

Parental Debt and Child Well-Being: What Type of Debt Matters for Child Outcomes?



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Wealth inequality in the United States has increased tremendously over the last several decades and has potentially serious repercussions for disparities in child well-being. Household debt, a key component of wealth, may also play a role in such disparities. In this study, we explore the associations of parents' unsecured debt with children's socioemotional well-being. Using data from the Fragile Families and Child Well-being Study, we compare the associations of mothers' unsecured household debt, fathers' unsecured household debt, and fathers' child support arrears with socioemotional outcomes among nine- and fifteen-year-old children who have a nonresident father. We find robust evidence that nonresident fathers' child support arrears, but not other types of parental household debt, are associated with worse outcomes and that these associations become stronger as children age.

Keywords: parental debt, child support arrears, child well-being, adolescent well-being, nonresident fathers

Wealth inequality in the United States, particularly among families with children, has increased tremendously over the last several decades and has potentially serious repercussions for socioeconomic and racial-ethnic disparities in child well-being (Pfeffer and Schoeni 2016; Yeung and Conley 2008; Gibson-Davis and Percheski 2018; Pfeffer and Waitkus 2021, this issue; Gibson-Davis and Hill 2021, this issue). Family wealth is the stock of accumulated

goods and assets to which a family has access. Research has linked family wealth with various domains of child well-being, and these accumulated resources may have both direct and indirect benefits for children (Elliott, Destin, and Friedline 2011; Grinstein-Weiss, Shanks, and Beverly 2014; Shanks 2007; Moulton et al. 2020; Conwell and Ye 2021, this issue; Boen, Keister, and Graetz 2021, this issue; Miller et al. 2021, this issue).

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One important factor contributing to increasing wealth inequality is the growing accumulation of debt by low-income families (Carr and Jayadev 2015; Gibson-Davis and Percheski 2018; Saez and Zucman 2016). For these families, debt has increased in response to a series of economic changes over the last several decades, including stagnating wages, rising costs of housing, child care, education, and health care (Mishel, Gould, and Bivens 2015), and easier access to credit (Rona-Tas and Guseva 2018), often on subprime terms (Fourcade and Healy 2013). Although the debt of all households in the United States has increased, inequality in debt holdings is growing, based on the types of debt accrued and the terms under which that debt is owed (Foote, Loewenstein, and Willen 2016; Rona-Tas and Guseva 2018; Conwell and Ye 2021, this issue). This inequality mirrors growing disparities in wealth that, in turn, have important implications for growing disparities in economic security among families (Dwyer 2018) and potentially for children's well-being.

Research on the negative consequences of debt for debt-holders and their children has often focused on unsecured debt, which is not tied to any form of collateral, such as a home or car. Unsecured debt is more often shouldered by lower-income and otherwise disadvantaged groups (Dwyer 2018; Saez and Zucman 2016; Houle 2014). Although some types of debt can benefit children and their families (Gibson-Davis and Hill 2021, this issue), parents' unsecured debt may be more likely to signal economic distress, which is detrimental to children. One type of unsecured debt rarely considered in this body of work is child support arrears owed by parents (most often fathers) who have a nonresident child. These arrears include unpaid child support as well as interest, fees, and costs that can be added to the original obligation (Turetsky and Waller 2020). Like other forms of unsecured debt, child support arrears have grown substantially over the past several decades (Office of Child Support Enforcement 2018) and are largely owed by nonresident fathers whose income levels are very low (Sorensen, Sousa, and Schaner 2007).

Fathers who fall behind on child support often face legal, economic, and social sanctions, including suspension of drivers' licenses, pub-

lic shaming, and incarceration. A growing body of research suggests that child support debt leads to lower employment and compliance with child support orders, less involvement with children, and worse mental health among nonresident fathers (McLeod and Gottlieb 2018; Miller and Mincy 2012; Link and Roman 2017; Turner and Waller 2016; Cancian, Heinrich, and Chung 2013; Um 2019). Thus, it is likely that child support arrears may be a particularly harmful form of debt for children. No study, however, has examined the association of child support arrears with child outcomes, or how child support arrears compare (or work in concert) with other forms of parental household debt to affect child well-being.

In this study, we examine the associations of unsecured parental debt—including both household debt and child support arrears—with socioemotional outcomes among a national sample of urban children who have a nonresident father. Given the adverse effects of unsecured debt documented in the existing literature, and that half of U.S. children will live apart from their biological fathers (Kennedy and Bumpass 2008), we focus our analysis on three types of unsecured debt that may have implications for the well-being of many U.S. children. Using longitudinal data, we model the associations of mothers' household debt, nonresident fathers' household debt, and nonresident fathers' child support arrears in middle childhood with internalizing, externalizing, and delinquent behaviors and anxiety and depression among nine- and fifteen-year-old children.

BACKGROUND

Total household debt in the United States has reached more than \$14 trillion, surpassing the pre-Great Recession peak of \$12.6 trillion (Federal Reserve Bank of New York 2019). Nationally, the largest sources of this debt include mortgages, auto loans, education loans, and credit card debt. Mortgages are the largest single source (\$9.5 trillion) but are much more likely to be held by older individuals. Student loan debt has tripled over the last fifteen years and is now the second largest source—representing 11 percent of debt (\$1.5 trillion) across all borrowers, but nearly 40 percent among those age

eighteen to twenty-nine. The total accumulated credit card debt (\$930 billion) has fluctuated to a minor degree since 2008 but is more equally distributed by age of borrower (Federal Reserve Bank of New York 2019). The most recent data on family-level debt holding, which are most relevant to our work, are only available from the 2016 Survey of Consumer Finances. These data reveal that among the 44 percent of families with a credit card balance, the average debt was \$5,700. In comparison, of the 20 percent of families with education loans, the average amount was \$34,000 (Bricker et al. 2017).

These national figures omit key debts among many lower-income families, most notably legal debts associated with the criminal justice system and child support arrears. Surveys have largely not measured the full scope of legal debts, though existing research indicates legal fees, fines, and sanctions are widespread and increasing (Harris, Evans, and Beckett 2010), with serious negative implications for family economic security (Katzenstein and Waller 2015; Comfort 2016). More is known about the prevalence and outstanding amounts of child support arrears for lower-income families. Like student loan debt, child support arrears have grown substantially over the past several decades to more than \$118 billion, with the typical obligor owing about \$11,020 (Office of Child Support Enforcement 2018). Typical debt calculations may thus substantially undercount the debts held by low-SES parents, who are overrepresented in the group who owe arrears. Omitting this key source of debt in overall and household-level debt calculations poses a serious limitation for our understanding of debt holding in the United States, especially among low-SES families.

Types of Debt

Debt is often categorized into two types: secured debt, which is tied to an asset or other form of collateral (such as a home, business, or car) that can be repossessed in the case of default; and unsecured debt, which lacks such collateral and typically takes the form of credit

card debt, medical bills, student loans, legal fees, and other personal loans. Secured and unsecured debt can be further classified into prospective credit offers or retrospective debt obligations; and these distinctions provide further insight into how types of debt may contribute to inequality and differentially affect family and child well-being (Dwyer 2018). Prospective credit offers include credit cards, store cards, bank loans, and student loans, which may promote financial independence and facilitate the development of human, social, or economic capital (Dwyer 2018). However, such lines of credit are generally awarded based on the myriad of factors that contribute to a credit score (Rona-Tas and Guseva 2018) and are disproportionately made available to White and higher-income individuals and households (Dwyer 2018). Retrospective debt obligations include medical debt, legal fines and fees, government fees (such as tax penalties), past-due rent and utility bills, and child support debt. These types of debt imply punishment or accountability for past behaviors and are disproportionately borne by minority and lower-income individuals and households. Thus, because retrospective debt often involves legal, economic, or social sanctions and does not facilitate the development of human, social, or economic capital, it can have immediate and long-term impacts on child and family well-being and contribute to disparities in outcomes.

Child support arrears are a particularly salient debt for low-income fathers and their children.¹ Over the past forty years, the deteriorating economic prospects of many men at lower skill and educational levels (Ruggles 2015; Wilson 2011; Edin and Nelson 2013; Smeeding, Garfinkel, and Mincy 2011), combined with the enactment of a series of more stringent measures to collect child support payments from non-resident fathers, contributed to a dramatic growth in outstanding arrears over the period (Sorensen, Sousa, and Schaner 2007). Notably, child support obligations are often set beyond the ability of low-income fathers to pay (Turet-

1. Although both mothers and fathers can be noncustodial parents of a child and have arrears, the overwhelming majority in the United States are men (Smock and Schwartz 2020; Office of Child Support Enforcement 2018). Thus, throughout this article, we consider and refer to child support arrears among fathers.

sky 2019). Courts may set child support orders based on imputed income if fathers do not appear in court, are unemployed, or cannot produce documentation of their income; however, this practice is used much more often for lower-than higher-income fathers (Turetsky and Waller 2020). Moreover, it can be very difficult for low-income parents to modify child support orders when they are out of work or incarcerated. Arrears typically double during periods of incarceration (National Council of State Legislatures 2019) and are three times higher among fathers with a history of incarceration (Dwyer Emory et al. 2020). In addition to unpaid support owed under the terms of a child support order, arrears may also include interest, fees, Medicaid birthing costs, and retroactive support assessed for periods before child support orders are established (Heinrich, Burkhardt, and Shager 2011; Wheaton and Sorensen 2007). Thus, child support arrears are both unsecured and retrospective debt, providing the least benefit to families and potentially extracting the largest cost.

Historically, the majority of child support arrears were owed to the government to recover the cost of benefits paid to families receiving cash assistance. As welfare caseloads have declined, so has the share of arrears owed to the government (Sorensen 2014, 2019). Today, about 80 percent of this debt is owed to families (Putze 2017). Nonetheless, most states continue to withhold child support to recover these costs. Moreover, most families in the child support system participate in some type of public assistance program, and about half have incomes below 150 percent of the poverty line (Sorensen, Pashi, and Morales 2016). Thus, it is not surprising that fully 75 percent of fathers who owe arrears have less than \$10,000 in annual income, and 60 percent report no income whatsoever (Arthur 2018). Fathers who accrue arrears may be subject to punitive enforcement measures, such as incarceration, suspension of drivers' and professional licenses, and seizure of assets and tax returns (Turetsky and Waller 2020), which are the same sanctions imposed on those who have legal financial obligations (court fines and fees) (Harris 2016). Data are limited on the total debt burden facing fathers who are behind on both child support arrears

and fines and fees related to their criminal justice system involvement, but the cost recovery goals and enforcement tools in these two systems, as well as the group of low-income men of color who are most likely to owe both types of debt, clearly converge (Turetsky and Waller 2020).

Debt and Child Well-Being

The associations between parental debt and child well-being, like other indicators of socioeconomic status (SES), may operate through parental resources or investments and through parental stress (Duncan, Magnuson, and Votruba-Drzal 2014; Magnuson and Votruba-Drzal 2009). In addition, Christina Gibson-Davis and Heather Hill (2021, this issue) identify two other pathways through which debt, as an indicator of wealth, may be conceptualized to affect child well-being: parents' subjective financial well-being and parents' future expectations for the child. These pathways are related to the ways in which wealth (or the lack of wealth), can independently create feelings of security or insecurity and stability or instability and act as a marker of comparative social class and hierarchy.

As true of other measures of SES, the parental investment pathway suggests that greater resources allow parents to purchase goods and services that can promote children's health and development. These investments may include better neighborhoods, safer housing, higher quality childcare, better schools, developmentally rich after-school activities, toys, books, and more nutritious foods that all may contribute to better child outcomes (Berger, Paxson, and Waldfogel 2009). The parental stress pathway suggests that constrained or scarce resources in a household increase parents' financial and emotional stress, which negatively affect both parents' physical and mental health as well as parental warmth and sensitivity, leading to lower quality parenting and a less nurturing environment for children (Conger, Conger, and Martin 2010; Conger et al. 1994; Mistry et al. 2002).

The subjective financial well-being pathway reflects how parents perceive their status and circumstances in relation to others, their past experiences, and their expectations for the fu-

ture (Vera-Toscano, Ateca-Amestoy, and Serrano-Del-Rosal 2006). It also illustrates how wealth (or lack of wealth), as a potential marker of constrained resources and unrealized financial independence, may reduce parents' future orientation and dampen expectations for themselves and their children. For example, parents discouraged by high levels of debt may communicate bleaker expectations about future economic security, pessimism about access to future opportunities, or reduced life-chances to their children based on their current economic situation. These pathways may be particularly salient for children's socioemotional outcomes (Magnuson and Votruba-Drzal 2009; Gibson-Davis and Hill 2021, this issue; Miller et al. 2021, this issue).

Different types of debt may signal particular economic contexts within the household and operate differently to affect child outcomes (Conwell and Ye 2021, this issue). To the extent that debt constrains household resources, higher levels of parental debt should reduce both parents' ability to provide necessities for their families, increase parental stress, and reduce subjective financial well-being and expectations for children's future. For example, retrospective debt can force the reallocation of scarce household resources away from expenditures on items that promote health and well-being toward repayment of that debt, hindering families' economic stability and ability to respond to unexpected needs (Seefeldt 2015). In the worst cases, such debt can lead to reallocation of resources away from basic necessities, causing utility shut-offs, food shortages (Brewer 2018; Chang, Chatterjee, and Kim 2014), and evictions (Lundberg and Donnelly 2019; Desmond 2016).

Alternatively, debt may supplement family resources over the short or long term or allow parents to make investments that contribute to future wealth. As noted, when kept at manageable levels, unsecured debt offered through prospective credit offers, such as credit cards or personal loans, can provide families access to resources that allow them to smooth consumption during spells of unemployment or other negative financial shocks (Dwyer 2018; Seefeldt 2015; Babiarez, Widdows, and Yilmazer 2013). This means that parents can temporarily

provide necessities and otherwise shield children from hardships that could affect their well-being. Similarly, student loan debt allows the borrower to accumulate human capital and serves as a potential investment, and these financial obligations may be offset by returns to additional education or the promise of future returns. Although acquiring this type of debt may still lead to some parental stress, in this context it may not diminish resources to children and may increase optimism about the future and enhance future orientation. Taken together, this framework suggests that associations between unsecured household debt and children's socioemotional outcomes may be offsetting, and thus our a priori expectations are ambiguous.

Child support arrears, which are a type of both retrospective and unsecured debt, may affect child well-being through the pathways discussed as well as through changes in father involvement unique to this form of debt. As with other debts, arrears may reduce available household resources—though in different ways for custodial mothers and nonresident fathers. Evidence suggests that arrears reduce fathers' motivation to secure employment because up to 65 percent of their earnings can be withheld, further constraining resources within their households (Link and Roman 2017; Miller and Mincy 2012). If arrears are owed to the state, they are likely to affect only fathers. On the other hand, if the arrears are due to both the mother and the state (as is most often the case), they are both a source of debt in the nonresident father's household and a source of strain and resource deprivation in the mother's household. Thus, child support debt may constrain the resources available to children in both custodial mothers' and nonresident fathers' households.

Child support arrears may be a particularly harmful source of debt for parents, reducing subjective financial well-being as well as future expectations for themselves and their children. Beyond the debt itself, having child support arrears is likely to have collateral consequences for fathers and their families, some of which can further undermine their family relationships and ability to pay off these debts. Fathers who accrue arrears may lose their drivers' li-

censes, be publicly shamed through “deadbeat dads” billboards and websites, have wages garnished at high rates, or be incarcerated for non-payment (Office of the Inspector General 2000; Roberts and Vinson 2004; Turetsky 2019; McLeod and Gottlieb 2018). Child support arrears are associated with lower employment, greater risk of incarceration, worse mental health, and lower child support payments among nonresident fathers (Miller and Mincy 2012; McLeod and Gottlieb 2018; Link and Roman 2017; Cancian, Heinrich, and Chung 2013; Um 2019). In some cases, men may be forced to rely on family members and partners to make “purge payments” on this debt to avoid immediate incarceration (Katzenstein and Waller 2015), increasing the resource strain and decreasing the subjective financial well-being that families face.

As a pathway unique to this type of debt, evidence suggests that child support arrears may also affect children by reducing nonresident fathers’ involvement with them. These reductions may be the result of fathers’ economic constraints, stigma around nonpayment, or weakened relationships with the mother due to possible conflict over support (Turner and Waller 2016). A robust body of research indicates that various indicators of nonresident fathers’ involvement with children, including engaging in activities, involvement in school, providing material support, and close and warm relationships, are associated with improved cognitive, academic, and socioemotional outcomes for children (Nepomnyaschy, Magnuson, and Berger 2012; Choi 2010; Choi and Pyun 2014; Carlson and Magnuson 2011; Kim and Hill 2015; Adamsons and Johnson 2013; Miller et al. 2020; Gold, Edin, and Nelson 2020; Nepomnyaschy et al. 2020). Reduced father involvement with children is thus a distinct and potentially even stronger pathway through which child support debt may affect child well-being more than parental investment, lower subjective financial well-being, reduced future expectations, or increased parental stress. Unlike for the other types of parental household debt, we expect the associations of arrears with children’s socioemotional well-being to be unambiguously negative.

THE EFFECTS OF HOUSEHOLD DEBT LITERATURE

Much of the research on the effects of debt on well-being focuses on physical and mental health outcomes among adults. This body of work, based on nationally representative and smaller-scale studies in the United States and in other developed countries, finds fairly consistent evidence that debt, particularly unsecured debt, is associated with worse physical health, including overall health, higher blood pressure, greater health impairment, and foregone medical care (Sweet et al. 2013; Drentea and Lavrakas 2000; Kalousova and Burgard 2013). A somewhat larger body of work finds such debt to be associated with worse mental health, including higher stress, anxiety, and anger, and more depressive symptoms and higher likelihood of depression (Berger, Collins, and Cuesta 2016; Sweet et al. 2013; Drentea and Lavrakas 2000; Drentea and Reynolds 2012, 2015; Brown, Taylor, and Wheatley Price 2005; Reading and Reynolds 2001). Only two studies examine child support debt and its effects on fathers’ well-being. They find that, among nonresident fathers, arrears are associated with higher likelihood of substance abuse (Um 2019) and depression (Turner and Waller 2016; Um 2019).

Only two studies explore the associations of parental debt with children’s socioemotional well-being, and both focus on parents’ household debts. Based on panel data from the National Longitudinal Study of Youth 1979 (NLSY-79), they find that parents’ unsecured debt, measured as credit card debt, medical debt, and money owed to businesses, individuals, or banks, but not educational debt, is associated with worse internalizing and externalizing behavior problems among children (Berger and Houle 2016, 2019). We are not aware of any studies exploring how child support debt compares with or combines with other types of parental debt to affect child well-being outcomes.

Expected Differences in Associations

The effects of debt on children’s socioemotional well-being may differ by some individual and family characteristics. First, as mentioned, the negative effects of debt should be particularly pronounced for lower-income families be-

cause these families have higher levels of unsecured household debt (Rona-Tas and Guseva 2018; Dwyer 2018) and these fathers have higher child support arrears (Arthur 2018; Sorensen, Sousa, and Schaner 2007). Thus, debt should be considered not just at absolute levels, but as the burden of debt to income. Further, because Black low-income men are particularly disadvantaged in the labor market and are at much greater risk of incarceration (Western and Wildeman 2009; Pager 2003; Pate 2016; Dwyer Emory et al. 2020), and because Black families are often saddled with debt on poor credit terms and may have less access to “good” types of debt (Dwyer 2018; Rona-Tas and Guseva 2018; Conwell and Ye 2021, this issue), these associations may differ by parents’ racial and ethnic background. Next, because boys and girls are likely to exhibit socioemotional problems in different ways (Hankin, Mermelstein, and Roesch 2007; Newsome et al. 2016; Rutter, Caspi, and Moffitt 2003), we expect possible differences in these associations by child sex. Finally, because debt, particularly child support debt, may accumulate over the child’s life, and because older children may be more aware of and less shielded from family financial circumstances, it is possible that associations may be stronger for older children (Orr 2003; Miller et al. 2021, this issue).

Current Study

In this study, we explore the associations of parental debt with parents’ reports of children’s internalizing and externalizing behaviors, and children’s own reports of their delinquent behaviors and anxiety or depression. We make four key contributions to the literature. First, we focus on children with nonresident fathers, given that half of children will experience this type of family form across childhood, and children in such families face substantial economic disadvantage. Second, we consider unsecured debt in the households of both custodial mothers and nonresident fathers. Third, and most important, we include child support arrears accrued by nonresident fathers as a distinct type of parental debt, not previously considered in this context. Fourth, we explore whether the associations of parental debt with child well-being are present when children are roughly

nine years old, and whether parental debt has effects six years later, when children are approximately fifteen years old. Finally, we use both mothers’ reports and children’s self-reports of their socioemotional well-being to capture both perspectives and to reduce potential bias in reporting. In light of these contributions, we are able to more comprehensively consider how parental debt shapes child outcomes by situating child support arrears within the broader context of household debt, a key driver of wealth inequality.

METHODS

We use longitudinal data from the Fragile Families and Child Wellbeing Study (FFCWS), which follows 4,898 children born in large U.S. cities between 1998 and 2000. The FFCWS aims to understand the circumstances and capabilities of unmarried parents, the role of fathers, the well-being of children, and how larger social and environmental contexts affect such families (Reichman et al. 2001). Births to unmarried mothers were oversampled at a 3:1 ratio, and the data are representative of such births in all U.S. cities with populations greater than two hundred thousand at that time. Mothers and available fathers were interviewed at the time of their child’s birth and then followed up one, three, five, and nine years later. Fathers were interviewed regardless of whether they were living with the child and detailed information is available about fathers from mothers’ surveys, even when fathers were not interviewed. At the fifteen-year follow-up, primary caregivers, a majority of whom were mothers, were interviewed but fathers who were not primary caregivers were not surveyed. Children were also interviewed at the nine- and fifteen-year surveys. The FFCWS is notable for its high response rates for unmarried fathers at the child’s birth (75 percent), a group notoriously absent from most household surveys in the United States (Garfinkel, McLanahan, and Hanson 1998). The FFCWS is also unique in that it is the only study in the United States that includes measures of parents’ household debt, nonresident fathers’ child support arrears, and children’s socioemotional well-being. These data are also ideal for the current study, because the focus on parents

with nonmarital births yields a large sample of children with nonresident fathers in lower-income families, who are more likely to bear the burden of unsecured debt and child support arrears.

Sample

This study seeks to explore the associations of parents' household debt at the nine-year follow-up survey with child outcomes at the nine- and fifteen-year follow-up surveys among children with nonresident biological fathers. We are limited to measuring debt at the nine-year wave because this is the only wave that includes both mothers' and fathers' household debt amounts. Of the 4,898 families in the baseline sample, 3,630 (74 percent) were followed up at year nine. Because our focus is on children with nonresident fathers, we further limit the sample to children living with their biological mothers all or most of the time and who have a living nonresident biological father at year nine ($n = 1,914$). Finally, our analyses are limited to children with valid information on behavioral outcome measures at year nine ($n = 1,788$) and at year fifteen ($n = 1,780$). We address all other item-specific missing data using full information maximum likelihood (FIML) estimation in all our analyses, though findings were very similar when we used the more conservative approach of casewise deletion for families missing information on the key independent variables.²

Measures

For *child socioemotional outcomes*, we measure mothers' reports of children's internalizing and externalizing behaviors, and children's self-reported anxiety or depression and delinquent behavior problems when they are approximately nine and fifteen years old. For ease of comparison across models, all child out-

comes are modeled as standardized measures (mean = 0, SD = 1) in our analyses. At years nine and fifteen, mothers' reports of children's internalizing and externalizing behaviors were taken from the Child Behavioral Checklist (CBCL), a well-regarded and widely used instrument for measuring problem behavior in children (Achenbach and Rescorla 2001). Internalizing behaviors are based on thirty-one items from the anxious-depressed, withdrawn, and somatic behavior subscales at year nine ($\alpha = 0.88$) and eight items from the anxious-depressed and withdrawn subscales at year fifteen ($\alpha = 0.72$). Externalizing behaviors are based on thirty-six items from the aggressive and rule-breaking behavior subscales at year nine ($\alpha = 0.89$) and nineteen items from these same subscales at year fifteen ($\alpha = 0.89$). Mothers were asked to report whether each item is not or never true (0), somewhat or sometimes true (1), or very or often true (2) about the child. Scores were averaged across the available items with a range of 0 to 2. In supplementary models for these mother-reported outcomes, we include a measure of behavior at the prior wave.

Children's self-reported socioemotional outcomes were measured differently between the nine- and fifteen-year surveys. At year nine, children's anxiety or depression was taken from the Self-Description Questionnaire (SDQ) (Marsh 1990), which measures how children get along with others and how they feel about school. Responses of not at all true (0) to very true (3) were averaged across eight items, such as: I feel sad a lot of the time and I worry about taking tests ($\alpha = 0.78$). Child-reported delinquent behaviors were based on a list of seventeen items modeled after the Things That You Have Done scale (Maumary-Gremaud 2000), such as ran away from home, and thrown rocks or bottles at people or cars. Affirmative responses were averaged

2. The largest source of missing data was information on fathers' household debt, as this is measured only from fathers' interviews. Of the 1,788 children in our nine-year analyses, 1,004 fathers were interviewed at the nine-year follow-up, and of those, 963 had valid information on household debt. An additional 141 cases have missing information on mothers' household debt. Table A1 compares characteristics of parents in the full imputed analysis sample (based on interviewed mothers at year nine) with the complete case sample (based on interviewed fathers at year nine). Samples are similar on all characteristics except that interviewed fathers were more likely to have been married to the mother at the birth of the child than those in the more inclusive sample of interviewed mothers.

across these items to create a 0:1 scale representing the proportion of behaviors reported ($\alpha = 0.70$).

At year fifteen, children's reports of their anxiety were based on six selected items from the Brief Symptom Inventory 18 (BSI 18) (Derogatis and Savitz 1999) (such as "I feel tense or keyed up," or "I feel fearful"), scored as not at all (0) to extremely (3). Self-rated depression was based on five items from the Center for Epidemiological Studies Depression Scale (CES-D) (Radloff 1977) ("I feel sad," or "I feel life is not worth living"), with responses reverse-coded from strongly disagree (0) to strongly agree (3). Scores were averaged across these eleven items with a range of 0 to 3 ($\alpha = 0.85$). Finally, children's self-reported delinquent behaviors at year fifteen were modeled after the Add Health Wave I and Wave II In-Home Questionnaires. Possible responses to thirteen items (such as skipped school without an excuse, or taken or stolen something), were never (0), one or two times (1), three or four times (2), or more than five times (3). These scores were averaged across all items ($\alpha = 0.75$).

For *parental debt*, our independent variables of interest include debt in the mothers' household, debt in the nonresident fathers' household, and nonresident fathers' arrears. These are measured when children were approximately nine years old from mothers' and fathers' interviews. Mothers and fathers were asked whether (and how much) they (or their husband, wife, or partner) had, first, credit and store card debt and, second, student loan debt, or money owed to a bank or a lender, other than that owed for mortgage or car. These two amounts were combined and, following prior work, top-coded at the 99th percentile of the sample, or approximately \$100,000 for both parents (Berger and Houle 2016).

Our primary contribution to research on parental debt is the consideration of nonresident fathers' child support arrears as another form of unsecured debt. Both mothers and fathers

were asked whether the father "has any arrears on the child support that he owes or is supposed to pay to the mother or to the welfare department for unpaid monthly support or for reimbursing medical costs," and the amount of such arrears. Mothers and fathers who reported that the father did not have a legal agreement to pay child support were not asked about arrears, and these cases were coded as having no arrears. Of the approximately 1,200 mother-father pairs for whom we had information on arrears, 78 percent agreed on whether the father had arrears, and among those in agreement, the correlation in reported amounts was 0.68.³ Thus, to minimize measurement error and maximize sample size, we first took the maximum of child support arrears reported by either mothers or fathers, and then used mothers' reports if fathers' reports were missing. A number of sensitivity checks for reports of fathers' arrears were conducted, including using mothers' reports only, fathers' reports only, and an average of mothers' and fathers' reports (rather than the maximum). The patterns of results remained unchanged.

We measure parents' household debt and nonresident fathers' arrears in several ways, including the ratio of each type of debt to household income in the respective parent's household and binary measures for whether debt to income ratios were greater than or equal to 0.25 to indicate high debt levels for mothers' household debt, fathers' household debt, and fathers' arrears. We also created a binary measure for whether mothers had any household debt, and a mutually exclusive categorical variable describing fathers' joint holding of household debt and child support arrears: household debt only, arrears only, both, or neither.⁴

For *covariates*, we control for a rich set of individual and family characteristics that may confound the association between debt and child behavior. Child characteristics include the child's sex (male), whether born low birth weight (< 2,500 grams), and age at the time of

3. Overall, mothers were more likely to report that fathers had any arrears and reported higher dollar amounts of arrears.

4. In supplementary models, we also considered absolute levels of debt, transforming reports of the raw amounts of debt to inverse hyperbolic sines, to account for outliers and skewness.

outcome (year nine or fifteen).⁵ Parents' sociodemographic characteristics measured at baseline include: whether married at child's birth; both parents' nativity; maternal race/ethnicity (non-Hispanic White, non-Hispanic Black, Hispanic, and other) and whether the father is of the same race-ethnicity (to reduce multicollinearity between parents' demographics); maternal education (less than high school, high school, more than high school) and whether father's education differed from mother; mothers' age (in years) and father's age minus mother's age; whether the child was mothers' or fathers' first born; and whether Medicaid paid for child's birth. To further control for parents' economic capability and potential selection into debt, we include indicators for whether mothers and fathers met criteria for depression at the one-year survey, based on the Composite International Diagnostic Interview (CIDI) (Kessler et al. 1998).⁶ Finally, we include characteristics of mothers' and fathers' households at the nine-year survey: household income (logged to account for outliers), whether either parent was currently living with a new partner, and the number of children in each parent's household.

In supplementary models, we also include two variables that may be particularly salient for fathers' accumulation of arrears but are not included in our main models because they likely lie on the causal pathway connecting fathers' child support debt and child outcomes. These variables include fathers' incarceration between the child's birth and the nine-year survey, and mothers' reports of the quality of her relationship with him at year nine, coded as good (excellent, very good, good), poor (fair, poor), or no relationship.

Analytic Strategy

We first provide a rich descriptive portrait of the families in our sample, focusing on their

overall levels of debt, the distribution of debt by socioeconomic status, and the degree of overlap between fathers with household debt and child support arrears. We next estimate a series of linear regression models to examine associations between each type of parental debt (mothers' household debt, fathers' household debt, and fathers' arrears) and each of the four child outcomes (at year nine and year fifteen), controlling for all the variables discussed. Our analyses attempt to address two primary challenges that could bias results: missing data and potential selection of parents into debt.

First, as discussed, fathers' household debt (other than arrears) is only available from fathers' interviews. A much larger proportion of mothers were interviewed than fathers, and the nonresident fathers interviewed are likely to be positively selected on unmeasured characteristics (Teitler, Reichman, and Sprachman 2003). In addition, a number of covariates measuring fathers' characteristics have missing information if fathers were not interviewed or if mothers did not know or refused to answer. We address these missing data problems by estimating full information maximum likelihood models using the structural equation modeling suite of commands in Stata 16. Unlike multiple imputation, another common approach to missing data, FIML is a model driven approach that uses maximum likelihood methods to fill in missing values. FIML shares many assumptions with multiple imputation, and previous research suggests that the two methods yield comparable results (Collins 2001; Johnson and Young 2011). Models estimating associations between parental debt and children's socioemotional outcomes only for the sample of interviewed fathers (N = 824) yielded identical results to those in the FIML analysis sample (not shown). Finally, we estimate a number of robustness checks to take account of potential selection of parents into debt, particularly fa-

5. Although the study aimed to conduct follow-up waves at nine and fifteen years after birth, children's ages ranged from nine through eleven and fourteen through eighteen in the nine- and fifteen-year surveys, respectively.

6. Research exploring the effects of mental health on debt accumulation is limited (Fitch et al. 2007), but is larger on the effects of physical health on debt (Houle and Keene 2015), and is well established on the effects of poor health on employment, income, wealth, and other indicators of economic well-being more broadly.

thers' child support arrears. All analyses are performed using Stata 16 and are based on unweighted data.⁷

RESULTS

Table 1 presents descriptive statistics of child socioemotional outcomes and all covariates. The unstandardized measures of child behavior indicate that mothers reported low average levels of internalizing and externalizing behavior problems for their children at years nine and fifteen. Similarly, average levels of child-reported depression and anxiety fell toward the bottom of their possible ranges. On average, children in the sample endorsed only 8 percent of the seventeen delinquent behaviors they were asked about at year nine and reported limited involvement in delinquent acts at year fifteen.

Reflecting the focus of our study on children with a nonresident father and the design of the FFCWS, our sample is more socioeconomically disadvantaged than nationally representative samples of families.⁸ At the birth of the child, only 10 percent of mothers were married to the father of the focal child (another 35 percent were not married, but cohabiting, not shown). The majority of mothers were non-White (85 percent), mostly non-Hispanic Black (62 percent); 70 percent had a high school degree or less. At the birth of the child, mothers were approximately twenty-four years old on average and most of the births (70 percent) were paid for through Medicaid. The child was the first birth for fewer than half of both mothers and

fathers (44 percent and 41 percent, respectively). Approximately one year after the child's birth, 18 percent of mothers and 15 percent of fathers met the criteria for depression. At the nine-year interview, 35 percent of mothers but only 6 percent of fathers were married to or cohabiting with a new partner; mothers reported approximately three children in their households and fathers reported only one. These latter two differences are of particular importance for interpreting parental debt in our study because both parents' incomes and unsecured debt amounts are reported at the household level, including the income and debts of their cohabiting partners. Nearly one-third of fathers had some incarceration experience between the child's birth and year nine. Finally, one-third of mothers reported good relationships with the father, 42 percent reported poor relationships, and 25 percent had no relationship with him.

Descriptive statistics for each measure of parental debt by each parents' household income tercile at the nine-year survey are shown in table 2. The tercile ranges differ for mothers and fathers, as fathers reported higher overall income and higher income within each tercile despite being less likely to share a household with a partner. This suggests that mothers in our sample are economically disadvantaged relative to both a national sample and their children's fathers, regardless of whether they were living with another potential earner.

More than half (55 percent) of mothers reported any household debt, with an average of

7. We do not apply weights in our multivariate models for several reasons. First, weights in the FF survey are cross-sectional and constructed based on the reporter (mother, father, child, couple) and the wave. Because we use data from mothers, fathers, and children, and data from multiple waves, weights are not available that are suited to our analyses. Second, as shown in table A1, which compares descriptive statistics between the weighted and unweighted samples, the most important difference is parents' marital status at birth because this was the primary sample selection criterion. All of our models control for this factor. Finally, because our sample focuses on children with nonresident fathers, it is likely that weights (which are created to exaggerate the importance of a few observations in order to generalize the sample to the population) are likely to bias multivariate results.

8. Table A1 presents descriptive statistics applying the nine-year city-level weights (for mothers for the analysis sample and for fathers for the interviewed father subsample) which are designed to make the sample representative of births in each of the cities at the year of the birth and take account of attrition. Reflective of the design of the study, parents in our sample are much less likely to have been married at the birth of the child (10 percent versus 21 percent, respectively). Other differences are much less stark. Most important, differences in whether fathers were incarcerated between the birth and year nine interview (a key measure of disadvantage and selection into arrears) are miniscule (32 percent versus 30 percent) between the unweighted and weighted samples.

Table 1. Descriptive Statistics of Child Behavior Outcomes and Covariates for Full Analysis Sample of Interviewed Mothers

	Percent or Mean	SD
Year 9 child outcomes, N = 1,788		
Mother-reported internalizing behaviors (0–2)	0.16	0.18
Mother-reported externalizing behaviors (0–2)	0.26	0.28
Child-reported depression/anxiety (0–3)	1.22	0.7
Child-reported delinquent behaviors (0–1)	0.08	0.11
Year 15 child outcomes, N = 1,780		
Mother-reported internalizing behaviors (0–2)	0.28	0.30
Mother-reported externalizing behaviors (0–2)	0.27	0.29
Child-reported depression/anxiety (0–3)	0.82	0.57
Child-reported delinquent behaviors (0–3)	0.12	0.20
Covariates, N = 1,788		
Child characteristics		
Male	51	
Low birthweight	16	
Age at year-9 interview (years)	9.28	0.37
Age at year-15 interview (years)	15.56	0.62
Baseline sociodemographics		
Mother and father married at birth	10	
Mother's race-ethnicity		
White, non-Hispanic	14	
Black, non-Hispanic	62	
Hispanic	21	
Other	3	
Mother and father are of same race/ethnicity	82	
Mother was U.S. born	93	
Father was U.S. born	91	
Mother's education at birth		
Less than high school	35	
High school diploma	35	
Some college or more	30	
Mother and father have same education		
Mother's age at birth (years)	23.81	5.47
Father's age minus mother's at birth	3.44	3.29
Child's birth was covered by Medicaid	70	
Focal child was mother's first born	44	
Focal child was father's first born	41	
Parents' capability		
Mother depressed (1 year)	18	
Father depressed (1 year)	15	
Household characteristics		
Mother's household income (year 9)	31,408	29,496
Father's household income (year 9)	38,029	35,637
Mother has new spouse or partner (year 9)	35	
Father has new spouse or partner (year 9)	6	
Number of children in mother's household (year 9)	2.76	1.36
Number of children in father's household (year 9)	0.99	1.34
Fathers' characteristics related to arrears, supplementary models only		
Incarcerated b/w birth and year 9	32	
Relationship quality with mother (year 9)		
Good relationship (good, very good, excellent)	33	
Poor relationship (poor, fair)	42	
No relationship	25	

Source: Authors' calculations based on Fragile Families and Child Wellbeing Study data.

Note: SD = standard deviation.

Table 2. Descriptive Statistics of Mothers' and Fathers' Household Debt and Fathers' Arrears by Income Tercile at Year Nine

	All Families	Income Terciles		
		Bottom	Middle	Top
Panel A. Mothers, N = 1,788				
Mother's household income (\$)	31,408	8,732	24,638	60,905
Range of income (\$)	0-400,000	0-16,792	16,800-34,457	34,679-400,000
Mothers' household debt				
Any household debt (%)	55	44	52*	69*
Total household debt (\$)	6853	4913	5268	10431*
Household debt to income ratio	0.19	0.25	0.17*	0.16*
Household debt >25% of income (%)	25	30	24*	20*
Panel B. Fathers, N = 993				
Father's household income (\$)	38,982	9,376	32,771	75,337
Range of income (\$)	0-385,000	0-22,000	22,026-45,000	45,241-385,000
Fathers' household debt				
Any household debt (%)	43	29	44*	55*
Total household debt (\$)	4,809	2,821	4,128	7,576*
Household debt to income ratio	0.11	0.13	0.11	0.10
Household debt >= 25% of income (%)	14	16	14	13
Fathers' arrears				
Any arrears (%)	45	52	43*	38*
Total arrears (\$)	4,745	6,191	4,347*	3,677*
Arrears to income ratio	0.18	0.35	0.13*	0.05*
Arrears >= 25% of income (%)	23	41	19*	8*
Arrears and debt (%)				
Household debt only	26	14	26*	37*
Arrears only	28	37	24*	21*
Both	17	15	19	17
Neither	30	34	31	24*

Source: Authors' calculations based on Fragile Families and Child Wellbeing Study data.

Note: Numbers are percentages or means. Tests of significance indicate significant differences between the lowest income tercile (the reference group) and the two others.

* $p < .05$

\$6,853. Both the proportion of mothers with debt and the average amounts increased at higher levels of income (\$4,913 versus \$10,431 in the bottom and top tercile, respectively). On the other hand, mothers' debt to income ratio decreased with rising income, from 0.25 to 0.16 in the bottom to top tercile. Similarly, the proportion of mothers reporting high (≥ 0.25) debt to income ratios also declined as income increased (from 30 percent in the bottom tercile to 20 percent in the top). Fewer fathers reported

any household debt (43 percent) and fathers had lower debt on average (\$4,809) than mothers. As with mothers, both the proportion with debt and the amount of debt increased at higher levels of income (from \$2,821 to \$7,576, in the bottom and top tercile, respectively). Because fathers' incomes were higher and unsecured debts lower, their debt to income ratios (and the proportions reporting high debts levels) were much lower than those of all mothers and across income terciles.⁹

9. These average amounts of parental household debt in our study are difficult to compare with other studies because we focus on debt in two households (the resident mother and nonresident father) and a more disad-

The next set of statistics focuses on fathers' child support arrears and reveals a very different picture. First, 45 percent of fathers have arrears, with an average of \$4,745, which is nearly equal to their average unsecured debt. Second, unlike household debt, the proportion with arrears and the absolute amount of arrears are much higher at lower levels than higher levels of income (52 percent versus 38 percent and \$6,191 versus \$3,677 in the bottom and top tercile, respectively). Not surprisingly then, arrears to income ratios decrease substantially as income increases, representing 0.35 and only 0.05 of income in the lowest and highest tercile, respectively. Further, fully 41 percent of fathers in the lowest tercile report that their arrears are at least 25 percent of income and only 8 percent of those in the top tercile are in this situation. Thus, taking account of fathers' unsecured household debt as well as child support arrears, which have not been previously measured, reveals that these fathers have much higher overall debt burden than mothers and that prior studies have substantially undercounted men's unsecured debts (by half or more), and that both of these things are particularly true for the lowest-income fathers.

Another important takeaway from these figures is that household debt (for mothers and fathers) is associated with higher incomes because these families likely have greater access to credit cards and loans (the only types of household debt measured here), whereas child support arrears are associated with lower income among fathers. The last rows of table 2 present the overlap of arrears and household debt among nonresident fathers and highlight this point further. Fathers in the bottom tercile are much more likely to have just arrears but no household debt than those in the top (37 percent versus 21 percent), whereas those in the top income tercile are much more likely to have household debt but no arrears than those in the bottom (37 percent versus 14 percent),

and only 17 percent of all fathers have both types.

Table 3 delves even deeper into the characteristics of fathers who hold different types of debt. Comparing columns 1 (household debt, no arrears) and 2 (arrears, no household debt) reveals that fathers with only arrears have lower levels of education, are less likely to be White, were much less likely to have been married at the birth of the child, are three times more likely to be poor (42 percent versus 14 percent), are more than twice as likely to have been incarcerated (42 percent versus 18 percent), and have lower quality relationships with the mother than those with only household debt. These figures further confirm findings from the prior table that fathers with household debt but not arrears are more socioeconomically advantaged not just than fathers with arrears, but even more so than fathers with neither type of debt (column 4).

Multivariate Results

Table 4 presents the associations of parental debt at year nine with child socioemotional outcomes, reported by mothers and self-reported, when children are nine (first set of four columns) and fifteen years old (second set of columns). All outcomes are standardized (mean = 0, SD = 1), and thus coefficients represent standard deviation changes for each dependent variable. Each column in each panel presents results from a separate regression model that includes all the covariates discussed, though only the coefficients of interest are presented for parsimony (full models in table A2).

Panel A examines the amount of parental debt, measured as debt to income ratio, scaled from zero (0 percent of income) to one (debt is 100 percent or more of income). Among nine-year-old children, we observe no associations of the level of mothers' household debt or fathers' household debt with any outcomes. However, higher arrears to income ratio is associ-

vantaged group of children with a nonresident father. Debt is also measured differently across data sets and studies, and across different time horizons and periods. Nonetheless, our estimate of parents' total average household debt (\$12,000) is quite close to those of families with young children in the Panel Study of Income Dynamics (\$14,000) (Michelmores and Lopoo 2021, this issue), but higher than estimates of families with children in the Survey of Consumer Finances from 1986 to 2016 (\$9,000) (Bandelj and Grigoryeva 2021, this issue), and higher than those of families with children in the NLSY (\$5,000) (Berger and Houle 2016).

Table 3. Descriptive Characteristics of Interviewed Fathers by Presence of Household Debt and Arrears, N = 993

Interviewed Fathers' Characteristics	Types of Fathers' Debt Holdings			
	Household Debt Only	Arrears Only	Both	Neither
Education				
Less than high school	21	43*	23	41*
High school	37	40	39	42
More than high school	42	16*	38	17*
Race-ethnicity				
White, non-Hispanic	19	8*	16	9*
Black non-Hispanic	60	70*	67	69*
Hispanic	19	19	15	20
Other	3	4	2	2
Age at child's birth (years)	26.7	25.8	25.3*	26.8
Born in the United States	92	98*	95	92
Relationship at birth				
Married	17	9*	9*	11*
Cohabiting	39	35	37	43
Nonresidential	44	57*	54*	46
Child is father's first	50	39*	42	42
Medicaid paid for birth	62	70*	61	73*
Depressed at year 1	15	15	17	23
Poor at year 9	14	42*	22*	31*
Has new partner (year 9)	10	4*	4*	6*
Number of kids in household (year 9)	1.0	1.0	1.2	0.9
Incarcerated since birth	18	42*	33*	32*
Relationship quality with mother (year 9)				
Good	53	31*	26*	52
Poor	39	52*	63*	36
No relationship	7	17*	11	12
N	255	274	168	296
Percent of sample	26	28	17	30

Source: Authors' calculations based on Fragile Families and Child Wellbeing Study data.

Note: All figures in table are percentages except where indicated. Significance tests indicate significant differences between those with household debts only (reference group) and all other groups

* $p < .05$

ated with worse externalizing behaviors and child's self-reported anxiety or depression, but the latter association is just shy of conventional statistical significance ($p = .051$). Among fifteen-year-old children, consistent with the results in the prior panel, fathers' higher arrears to income ratio is associated with worse internalizing and externalizing behaviors and anxiety or depression. In addition, fathers' higher house-

hold debt to income ratio is associated with more delinquent behaviors.

In panel B, we examine the associations of parents' high debt to income ratios (≥ 0.25) with children's socioemotional outcomes. In these models, neither mothers' nor fathers' high household debt burden is associated with any outcome among nine- or fifteen-year-old children. Among nine-year-olds, nonresident

Table 4. Mothers' Household Debt, Fathers' Household Debt, Fathers' Arrears, and Child Outcomes at Year 9 and 15

	Outcomes at Age 9, N = 1788				Outcomes at Age 15, N = 1780			
	Mother-Reported		Child-Reported		Mother-Reported		Child-Reported	
	Internalizing Behaviors	Externalizing Behaviors	Anxiety or Depression	Delinquent Behaviors	Internalizing Behaviors	Externalizing Behaviors	Anxiety or Depression	Delinquent Behaviors
Panel A. Parents' debt to income ratios (0-1)								
Mothers' household debt	0.07 (0.88)	-0.01 (0.10)	0.002 (0.02)	0.06 (0.72)	0.040 (0.46)	0.00 (0.04)	-0.090 (1.07)	-0.03 (0.38)
Fathers' household debt	-0.12 (0.87)	0.06 (0.44)	0.11 (0.86)	0.05 (0.40)	0.06 (0.47)	0.07 (0.54)	0.15 (1.19)	0.32* (2.28)
Fathers' arrears	0.16 (1.47)	0.23* (2.20)	0.20* (1.95)	0.20 (1.89)	0.47*** (4.66)	0.48*** (4.57)	0.26* (2.52)	0.00 (0.00)
Panel B. Parents have high (>= 0.25) debt to income ratios								
Mothers' household debt	0.04 (0.72)	0.03 (0.48)	-0.01 (0.15)	0.03 (0.58)	0.03 (0.60)	-0.02 (0.34)	-0.02 (0.40)	-0.01 (0.19)
Fathers' household debt	0.01 (0.14)	0.05 (0.49)	0.09 (1.04)	0.09 (0.93)	0.07 (0.71)	0.01 (0.14)	0.08 (0.84)	0.16 (1.58)
Fathers' arrears	0.07 (0.87)	0.11 (1.45)	0.17* (2.31)	0.12 (1.54)	0.31*** (3.93)	0.27*** (3.37)	0.22** (2.81)	-0.04 (0.42)

Source: Authors' calculations based on Fragile Families and Child Wellbeing Study data.

Note: Coefficients in each panel are from one model (for each outcome) controlling for all covariates from table 1. Estimates are from FIML models. All outcomes are standardized (mean = 0, SD = 1). Figures in table are linear regression coefficients with z-statistics in parentheses.
* $p < .05$; ** $p < .01$; *** $p < .001$

fathers' high arrears burden is associated with 17 percent standard deviation increase in child-reported anxiety or depression. Among fifteen-year-olds, consistent with the pattern of results in the prior panel, high arrears burden among nonresident fathers is associated with 31 percent, 27 percent, and 22 percent standard deviation increases in mother-reported internalizing and externalizing behaviors and child-reported anxiety or depression, respectively. To contextualize these results, we can compare them with the coefficients for mothers' depression, a factor that is particularly relevant for children's socioemotional well-being. Holding all else constant (full models in table A2), children of mothers who met criteria for depression had 32 percent, 18 percent, and 19 percent standard deviation higher internalizing and externalizing behaviors and anxiety or depression, respectively. Thus, the associations of having a father with high child support arrears are comparable to or greater than those of having a mother with depression.

To summarize results so far, we find consistent evidence, particularly among fifteen-year-old children, that nonresident fathers' arrears, but not other types of parental debt, are associated with worse mother-reported internalizing and externalizing behaviors and child-reported anxiety or depression, but not with child-reported delinquent behaviors. We find little evidence of any association of mothers' or fathers' household debt or household debt burden with child outcomes. These results are robust to alternative measures of debt, including when debts were estimated as absolute amounts (transformed to inverse hyperbolic sines), when each type of parental debt was entered in a separate model (not including other measures of debt), and when we used either mothers' or fathers' reports of his child support debt.

Finally, we explored differences in these associations by racial and ethnic background of parents and by child sex. Because our sample is overwhelmingly non-Hispanic Black (62 percent), we estimated interactions and stratified models for Black versus non-Black parents. No interactions were statistically significant and no pattern of results by either parent race or child sex was observed.

Robustness Checks

We next estimate a number of models to test the robustness of the findings, paying particular attention to fathers' selection into having child support arrears, and focusing on internalizing and externalizing behavior problems among fifteen-year-old children (table 5). Because fathers' incarceration can both be a cause and a consequence of child support arrears, we estimate models controlling for fathers' incarceration (between the child's birth and year nine) and only for the sample of fathers who were not incarcerated. Similarly, we include a control for parents' relationship quality because conflict between parents can also be both a cause and consequence of arrears. Additionally, both of these factors may be markers of more challenging and complex family processes and dynamics, yet because they may also be potential pathways between fathers' child support debt and child outcomes, we do not include them in our primary models. We further attempt to address selection into child support arrears by including a measure of child behavior from the prior wave, estimating models only for those who have any arrears, and including inverse probability of treatment weights that take account of selection into any arrears on observed characteristics. Results from table 5 indicate that the strong associations of nonresident fathers' child support arrears with worse socioemotional outcomes among fifteen-year-olds remain robust across all these model specifications.

DISCUSSION

Mirroring disparities in wealth accumulation, household debt varies substantially by family socioeconomic status in the United States. In this study, we examine whether growing inequality in parental debt has implications for child well-being by modeling associations between three distinct types of parental debt and children's socioemotional outcomes. Our study makes a number of contributions to the small body of research in this area. First, we focus on children with nonresident fathers, a particularly common family form among lower-SES families. Doing so enables us to consider unsecured debt among parents living in separate households. We also examine nonresident fa-

Table 5. Robustness Checks of Associations of Parental Debt with Behavioral Problems Among Fifteen-Year-Old Children

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Panel A. Internalizing behaviors (std)							
Mothers' household debt to income ratio (0-1)	0.04 (0.46)	0.04 (0.47)	0.03 (0.43)	0.03 (0.32)	0.05 (0.49)	-0.08 (0.65)	
Fathers' household debt to income ratio (0-1)	0.06 (0.47)	0.07 (0.50)	0.06 (0.43)	0.05 (0.39)	0.12 (0.79)	0.12 (0.62)	
Fathers arrears to income ratio (0-1)	0.47*** (4.66)	0.47*** (4.57)	0.45*** (4.28)	.45*** (4.34)	0.55*** (4.19)	0.40*** (2.62)	
Any arrears							0.18** (2.52)
Panel B. Externalizing behaviors (std)							
Mothers' household debt to income ratio (0-1)	0.003 (0.04)	0.004 (0.05)	0.001 (0.02)	0.02 (0.32)	-0.003 (0.03)	-0.11 (0.79)	
Fathers' household debt to income ratio (0-1)	0.07 (0.54)	0.080 (0.60)	0.060 (0.47)	0.00 (0.00)	0.01 (0.06)	0.04 (0.19)	
Fathers arrears to income ratio (0-1)	0.48*** (4.57)	0.47*** (4.44)	0.42*** (3.87)	0.32*** (3.22)	0.47*** (3.43)	0.41*** (2.64)	
Any arrears							0.15* (2.08)
N	1,780	1,780	1,780	1,780	1,206	706	824

Source: Authors' calculations based on Fragile Families and Child Wellbeing Study data.

Note: Coefficients in each column are from one model (for each outcome/panel) controlling for all covariates from table 1. Model 1: base model from table 4. Model 2: Add control for fathers' incarceration to model 1. Model 3: Add control for parents' relationship quality to model 1. Model 4: Add control for child behavior from prior wave to model 1 (lagged dependent variable). Model 5: Limit sample to fathers without incarceration history. Model 6: Limit sample to fathers who have any arrears. Model 7: Include inverse probability of treatment weights for any arrears, based on sample of interviewed fathers. Figures in table are linear regression coefficients with z-statistics in parentheses.

* $p < .05$; ** $p < .01$; *** $p < .001$

thers' unsecured debt more comprehensively than prior studies by considering their child support arrears. Finally, we explore whether these associations are only present in middle childhood or whether they extend longer term, into adolescence. Because more than half of children in the United States will live apart from one of their parents at some point during childhood, it is crucial to understand how debt accumulation contributes to intergenerational inequality in these families (Kennedy and Bumpass 2008; U.S. Census Bureau 2020). A key finding of our analyses, consistent with that of Conwell and Ye (2021, this issue), is that the type of household debt matters for children's outcomes. We find no association, in any model, of mothers' household debt with child outcomes, and very little evidence that equivalent measures of nonresident fathers' household debt were associated with child outcomes even when debt to income burdens were high. On the other hand, across numerous measures and model specifications, nonresident fathers' child support arrears were consistently associated with worse child outcomes.

Our finding that debt from credit cards or loans may have little impact on child well-being runs counter to two studies that have linked such unsecured debts to worse child behavior (Berger and Houle 2016, 2019). Several explanations for this inconsistency are possible. First, in those studies, educational debt was modeled separately from other forms of unsecured household debt, and educational debt had no association or a negative association (in some models) with child behavior problems. We are not able to separate these types of debt in this study, and thus, as we hypothesized, there may be offsetting effects of these types of debt leading to our null findings. Second, whereas these two studies relied on nationally representative data from the NLSY, our sample consists of children in urban areas, who were relatively disadvantaged at the time of their birth, and who have nonresident biological fathers—family types commonly undercounted in national data. Studies have documented economic survival and parenting strategies in poor families of color that contribute to their resilience (Stack 1975; Edin and Shaefer 2015; Seefeldt 2015). Low-income families may be able to buf-

fer children from stress and resource loss better than more affluent households. This pattern of results among a more disadvantaged and yet quite prevalent group of children is a key contribution of our study. Finally, research has not accounted for debt in the form of child support arrears, which we hypothesized and which our results confirm may be a particularly pernicious type of parental debt. At a minimum, our results suggest that future surveys on household debt should inquire specifically about child support arrears. They also underscore the importance of including nonresident fathers in household surveys because their economic situation is highly relevant to child outcomes.

We found that child support arrears represent a very large proportion of debt held by fathers with nonresident children. Previous studies have therefore likely substantially underestimated the overall debt burden in all families with children, particularly for the lowest-income families. Consistent with national data, we find that fathers with the fewest economic resources owe the largest amount of arrears and face an average debt to income ratio well over 0.25, a high-burden threshold.

Moreover, our results indicate that high child support arrears burdens are associated with much worse socioemotional outcomes among children, with effect sizes in the range of 20 percent to 30 percent of a standard deviation, associations comparable to those for maternal depression in our results. While parents' household debts and child support arrears are both considered unsecured debts, there are important distinctions in these types of debt that have implications for child well-being. Parents' household debt (from credit cards, bank loans, or student loans) likely represent offers of prospective credit that may facilitate the development of human, social, or economic capital, and may enable parents to access resources and smooth consumption during periods of economic instability. Child support arrears, on the other hand, are a type of retrospective debt obligation that carries economic, social, and legal sanctions that may be more harmful to children. Child support arrears can lead to punitive enforcement actions like license suspension and incarceration, which undermine fathers' ability to work, pay off debts, and spend time

with children; can lead to more conflict in the coparenting relationship, less reliable cash and noncash contributions from fathers, and less involvement with children; cannot be discharged by filing for bankruptcy; and can be extremely difficult for the lowest-income parents to ever repay and thus persist and accumulate throughout childhood. In addition, the parents most affected by arrears, as shown in our study, are more disadvantaged than those who accrue other forms of household debt measured in the survey. Not only are these parents unlikely to have access to credit cards and loans, which are necessary precursors for these other forms of debt, but having arrears can also make them subsequently ineligible to obtain credit, because arrears decrease credit scores (New York State 2020).

The robustness of our results across multiple reporters and multiple sensitivity analyses builds further confidence that these findings reflect true differences in behavior rather than differences in perception alone. We find strong and robust associations of fathers' arrears with worse mother-reported internalizing and externalizing behaviors when children are fifteen, and worse child-reported anxiety or depression when children are nine and fifteen. This is an important contribution to this literature, given that the theoretical pathways through which arrears may affect children—parental stress, future expectations, and subjective financial well-being—may also bias mothers' perceptions of their child's behavior. Finally, we find stronger associations of nonresident fathers' arrears among fifteen-year-olds than among nine-year-olds. As discussed, because arrears are high relative to their incomes and accrue over time, many low-income fathers are unlikely to ever pay them off. The documented harmful effects of arrears on fathers' well-being and ability to be involved with their children likely also accumulate over the child's life, potentially leading to increased harm as they age. Children also become more aware of household finances as they age, and so older children may internalize the stress of family financial strain to a larger degree than younger children (Miller et al. 2021, this issue). In addition, older children may be called upon to take greater responsibilities in the household by working or caring for younger

children, which can also have a negative impact on socioemotional well-being.

Limitations

The FFCWS is uniquely suited to explore the associations of parental debt, especially nonresident fathers' child support arrears, and child outcomes. However, our study is subject to several limitations. First, child support arrears measures are available only for the nonresident father of the focal child. More than a third of the mothers in our sample at year nine are living with a new partner, and these new partners may also owe child support to children in other households. These debts are not measured in the FFCWS data, likely underestimating the overall debt burden in the mother's household, which may account for the null associations between mothers' household debts and child outcomes. Additionally, nonresident fathers' child support arrears are only reported for the focal child. National estimates suggest that nearly 20 percent of all fathers and between 40 and 50 percent of more disadvantaged fathers have multiple-partner fertility (Guzzo 2014; Cancian and Meyer 2005), and it is likely that many of these fathers owe child support to other children living either in the mother's household or in other households. Moreover, mothers and fathers may not know whether or how much child support arrears are owed, as suggested by the substantial disagreement between mothers' and fathers' reports of fathers' arrears in our data. We find that mothers report higher arrears than fathers do, which might suggest an overestimate of his arrears to the current child; however, given all these scenarios, it is likely that arrears owed to all children are substantially underestimated. Thus, although robust to alternative specifications of arrears, our results are likely a conservative estimate of the association of child support arrears and children's socioemotional outcomes.

To date, social surveys have generally failed to collect comprehensive and detailed information on debt (Dwyer 2018). Likewise, the FFCWS does not capture all types of debt that families may accrue or the accumulation of debt over time. Legal fines and fees related to parents' criminal justice system involvement, medical or utility bills, and informal loans may be of

particular consequence for these families (Rona-Tas and Guseva 2018; Harris 2016; Dwyer 2018) but are not measured in our data. We also cannot capture household debts at earlier years in the child's life. It is likely that the ill effects of parental debt may be cumulative, given that children live in persistently indebted households or begin in later childhood to experience constrained household finances in service of debt rather than smoothed consumption (Seefeldt 2015). Our study makes a notable contribution by taking advantage of a unique source to consider child support debt, but future data collection efforts should more comprehensively measure debt among low-SES families, paying specific attention to debt among resident and nonresident parents. Next, as with all observational data, our models may not fully account for unobserved factors that can lead to both more debt and worse child outcomes.

Finally, nonresident fathers' household debts are available only from interviewed fathers. This means that we can only capture these fathers' debts at one interview year (year nine), as only primary caregivers (largely mothers) were interviewed at year fifteen, and prior waves do not include debt measures. Although FIML models take into account the relationships between variables to estimate associations based on the full sample of interviewed mothers, we may still be capturing a conservative estimate of these associations.

Despite these limitations, our study contributes important new evidence on the effects of parental debt for child well-being and affirms the importance of distinguishing "good" from "bad" types of debt (Conwell and Ye 2021, this issue). Our results point to large and robust negative associations of nonresident fathers' arrears for children's socioemotional well-being in the immediate term during middle

childhood and extending longer term into adolescence when these behaviors may begin to have compounding effects for the transition to adulthood. Along with prior research pointing to the adverse consequences of child support arrears for fathers' employment, mental health, involvement with children, formal and in-kind support, and coparenting, our study shows that this damage extends to their children's well-being. Consistent with the conceptual framework that Gibson-Davis and Hill lay out in this issue, child support arrears can reduce fathers' ability to invest in their children, increase parental stress and family conflict, and reduce fathers' subjective well-being and future expectations for children, which can all negatively impact children's socioemotional well-being.

Our results point to the need to consider policies to reduce child support arrears among men with nonresident children. Previous research highlights a number of policies and practices that contribute to the high and uncollectable arrears that fathers face, such as setting orders based on imputed income, charging child support retroactively, charging high interest on arrears, and the difficulty of modifying child support orders during periods of unemployment or incarceration (Turetsky 2019). Such punitive policies combined with aggressive enforcement actions like license suspension and incarceration do not increase the likelihood that fathers will pay child support, but only add to their debt burden (Turetsky and Waller 2020). In the end, this high debt burden further reduces low-income fathers' ability to pay and likelihood of paying support as they go forward (Cancian, Heinrich, and Chung 2013). Results from our study suggest that innovative policy reforms (ASCEND 2020) aimed at reducing the likelihood that low-income men accrue arrears and reducing already accrued arrears may be beneficial for child well-being.

Table A1. Comparison of Imputed Analysis Sample of Interviewed Mothers, Interviewed Fathers Subsample, and Both with Nine-Year City Weights Applied

	Mother Sample		Father Subsample	
	Unweighted	Weighted	Unweighted	Weighted
Father's education				
Less than high school	36.7	35.7	33.6	32.1
High school	39.6	38.9	40.0	40.7
More than high school	23.7	25.4	26.5	27.2
Father's race-ethnicity				
White, non-Hispanic	10.9	13.9	12.6	14.8
Black, non-Hispanic	64.3	58.7	66.1	62.3
Hispanic	21.6	24.7	18.3	20.4
Other	3.2	2.7	3.1	2.5
Father's age at birth (years)	26.3	26.8	26.3	26.6
Relationship at birth				
Married	9.5	20.7	11.2	21.4
Cohabiting	34.4	29.8	39.0	34.2
Nonresidential	56.1	49.5	49.8	44.4
Incarcerated since birth	31.9	31.2	31.8	29.9
Mother's race-ethnicity				
White, non-Hispanic	14.1	16.3	15.0	16.9
Black non-Hispanic	62.3	56.7	62.9	59.0
Hispanic	21.0	23.9	19.2	20.4
Other	2.6	3.1	3.0	3.8
Mother's education				
Less than high school	34.7	34.9	31.6	31.1
High school	35.4	36.7	34.9	37.2
More than high school	29.9	28.4	33.4	31.7
Child is male	50.7	51.1	49.1	51.0
Child was low birth weight	11.1	11.1	11.2	10.9
Medicaid birth	70.1	67.6	68.1	64.8
N	1,788	1,788	949	949

Source: Authors' calculations based on Fragile Families and Child Wellbeing Study data.

Note: Nine-year city weights are applied. Numbers are percentages except where noted.

Table A2. Full Models of Parental Debt and Child Socioemotional Outcomes

	Outcomes at 9-Year				Outcomes at 15-Year			
	Mother-Reported		Child-Reported		Mother-Reported		Child-Reported	
	Internalizing Behaviors	Externalizing Behaviors	Anxiety Depression	Delinquent Behaviors	Internalizing Behaviors	Externalizing Behaviors	Anxiety Depression	Delinquent Behaviors
High parental debt burden								
Mothers' household debt >= 25% of income	0.04	0.03	-0.01	0.03	0.03	-0.02	-0.02	-0.01
Fathers' household debt >= 25% of income	0.01	0.05	0.09	0.09	0.07	0.01	0.08	0.16
Fathers' arrears >= 25% of income	0.07	0.11	0.17*	0.12	0.31***	0.27***	0.22**	-0.04
Covariates								
Child is male	0.06	0.20***	0.07	0.43	-0.10*	0.14**	-0.17***	0.25***
Low birthweight	0.03	0.00	0.07	-0.08	0.02	0.10	0.07	-0.08
Child age (years)	0.11	0.00	-0.02	0.07	-0.06	-0.04	0.07	0.05
Marital birth	0.14	0.10	0.01	0.19*	0.01	0.11	-0.15	-0.12
Mother: non-Hispanic black	-0.29**	-0.28***	0.26**	0.24**	-0.46***	-0.07	-0.25***	0.11
Mother: Hispanic	-0.08	-0.25**	0.16	-0.07	-0.38***	-0.13	-0.10	0.03
Mother: other race	0.05	-0.06	0.10	0.06	-0.13	0.10	-0.04	0.32
Parents same race	-0.07	0.02	0.05	0.25*	-0.13	-0.02	0.18*	0.22
Mother: U.S.-born	-0.06	0.10	0.21	-0.02	-0.04	0.14	-0.05	-0.06
Father: U.S.-born	-0.09	0.14	0.03	-0.06	-0.21**	0.05	0.03	-0.10

Mother: high school degree	0.01*	0.04	-0.09	-0.01**	0.01	-0.07	0.04	-0.02**
Mother: more than high school	0.01	0.02	-0.15*	0.00	0.01	-0.11	-0.06	0.01*
Parents same education	0.09	0.00	-0.01	0.00	0.04	0.05	0.01	-0.04
Mothers' age (years)	0.07	-0.01	-0.01**	0.05	0.08	-0.02**	0.00	0.08
Parent age diff (years)	0.10	0.01	0.00	-0.06	0.07	0.01	0.01	0.05
Child fathers' first	0.05	0.02	0.06	-0.01	-0.03	0.08	0.08	-0.03
Child mothers' first	0.05	-0.09	-0.03	-0.01	0.16**	-0.22***	-0.04	-0.04
Medicaid birth	0.11	0.11*	0.11*	-0.17**	-0.05	0.07	0.03	-0.03
Mother depressed	0.37***	0.34***	0.11	0.06	0.32***	0.18**	0.19**	-0.08
Father depressed	0.22*	0.35***	0.10	0.15	0.13	0.15	0.13	0.05
Mothers' household income (ln)	-0.03*	-0.02	-0.02	-0.02	-0.01	-0.01	-0.03*	0.00
Fathers' household income (ln)	-0.02	-0.02	0.02*	-0.01	-0.02	-0.02	-0.01	0.00
Father has cohab part	-0.14	-0.28*	0.16	0.01	-0.06	0.16	0.14	0.19
Mother has cohab part	-0.01	-0.04	-0.03	-0.01	0.02	0.05	0.01	0.02
Mother, number of kids in household	-0.03	-0.01	0.04	-0.04	-0.02	-0.02	0.02	0.01
Father, number of kids in household	0.02	0.00	-0.05*	-0.02	0.02	-0.04	-0.03	-0.01
N	1,788	1,788	1,788	1,788	1,780	1,780	1,780	1,780

Source: Authors' calculations based on Fragile Families and Child Wellbeing Study data.

Note: Estimates are from FIML models. All outcomes are standardized (mean = 0, SD = 1). Figures in table are linear regression coefficients.

* $p < .05$; ** $p < .01$; *** $p < .001$

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