2010), and these initiatives are informed by research indicating a positive link between paternal contact and support (Nepomnyaschy, 2007).

Other recent family-centered initiatives have focused on improving child support outcomes by preventing low-income NCPs from accruing large child support debts. Since 1975, total child support arrears have accumulated to more than \$114.5 billion (U.S. Department of Health and Human Services, Administration for Children and Families, Office of Child Support Enforcement, 2013). Research suggests that about one quarter of NCPs in the child support program have limited ability to pay and that low-income fathers owe a disproportionate amount of the

Child Trends, 7315 Wisconsin Avenue, Suite 1200 W, Bethesda, MD 20814 (kturner@childtrends.org).

*Department of Policy Analysis and Management, 257 MVR Hall, Cornell University, Ithaca, NY 14853.

This article was edited by Kelly Raleigh.

Key Words: *child support, fathers, Fragile Families and Child Wellbeing Study, nonresidential parents, parental involvement.*

outstanding child support arrears (U.S. Department of Health and Human Services, 2014). Sorensen, Sousa, and Schaner's (2007) study of child support arrears in nine large states shows that 70% of arrears are owed by obligors who had no reported income or incomes of less than \$10,000.

In addition to being largely uncollectible, there is growing concern that child support arrears may have unintended consequences for low-income fathers and their family relationships. Recent studies have documented the negative impact of child support arrears on fathers' employment and child support payments (Cancian, Heinrich, & Chung, 2013; Miller & Mincy, 2012). Some qualitative and evaluation evidence further suggests that low-income men with high levels of child support debt face increased challenges in establishing and maintaining relationships with custodial mothers and children (Martinson & Nightingale, 2008). Although the OCSE has recognized the importance of preventing nonresident fathers from both accruing child support arrears and disengaging from their children, the potential link between child support arrears and paternal involvement has not been examined in a large, national data set. Moreover, we have little understanding of the mechanisms through which arrears may weaken family relationships.

Using information from the Fragile Families and Child Wellbeing Study, which includes representative data on births in large urban areas, the primary goal of this article is to examine whether there is a negative connection between child support arrears and nonresident fathers' involvement with children. A secondary goal of this article is to investigate key mediators, suggested in the literature, which help explain why child support arrears might be associated with lower levels of father involvement 9 years after their child's birth.

Research examining child support arrears has either relied on administrative data with limited information on family relationships or has used custodial mothers' reports of child support arrears, which may be less reliable than those of the nonresident father. Other studies hypothesizing a connection between child support debt and paternal involvement have not tested this relationship using a national data set. To empirically examine whether an association between arrears and paternal involvement exists, we take advantage of the Year 9 Fragile Families Survey,

which is the first wave of the study that includes direct reports from a large sample of nonresident fathers on their own child support debt as well as rich information about fathers' characteristics and family relationships. We also help fill an important gap in the literature about the role of child support arrears in low-income families by exploring multiple pathways—fathers' employment, mental health, and relationship with the mother—through which child support arrears could hinder paternal involvement.

Our analysis provides the first multilayered, descriptive portrait of how and why child support debt may be linked to fathering in a racially diverse sample of mostly disadvantaged fathers who have been highly impacted by child support enforcement policy. A central purpose of the Fragile Families Survey was to include direct reports from disadvantaged fathers on their own experiences. Although coverage and response rates of low-income fathers in the Fragile Families Survey surpass those of many other data sets, the use of the father sample has often been limited because of concerns about selectivity relative to the mother sample. Analyses that rely on the mother sample, however, may overlook equally compelling methodological concerns about how proxy reports may compromise measurement validity (Pleck & Masciadrelli, 2004). The longitudinal design of the study makes it possible to address issues of selection by controlling for father involvement and mechanisms at an earlier time period. We are also able to test the robustness of our results using mothers' reports of arrears at Year 5 and reports of father involvement provided by both parents.

BACKGROUND

Child Support Arrears and Low-Income Fathers

As more information on noncustodial fathers' economic characteristics has become available, academic and policy discussions have recognized a distinction between "deadbroke" dads who are unable to meet their child support obligations and "deadbeat" dads who are able to pay but refuse to do so (U.S. Department of Health and Human Services, Office of Inspector General, 2000, p. 8). The child support enforcement program has developed a number of tools to improve collection among NCPs who have the ability to meet their child support obligations, such as income withholding, tax

refund intercepts, liens against property, asset seizure, passport restrictions, and incarceration (Solomon-Fears, Smith, & Berry, 2012). These tools appear to be less effective for NCPs with limited earnings, however, and these men accrue high levels of child support debt (U.S. Department of Health and Human Services, Office of Inspector General, 2000).

Why have child support arrears grown to such a high level among low-income men who have the least ability to pay? Child support arrears are comprised not only of delinquent payments on current orders but may also include interest, fees, and retroactive support for periods before the orders were established (Heinrich, Burkhardt, & Shager, 2011). For families who have received public benefits, a portion of NCPs' arrears may also be owed to the state to offset Medicaid and Temporary Assistance for Needy Families (TANF) expenditures on children (Wheaton & Sorensen, 2007). Although some NCPs may fall into arrears because of their unwillingness to provide support, state-level policies can also have a significant influence on whether low-income NCPs accrue child support debt (U.S. Department of Health and Human Services, Office of Inspector General, 2000).

Some state guidelines require NCPs to make a minimum child support payment even when they are incarcerated, unemployed, or have very limited earnings. States may also impute income when NCPs fail to appear in court and issue a default child support order in their absence. Although income is imputed at various levels, it is typically assumed that NCPs have full-time employment (Roberts, 2001). Retroactive support can also be ordered for periods that range as far back as the date of the child's birth and may even include the costs of genetic tests, court filing fees, attorneys, and other fees in the child support order. As a result of these practices, many low-income NCPs have significant debt at the time their order is set and can be required to pay up to 65% of their disposable income to meet these obligations (Miller & Mincy, 2012). After the initial order is set, some states charge high interest rates—even up into the double digits—on missed or delinquent payments (Roberts, 2001). Sorensen and colleagues (2007) found that the practice of assessing interest on a routine basis was the primary reason arrears have grown to such high levels.

Links Between Child Support Debt and Paternal Involvement

Data from the Fragile Families Survey, which includes a representative sample of births in large U.S. cities, show a high level of paternal engagement around the time of their child's birth. Five years after the birth, however, only 50% of nonresident fathers are reported to have seen their child in the previous month. As fathers' coresidence, involvement, and informal contributions decline over time, their participation in the formal child support system increases. By the time their child is age 5, about 57% of nonresident parents have formal child support orders (McLanahan, 2009, 2011).

Reasons for paternal disengagement are varied, but a small number of studies have hypothesized that nonresident fathers who accrue arrears will have less regular and meaningful contact with their children (Bartfeld, 2003). Qualitative research with low-income, unmarried parents in different locations illustrates how the economic demands placed on fathers with unrealistic child support arrears may strain family relationships (Achatz & MacAlum, 1994; Edin & Lein, 1997; Hays, 2003; Sullivan, 1993; Waller, 2002; Waller & Plotnick, 2001). Many mothers report that fathers will provide less parenting and in-kind support for children if they are threatened by punitive child support enforcement actions, and fathers report communicating these intentions to the mother. Reviewing multisite evaluations of responsible fatherhood programs, Martinson and Nightingale (2008, p. 3) concluded: "Poor fathers often face child support orders that are set at levels they cannot pay; their orders are rarely modified during periods of unemployment, and they can accrue unrealistic levels of debt. *This may motivate fathers to lose contact with their families and evade the child support system*" [emphasis added]. On the basis of this evidence, we expect child support arrears to be associated with lower involvement among nonresident fathers.

Pathways Through Which Child Support Debt Could Hinder Paternal Involvement

Examining the mechanisms, or pathways, linking child support arrears and father involvement could help us further understand why NCPs with child support debt have more trouble establishing and maintaining close connections with their children (Lin, 1998). Although

previous research on potential mechanisms is also limited, some evidence suggests that child support arrears are negatively associated with fathers' employment, their mental health, and the coparental relationship with their child's mother, which, in turn, hinders their involvement with children. Figure 1 illustrates our mediational model for understanding the pathways through which child support arrears are linked to paternal involvement.

Employment. The employment and labor market participation of young men at lower educational levels has declined significantly during the past 3 decades, particularly among African American men (Blank, 2009; Sum, Khatiwada, McLaughlin, & Palma, 2011). Holzer and colleagues (Holzer, 2009; Holzer, Offner, & Sorensen, 2005a, 2005b) contend that part of this decline may be explained by increased child support enforcement. In theory, NCPs could respond to child support enforcement by working less because the cost of leisure would be lower (a substitution effect), or they could increase their work effort to compensate for lost earnings (an income effect). Although expectations from economic theory are inconsistent, evidence from empirical studies more clearly indicates that child support debt discourages work effort and connections to the formal economy (Cancian et al., 2013; Miller & Mincy, 2012). Miller and Mincy (2012) report that child support arrears led to a decrease in average weeks worked in the formal labor market. Using Wisconsin administrative data, Cancian et al. (2013) similarly found that child support debt related to Medicaid childbirth costs adversely impacts nonresident fathers' formal employment. Because childbirth costs were used as a source of exogenous variation in the Wisconsin study, these results indicate that child support debt could have a causal effect on men's employment. Findings from other empirical work examining whether heightened child support enforcement policies push disadvantaged fathers from formal employment to underground economies have been more mixed (Rich, Garfinkel, & Gao, 2007; Roff & Lugo-Gil, 2012).

Although arrears appear to weaken men's labor market attachment, employment has been identified as both a "barrier" and an "enabler" to men's involvement with children (Russell & Hwang, 2004, p. 500). For resident fathers, strong labor market attachments are associated

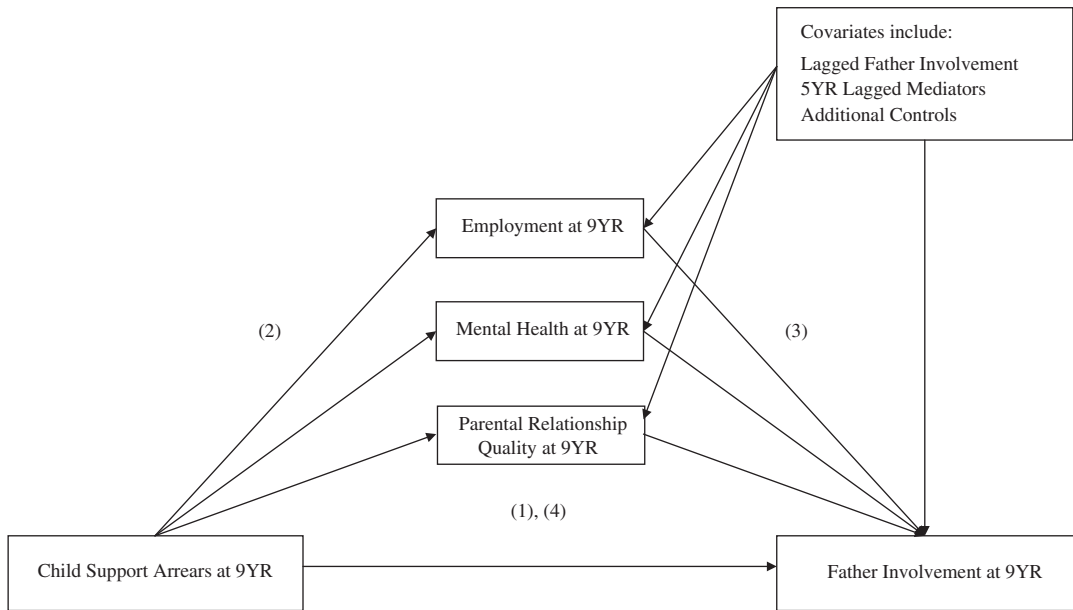
with less direct care of children (Bonney, Kelley, & Levant, 1999; Yeung, Sandberg, Davis-Kean, & Hofferth, 2001). More recent studies of unmarried, nonresident fathers have shown a positive association between employment and paternal contact, however (Cabrera, Fagan, & Farrie, 2008; Ryan, Kalil, & Ziol-Guest, 2008). On the basis of these latter studies, it appears possible that nonresident fathers with arrears will be less involved if they are more weakly attached to the formal labor market. This pathway is illustrated in Figure 1.

Mental health. Some research indicates that disadvantaged fathers who live apart from their children may have a higher risk of mental health problems than other fathers, particularly depression (DeKlyen, Brooks-Gunn, McLanahan, & Knab, 2006). Qualitative and policy research further suggests that child support debt may contribute to low-income fathers' feelings of depression. Waller and Plotnick's (2001) analysis of qualitative studies conducted in multiple sites shows that many low-income NCPs perceived their child support debt as insurmountable. Fathers in these studies reported feeling overwhelmed by the size of their child support arrears and were incredulous that they could accumulate such a large debt while they had limited earnings. A father interviewed in one study explained why he perceived the possibility of paying off his arrears as impossible even if he worked full-time and allocated more than half of his take-home pay to child support:

I called up my probation officer. I was talking to him...telling him I can't afford it. And he was like, "Well, it's not my problem. You gotta pay it" ... [the arrears] just kept building up and building up. I didn't have a job...I couldn't get no assistance from nobody. I didn't have a driver's license. And like I said, I don't got too much of an education. I can't read or write so well. So, I couldn't get a job, no good paying job anyway. I mean, I worked a couple jobs here and there, minimum wage, but that wasn't paying the bills. I'd work all week long, forty, fifty hours a week, then pay my child support, and then I got twenty dollars left. I couldn't do it. No way could I possibly do it. (Waller, 2002, p. 132)

Reports from others studies also suggest a strong sense of hopelessness and despair in the face of NCPs' child support debt. A 2000 Office of Inspector General report also found the

FIGURE 1. MULTIPLE MEDIATOR MODEL OF CHILD SUPPORT ARREARS AND FATHER INVOLVEMENT WITH CHILDREN.



Note. The associations between child support arrears and father involvement are first estimated without mediators (1). When mediators are added to the models, the direct associations between child support arrears and father involvement are estimated (4). The indirect pathways between child support arrears and father involvement with children are composed of the associations between arrears and mediating variables (2) and the associations between mediating variables and father involvement (3). All possible pathways are estimated, including the pathways between the proposed mediators as well as the pathways between the covariates and child support arrears. Five-year lagged father involvement and mediating variables are also included. YR = years.

following: “low-income non-custodial parents faced with thousands of dollars in debt, often see attempts to comply as futile” (U.S. Department of Health and Human Services, Office of Inspector General, 2000, p. 24). In research focusing on NCPs in the W-2 experiment, Pate (2002, p. 79), similarly observed that “arrearages and retroactive support can be so large that the amount of debt will be impossible to ever pay.” Although these responses may not necessarily indicate serious mental health problems, research has also found a strong connection between personal debt and diminished mental well-being, as well as significant links between negative economic changes and heightened risks of depression (Barbaglia, ten Have, Dorsselaer, Alonso, & de Graaf, 2015; Richardson, Elliott, and Roberts, 2013). There is also evidence that financial strain is associated with adverse mental health outcomes (Price, Choi, & Vinokur, 2002; Selenko & Batinic, 2011).

Studies of father–child relationships indicate that diminished mental health among fathers is

correlated with lower levels of paternal contact (Bronte-Tinkew, Moore, Matthews, & Carrano, 2007; Schindler, 2010). Paternal involvement is also tempered among low-income, nonresident fathers who report feelings of psychological distress and depression (Knoester, Petts, & Eggebeen, 2007; Kotila & Dush, 2013). Child support debt could therefore predict higher levels of depressive symptoms among nonresident fathers which, in turn, limits their involvement with children. This second potential pathway is also shown in Figure 1.

Relationships between parents. Receiving child support has been associated with increased conflict between parents (Hutson, 2007). In qualitative studies, both low-income mothers and fathers have reported that participation in the formal child support system can undermine cooperation and exacerbate conflict in their relationships (Achatz & MacAllum, 1994; Edin & Lein, 1997; Hays, 2003; Sullivan, 1993; Waller, 2002; Waller & Plotnick, 2001). For example,

Achatz and MacAllum (1994, p. 88) reported that most NCPs who participated in the Young Unwed Fathers Project in Philadelphia reduced their contact with children after they were called to court for child support. As one father in the program with child support arrears explained: "I wanted to see the baby but I didn't want to go around there just to get back at her for doing that" (Achatz & MacAllum, 1994, p. 88).

Mothers often facilitate nonresident fathers' relationships with children (Marsiglio & Cohan, 2000; Pleck & Masciadrelli, 2004), and recent studies have shown a strong correlation between cooperative coparenting and paternal involvement (Carlson, McLanahan, & Brooks-Gunn, 2008; Fagan & Palkovitz, 2011; Sobolewski & King, 2005). As shown in Figure 1, a third pathway through which arrears may be linked to paternal involvement is through the lower quality of the relationship between parents. In sum, we expect that nonresident fathers' employment, mental health, and relationship with the mother will help explain the association between child support arrears and NCPs' contact and engagement with children 9 years after their birth.

Alternative explanations. The relationship between child support arrears and paternal involvement may be spurious if extraneous factors lead NCPs to both accrue child support debt and disengage from their children. To address selection bias, we use the longitudinal data to control for father involvement and each of the three mediators—employment, mental health, and relationship quality—at an earlier time period (Su, 2012). Previous qualitative and evaluation studies of low-income fathers suggest that arrears would lead to paternal disengagement. It is possible, however, that these three pathways and lower father involvement could also lead to the nonpayment of child support. Including lagged dependent variables and mediators from the Year 5 survey also gives us more confidence in the direction of these associations.

To further minimize selection bias, we control for a rich set of covariates which could also create a spurious association between child support debt and paternal disengagement. Previous studies identify other factors that may influence arrears and father involvement, such as fathers' race or ethnicity (Edin, Tach, & Mincy, 2009; Lerman & Sorenson, 2000), fertility history (including multipartner fertility; Guzzo, 2009;

Tach, Mincy, & Edin, 2010), incarceration history (Swisher & Waller, 2008), support available from family and friends (Castillo & Sarver, 2012), mother's use of public assistance (Cancian et al., 2013), and the child's gender (Lundberg, McLanahan, & Rose, 2007) and temperament (McBride, Schoppe, & Rane, 2002). Other factors such as marital status at birth, parental age and education, and fathers' geographical distance from the child have been found to further differentiate patterns of nonresident father-child contact (Cheadle et al., 2010). We expect to see a negative relationship between arrears and paternal involvement after controlling for father involvement and mediators at an earlier time period and other extraneous factors.

METHOD

Data and Sample

The Fragile Families and Child Wellbeing Study is a longitudinal survey of 4,897 urban births, and the weighted sample is nationally representative of births in large U.S. cities (> 200,000) between 1998 and 2000. Baseline interviews with fathers and mothers took place in 75 hospitals in 20 cities just after the baby's birth, and follow-up interviews were conducted at 1, 3, 5, and 9 years after the birth. At the baseline interview, 78% of eligible fathers participated in the survey, and the response rate is 54% for fathers at the Year 9 survey.

This study examines the relationship between child support arrears and nonresident father involvement with 9-year-old children using the father sample. At the Year 9 survey, 2,652 fathers were interviewed. Given our interest in nonresident fathers, 1,597 fathers were excluded when we limited the sample to fathers who lived apart from the child most of the time on the basis of mothers' reports. Information on the arrears status of 38 nonresident fathers was missing, and these respondents were also excluded from the sample. The full analytic sample is composed of 1,017 nonresident fathers.

The Fragile Families Study was designed to address serious problems of coverage and nonresponse error in previous surveys that attempted to include low-income fathers (Garfinkel, Meyer, & McLanahan, 1998). Fathers who did not participate in the baseline survey were less advantaged and had weaker ties to mothers and children at the time of the birth (Teitler,

Reichman, & Sprachman, 2003). Furthermore, attrition is not a random occurrence; the most disadvantaged fathers were least likely to participate in follow-up surveys. Those in the Year 9 survey were relatively advantaged when compared with fathers who did not participate: They had greater educational attainment and were more strongly connected to the labor market. Therefore, findings about the relationship between child support arrears and nonresident fathers' involvement may be underestimates in our study because the most disadvantaged fathers and those with the weakest connections to mothers and children are underrepresented.

Another contribution of the Fragile Families Study was to include direct reports from fathers about their experiences, and we used fathers' reports of their own child support arrears available in the Year 9 survey. Although mothers are able to report when they are receiving child support, some evidence shows that they have limited knowledge of child support provisions they do not directly experience (Meyer, Cancian, & Nam, 2007). There is also a 4-year gap between the last two survey waves (at Years 5 and 9), during which time more fathers fall into arrears and their debt could increase. The Year 9 data on arrears provide the most up-to-date assessment of the debt fathers have accrued. Using the Year 9 data is also preferable because we would expect current arrears to have a more immediate influence on fathers' relationships with their children than child support debt reported 4 years earlier. Because of skip errors in previous survey waves, this is also the first wave to include fathers' reports from a complete child support panel.

To reduce shared method variance—bias attributed to the same individual reporting both the independent and dependent variables—we use mothers' reports of father involvement (Marsiglio, Amato, Day, & Lamb, 2000). Previous studies suggest that mothers tend to report lower father involvement than nonresident fathers themselves report (Coley & Morris, 2002; Mikelson, 2008). At the end of the results section, we also present results from sensitivity tests in which mothers' reports of arrears and fathers' reports of involvement are used.

Measures

Dependent variables. We analyze three different indicators of paternal involvement reported

by mothers in the Year 9 survey. First, mothers reported the number of days nonresident fathers saw the focal child in the past month (0–30 days). Second, mothers indicated the average weekly frequency (0–7 days) fathers did the following four activities with the focal children: helped with homework, discussed events of the day, read books, and played outside. Engagement in child-centric activities was coded as zero for fathers who did not see the focal child in the past month. Third, mothers reported the average frequency fathers provided in-kind support for the focal child, specifically clothes, toys, medicine, and food, ranging from (1) *never* to (4) *often*. To control for a priori selection, we include similar measures of father involvement from the Year 5 survey. Because mothers were only asked about the number of days of contact if fathers were nonresident, fathers who were still resident in the previous wave were coded as having 30 days of contact.

Independent variables. We measure child support arrears in two ways. First, fathers are asked this question at the Year 9 survey: "Do you have any arrears on the child support that you are supposed to pay to [biological mother of the focal child], or do you owe anything to the welfare department for unpaid monthly support or for reimbursing medical costs?" This is a dichotomous measure of child support arrears, with an affirmative response indicating that fathers had child support-related debt. We are also interested in whether the size of the arrears burden is associated with father involvement. Fathers are asked the amount of arrears that they owe, and the observed values range from \$0 to \$81,300 in 2010 dollars.

Mediating variables. As described earlier, we examine whether the association between nonresident fathers' child support arrears and involvement with children is partially mediated by three factors: fathers' employment, fathers' mental health, and the quality of the relationship between the biological parents.

Employment is represented by the number of weeks fathers reported working in the prior year (0–52 weeks). Those who reported that they did not work in the past year or had no earnings were coded as zero. Mental health is denoted by a scale for depression derived from the Composite International Diagnostic Interview–Short Form on the basis of symptoms (i.e., losing

interest, feeling tired, etc.) that ranges from 0 to 8 (Kessler, Andrews, Mroczek, Ustun, & Wittchen, 1998). Fathers also described the quality of their relationship with the focal child's biological mother, ranging from (1) *poor* to (5) *excellent*. At Year 9, 66 fathers volunteered to interviewers that they did not have a relationship with the mother, and these fathers were coded as "poor." Measures of fathers' employment, fathers' mental health, and relationship quality at Year 5 are also included as controls.

Additional control variables. We account for couple, parent, and child characteristics that may lead to both arrears and lower father involvement. Mothers reported the relationship status of the biological parents at each survey wave, and this information is used to construct a nine-category variable that represents the duration of fathers' nonresidence for biological parents who were both married and unmarried at the birth of the focal child.

Several covariates—age, racial-ethnic group membership, educational attainment, and ever-incarcerated status—are reported by fathers. To account for the possibility that fathers report arrears owed for more than one child, fathers' reports of whether they experienced multipartner fertility or fathered additional children with the biological mother of the focal child are included. Because fathers could potentially ask family members for help to pay arrears, resources available to nonresident fathers through their personal networks are represented by fathers' ability to count on someone to provide a \$200 loan. Nonresident fathers who live more than 30 miles away from the focal child are also identified.

We controlled for whether mothers received TANF during any of the observed survey waves on the basis of mothers' reports because some portion of the arrears may be owed to reimburse these costs. Mothers also reported whether the focal child had a difficult temperament at Year 1 using the Emotionality, Activity, Sociability, and Impulsivity scale (Buss & Plomin, 1984). The gender of the focal child was also identified.

Analytic Strategy

We use structural equation modeling with full-information maximum likelihood estimation to examine the relationship between child support arrears and father involvement through

three proposed mediational pathways: father's employment, mental health, and relationship quality with the biological mother. Multiple mediator models allow us to determine whether the association between fathers' child support arrears and involvement with children can collectively be attributed to the proposed indirect pathways; we can also identify the contribution of each mediator. Using the SEM command in Stata 14 (StataCorp, 2015), we estimate all possible pathways between variables, including relationships between the proposed mediators.

Key associations are identified by number (in parentheses) in Figure 1. Baron and Kenny (1986) outline a sequence of conditions for partial mediation. First, we examine whether there is a link between child support arrears and fathers' involvement with children (1). Next, when potential mediators are added to the model, we examine associations between arrears and the mediating variables (2) and associations between the mediating variables and father involvement (3). Last, we examine whether the association between child support arrears and father involvement persists (4) and is attenuated when mediating variables are included, $(4) < (1)$. Because mediation can occur even when these conditions are not met, we also test mediational pathways using Sobel tests—a joint test of significance for indirect associations that is considered reliable with a large sample size (MacKinnon, Lockwood, Hoffman, West, & Sheets, 2002; Preacher & Hayes, 2008).

Full-information maximum likelihood models account for missing data by treating missing observations as a function of all available information from the variables in the model to preserve the sample size (Allison, 2003; Schafer & Graham, 2002). To obtain precise estimates, each model includes a robust set of control variables when estimating the association between child support arrears and father involvement as well as the mediational pathways. For each of the observed covariates, less than 4% of the observations are missing with one exception: 10% of the observations for the distance the father lived from the child are missing.

We take advantage of the longitudinal data structure to address the possible endogeneity of child support arrears and involvement with children. Using lagged measures of father involvement and mediators as controls reduces the likelihood of spurious relationships because many unmeasured characteristics

remain constant within an individual (Greene, 2003; Nepomnyaschy, 2007). We also present results from sensitivity tests in which mothers' reports of arrears at Year 5 are included in the models, with lagged measures of father involvement at Year 3 and Year 5, and compare models using mother and father reports of involvement.

RESULTS

The descriptive statistics for the analytic sample are presented in Table 1. These results indicated that more than 30% of the nonresident fathers ($n = 309$) reported having child support-related debt. For those with arrears, the average amount owed was \$7,705.

Results from t tests further showed that nonresident fathers with child support arrears were less involved with their 9-year-old children: On average, they saw their children 3 fewer days a month, engaged children in activities less frequently, and provided less in-kind support than nonresident fathers who did not have child support arrears. Those with arrears when the focal child was age 9 were also less involved fathers when the child was age 5.

Nonresident fathers' labor market participation, mental health, and relationship quality with the biological mother of the focal child all varied significantly by child support arrears status. Those with arrears, on average, worked 5 fewer weeks per year than their counterparts without child support debt; they also scored higher on the depression scale and had poorer quality relationships with the biological mother of the focal child. Finally, they were more disadvantaged relative to their counterparts without arrears: Those with arrears had lower levels of educational attainment and were more likely to experience multipartner fertility and incarceration.

Results From Structural Equation Models

Results from structural equation models examining the relationship between child support arrears and nonresident father involvement are presented separately for each of the three father involvement measures in Tables 2 to 4. In each table, Panel A shows the results for the dichotomous measure of arrears, and Panel B shows the results for the amount of arrears owed. Estimates of the key associations identified by number in Figure 1 are presented

in the corresponding numbered columns, with each panel in the tables representing a unique model. Column 1 shows associations between arrears and father involvement without proposed mediators. The relationships between arrears and mediating variables and between mediating variables and father involvement are presented in Column 2 and Column 3, respectively. Column 4 shows direct associations between child support arrears and father involvement when the mediational pathways through fathers' employment, mental health, and relationship quality are included in the models. We also include a fifth column to present indirect associations between arrears and involvement as proportions of total associations attributable to mediational pathways.

Number of days father saw the child. Results for the first dependent variable, the number of days nonresident fathers saw their children in the past month, are presented in Table 3. These results indicated that having child support arrears was strongly associated with nonresident fathers seeing their children fewer days. The indirect pathways through fathers' employment, mental health, and relationship quality collectively accounted for more than a quarter of this relationship, with the quality of the relationship between the biological parents accounting for most of this association.

As shown in Panel A, Column 1, nonresident fathers with arrears saw their children on average about 1.51 fewer days per month, net controls for sociodemographic characteristics, than did fathers without arrears. Results for the multiple mediator models are presented in Columns 2 to 5. In Column 2, fathers with arrears reported poorer relationship quality with the biological mother of the focal child relative to those without arrears (-0.21 on a 1-to-5 scale, or 16% of the standard deviation for the full analytic sample). Parental relationship quality was also strongly linked with the number of days nonresident fathers saw their children, with fathers seeing their children 1.16 more days for every unit on the relationship quality scale (Column 3). Although having child support arrears was associated with working 3.97 fewer weeks a year (Column 2), the number of weeks worked was not related to the number of days fathers saw their children (Column 3). Fathers with child support-related debt had depression scale scores that were 0.64 units (about 27% of the

Table 1. Descriptives of Nonresident Fathers by Child Support Arrears Status

	Nonresident fathers ^a		No child support arrears		Child support arrears	
	Mean or %	SD	Mean or %	SD	Mean or %	SD
Child support arrears at 9YR						
Child support arrears (%)			69.6		30.4	
Amount of arrears owed in 2010 dollars (in 1,000 s)	\$2,116	6,630	–		\$7,705	10,830
Father involvement with children at 9YR						
Days father saw child at 9YR (range 1 – 30)	7.27***	9.52	8.164	9.80	5.216	8.52
Engagement in activities at 9YR (range 1 – 7)	.92***	1.44	1.071	1.55	0.565	1.05
In-kind support at 9YR (range 0 – 4)	2.02***	0.97	2.196	1.00	1.656	0.79
Mediating variables						
Weeks worked per year at 9YR (range 0 – 52)	36.79***	20.10	38.35	19.79	32.96	20.36
Depressive symptoms at 9YR (range 0 – 8)	1.14***	2.36	0.90	2.16	1.69	2.70
Relationship with biological mother at 9YR (range 1 – 5)	2.76***	1.32	2.87	1.33	2.51	1.27
Lagged father involvement at 5YR						
Days father saw child at 5YR (range 1 – 30)	12.43***	12.43	13.731	12.58	9.462	11.67
Engagement in activities at 5YR (range 1 – 7)	1.46***	1.82	1.665	1.90	0.993	1.55
In-kind support at 5YR (range 0 – 4)	2.34***	1.12	2.508	1.12	1.97	1.04
Lagged mediating variables at 5YR						
Weeks worked per week at 5YR (range 0 – 52)	38.58	19.44	38.88	19.56	37.88	19.19
Depressive symptoms at 5YR (range 0 – 8)	0.82*	2.01	0.76	1.99	0.95	2.06
Relationship quality with biological mother at 5YR (range 1 – 5)	3.05	1.30	3.13	1.33	2.85	1.23
Control variables						
Marital status at birth and duration of nonresidence (%)						
Nonmarital birth, nonresident 9YR only	17.8**		20.06		12.62	
Nonmarital birth, nonresident 5YR & 9YR only	14.75		15.11		13.92	
Nonmarital birth, nonresident 3YR, 5YR, & 9YR only	14.55		14.83		13.92	
Nonmarital birth, nonresident 1YR, 3YR, 5YR, & 9YR only	11.41		10.45		13.59	
Nonmarital birth, nonresident at birth, 1YR, 3YR, 5YR, & 9YR only	28.91		25.71		36.25	
Marital birth, nonresident 9YR only	4.92		5.79		2.91	
Marital birth, nonresident 5YR & 9YR only	3.24		3.67		2.27	
Marital birth, nonresident 3YR, 5YR, & 9YR only	2.85		2.82		2.91	
Marital birth, nonresident 1YR, 3YR, 5YR, & 9YR only	1.57		1.55		1.62	
Fathers' age (range 25 – 62)	35.66***	6.59	36.093	6.94	34.673	5.61
Fathers' racial-ethnic background (%)						
White	12.9		13.6		11.36	
Black	65.6		64.45		68.18	
Hispanic	18.5		19.55		16.23	
Other	3.0		2.41		4.22	
Fathers' educational attainment (%)						
Less than high school	18.8		17.76		21.3	
High school degree or equivalent	34.6		33.52		37.1	
Some college or higher	46.6		48.72		41.64	
Multipartner fertility (%)						
Other kids with biological mom (%)	67.7**		64.89		74.32	
Ever incarcerated (%)	43.2		41.64		46.6	
Perceived financial support (%)	33.0***		27.68		45.31	
Mother received Temporary Assistance for Needy Families (TANF) (%)	80.0*		81.79		75.82	
Child is a boy (%)	47.3**		44.07		54.69	
Child is a boy (%)	49.4		48.02		52.43	
Child temperament (range 1 – 5)	2.84	1.08	2.810	1.07	2.910	1.11
Resides 30+ miles from child (%)	33.62		32.71		34.55	
Number of observations (n)	1,017		708		309	

Note. YR = years. ^aDifferences across child support arrears status are tested. *t*-tests are used for continuous variables, *z*-tests are used for binary variables, and χ^2 tests are used for categorical variables.

Source. Fragile Families and Child Wellbeing Study.

[†]*p* < .10, **p* < .05, ***p* < .01, ****p* < .001.

Table 2. *Mediation of Child Support Arrears and the Number of Days Fathers Saw Children in the Past Month*

Dependent variable	(1)		(2)		(3)		(4)		(5)
	Arrears > Father Inv		Arrears > Mediators		Mediators > Father Inv		Arrears > Father Inv		Prop of total assoc., %
Number of days fathers saw children in past month	β	SE	β	SE	β	SE	β	SE	
Panel A									
Arrears (binary)	-1.507*	0.601					-1.093 [†]	0.602	
Weeks worked per year			-3.969**	1.430	0.002	0.015			0.7
Depressive symptoms			0.640***	0.159	-0.221 [†]	0.119			9.5 [†]
Parental relationship quality			-0.211*	0.086	1.162***	0.224			16.5*
Total indirect association									26.6**
Panel B									
Amount of arrears owed (in 1,000 s)	-0.133**	0.042					-0.121**	0.042	
Weeks worked per year			-0.209*	0.100	0.002	0.015			0.3
Depressive symptoms			0.018	0.011	-0.231 [†]	0.118			3.0 [†]
Parental relationship quality			-0.013*	0.006	1.146***	0.224			10.5*
Total indirect association									13.9**
Sample size (<i>n</i>)	1,016								

Note. The associations presented in Columns 1 to 5 are all conditional on the following controls: parental marital status at birth and duration of nonresidence, fathers' age, racial-ethnic group membership, educational attainment, distance from focal child, multipartner fertility, other children with biological mother, ever-incarcerated status, perceived financial support, mothers' Temporary Assistance for Needy Families (TANF) receipt, child's gender and temperament, and the mediators and father involvement variable at Year 5. All possible pathways between variables, including relationships between the proposed mediators, are estimated. assoc. = associations; Inv = Involvement Prop = proportions.

[†] $p < .10$, * $p < .05$, ** $p < .01$, *** $p < .001$.

standard deviation) higher than those without arrears. Each unit increase in the depression scale was also marginally associated with a 0.22 unit decrease in the number of days the nonresident fathers saw the focal child (Columns 2 and 3, respectively).

Taken together, the mediational pathways were significantly associated with the number of days fathers saw children in the past month (Column 5). Fathers' mental health and parental relationship quality, respectively, explained about 10% and 17% of the total association between arrears and the number of days fathers saw their children. Whereas the indirect paths through mental health marginally contributed to the association between arrears and involvement ($p < .1$), parental relationship quality significantly mediated the relationship between arrears and the number of days fathers saw their children ($p < .05$).

Results for the relationship between the amount of child support arrears owed and father involvement are presented in Panel B. On average, nonresident fathers saw their children 0.13 fewer days for each \$1,000 of arrears owed

(Column 1). The total indirect association accounted for almost 14% of the relationship between the amount of arrears owed and days of contact, with parental relationship quality explaining approximately 11% of the total association (Column 5). As expected, the amount of arrears owed was strongly related to parental relationship quality, and parental relationship quality was positively associated with the number of days fathers saw their children (Columns 2 and 3). In this model, the number of weeks fathers worked was again associated with the amount of arrears owed, but fathers' work effort was not related to the number of days they saw their children (Columns 2 and 3). Although the amount of arrears owed was also not linked with fathers' mental health, the negative relationship between depression and the number of days fathers saw their children was marginal for this outcome (Columns 2 and 3).

Engagement in child-centric activities. Consistent with our previous models, the results in Table 4 show that child support-related debt

Table 3. *Mediation of Child Support Arrears and Fathers' Engagement in Child-Centric Activities*

Dependent variable	(1)		(2)		(3)		(4)		(5)
	Arrears > Father Inv		Arrears > Mediators		Mediators > Father Inv		Arrears > Father Inv		Prop of total assoc., %
Engagement in child-centric activities	β	SE	β	SE	β	SE	β	SE	
Panel A									
Arrears (binary)	-0.255**	0.093					-0.198*	0.093	
Weeks worked per year			-3.958**	1.469	-0.002	0.002			-3.8
Depressive symptoms			0.661***	0.164	-0.036†	0.018			9.5†
Parental relationship quality			-0.197*	0.088	-0.182***	0.035			14.5*
Total indirect association									20.2**
Panel B									
Amount of arrears owed (in 1,000 s)	-0.016*	0.006					-0.014*	0.006	
Weeks worked per year			-0.212*	0.101	-0.002	0.002			-3.0
Depressive symptoms			0.022†	0.012	-0.038**†	0.018			-5.0†
Parental relationship quality			-0.013*	0.006	0.182***	0.035			14.1†
Total indirect association									16.1**
Sample size (n)	972								

Note. The associations presented in Columns 1 to 5 are all conditional on the following controls: parental marital status at birth and duration of nonresidence, fathers' age, racial-ethnic group membership, educational attainment, distance from focal child, multipartner fertility, other children with biological mother, ever-incarcerated status, perceived financial support, mothers' Temporary Assistance for Needy Families (TANF) receipt, child's gender and temperament, and the mediators and father involvement variable at Year 5. All possible pathways between variables, including relationships between the proposed mediators, are estimated. assoc. = associations; Inv = Involvement Prop = proportions.

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

was negatively associated with fathers' engagement in child-centric activities and that a sizable part of the association was attributed to parental relationship quality. Nonresident fathers with child support arrears engaged their children less frequently in child-centric activities, averaging 0.26 fewer units of engagement (or about 18% the standard deviation). Results for the indirect pathways between arrears and engagement with children were also comparable and collectively accounted for 20% of the relationship between arrears and fathers' engagement with children. Although the majority of the indirect association again worked through parental relationship quality, fathers' mental health marginally accounted for the association between child support arrears and engagement with children.

Nonresident fathers who owed larger amounts of arrears were also less likely to engage their children in child-centric activities. For every \$1,000 in child support debt owed, fathers engaged their children 0.02 fewer days. Similar to previous findings, parental relationship quality served as an indirect pathway between the amount of arrears owed and father involvement,

accounting for 14% (nearly all of the total indirect association) of the total association between having child support arrears and engagement with children.

In-kind support. Models examining the relationship between child support arrears and in-kind support provided by nonresidential fathers are shown in Table 4. Those with arrears provided significantly less in-kind support than those without arrears, a 0.30 unit difference on a 1-to-4 measure (approximately 31% of the standard deviation). Similar to the results for other father-involvement outcomes, the mediational pathways accounted for a sizeable proportion of the association between having arrears and the amount of in-kind support provided. The majority of the indirect association was also attributed to the pathway through parental relationship quality, which accounted for 11% of the total association. Nonresident fathers who owed more arrears also provided less in-kind support, with each \$1,000 in arrears owed associated with providing nearly 0.02 fewer units of in-kind support (2% of the standard deviation).

Table 4. Mediation of Child Support Arrears and Fathers' In-Kind Support

Dependent variable	(1)		(2)		(3)		(4)		(5)
	Arrears > Father Inv		Arrears > Mediators		Mediators > Father Inv		Arrears > Father Inv		Prop of total
In-kind support	β	SE	β	SE	β	SE	β	SE	assoc., %
Panel A									
Arrears (binary)	-0.298***	0.059					-0.245***	0.058	
Weeks worked per year			-4.076**	1.468	0.002	0.001			2.6
Depressive symptoms			0.623***	0.161	-0.019	0.011			4.1
Parental relationship quality			-0.194*	0.087	-0.166***	0.023			10.9*
Total indirect association									17.6**
Panel B									
Amount of arrears owed (in 1,000 s)	-0.015***	0.004					-0.012**	0.004	
Weeks worked per year			-0.211*	0.101	0.002	0.001			3.0
Depressive symptoms			0.018	0.011	-0.024*	0.012			2.8
Parental relationship quality			-0.012*	0.006	0.168***	0.022			13.3*
Total indirect association									19.1**
Sample size (n)	964								

Note. The associations presented in Columns 1 to 5 are all conditional on the following controls: parental marital status at birth and duration of nonresidence, fathers' age, racial-ethnic group membership, educational attainment, distance from focal child, multipartner fertility, other children with biological mother, ever-incarcerated status, perceived financial support, mothers' Temporary Assistance for Needy Families (TANF) receipt, child's gender and temperament, and the mediators and father involvement variable at Year 5. All possible pathways between variables, including relationships between the proposed mediators, are estimated. assoc. = associations; Inv = Involvement Prop = proportions.

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

The indirect pathways explained 19% of the total association between the amount of arrears owed and in-kind support.

Sensitivity Analyses

We performed a series of sensitivity checks to assess the robustness of our results to alternative specifications. Our main models used contemporaneous measures of child support arrears, mediators, and father involvement at the Year 9 survey because this was the first year of the survey that included full reports from fathers on their arrears. Although these models included controls for the mediators and father involvement variables at Year 5, it is possible that lower father involvement at Year 9 could have led to both the accumulation of arrears and problems with employment, mental health, and the coparental relationship with the mother. To test for directionality more rigorously, we first checked the robustness of our results in models that included mothers' reports of arrears at the Year 5 survey. To assess whether results differed by reporter, a second set of sensitivity tests compared models using the measures of involvement both the mother and father reported: in-kind

support and the number of days fathers saw their children.

We examined mediation models with a 3-year father involvement lag to control for the selection into arrears because fathers who fall into debt may be less involved to begin with. These models also accounted for selection into poor employment, mental health problems, and lower relationship quality as well as involvement at a later point in time. Next, we assessed these associations with a 5-year father involvement lag measured at the same time as arrears to provide a more strenuous test of change in involvement between survey waves. The models included fathers who were nonresident at both the Year 5 and Year 9 surveys ($n = 786$) to ensure that they lived apart from the focal child when arrears were measured with all controls measured at the same or earlier wave.

The results of these additional models using mother reports of arrears at Year 5 were consistent with our main models, indicating an inverse relationship between child support debt and fathers' involvement with children and that parental relationship quality was the strongest and most consistent mediator. Although the total associations in the sensitivity models

were comparable with the main models, the indirect associations explained more of the relationship between arrears and involvement. As shown in Appendix Table A1, relationship quality accounted for between 19% and 55% of the association between arrears and father involvement in models using mother reports of arrears at Year 5. Mothers reported both more arrears and less involvement than did fathers at Years 5 and 9. It is possible that relationship quality played a larger role in the mediation process when mothers perceived fathers to be in debt. Consistent with the main results, the indirect associations were stronger in models predicting the number of days fathers' saw their children than in those predicting in-kind support, suggesting that relationship quality may be particularly important for explaining this outcome. Overall, results were generally more robust in models using father reports of involvement; however, we did not observe these differences in additional sensitivity tests using reports of arrears and involvement at Year 9 (available on request).

The magnitude of associations was somewhat smaller in these additional models when compared with the main models, perhaps as a result of the reduced sample size and estimation power. This was consistent with our expectations that arrears would have a stronger and more immediate influence on involvement in the main models because arrears reported when children are age 5 may be less consequential for father's interactions with their 9-year-old children. Associations between arrears and involvement in models using 3-year lags of father involvement were also somewhat stronger than those using 5-year lags, likely because fathers' levels of involvement were more highly correlated across the last two waves of the survey.

As a final sensitivity check, we assessed the relationship between arrears and involvement among a subsample of nonresident fathers with child support orders to ensure that our measure of arrears was not just accounting for formal interaction with the child support system (available on request). Among those with child support orders at Year 9, we found that the negative associations between arrears and involvement were consistent and significant across models. The indirect pathways are generally weaker than those presented in our main results, and this was again likely because of differences in sample size and estimation power. Overall, these

sensitivity tests indicated that our findings were robust.

DISCUSSION

Child support arrears have grown to more than \$100 billion dollars in the United States, and most of this outstanding debt is owed by men with very limited earnings (Sorensen et al., 2007). Although few studies have investigated the meaning of child support debt for low-income families, research shows that arrears reduce nonresident fathers' labor force participation and child support payments (Cancian et al., 2013; Miller & Mincy, 2012). This is among the first studies we are aware of that uses national data to examine whether accruing child support arrears is linked to nonresident fathers' involvement with children. Our results indicate that nonresident fathers with child support arrears saw their children about 3 fewer days a month, were less likely to engage with their children in daily activities, and provided in-kind support less often to their children than did fathers without this debt.

We also go beyond establishing this empirical link by providing insight into three pathways—the quality of the fathers' relationship with biological mothers, their work effort, and mental health—through which child support arrears could hinder paternal involvement. Prior research, though limited, suggests that child support debt could operate through each of these mechanisms (Cancian et al., 2013; DeKlyen et al., 2006; Hutson, 2007; Martinson & Nightingale, 2008; Miller & Mincy, 2012; Waller & Plotnick, 2001). We find that these three mediational pathways collectively account for a substantial share of the association between having child support arrears and involvement (18% to 27%) and between the amount of arrears owed and involvement (14% to 19%) across our three outcome measures.

Our results specifically show that the quality of the relationship with the mother is the strongest and most consistent mediator across all model specifications. Nonresident fathers with arrears have weaker relationships with their child's mother, and the quality of these relationships accounts for most of the indirect associations we observe. Child support enforcement tools aimed at collecting these debts, such as incarceration, license revocation, and tax

refund intercept, impact the most disadvantaged fathers who disproportionately owe arrears. It is plausible that accruing child support arrears could put considerable strain on fathers' relationships with mothers in this context, leading men to avoid households where their children live or making the mothers less inclined to interact with the father.

Prior empirical work suggests that significant personal debt and financial strain are associated with adverse mental health outcomes (Barbaglia et al., 2015; Price et al., 2002; Richardson et al., 2013; Selenko & Batinic, 2011). We find marginal evidence that the relationship between having child support arrears and father involvement works through depressive symptoms on two key outcomes. Several studies have reported that low-income fathers often report feeling overwhelmed by the size of their debts, and we see a relationship between arrears and depressive symptoms in most models (Pate, 2002; U.S. Department of Health and Human Services, Office of Inspector General, 2000; Waller & Plotnick, 2001). It is possible that the influence of mental health on involvement is emerging at an earlier time point.

We find little evidence of mediation by fathers' employment. Although findings are consistent with studies that show men with arrears have weaker labor market attachments (Cancian et al., 2013; Miller & Mincy, 2012), we did not observe a strong connection between men's employment and their interactions with children. Previous research suggests that employment can both facilitate and hinder father involvement (Gerson, 1993; Pleck, 1997): Although economic contributions can open the door to father-child contact, work demands can also prevent fathers from spending a significant amount of time with their children (Russell & Hwang, 2004). This bidirectional pull may yield null results in mediational models. It is also important to note that our sample is composed of disadvantaged men whose labor market participation is concentrated at lower levels, limiting variation in employment experiences.

Limitations

The Year 9 Fragile Families data allow us to analyze direct reports from a large sample of nonresident fathers about their own child support arrears, yielding a rich descriptive portrait of how and why fathers are less involved after

accruing child support debt. We cannot check these self-reports against administrative data, and the measure of arrears in the Fragile Families Survey does not allow us to distinguish between arrears owed to the state to reimburse TANF and Medicaid expenditures and those owed to mothers or to identify total arrears across all families. Linking administrative and survey data is an important direction for future research. It is also important to note that disadvantaged, nonresident fathers with weaker connections to families were less likely to participate in the survey and are more likely to drop out of the study. Therefore, our results may underestimate the relationship between child support arrears and paternal involvement if more disengaged fathers are underrepresented. Because the sample includes only parents in large urban areas with 9-year-old children, this may also limit the generalizability of findings for parents with children of other ages or for those living in other geographical locations.

Our models account for factors that may lead to fathers both accruing arrears and being less involved with children by including lagged dependent variables and mediators as well as an extensive set of controls. This approach allows us to examine associations between arrears and involvement and salient pathways, but it does not allow us to make causal inferences. Given that most of our measures are contemporaneous, it is also not possible to definitively establish time order. Sensitivity tests suggest that the results were robust when arrears were measured at an earlier time point, but additional studies are also needed to tease out the directional pathways. It is also possible that the nonpayment of child support could negatively impact the quality of the relationship with the mother and child, regardless of whether debt is accrued. Another important direction for future work is to use methods that can distinguish the effect of not paying child support from the accumulation of child support debt. Finally, questions remain about whether the link between arrears and father involvement could be explained by other mediators not available in these data.

Policy Implications

The child support enforcement program was established in 1975 at a time when the majority of children in separated families were living with

divorced rather than never-married parents. It is estimated that half of the children in poor families now participate in the child support program (OCSE, 2013), and a growing share of parents with child support orders are living in fragile families (Grall, 2013). Given sharp differences in the likelihood of having a child outside of marriage by education and race and ethnicity (Ellwood & Jencks, 2004), unmarried fathers are more economically disadvantaged than their divorcing counterparts, are less able to pay child support, and have more fragile relationships with their child's mother. A disproportionate number of NCPs with arrears are also very low-income men, and these fathers report significant distrust of the legal system (Goffman, 2014). High levels of child support debt could create additional challenges for fragile families in poor and minority communities.

Roberts (2001) has outlined a number of legal options available to states to minimize arrears, such as providing self-support reserves and avoiding minimum orders; limiting retroactive support; minimizing income imputation; limiting fee and cost recovery; modifying orders quickly, preventing, modifying, or forgiving interest charges; limiting the percentage of NCPs' income that can be withheld; compromising, capping, or forgiving arrears; offering arrears amnesty programs; and reviewing cases for closure. Research on the effectiveness of these strategies is ongoing, but results from one demonstration program in Wisconsin show that nonresident fathers who participated in a program that gradually reduced their child support arrears when they stayed current on their child support orders were able to increase their payments (Heinrich et al., 2011).

Child support policies could also address specific pathways through which this debt is linked to lower paternal involvement. Our results show that child support debt operates partially through nonresident fathers' poor relationships with their child's mother. Some community-based coparenting interventions for low-income, fragile families are being developed to prevent paternal disengagement and improve child outcomes (McHale, Waller, & Pearson, 2012). Growing attention is also being paid to providing mental health services to low-income men (Johnson, 2010). Problem-solving courts and fathering programs that take a more holistic and preventive approach to addressing families' needs by connecting fathers to employment, mental

health, coparenting, legal, and other supports before they accrue significant arrears may further help low-income men meet their child support obligations and stay connected to their children.

NOTE

The first author would like to acknowledge the Cornell Population Center and the Frank H. T. Rhodes Postdoctoral Fellowship endowment at Cornell University for research support. This research was also supported by a Hatch grant awarded to the second author through the National Institute of Food and Agriculture, U.S. Department of Agriculture. The authors would like to thank the editor and three anonymous reviewers for their constructive comments.

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APPENDIX

Table A1. Mediation of Child Support Arrears at Year 5 and Father Involvement at Year 9

	Proportion of total association attributed to mediation			
	In-kind support at 9YR		Number of days fathers saw children at 9YR	
	Mothers' reports	Fathers' reports	Mothers' reports	Fathers' reports
Lagged father involvement at 3YR				
Arrears (Binary) at 5YR				
Weeks worked per year, %	2.5	2.7	4.7	0.9
Depressive symptoms, %	−0.1	0.8	0.6	0.9
Parental relationship quality, %	19.9*	21.6**	35.0*	35.3**
Total indirect association, %	22.3*	25.1**	40.4*	37.0**
Lagged father involvement at 5YR				
Arrears (Binary) at 5YR				
Weeks worked per year, %	2.7	2.1	5.9	1.2
Depressive symptoms, %	−0.4	1.4	−0.4	0.0
Parental relationship quality, %	34.2†	22.2*	54.8*	39.8**
Total indirect association, %	37.2†	25.6*	60.3*	41.1*
Sample size (n)	743	780	785	785

Note. The associations presented in Columns 1 to 5 are all conditional on the following controls: parental marital status at birth, fathers' nonresident status at birth racial-ethnic group membership, child's gender and temperament, and the mediating variables at Year 5. All possible pathways between variables, including relationships between the proposed mediators, are estimated. YR = years.

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