

Child Support and Child Development

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Prior research has found that child support receipt is positively related to various measures of child well-being, including cognitive skills, emotional development, and educational attainment. However, most existing studies have used samples of children born to previously married parents and have specifically focused on child support received through formal child support agreements. Today, nearly 40% of children are born to unmarried parents, and unmarried mothers with children now represent the largest proportion of single parent families in the US. Compared to children of divorced parents, children of unmarried parents are much less likely to receive formal support from their fathers because many of these men have low earnings and are only loosely connected to the labor market. Furthermore, many unmarried parents continue to be involved in romantic relationships and thus are less likely to become involved with the formal system. Research on unmarried parents confirms that most of these fathers are involved with their children and contribute to them informally, either through direct cash contributions or non-cash support. However, little is known about the effects of these alternate forms of father involvement on children's well-being and development.

In this paper, we examine associations of multiple types of nonresident father contributions to children—including cash paid through the formal child support system, cash paid directly to resident mothers (informal support), and in-kind support—with children's behavior problems and cognitive skills using a sample of unmarried parents in large urban areas in the US.

Data

This research is based on data from the Fragile Families and Child Wellbeing Study (FF), a longitudinal birth cohort study of approximately 5,000 children born to unmarried parents between 1998 and 2000 in 20 large U.S. cities in 15 states. Mothers and fathers were interviewed at the hospital at the time of their child's birth, and follow-up interviews were conducted when children were 1, 3, and 5 years old. The FF sample is representative of births to unmarried parents in all U.S. cities with populations of 200,000 or more in the late 1990's. The survey includes a rich set of variables related to mother, father, and child characteristics, family resources, and child wellbeing. Additionally, mothers provided detailed information about non-resident fathers' characteristics and behaviors, including their provision of formal, informal, and in-kind child support as well as their types and levels of involvement with children.

In the current study, we focus on a sample of parents who were unmarried at the birth of their child and were not cohabiting at either of the last two waves of the survey (the 3-year or the 5-year interview). In the 5-year survey, mothers were asked about the amount of child support they have received from the father of the focal child since the last survey (approximately two years ago). Mothers reported on formal child support if they had a legal child support order and on informal cash support in addition to or in place of formal support if they did not have an agreement. We created a dichotomous measure for whether the mother received either type of cash support and a continuous measure for the amount of each type. We also combined these types of support into a measure of total cash support received. Mothers were also asked about in-

kind contributions that fathers made (whether fathers contributed clothes, toys, medicine, food, or other non-cash items ‘often, sometimes, or never’). We created a dichotomous measure for whether the father provided any of these things ‘often or sometimes’ vs. ‘never.’

Our outcome measures of interest are children’s cognitive skills and behavior problems. Cognitive skills are assessed by a child’s score on the Peabody Picture Vocabulary Test-Revised (PPVT-R) at approximately 60-months of age. The PPVT-R is a receptive vocabulary test that has been widely used to measure children’s language and cognitive ability. It is administered directly to the child by a trained interviewer. Behavior problems are assessed by the internalizing and externalizing behaviors subscales of the Child Behavior Checklist (CBCL). The CBCL is a commonly used measure of children’s behavioral problems. It is completed by the adult respondent to the survey, typically the child’s mother. The internalizing behaviors subscale included in FF consists of 23 items assessing anxious, depressed, and withdrawn behaviors; the externalizing behaviors subscale consists of 30 items assessing aggressive and delinquent behaviors.

Methods

One of the primary challenges in considering the association between child support and children’s wellbeing is selection bias. Fathers who provide economic support to their children are likely to differ from fathers who do not in a variety of ways that may give rise to a spurious association between child support and child outcomes. As a result, cross sectional analyses that relate a point in time measure of child support to child wellbeing, are likely to be biased. For this reason, we focus on estimating a lagged dependent variable (or value added) regression model that focuses on understanding whether higher levels of child support (amount of formal, informal, and in-kind support provided in the past two years) reported when the child is age 5, predict children’s five year outcomes after adjusting for their scores on these outcomes at age 3. This lagged dependent variable approach is a particularly powerful way to reduce omitted variable bias because the measure of the child outcome at age 3 can also be viewed as a rough proxy for unmeasured preexisting child and family characteristics and experiences that contribute to children’s development. In addition to the lagged dependent variable, we also include in the model an extensive set of observed child and family factors that may be confounded with both paternal support and child wellbeing. We focus our attention on ages 3 and 5 because there are few good measures of children’s cognitive skills and behavior prior to age 3, and also because a larger proportion of parents have ended their relationship by the age three interview than have by the age 1 interview. Our models take the following form:

$$Y_{i5} = \beta_0 + \beta_1 Y_{i3} + \beta_2 \text{Char}_{i3} + \beta_3 \text{Formal}_{i5} + \beta_4 \text{Informal}_{i5} + \beta_5 \text{Inkind}_{i5} + e_i$$

where Y_{i5} represents a child’s behavior or achievement that is predicted by covariates measured at or before the age 3 survey (Char_{i3}), child support reported by mothers for the past year during the five-year interview (Formal_{i5} , Informal_{i5} , Inkind_{i5}), and a measures of children’s achievement and behavior taken from the age 3 survey.

The exact way in which to model formal and informal cash support is theoretically ambiguous. On the one hand, some features of formal support (regularity, predictability) may make formal support more beneficial for children than informal support. On the other hand, informal support

may be more connected with fathers' visitation, allowing them to better monitor mothers' spending on children which may be more beneficial. Alternatively, these two types of support may function as substitutes, in which case the combined amount may be most important. Given this ambiguity, we consider several ways of measuring support (separately and in the aggregate).

In addition, we might expect the effects of support to differ based on a child's household resources. For example, increases in income appear to be more beneficial for children experiencing deep poverty. However, the level of resources in a child's household is likely endogenous to the level of support a father contributes. For example, in the absence of regular financial support from a non-resident father a mother may seek out a new partner or might co-reside with extended kin. Alternatively, with high levels of support from a non-resident father, a mother may reduce her work effort. As a result, we use the mothers' level of education as a proxy for her earnings potential (as well as her access to economic resources), and estimate our models separately for mothers with less than a high school degree, those with a high school degree, and those with at least some post-secondary education.

Although our lagged dependent variable approach can be quite helpful in reducing bias related to time invariant unmeasured characteristics, it fails to adequately reduce bias due to time varying characteristics. Thus, we take advantage of variation in child support enforcement across states and localities to estimate instrumental variables (IV) models of the effect of formal child support on children's outcomes. In the first stage of these models, we include a measure of the strength of child support enforcement along with a host of covariates to predict whether fathers make formal support payments. For instruments, we will examine and test a number of measures of enforcement which vary at the state and city-level. These measures will include: child support expenditures per single mother in the state, an index of how proactive states have been in enacting new federal child support legislation, an interaction of these two measures, and a city-level practice measure that incorporates child support outcomes from Census data. Prior research with FF data suggests that these measures of child support enforcement will be sufficiently strong predictors of formal payments to serve as instruments in IV our models (Nepomnyaschy & Garfinkel, 2008).

In the second stage of the IV models, child outcomes will be regressed on the predicted value of formal child support as well as a host of rich individual level controls. There are several assumptions which are necessary to interpret IV results as local average treatment effects. The most worrisome is what is termed the "exclusion restriction". We must assume that the only way in which child support enforcement would affect children's outcomes is via its association with child support payments. Unfortunately, we cannot test this assumption, but we include state and city-level variables to reduce the likelihood of spurious associations creating bias. Because there are no valid instruments for informal or non-cash support, these analyses will only be performed for formal child support receipt.

Preliminary Results

Preliminary results from OLS regressions without controls suggest that the amount of total child support received is positively associated with cognitive skills and negatively associated with externalizing behavior problems and that the amounts of both formal and informal child support paid by fathers are positively associated with cognitive skills, whereas only the amount of formal

support paid is associated with externalizing behavior problems. For example, an additional \$1000 in formal support over the approximately 2 years between the age 3 and age 5 surveys was associated with a .03 standard deviation (SD) increase in cognitive skills and a .02 SD decrease in externalizing behavior problems; a \$1000 increase in informal support was associated with a .05 SD increase in cognitive skills. Neither formal nor informal support was associated with internalizing behavior problems. Furthermore, fathers' in-kind contributions were not related to child cognitive skills or behavior. The next steps in our analyses will include adding the control variables and lagged dependent variables to our regressions and also estimating the IV model for formal support. To the extent that results from those models can be assumed to reflect causal relations, our findings will have implications for whether increasing child support payments—both those paid through the formal child support system and those contributed informally—is likely to lead to improvements in child wellbeing.