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UNIVERSITY OF WISCONSIN–MADISON

## **Incarceration, Child Support, and Family Relationships**

### **2022–2024 Child Support Policy Research Agreement: Task 11**

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## **INTRODUCTION**

The United States incarcerates more individuals than any nation in the world and has seen a massive surge in incarceration rates over the past fifty years (Travis et al., 2014). In 1972, about 93 individuals per 100,000 were incarcerated in U.S. state and federal prisons but by 2022 that rate had climbed to 666 per 100,000 (Carson & Kluckow, 2023; Enns, 2014). Such high rates of incarceration have resulted in profound impacts on U.S. American families as it is estimated that one in fourteen children will experience parental incarceration between birth and age seventeen (Murphey & Cooper, 2015). These rates climb higher still for children of color, those living in poverty, and those in rural areas (Murphey & Cooper, 2015). American men comprise the segment of the population most affected by the mass incarceration crisis, with nearly half of incarcerated men identifying as fathers of at least one minor child (Maruschak et al., 2021).

Parental incarceration is associated with numerous negative outcomes for children, the growing recognition of which has spurred a vast body of research (see, for example, Geller et al., 2012; Poehlman-Tynan et al., 2017; Turney & Haskins, 2014). Incarceration not only physically separates parents from their children, but it also strains family relationships (Charles, et al., 2019; Tadros, 2021). In the case of fathers, these strains serve as barriers to the relationships they have with their children and caregivers during incarceration and long after release (Foster & Hagan, 2009). Furthermore, it is well known that a history of incarceration limits an individual's employment opportunities and is associated with depressed earnings and limited economic mobility (Geller et al., 2006; Holzer, 2009; Western, 2002). For non-custodial parents, decreased earnings and limited job opportunities can make financial contributions to children, particularly fulfilling child support orders, more challenging (Berger et al., 2021; Haney, 2018, 2022). These

collateral consequences of incarceration for fathers' relationships with and investments in children are also distinctly racialized by criminal legal and child-support systems notorious for their over-policing and excessive punitiveness towards men of color (Alexander, 2020; Berger et al., 2021; Kim et al., 2024; McDonald, 2020; Pate, 2015; Spjeldnes et al., 2015).

With such broad reach and deep impacts, the consequences of paternal incarceration for father-child relationships and fathers' financial investments in their children demand the attention of scholars and policymakers. In this study, we examine how the history of incarceration among non-custodial fathers may shape their involvement with their non-resident children—both relationally and financially. This report makes novel contributions to our understanding of the differential impacts of incarceration's timing and length on non-custodial fathers' relationships with their non-resident children and their ability to meet the formal child support demands they face.

## **BACKGROUND**

### **Incarceration and Parent-Child Relationships**

Incarceration represents a disruption to family relationships that can have impacts long after a father is released from jail or prison. We utilize various outcome measures to gain insight into the relationships between nonresident fathers and their children—including contact, relationship quality, engagement, and decision-making. Contact between nonresident fathers and their children both during and after incarceration has been studied extensively by scholars. For example, previous research has found that any time spent in jail or prison is associated with a diminished likelihood of future father-child contact (Tach et al., 2010). Incarceration also increases the likelihood that mothers will repartner which in turn may indirectly affect the father-child relationship post-release and reduce the incidence of father-child contact (Cancian et al.,

2016; Dwyer Emory, 2022; Guzzo, 2009). Fathers of nonresident children are more likely to see their children after release if they maintain contact with them while incarcerated (Charles et al., 2023). However, significant barriers exist in maintaining contact with children including maternal gatekeeping, limited visiting options for families, and the expenses associated with communication and contact for family members of those who are incarcerated (Arditti et al., 2005; Swanson et al., 2013; Sobol, 2018).

While nonresident fathers' contact with their children has been studied extensively as a proximal measure of "involvement," there is also growing recognition that father-child relationship quality—not just frequency of contact—is important for our understanding of family relationships (Palkovitz, 2019). Thus, we focus on the quality of father-child relationships, as well as the quantity of interactions between them. Previous studies of incarceration's impact on parent-child relationship quality have mixed results, but generally find that pre-incarceration relationship quality and parent-child contact while incarcerated can help to explain these mixed findings (Venema et al., 2022).

We also examine the effects of incarceration on the engagement of fathers in parenting activities and parental decision-making. Previous studies have found that, among fathers who did not reside with their children prior to a spell of imprisonment, incarceration is associated with virtually no change in their frequency of engaging in parenting behaviors (Turney & Wildeman, 2013). However, prior studies have not distinguished between a spell of incarceration before or after children were born and did not consider the length of incarceration, both of which are gaps addressed by our study. Additionally, our study goes further than previous research by examining incarceration's association with nonresident fathers' engagement in decision-making about child rearing (for example, helping make decisions about what religious tradition a child

may or may not be raised in). This additional measure provides new insights beyond traditional measures of contact, relationship quality, and engagement.

### **Incarceration and Child Support**

In 2018, 21.9 million children in the United States—more than one in four children—had a parent who lived outside of their household (Grall, 2020). About half of the 12.9 million custodial parents who cared for those millions of children received child support payments under a formal court order—6.4 million parents had a formal court order mandating receipt of child support payments (Grall, 2020). These payments are generally considered to be an effective antipoverty policy measure for custodial parents and their children (Costanzo et al., 2023). Incarceration, however, has been shown to reduce both informal and formal child support contributions that nonresident fathers provide (Emory et al., 2020).

Child support policies have also been criticized for being exceedingly punitive and burdensome for many low-income non-custodial parents (e.g., Battle, 2019; Edin et al., 2019). This parallels trends in U.S. incarceration rates and practices that ensnared fathers in a complex web of criminal justice and child support policies (Haney, 2018, 2022); beginning in the 1970s and 1980s, child support enforcement measures were expanded and increasingly used to collect child support payments from non-custodial parents (Huang & Han, 2012; Pirog & Ziol-Guest, 2006). Some enforcement measures for nonpayment of child support that generally sanction or penalize non-custodial parents—for example, issuing warrants for arrest, placing liens on property, or eventually incarcerating non-custodial parents—are associated with parents beginning to pay orders and thus have been considered effective from a compliance standpoint (Meyer et al., 2020). On the other hand, critics of the child support system and its enforcement measures argue that it operates under a “carceral logic of parental responsibility” that reproduces

gender and racial inequities (Battle, 2023, p. 679). This logic values cash contributions to children's care above all and devalues other types of contributions that non-custodial parents may make, including relationship development and parental engagement (Battle, 2023). The system has also been criticized for allowing for the accrual of oppressive amounts of child support debt owed to the state, debts that often accrue during periods of incarceration (Brito, 2012; Haney, 2022). The child support system thus appears to sanction and penalize those whose families diverge from cultural ideals, ideals based upon traditional views of family, and parents' provision of financial support (McDonald, 2020). The system has also disproportionately penalized low-income fathers of color, in particular Black fathers (Kim et al., 2024; Pate, 2016; Spjeldnes et al., 2015). This carceral logic has serious consequences for family relationships and fathers' well-being, as child support debts and enforcement have been associated with diminished contact with children and worsened paternal well-being among non-custodial fathers (Robbins et al., 2022; Turner & Waller, 2017).

Incarceration itself is associated with the accrual of child support debt and greater total child support arrears as well as diminished total child support payments post-release (McLeod & Gottlieb, 2018; Emory et al., 2020). These debts can make fathers' efforts to reenter society and the workforce all the more difficult, which has been found to decrease fathers' likelihood of being formally employed over time (Harper et al., 2021; Link & Roman, 2017). As fathers accrue child support debts, they may become less likely to engage with the formal labor market as they seek to avoid having wages garnished (Cancian et al., 2013; Miller & Mincy, 2012). Black fathers who experience incarceration for child support non-payment also experience higher rates of recidivism (Spjeldnes et al., 2015). Black fathers' with criminal records are at risk for the most adverse labor market and child support payment outcomes overall (Berger et al.,

2021). While the tangled web of incarceration and child support has been well-established, we offer new insights via multiple measures of incarceration history to test the associations between incarceration length and timing for later child support payment and compliance.

## **DATA AND METHODS**

### **Data**

Our data are drawn from the Child Support Noncustodial Parent Employment Demonstration (CSPED) evaluation, a randomized controlled trial conducted in certain counties across eight states in the U.S. To participate, noncustodial parents (NCPs) were required to have established paternity, at least one open child support order, either current or likely future difficulty in making child support payments, and be facing employment difficulty even though they were legally and medically able to participate in gainful employment.<sup>1</sup> All participants were at least 18 years of age and not incarcerated at the time of enrollment in the study. Baseline surveys were administered to all participants at the date of their enrollment, between October 2013 and September 2016 (Cancian, et al., 2019). Baseline surveys gathered background information about socioeconomic characteristics, relationships with children, employment status, receipt of public assistance, family of origin characteristics, and motivations for enrolling in the CSPED program. About one year after participants completed the baseline survey, a follow-up survey was conducted. CSPED also collected administrative data from each partner state which we use exclusively for child support payment-related information.

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<sup>1</sup>A small percentage of participants (about 2%) did not owe current child support but were enrolled because they were anticipated to begin to owe. For simplicity, we describe the sample as all owing support.

## Sample

We restrict our analytic sample to NCPs who responded to both a baseline and follow-up survey with CSPED. Our analysis sample consists of noncustodial parents from six of the eight participating states. NCPs (N = 853) from Texas and Iowa were excluded because of data limitations.<sup>2</sup> Additionally, we exclude N = 466 individuals who did not identify as fathers, N = 101 NCPs without nonresident children, and N = 449 NCPs with missing data across any of our selected outcomes. We also restrict our child-level outcome data to NCPs' biological minor children who did not reside with the NCP at both the baseline and follow-up surveys (or who were not yet born at baseline and did not reside with the NCP at follow-up) as measured by the NCP reporting spending fewer than 16 nights in the same place as the child in the past thirty days. This leaves a final analytic sample of N = 2,409. After completing an analysis drawing on data from all six states, we conducted a Wisconsin-only analysis using the same approach to data inclusion and exclusion as described above but dropping any additional NCPs who did not reside in Wisconsin. The final analytic for the Wisconsin-only analyses is N = 457.

We use multiple imputation with chained equations in Stata to impute missing data across our primary independent variable—incarceration history—and relevant covariates. Ten imputed datasets were generated for our analysis using this method and, following best practice, we do not utilize imputed values for our outcome measures (Von Hippel, 2007).

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<sup>2</sup>The six states include California, Colorado, Ohio, South Carolina, Tennessee, and Wisconsin. Texas utilized an abbreviated version of the baseline survey. Additionally, administrative data on child support-related outcomes are no longer available from either Texas or Iowa, thus both were excluded from the analysis.



## Measures

### *Outcomes*

We examine seven outcomes focused on two areas of father involvement: relationships with children and financial investments in children (referred to hereafter as relational and financial outcomes, respectively). All outcomes draw from data restricted to nonresident minor children of NCPs with the relational outcome measures coming from the CSPED follow-up survey responses and the financial outcome measures from the CSPED child support administrative data.

*Relational.* The relational domain includes four measures that examine noncustodial fathers' relationships with their nonresident children. The first is a measure of noncustodial fathers' contact with children measured by the number of days of any contact (e.g., in person, phone, letters, emails, texts) fathers had with children in the past thirty days averaged across a father's nonresident children. The second outcome assesses the relationship quality between fathers and their nonresident children. Fathers were asked to say if in general, their relationship with a given child was excellent, very good, good, fair, or poor. We average this rating across fathers' nonresident children, round to the nearest integer, and then dichotomize these quality ratings as either 1 = excellent or very good or 0 = good, fair, or poor. The third relational outcome is a measure of parental engagement. Noncustodial fathers were asked a series of questions regarding how many days in the past thirty days they had: read books to, given something to eat, had a meal with, taken to school, childcare, or appointments, taken to spend time with their own family, or talked with the child about something the child was interested in. We averaged the total number of days engaged in these activities across a father's nonresident

children.<sup>3</sup> Our final relational outcome is a measure of parental decision making. Fathers were asked if they felt they were “involved in making decisions about raising [CHILD], such as decisions about child care, education, religion, and medical care” (Herard-Tsiagbey, Weaver, & Moore, 2019, p. 31). We again average fathers’ responses from strongly agree to strongly disagree across fathers’ nonresident children, rounded, and dichotomized fathers’ responses coding them as either 1 = strongly agree or agree or 0 = not sure, disagree, or strongly disagree.

*Financial.* The second domain includes three outcomes about fathers’ financial investments in their children. Given that we focus exclusively on fathers’ nonresident children, and all fathers in the CPSSED sample had at least one active child support order in the state where they resided, we examine fathers’ formal child support payments only and exclude informal cash or in-kind contributions to their nonresident children’s caregivers. The first financial outcome examined is the father’s payment of *any* child support in the year after the CSPED study random assignment, measured dichotomously as 1 = any payment and 0 = no payment. The second financial outcome is the average monthly total child support payment made by fathers to all custodial mothers in the year after random assignment, measured in nominal dollars. The final financial outcome is child support compliance measured as the ratio of child support paid to the amount due in the year following CSPED random assignment.

### ***Independent Variables***

We use two approaches to measure incarceration history to approximate the effects of both the timing and length of incarceration on the seven outcomes of interest. At the time of the baseline survey, fathers were asked a series of questions about their experiences with the

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<sup>3</sup>We summed the number of days (0–30) that a father participated in each of the 6 activities and divided by the number of potential activities (6). We then averaged this for each child if a father had more than one nonresident child.

criminal legal system including if they had ever been convicted of a crime, if they had ever spent time in an adult correctional institution, the longest amount of time they had ever been incarcerated, and their most recent date of release from either jail or prison. This set of questions allowed us to approximate both the timing and maximum length of a father's incarceration.

*Timing of Incarceration.* Our first measure of incarceration focuses on the timing of a father's incarceration in relation to their oldest nonresident child's date of birth. We use this approach to approximate children's direct or indirect exposure to a father's incarceration. Using children's date of birth compared to a father's most recent date of release from incarceration, we create a three-category measure of incarceration timing: 0 = no criminal conviction or a criminal conviction but no time spent in an adult correctional facility, 1 = any incarceration that occurs *before* their oldest child's date of birth indicating that none of a father's children have been directly exposed to paternal incarceration (referred to as "ever incarcerated pre-birth"), and 2 = any incarceration *after* their oldest child's date of birth indicating that at least one of a father's children has been directly exposed to paternal incarceration (referred to as "ever incarcerated post-birth").

*Length of Incarceration.* Our second measure of incarceration focuses on the longest amount of time a father has ever spent in an adult correctional institution measured in months. We classify 12 months or less of incarceration as a short spell (approximating incarceration in a jail which typically lasts for one year or less) and more than 12 months as a long spell (approximating incarceration in prison which typically lasts for longer than one year). We use another three-category measure where 0 = no criminal conviction or a criminal conviction but no time incarcerated, 1 = longest reported spell of incarceration was 12 months or less, and 2 = longest reported spell of incarceration was longer than 12 months.

## ***Covariates***

A robust set of relevant covariates was constructed for inclusion in our analytic models using baseline survey data. Covariates were selected for their potential relation to our seven outcomes of interest including noncustodial fathers' demographic characteristics (i.e., age, race, and ethnicity), marital and cohabitation status, and socioeconomic status (i.e., highest level of education and earnings in the 30 days before baseline survey administration). Additional covariates include incidence of major severe depression, a father's relationship quality with and involvement of their own biological father,<sup>4</sup> NCPs having children with more than one partner, gatekeeping by any custodial parent or a custodial parent's family or friends, and NCPs residence with a non-biological child of a romantic partner. Child-level covariates include the number of nonresidential minor children a father has, average nonresident child age, average relationship quality with nonresident children at baseline,<sup>5</sup> and nonresident child sex. Finally, the CSPED treatment group and a father's state of residence are included. The full set of covariates is listed in Table 1.

## **Analytic Approach**

To assess the associations between incarceration among NCPs and their relationships with and financial investments in their nonresident children, we conducted a robust set of multivariate regression analyses. Our main estimation strategies are ordinary least squares and logistic regression modeling. All regression models are weighted with CSPED survey weights.

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<sup>4</sup>This variable is coded as 0=not at all involved, 1=somewhat involved and fair or poor relationship, 2=somewhat involved and excellent/very good/good relationship, 3=very involved and fair/poor relationship, and 4=very involved and excellent/very good/good relationship. We chose this approach to be consistent with previous literature that has used the same strategy (e.g., Cancian et al., 2018; Kim et al., 2023).

<sup>5</sup>Relationship quality with children is both an outcome in its own right and potentially very important to the other outcomes of interest, so we include it as a covariate in those models (but exclude it from the models where relationship quality is the outcome).

Our analytic approach attempts to quantify the possible associations between different measures of a father's history of incarceration and a variety of relational and financial outcomes. Our analysis focuses on the relationship between incarceration and our outcomes of interest, controlling for a variety of other factors; an attempt to identify the particular pathways through which incarceration may affect outcomes is beyond the scope of this research.<sup>6</sup>

### *All States Models*

We provide descriptive information for the complete sample from all included states and a descriptive examination of the seven outcomes of interest by the two measures of incarceration history. The presentation of regression models follows and we display the results of OLS and logistic regression models using the main treatment of incarceration history based on the timing of incarceration in relation to children's birth and the seven outcomes. Then we use the same estimation techniques across the seven outcomes (with the same covariates from the main analysis) and present the main treatment of incarceration results along with the alternative measure of incarceration history based on the length of a father's incarceration.

*Subgroup Analyses by Race.* We then conducted subgroup analyses for the two largest racialized groups to examine differences in the associations between incarceration and the seven outcomes among non-Hispanic Black fathers and non-Hispanic White fathers. These models include the same covariates as in the main models except for a father's race and ethnicity which are excluded. Next, we take a similar approach to our earlier comparisons and present the main

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<sup>6</sup>We include in our list of control variables factors that may be affected by incarceration themselves. For example, we are interested in the relationship between incarceration and child support payments controlling for earnings, rather than examining whether incarceration affects earnings, which then affects child support. Similarly, we examine the relationship between incarceration and relational outcomes controlling for gatekeeping, rather than examining whether incarceration affects gatekeeping, which then affects relationships with children. Additional analyses that do not include earnings, gatekeeping, or relationship with children, show very similar results.

and alternative treatments of incarceration for all outcomes among non-Hispanic Black fathers and non-Hispanic White fathers.

### ***Wisconsin Only Models***

Using our restricted sample with noncustodial fathers from Wisconsin only, we conduct identical analyses as with the models that include all the states to evaluate the possible associations between incarceration, child support, and family relationships. The covariates for the WI-only models are the same except for the state of residence, which is replaced by a noncustodial father's county of residence (Brown or Kenosha).

## **RESULTS: ALL STATES**

### **Characteristics of Noncustodial Parents and their Children: All States**

Table 1 shows characteristics of the fathers and their children in our sample from the full set of states. Using the main treatment of incarceration history focused on pre- and post-birth periods of imprisonment, we see that over one-third (34%) of the sample had never been incarcerated, 9% had experienced incarceration before their children were born, and 56% after their children were born. Thus, nearly two-thirds of this sample of fathers owing child support and having employment difficulties has been incarcerated. The high rate makes this sample particularly useful for studying the relationship between incarceration and father-child outcomes. For the alternative treatment of incarceration, we see again that 34% never experienced incarceration, 48% had been incarcerated for 12 months or less (a short spell), and 19% had experienced incarceration for more than 12 months (a long spell). The fathers were on average 35 years old ( $SD = 8$ ) and less than half (43%) identified as non-Hispanic Black, followed by non-Hispanic White (31%). Most respondents were economically disadvantaged with almost one-quarter having less than 12 years of education and over two-thirds having earned \$300 or

less in the previous 30 days. Thirteen percent of the fathers reported being married, while the remainder were either now cohabiting (24%) or not living with anyone (63%). Twenty-five percent of respondents reported symptoms of depression. Many fathers (38%) indicated they had no prior involvement with their own biological father while 30% reported having been very involved with their father and having had a high-quality relationship. The majority (63%) of NCPs reported having children with more than one partner and one-third reported that a custodial parent, or her friends or family, engaged in gatekeeping behavior. Less than 10% of fathers lived with the non-biological child of their romantic partner and most reported having a moderately high-quality relationship with their own nonresident child(ren) ( $M = 3.4$ ,  $SD = 1.5$  on a scale of 1–5 where 3 = good, 4 = very good, and 5 = excellent). Almost two-thirds of fathers had two or more children while the remaining respondents had one child. Almost half of respondents had both daughters and sons and the children's average age was 8.8 years old ( $SD = 4.2$  years). Half the sample participated in the CSPED treatment and were distributed among participating states including Tennessee (22%), California (21%), Colorado (20%), Wisconsin (19%), Ohio (15%), and South Carolina (3%).

**Table 1: Sample Characteristics at Baseline**

	<i>%/M</i>	<i>SD</i>
<b>Incarceration History: Main Treatment</b>		
Never Incarcerated	34%	
Ever Incarcerated Pre-Birth	9%	
Ever Incarcerated Post-Birth	56%	
<b>Incarceration History: Alternative Treatment</b>		
Never Incarcerated	34%	
Incarcerated for 12 Months or Less	48%	
Incarcerated for More than 12 Months	19%	
<b>Covariates</b>		
<b>Education</b>		
<12 Years	24%	
12 Years/GED	44%	
Some College or Higher	32%	
<b>NCP Age</b>	35.21	8.01
<b>Race and Ethnicity</b>		
Non-Hispanic White	31%	
Non-Hispanic Black	43%	
Hispanic	20%	
Non-Hispanic Other	6%	
<b>Earnings in Past 30 Days</b>		
\$0	47%	
\$1–\$300	21%	
\$301–800	17%	
\$801 or More	15%	
<b>NCP Depression (PHQ-8)</b>	25%	
<b>NCP Relationship Quality with and Involvement of Biological Father</b>		
Not At All Involved	38%	
Somewhat Involved and Fair or Poor Relationship	14%	
Somewhat Involved and Excellent, Very Good, or Good Relationship	17%	
Very Involved and a Fair or Poor Relationship	2%	
Very Involved and Excellent, Very Good, or Good Relationship	30%	
<b>Marital and Cohabitation Status</b>		
Married	13%	
Previously Married/Cohabiting	9%	
Never Married/Cohabiting	15%	
Previously Married/Not Cohabiting	26%	
Never Married/Not Cohabiting	37%	
NCP Has Children with More than One Partner	63%	
<b>Gatekeeping</b>	34%	
<b>NCP Lives with Non-Biological Child of Romantic Partner</b>	9%	
<b>Relationship Quality with Children</b>	3.36	1.46
<b>Number of Non-Residential Minor Children</b>		
One	35%	



	<i>%/M</i>	<i>SD</i>
Two or More	65%	
Child Sex		
All Males	26%	
All Females	25%	
Both Sexes	49%	
<b>Average Child Age</b>	8.84	4.16
<b>CSPED Intervention Treatment</b>	50%	
<b>States</b>		
California	21%	
Colorado	20%	
Ohio	15%	
South Carolina	3%	
Tennessee	22%	
Wisconsin	19%	

Notes: N = 2,409 (excluding cases missing on outcomes). Percentage may not add to 100 due to rounding.

### **Descriptive Statistics of Outcomes by Incarceration History: All States**

Table 2 contains information about fathers' relationships with their children and the financial contributions they make, for all fathers in column one, followed by fathers with no incarceration history in column two. In the next two columns, we show the relational and financial outcomes for fathers who were ever incarcerated pre-birth and post-birth, comparing them to each other as well as comparing both of them to fathers who had never been incarcerated. The final two columns show outcomes for fathers incarcerated for short and long spells (more than 12 months), again comparing them to each other and to those never incarcerated.

**Table 2: Descriptive Statistics of Outcomes by Main and Alternative Treatments of Incarceration History**

Outcomes Variables	Full Sample	Never Incarcerated	Main Treatment of Incarceration		Alternative Treatment of Incarceration	
			Ever Incarcerated Pre-Birth	Ever Incarcerated Post-Birth	Incarcerated for 12 Months or Less	Incarcerated for More than 12 Months
<b>Parent-Child Relationship</b>						
Days of Any Contact	5.9 (6.9)	6.1 (11.6)	6.9 (27.0) <sup>d</sup>	5.6 (9.1)	6 (10.3) <sup>f</sup>	5.2 (14.9) <sup>a</sup>
Very Good or Excellent Relationship Quality	46%	52%	51% <sup>b</sup>	41% <sup>c</sup>	46% <sup>b,g</sup>	33% <sup>c</sup>
Parental Engagement	4.3 (5.3)	4.5 (9.0)	5.1 (20.4) <sup>d</sup>	4.1 (6.98)	4.4 (8.0) <sup>f</sup>	3.7 (11.0) <sup>b</sup>
Agree or Strongly Agree Parental Decision Making	48%	49%	54% <sup>d</sup>	46%	48%	45%
<b>Financial Contributions</b>						
Any Formal Child Support Payments	86%	90%	86%	83% <sup>c</sup>	84% <sup>c</sup>	80% <sup>c</sup>
Amount of Formal Child Support Paid	128.4 (143.5)	162.6 (270.3)	125.6 (484.8) <sup>b</sup>	108.1 (175.8) <sup>c</sup>	119.1 (201.2) <sup>c,g</sup>	90.5 (263.0) <sup>c</sup>
Compliance	0.36 (.30)	0.42 (.51)	0.37 (1.0) <sup>a,d</sup>	0.32 (.40) <sup>c</sup>	0.34 (.43) <sup>c</sup>	0.31 (.70) <sup>c</sup>

<sup>a</sup> Different from Never Incarcerated at  $p < .05$ .

<sup>b</sup> Different from Never Incarcerated at  $p < .01$ .

<sup>c</sup> Different from Never Incarcerated at  $p < .001$ .

<sup>d</sup> Different from Post-Birth at  $p < .05$ .

<sup>e</sup> Different from Post-Birth at  $p < .001$ .

<sup>f</sup> Different from Incarcerated for More than 12 Months at  $p < .05$ .

<sup>g</sup> Different from Incarcerated for More than 12 Months at  $p < .001$ .

In the Parent-Child Relationship section, the average monthly contact between children and fathers ranges from 5–7 days per month. Those with long spells have significantly less contact than those with short spells or those never incarcerated. Those incarcerated post-birth have less contact than those incarcerated pre-birth. The differences among the groups are not large, however. About half of all fathers report very good or excellent relationships with their children. The incarceration subgroups show more differences for this outcome than for contact, with particularly low relationship quality for those with long spells of incarceration and (to a lesser extent) those incarcerated post-birth. Fathers report relatively low levels of engagement with their children in the full sample, about 4 days/month on average of activities. The lowest (3.7 days per month) is found among fathers with long spells of incarceration. The final parent-child relationship outcome shows that about half of all fathers (48%) affirm their involvement in decision making about raising their child. A slightly higher proportion is found in the pre-birth incarceration group (54%) compared to fathers who experienced incarceration after their children were born (46%).

The Financial Contributions section shows how most fathers (86%) made at least one child support payment. Making child support payments is most common among fathers without any incarceration history (90%) and the least common among fathers incarcerated for more than 12 months (80%). On average, NCPs paid \$128/month. Again, we see a strong relationship between incarceration and child support with fathers who have the longest spells of incarceration paying the lowest amount (\$90), followed by fathers incarcerated after their child was born (\$108); these are both substantially (and statistically) less than the \$163 paid by fathers without incarceration. The pattern of incarceration being linked to financial contributions continues when we examine the final outcome, compliance with orders, where we see a consistently negative

relationship between incarceration across all groups compared to fathers without an incarceration history.

### **Factors Associated with Parent-Child Relationship and Financial Contribution Outcomes: All States**

Table 3 shows the results of the models predicting parent-child relationship and financial contribution outcomes among NCPs and their children using the full sample of states. Models 1 (contact), 3 (parental engagement) and 4 (decision making) show no statistically significant results between incarceration and these parent-child relationship outcomes. Model 2 suggests that fathers who experienced incarceration after their children were born are less likely to have high quality relationships with them. The remaining models which focus on financial contributions show a similar pattern across models, with those who had post-birth incarceration being less likely to make child support payments (Model 5), paying less (Model 6), and complying with orders at a lower rate (Model 7) than those in the never-incarcerated group. The differences are particularly large for payments (\$48/month) and compliance (9 percentage points). Additionally, fathers with pre-birth incarceration paid less (about \$31/month) and complied less (5 percentage points) than the never-incarcerated group. Combined, these results suggest that incarceration, especially after the birth of a child, negatively affects one particular aspect of the parent-child relationship, as well as multiple dimensions of a father's ability to financially contribute to the household of his child.<sup>7</sup>

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<sup>7</sup>We conducted sensitivity tests to examine if any incarceration between the baseline and follow-up surveys would change the results since very recent incarceration (in the past year before the follow-up survey) could be expected to impact a father's financial contributions to and relationship with his children. There were n=41 respondents with a first incarceration and n=250 with a repeat incarceration between the baseline and follow-up surveys. In our robustness check, we included a dummy variable in the All States (and WI-only) main and alternative models to indicate if the respondent had either of these types of incarceration. The results showed no unexpected differences in the relationship between our pre-baseline measures of incarceration and our outcomes once between-wave incarceration is controlled. Between-wave incarceration is negatively related to days of contact and number of activities engaged in, as expected, since for some of the period the father was incarcerated and would

Looking at other predictors, we found that higher levels of education were associated with a lower likelihood of being involved in decision making, but an increased likelihood of making financial contributions than those with less than 12 years of education. Fathers with at least a high school diploma or its equivalent are also more likely to be regularly engaged with their children than fathers with less education. Older fathers reported better quality relationships with their children yet were less engaged in daily activities like eating together and reading books. They were also more likely to pay higher amounts of child support. Non-Hispanic Black fathers and Hispanic fathers were more likely to report being involved in parental decision-making than non-Hispanic White fathers, but Non-Hispanic Black fathers were less financially involved in all ways (i.e., making payments, the amount paid, and compliance with orders). Fathers with higher monthly earnings were more likely to make child support payments, pay more, and comply with orders at a higher rate. Depression was associated with a lower likelihood of making payments and lower levels of compliance. Moreover, fathers with high-quality relationships with their own fathers (whether their own fathers were very involved or somewhat involved with them) reported better quality relationships with their own children compared to fathers who had completely uninvolved fathers themselves. Conversely, fathers with very involved but fair- or poor-quality father relationship histories had lower child support compliance than those without any involvement from their father at all.

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have had limited opportunities for contact or engagement. Moreover, between-wave incarceration is negatively related to relationship quality and all financial outcomes. Importantly, whether we control for between-wave incarceration or not, the longer-term relationship between incarceration and our outcomes does not change a great deal.

**Table 3: Ordinary Least Squares and Logistic Regression Analyses Predicting Parent-Child Relationship and Financial Contribution Outcomes Using Main Treatment of Incarceration History**

Predictor	Parent-Child Relationship								Financial Contributions					
	Days of Any Contact		Relationship Quality		Engagement		Decision Making		Any Child Support Payment		Formal Amount Paid		Compliance	
	Model 1		Model 2		Model 3		Model 4		Model 5		Model 6		Model 7	
	<i>B</i>	<i>SE</i>	<i>Marg Eff</i>	<i>SE</i>	<i>B</i>	<i>SE</i>	<i>Marg Eff</i>	<i>SE</i>	<i>Marg Eff</i>	<i>SE</i>	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>
<b>Incarceration History: Main Treatment</b>														
(Never Incarcerated)														
Ever Incarcerated Pre-Birth	0.74	(0.48)	-0.02	(0.04)	0.63	(0.36)	0.04	(0.05)	-0.04	(0.02)	-31.45**	(10.08)	-0.05*	(0.02)
Ever Incarcerated Post-Birth	0.00	(0.28)	-0.05*	(0.02)	0.05	(0.22)	0.00	(0.03)	-0.07***	(0.01)	-47.70***	(6.07)	-0.09***	(0.01)
<b>Education</b>														
(<12 Years)														
12 Years or GED	0.65*	(0.32)	0.02	(0.03)	0.51*	(0.25)	-0.09**	(0.03)	0.01	(0.02)	17.97**	(6.79)	0.03	(0.01)
Some College or Higher	0.48	(0.35)	0.03	(0.03)	0.55*	(0.27)	-0.16***	(0.03)	0.04*	(0.02)	20.58**	(7.32)	0.03*	(0.02)
<b>NCP Age</b>	-0.01	(0.02)	0.01***	(0.00)	-0.04**	(0.02)	0.00	(0.00)	-0.00**	(0.00)	1.01*	(0.44)	0.00	(0.00)
<b>Race and Ethnicity</b>														
(Non-Hispanic White)														
Non-Hispanic Black	0.53	(0.35)	0.01	(0.03)	0.20	(0.27)	0.12***	(0.03)	-0.04*	(0.02)	-17.67*	(7.48)	-0.04*	(0.02)
Hispanic	0.23	(0.39)	0.05	(0.03)	0.17	(0.30)	0.09*	(0.04)	-0.01	(0.02)	1.83	(8.15)	0.01	(0.02)
Non-Hispanic Other	0.61	(0.54)	0.06	(0.05)	0.24	(0.41)	-0.02	(0.05)	-0.03	(0.03)	-13.15	(11.27)	-0.04	2409
<b>NCP Average Monthly Earnings</b>														
(Earnings \$0)														
Earnings \$1–\$300	-0.16	(0.33)	-0.01	(0.03)	-0.24	(0.25)	0.02	(0.03)	0.01	(0.02)	-7.61	(6.91)	0.01	(0.02)
Earnings \$301–800	0.53	(0.36)	0.04	(0.03)	0.48	(0.27)	0.03	(0.03)	0.04**	(0.02)	16.63*	(7.45)	0.03*	(0.02)
Earnings \$801 or More	0.51	(0.38)	0.06	(0.03)	0.36	(0.29)	0.01	(0.04)	0.09***	(0.02)	69.48***	(7.94)	0.13***	(0.02)
<b>NCP Depression (PHQ-8)</b>	-0.17	(0.29)	-0.05	(0.03)	-0.14	(0.23)	-0.02	-0.02	-0.05***	(0.02)	-6.19	(6.19)	-0.03*	(0.01)
<b>NCP Relationship Quality with and Involvement of Father</b>														
(Not At All Involved)														
Somewhat Involved and Fair or Poor Relationship	0.22	(0.40)	-0.02	(0.03)	0.15	(0.30)	0.01	(0.04)	-0.01	(0.02)	-3.23	(8.37)	-0.01	(0.02)
Somewhat Involved and Excellent, Very Good, or Good Relationship	0.05	(0.37)	0.10**	(0.03)	0.12	(0.28)	0.05	(0.03)	-0.01	(0.02)	-0.75	(7.83)	0.00	(0.02)
Very Involved and a Fair or Poor Relationship	-0.07	(1.03)	0.02	(0.09)	0.03	(0.80)	0.08	(0.10)	-0.14	(0.08)	-41.24	(21.78)	-0.13**	(0.05)
Very Involved and Excellent, Very Good, or Good Relationship	-0.15	(0.31)	0.06*	(0.03)	-0.04	(0.24)	0.02	(0.03)	0.00	(0.01)	1.23	(6.54)	-0.01	(0.01)

Predictor	Parent-Child Relationship								Financial Contributions					
	Days of Any Contact		Relationship Quality		Engagement		Decision Making		Any Child Support Payment		Formal Amount Paid		Compliance	
	Model 1		Model 2		Model 3		Model 4		Model 5		Model 6		Model 7	
	<i>B</i>	<i>SE</i>	<i>Marg Eff</i>	<i>SE</i>	<i>B</i>	<i>SE</i>	<i>Marg Eff</i>	<i>SE</i>	<i>Marg Eff</i>	<i>SE</i>	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>
<b>Marital and Cohabitation Status</b>														
(Married)														
Previously Married/Cohabiting	-0.22	(0.54)	0.02	(0.05)	0.01	(0.41)	0.08	(0.05)	0.01	(0.02)	23.06*	(11.34)	-0.01	(0.02)
Never Married/Cohabiting	-0.30	(0.49)	0.05	(0.04)	-0.01	(0.38)	0.12**	(0.05)	-0.03	(0.02)	-17.66	(10.37)	-0.04	(0.02)
Previously Married/Not Cohabiting	0.01	(0.44)	0.04	(0.04)	0.10	(0.34)	0.06	(0.04)	-0.04	(0.02)	-9.01	(9.27)	-0.05*	(0.02)
Never Married/Not Cohabiting	0.05	(0.43)	0.02	(0.04)	0.23	(0.33)	0.08*	(0.04)	-0.04*	(0.02)	-21.36*	(9.09)	-0.05*	(0.02)
<b>NCP Has Children with More than One Partner</b>														
Gatekeeping	-0.68*	(0.28)	-0.18***	(0.02)	-0.63**	(0.21)	-0.12***	(0.02)	0.02	(0.01)	1.35	(5.81)	-0.02	(0.01)
<b>NCP Lives with Non-Biological Child of Romantic Partner</b>														
Relationship Quality with Children	1.94***	(0.09)	—	—	1.51***	(0.07)	0.16***	(0.01)	0.01	(0.00)	2.91	(1.93)	0.01*	(0.00)
<b>Number of Non-Residential Minor Children</b>														
(One)														
Two or More	0.52	(0.31)	0.01	(0.03)	0.23	(0.24)	-0.02	(0.03)	0.01	(0.02)	34.10***	(6.60)	-0.05**	(0.01)
<b>Child Sex</b>														
(All Males)														
All Females	-0.07	(0.34)	0.03	(0.03)	-0.03	(0.26)	0.03	(0.03)	0.00	(0.02)	6.83	(7.26)	0.01	(0.02)
Both Sexes	-0.22	(0.34)	0.00	(0.03)	-0.21	(0.26)	-0.02	(0.03)	0.00	(0.02)	13.37	(7.21)	0.01	(0.02)
Average Child Age	-0.12**	(0.04)	-0.02***	(0.00)	-0.06*	(0.03)	-0.00	(0.00)	-0.00	(0.00)	-1.19	(0.81)	-0.00	(0.00)
<b>CSPED Intervention Treatment</b>														
State	0.30	(0.25)	-0.01	(0.02)	0.12	(0.19)	-0.01	(0.02)	-0.00	(0.01)	-7.18	(5.24)	0.00	(0.01)
(California)														
Colorado	-1.05*	(0.41)	-0.06	(0.03)	-0.74*	(0.31)	-0.05	(0.04)	0.17***	(0.03)	93.60***	(8.63)	0.15***	(0.02)
Ohio	-0.12	(0.47)	-0.03	(0.04)	-0.11	(0.36)	-0.01	(0.04)	0.05	(0.03)	-9.18	(9.94)	0.01	(0.02)
South Carolina	-1.10	(0.88)	-0.04	(0.08)	-0.64	(0.67)	0.06	(0.08)	0.15***	(0.05)	32.29	(18.48)	0.21***	(0.04)
Tennessee	0.80	(0.49)	0.13**	(0.04)	0.67	(0.37)	0.11*	(0.05)	0.20***	(0.03)	77.18***	(10.22)	0.10***	(0.02)
Wisconsin	0.75	(0.42)	-0.04	(0.04)	0.42	(0.33)	0.04	(0.04)	0.18***	(0.03)	47.56***	(8.95)	0.15***	(0.02)
<b>Number of Observations</b>	2,409		2,409		2,409		2,409		2,409		2,409		2,409	

**Note:** The reference group for the categorical variables is shown in parenthesis. \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .

Weaker relationship ties (here defined as those never married and not cohabiting) are associated with an increased likelihood of decision making about raising one's child, yet lower financial contributions including making payments, making lower payments (\$21/month) and complying with orders compared to married fathers, while stronger ties (i.e., previous marriage and cohabitation) are associated with higher monthly payments (\$26/month). Current cohabitation among never-married fathers also increased the likelihood of fathers being involved with decision making compared to married fathers. Gatekeeping, and to a lesser extent multipartner fertility, was consistently negatively associated with relational outcomes, whereas better relationship quality with one's child was associated with an increased likelihood of positive parent-child relationship outcomes (i.e., contact, engagement, and decision making) and compliance with orders. Fathers with more nonresident children, on average, paid more per month, but their payments constituted a lower proportion of what they owed (i.e., their compliance with the order was lower). Finally, fathers with older children were less likely to be relationally involved.

### **Comparing the Two Treatments of Incarceration History: All States**

We conducted the analyses with two different operationalizations of incarceration: the main treatment contrasted (a) those with no incarceration, (b) those with incarceration but only before their oldest child's birth (pre-birth incarceration), and (c) those with incarceration after their oldest child's birth (post-birth incarceration); the alternative treatment contrasted (a) those with no incarceration, (b) those with a short spell ( $\leq 12$  months), and (c) and those with a long spell ( $> 12$  months). These different ways of measuring incarceration history help us to think about the various ways in which incarceration interacts with family functioning and a parent's ability to contribute financially to their child's life. We consider short spells a proxy for



incarceration in jails because jail stays typically last for one year or less whereas we consider long spells a proxy for prison since prison sentences are usually longer than one year. Although not directly comparable, for efficiency we include the regression results for the main treatment of incarceration in Panel A of Table 4 (without the rest of the covariate results which can be found in Table 3), followed by the results of the alternative treatment in Panel B of Table 4.<sup>8</sup>

Summarizing our main results (Panel A), those with both pre- and post-incarceration history have no association with three of the relational outcomes; in contrast, there is a negative association between post-birth incarceration and relationship quality. However, there is a strong pattern of association between both incarceration history types and financial contribution outcomes with post-birth incarceration fathers being less likely to make any child support payments, and fathers from both pre- and post-birth incarceration groups paying less on average each month and having lower compliance rates, compared to never incarcerated fathers.

Turning to Panel B, longer spells of incarceration are associated with worse relationship quality between fathers and their children, but the other relationship outcomes do not differ by incarceration length. However, any length of incarceration (short or long), has negative implications for fathers' child support contributions (i.e., any payment, amount paid, and compliance with orders). Moreover, long spells appear to have the most sizable and significant effect on the amount of child support paid with fathers paying almost \$70 less per month compared to never incarcerated fathers, relative to \$40 less per month among fathers with short incarceration stays.

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<sup>8</sup>The full set of results for the alternative treatment models are available upon request.

**Table 4: Ordinary Least Squares and Logistic Regression Analyses Predicting Parent-Child Relationship and Financial Contribution Outcomes Comparing the Main and Alternative Treatments of Incarceration History**

Predictor	Parent-Child Relationship								Financial Contributions					
	Days of Any Contact		Relationship Quality		Engagement		Decision Making		Any Child Support Payment		Formal Amount Paid		Compliance	
	Model 1		Model 2		Model 3		Model 4		Model 5		Model 6		Model 7	
	<i>B</i>	<i>SE</i>	<i>Marg Eff</i>	<i>SE</i>	<i>B</i>	<i>SE</i>	<i>Marg Eff</i>	<i>SE</i>	<i>Marg Eff</i>	<i>SE</i>	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>
<b>Panel A</b>														
<b>Incarceration History: Main Treatment</b> (Never Incarcerated)														
Ever Incarcerated Pre-Birth	0.74	(0.48)	-0.02	(0.04)	0.63	(0.36)	0.04	(0.05)	-0.04	(0.02)	-31.45**	(10.08)	-0.05*	(0.02)
Ever Incarcerated Post-Birth	0.00	(0.28)	-0.05*	(0.02)	0.05	(0.22)	0.00	(0.03)	-0.07***	(0.01)	-47.70***	(6.07)	-0.09***	(0.01)
<b>Panel B</b>														
<b>Incarceration History: Alternative Treatment</b> (Never Incarcerated)														
Incarcerated for 12 Months or Less	0.15	(0.29)	-0.03	(0.02)	0.13	(0.22)	0.00	(0.03)	-0.06***	(0.01)	-39.55***	(6.01)	-0.08***	(0.01)
Incarcerated for More than 12 Months	0.13	(0.38)	-0.15***	(0.03)	0.20	(0.29)	0.01	(0.04)	-0.09***	(0.01)	-69.22***	(8.04)	-0.10***	(0.02)
<b>Number of Observations</b>	2,409		2,409		2,409		2,409		2,409		2,409		2409	

**Notes:** The reference group for the categorical variables is shown in parenthesis. All covariates listed in Table 3 are included in the Panel B models. The full set of results for Panel B are available upon request. \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .

### **Race Comparisons: All States**

We now turn our attention to a series of models that examine if incarceration is associated with relational and financial outcomes, this time differentiating by a father's race and ethnicity. In Table 5, we first replicate the analyses conducted for Table 3 using the same treatment of incarceration history (i.e., never, pre-birth incarceration, and post-birth incarceration) and the same set of covariates (except for race and ethnicity which are dropped here).<sup>9</sup> The results in Panel A of Table 5 include parent-child relationship outcomes only (Models 1–4), first for non-Hispanic Black fathers on the left, followed by the same models for non-Hispanic White fathers on the right. Results in Panel A show one finding related to incarceration history: non-Hispanic Black fathers with a post-birth incarceration, compared to their never incarcerated counterparts, are less likely to have a high-quality relationship with their children.

In Panel B of Table 5, we extend the examination of incarceration by race using the alternative treatment of incarceration (never, incarcerated for 12 months or less (short), and incarcerated for more than 12 months (long)).<sup>10</sup> In Table 5. Panel B, we see a negative association between long spells of incarceration and high-quality relationships among both non-Hispanic Black and White fathers compared to never incarcerated fathers.

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<sup>9</sup>Only the results for incarceration are shown in Table 5; the full set of results for the models using the main treatment of incarceration are available upon request.

<sup>10</sup>Similar to Panel A, the full set of covariate results are available upon request.

**Table 5: Ordinary Least Squares and Logistic Regression Analyses Predicting Parent-Child Relationship Outcomes by Race Comparing the Main and Alternative Treatments of Incarceration History**

Predictor	Parent-Child Relationship															
	<i>Non-Hispanic Black NCPs</i>								<i>Non-Hispanic White NCPs</i>							
	Days of Contact		Relationship Quality		Engagement		Decision Making		Days of Contact		Relationship Quality		Engagement		Decision Making	
	Model 1		Model 2		Model 3		Model 4		Model 1		Model 2		Model 3		Model 4	
	<i>B</i>	<i>SE</i>	<i>Marg Eff</i>	<i>SE</i>	<i>B</i>	<i>SE</i>	<i>Marg Eff</i>	<i>SE</i>	<i>B</i>	<i>SE</i>	<i>Marg Eff</i>	<i>SE</i>	<i>B</i>	<i>SE</i>	<i>Marg Eff</i>	<i>SE</i>
<b>Panel A</b>																
<b>Incarceration History: Main Treatment</b> (Never Incarcerated)																
Ever Incarcerated Pre-Birth	0.19	(0.82)	-0.07	(0.07)	0.39	(0.62)	0.05	(0.07)	0.88	(0.83)	0.03	(0.07)	0.42	(0.61)	0.06	(0.08)
Ever Incarcerated Post-Birth	0.46	(0.51)	-0.09*	(0.04)	0.46	(0.38)	0.05	(0.04)	-0.47	(0.46)	0.02	(0.04)	-0.51	(0.35)	0.02	(0.04)
<b>Panel B</b>																
<b>Incarceration History: Alternative Treatment</b> (Never Incarcerated)																
Incarcerated for 12 Months or Less	0.52	(0.52)	-0.05	(0.04)	0.48	(0.39)	0.05	(0.05)	-0.15	(0.45)	0.05	(0.04)	-0.31	(0.35)	0.01	(0.04)
Incarcerated for More than 12 Months	0.50	(0.61)	-0.18***	(0.05)	0.56	(0.46)	0.04	(0.05)	-0.26	(0.68)	-0.13*	(0.06)	-0.23	(0.53)	0.10	(0.07)
<b>Number of Observations</b>	996		996		996		996		758		758		758		758	

**Notes:** The reference group for the categorical variables is shown in parenthesis. All covariates listed in Table 3 are included in these models except race. The full set of results for Panel A and Panel B are available upon request. \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .

In Table 6, we continue with an examination of incarceration by racial groups, but this time focusing on child support outcomes (Models 5–7). Panel A in Table 6 shows the results based on the main treatment of incarceration (never, pre-birth incarceration, and post-birth incarceration). In this case, we see an identical pattern of results for both racial groups: pre- and post-birth incarceration history are negatively associated with the amount paid and post-birth incarceration is associated with less likelihood of making any payment and complying with orders, compared to never incarcerated fathers.

Finally, in Panel B of Table 6, we examine financial outcomes among both racial groups based on the alternative treatment of incarceration (never, short, and long). We find a consistent pattern across both categories of incarceration and all three financial contribution outcomes for both racial groups: no matter the length of incarceration (short or long), compared to no incarceration, there is a negative association with child support outcomes among both non-Hispanic Black and White fathers. Again, the full set of results for the models in Table 6 are available upon request.

**Table 6: Ordinary Least Squares and Logistic Regression Analyses Predicting Financial Contribution Outcomes by Race Comparing the Main and Alternative Treatments of Incarceration History**

Predictor	Financial Contributions											
	<i>Non-Hispanic Black NCPs</i>					<i>Non-Hispanic White NCPs</i>						
	Any Child Support Payment		Formal Amount Paid		Compliance	Any Child Support Payment		Formal Amount Paid		Compliance		
	Model 5		Model 6		Model 7	Model 5		Model 6		Model 7		
	<i>Marg Eff</i>	<i>SE</i>	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>	<i>Marg Eff</i>	<i>SE</i>	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>
<b>Panel A</b>												
<b>Incarceration History: Main Treatment</b> (Never Incarcerated)												
Ever Incarcerated Pre-Birth	-0.02	(0.03)	-38.10*	(15.65)	-0.03	(0.04)	-0.04	(0.04)	-41.17*	(17.96)	-0.07	(0.04)
Ever Incarcerated Post-Birth	-0.06**	(0.02)	-52.70***	(9.75)	-0.09***	(0.02)	-0.09***	(0.02)	-55.99***	(10.85)	-0.11***	(0.02)
<b>Panel B</b>												
<b>Incarceration History: Alternative Treatment</b> (Never Incarcerated)												
Incarcerated for 12 Months or Less	-0.04*	(0.02)	-46.59***	(9.92)	-0.07***	(0.02)	-0.07***	(0.02)	-45.95***	(10.65)	-0.09***	(0.02)
Incarcerated for More than 12 Months	-0.09***	(0.03)	-71.14***	(11.57)	-0.09***	(0.03)	-0.15***	(0.04)	-99.55***	(15.87)	-0.15***	(0.04)
<b>Number of Observations</b>	996		996		996		758		758		758	

**Notes:** The reference group for the categorical variables is shown in parenthesis. All covariates listed in Table 3 are included in these models except race. The full set of results for Panel A and Panel B are available upon request. \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .

### Robustness Check: All States

As a final robustness check with both the basic and alternative models, we predict formal amount paid comparing models with and without amount owed as a control variable. To keep the models simple and relatively consistent across our outcomes, we do not include the amount of child support owed in our model of formal child support amounts paid. Table 7 shows our basic model and an alternative that includes the amount owed. As expected, the relationships between incarceration and the amount paid are weaker when the amount owed is included, but the conclusions are generally identical.

**Table 7: Ordinary Least Squares Predicting Formal Amount Paid Comparing Models with and without Amount Owed as a Control Variable**

Predictor	Formal Amount Paid		Formal Amount Paid (Controlling for Amount Owed)	
	Model 6		Model 6	
	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>
<b>Panel A</b>				
<b>Incarceration History: Main Treatment</b> (Never Incarcerated)				
Ever Incarcerated Pre-Birth	-31.45**	(10.08)	-14.47	(8.76)
Ever Incarcerated Post-Birth	-47.70***	(6.07)	-30.41***	(5.28)
<b>Panel B</b>				
<b>Incarceration History: Alternative Treatment</b> (Never Incarcerated)				
Incarcerated for 12 Months or Less	-39.55***	(6.01)	-24.82***	(5.21)
Incarcerated for More than 12 Months	-69.22***	(8.04)	-43.59***	(6.99)
<b>Number of Observations</b>	2,409		2,409	

**Notes:** The reference group for the categorical variables is shown in parenthesis. All covariates listed in Table 3 are included in the Panel A model. The Panel B model includes all covariates listed in Table 3 plus “amount owed.” The full set of results for Panels A and B are available upon request. \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .

## RESULTS: WISCONSIN ONLY

### Characteristics of Noncustodial Parents and their Children: Wisconsin Only

The tables in Appendix A repeat the tables shown so far but are focused only on Wisconsin (WI). Appendix A, Table 1 shows characteristics: about one-quarter (27%) of the NCPs in Wisconsin have no history of incarceration; 62% report a history of incarceration after their children’s birth; and the remaining 8% report incarceration before their children’s birth.

One in four reported a long spell of incarceration, with the proportion reporting only short spells nearly double (48%). These numbers are generally comparable to the six-state sample, though incarceration rates among Wisconsin NCPs are a little higher. The racial and ethnic composition of fathers also differs somewhat from the full sample, with more non-Hispanic White fathers in Wisconsin and fewer non-Hispanic Black fathers and Hispanic fathers. While there are some relatively small differences between Wisconsin and the full sample on other characteristics, in general the characteristics are similar.

### **Descriptive Statistics of Outcomes by Incarceration History: WI Only**

Appendix A, Table 2 shows similar patterns to the full sample, with fathers who were incarcerated before their child was born reporting the best relational outcomes and those with long periods of incarceration time mostly reporting the worst. Decision making is linked to the timing of incarceration; fathers incarcerated before their children were born more frequently report participating in decision making (62%) than those incarcerated after their children were born (44%). Again, this is similar to the six-state model, but the difference is larger in Wisconsin.

Among fathers incarcerated before they had children, most (98%) made child support payments, compared to 89% of fathers with children born after their incarceration spell. About 86% of those with long spells of incarceration (more than 12 months in Wisconsin), make formal child support payments, the lowest of any group (although the differences are not statistically significant). Finally, compliance with orders is strongly linked to incarceration in Wisconsin; those who experienced incarceration after their child's birth and any length of incarceration (short or long) have lower rates of compliance than fathers with no incarceration history.



### **Factors Associated with Parent-Child Relationship and Financial Contribution Outcomes: WI Only**

Appendix A, Table 3 shows our base results for the WI-only sample. There are no associations between incarceration before or after a child is born and any relationship outcomes in Wisconsin, but post-birth incarcerations are associated with a decreased likelihood of making financial contributions (amount paid and compliance with orders).<sup>11</sup> Those incarcerated after birth pay on average \$51 per month less and have 9 percentage points lower compliance rates than those never incarcerated. Education plays a mixed role with respect to the outcomes; having a high school diploma or equivalent is negatively associated with decision making but having some college or more is linked to higher monthly payments compared to those with less than 12 years of education. Non-Hispanic Black fathers pay less than their White counterparts, about \$38 on average less each month. Not surprisingly, higher earnings are associated with higher payments and an increased likelihood of compliance with orders. Fathers who had poor quality relationships with their own fathers, even when their fathers were very involved, pay less each month and have lower compliance rates than fathers who had no involvement from their fathers at all.

Fathers with children with more than one partner and fathers who report gatekeeping both experience negative relationship quality with their children. Similar to the all-state models, relationship quality between fathers and their children is positively associated with all the relational outcomes that were assessed (i.e., days of contact, engagement, and decision making). Having more children is associated with higher average monthly payments compared to having

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<sup>11</sup>We do not show results for Model 5—any child support payment—in Wisconsin because cell sizes are too small not allowing for convergence of the model.

one child, as is having both sons and daughters (relative to having only sons). Finally, as children get older, we see a decline in relationship quality between them and their fathers.

### **Comparing the Two Measures of Incarceration History: WI Only**

Appendix A, Table 4 shows results for Wisconsin only on the two measures of incarceration. There are no associations between either treatment of incarceration—incarcerated before or after children are born (Panel A) or short and long spells of incarceration (Panel B)—and the relational outcomes (Models 1–4). Next, we examine the financial outcomes (Models 6 and 7) where we see a different pattern of results from the relational outcomes. Beginning with a reminder of the results from Table 3, in Panel A, we see a negative association between post-birth incarceration spells and amount paid and compliance with orders. As seen in Panel B, when using the alternative treatment of incarceration (short and long spells vs. none), we see that long spells of incarceration are related to lower payments and compliance, as are even short spells. Long spells have nearly double the impact on payments with fathers paying close to \$80 less on average each month whereas fathers with short spells pay about \$40 less per month.<sup>12</sup>

### **Race Comparisons: WI Only**

Similar to the all-state models, we now turn our attention to the potential link between incarceration and relational and financial outcomes but this time differentiating by race. We focus our discussion on the link between incarceration and our outcomes of interest; the full set of results are available upon request.

Appendix A, Table 5, Panel A displays the models of incarceration history (pre-birth and post-birth vs. none) and their potential effect on relational outcomes. On the left are Models 1–4

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<sup>12</sup>The full set of results for Appendix A, Table 4, Panel B are available upon request.

restricted to non-Hispanic Black fathers while on the right we see the same models but for non-Hispanic White fathers. There are no statistically significant associations between incarceration and parent-child relationship outcomes. Appendix A, Table 6, Panel A presents the parallel models for financial contributions, again showing the results for non-Hispanic Black fathers on the left and non-Hispanic White fathers on the right. Here we see that incarceration among fathers after they had children is negatively associated with payments and compliance; these differences are statistically significant for non-Hispanic White fathers.

Finally, we turn to an examination of the alternative treatment of incarceration in Appendix A, Table 5, Panel B and Appendix A, Table 6, Panel B examining short and long spells (vs. none). In Panel B of Appendix A, Table 5, there are no associations between incarceration and parent-child relationship outcomes in Wisconsin, regardless of how incarceration is measured (short or long). In Appendix A, Table 6, Panel B shows a negative link between long spells of incarceration and the amount paid (for both non-Hispanic Black and White fathers), and between long spells and compliance among non-Hispanic White fathers. In addition, short spells of incarceration (i.e., 12 months or less) are negatively associated with the amount paid among non-Hispanic White fathers.

## **CONCLUSIONS, LIMITATIONS, AND IMPLICATIONS**

There is limited information from large samples available to evaluate whether fathers who had been incarcerated generally have worse relational or financial connections to their children than fathers who never experienced incarceration. In this report, we use data from an intervention study that contains details about children's birth records and the timing and length of incarceration that, when combined, offers a unique opportunity to assess how differences in fathers' incarceration experiences may be associated with family well-being from a relational

and financial perspective. Among the novel contributions of this study is the inclusion of relationship quality, parental decision-making (as well as the more traditional measures of contact and engagement), and a multi-dimensional examination of formal financial contributions drawn from administrative data.

Using a unique differentiation of incarceration comparing fathers never incarcerated, those incarcerated before fathering, and those incarcerated after fathering, we find that post-birth incarceration is related to the quality of a father's relationship with his children, but not to any of the other parent-child relationship outcomes assessed including contact with the child, parent engagement, or decision making about raising the child. On the other hand, we find a clear pattern of strong relationships between post-birth incarceration and all measures of financial contributions, and even some relationships between pre-birth incarceration and financial contributions. The consistent finding about negative incarceration consequences for fathers and their children for whom parental incarceration occurs during the child's life (and not prior) is consistent with the robust literature that demonstrates the detrimental effects of parental incarceration on children (Poehlmann-Tynan & Turney, 2021; Turney & Goodsell, 2018) and which similarly focuses on the direct exposure of parental incarceration. The unique examination of the timing of incarceration in this study however (before versus after a child is born), extends this literature, suggesting that any incarceration is likely unfavorable for the parent-child relationship but much more so when the exposure is direct and occurs during the child's lifetime.

In a novel comparison, we also differentiate those never incarcerated, those with shorter spells (typically jail) and those with longer spells (typically prison). The most negative consequences are for those with long spells; specifically, with relationship quality and all measures of financial contributions, but even those with shorter spells of incarceration have

substantially lower financial contributions than those without. Incarceration in prison settings (which we expect is the setting for those with incarceration stays of more than one year) is known to be linked with especially grave consequences for family relationships because of barriers to communication and connection including distance between home and prison, cost of transportation, and time away from work and school (Clark & Duwe, 2017; Jensen et al., 2023). As such, our findings are congruent with previous literature in this area. Unlike prisons, incarceration in jails can afford families the ability to visit and remain more relationally connected because jails are usually located closer to where the parent and family lives and because shorter stays—26 days on average in the United States (Zeng, 2019)—allow parents and children to reconnect more easily after release. However, the negative consequences of any incarceration (short or long) on fathers' financial contributions confirms that any variety of imprisonment among parents relationally and economically disadvantages children and families.

We also conducted analyses separately for non-Hispanic Black fathers and non-Hispanic White fathers. These results were broadly similar to our main findings: relational outcomes are generally similar for those incarcerated and those not, and post-birth incarceration is negatively associated with relationship quality among non-Hispanic Black fathers but not non-Hispanic White fathers. Similar to the main results, among both racial groups financial contributions are lower for those incarcerated after birth and for fathers who experienced longer spells of imprisonment.

Finally, we examined results separately for fathers in Wisconsin. Relationships are more difficult to detect given smaller samples, but in general these results are consistent with a few exceptions. For example, the negative relationship between incarceration after a child is born and financial contributions in the six-state models are not present for non-Hispanic Black fathers in

Wisconsin but remain for non-Hispanic White fathers. Unlike in the full analysis where long spells are negatively associated with relationship quality in both racial groups, this association is not statistically significant in the WI-only analysis.

Despite the novelty of the study, there are limitations worth noting. We can detect only associations rather than causal relationships and there may be residual (i.e., unmeasured) differences between those with and without incarceration histories that may be associated with the outcomes. For example, developmental factors, such as adverse childhood experiences (ACEs), substance use problems, prolonged employment barriers, or relationship challenges with partners could be linked to the relational and financial outcomes we examine. Moreover, the generalizability of our findings is unknown, since our results come from fathers in just two counties who owe support and are having employment difficulties. There are also two limitations related to incarceration: self-reports of incarceration (e.g., date of release or longest stay) may not be accurate and are subject to recall bias; our proxy for jail and prison (short and long spells) lacks specificity (we do not have administrative data specifying location, length, or release date) that could be important for improving the rigor of the study and our understanding of the findings. Finally, the relational outcome measures are somewhat inexact; a finer-grained measure of decision-making or engagement might yield different results.

The consistently negative findings related to financial outcomes (i.e., any payment, amount paid, and compliance with orders) suggests that reentry programs should be aware of child support issues and help noncustodial parents address the financial repercussions of their ongoing financial obligations to their children and the level of child support arrears. Of importance is the negative consequence of incarceration, regardless of length (short or long) or timing (before or after a child's birth), to all of our measures of ways fathers contribute to their

children financially. Policymakers and practitioners should consider paternal incarceration history a considerable risk factor for economic disadvantage for children and, in the longer-term, work to reduce parental incarceration as a strategy to increase both individual and family well-being.

The lack of negative associations between parent-child relationships and a father's history of incarceration—specifically the measures that capture involvement but not relationship quality—highlights the commitment of incarcerated parents to stay connected to their children through activities and routine communication (Charles, et al., 2021). However, the findings for parent-child relationship quality suggest that reentry programs need to bolster supports for incarcerated parents and their children to ultimately help them improve the quality—not just the involvement aspect—of their relationship.

Future research is needed to help improve our understanding of the mechanisms behind the results. A lingering question asks: Are the negative findings related to child support primarily due to the consequences of incarceration on employment (and thus on financial contributions), or incarceration in and of itself? Similarly, does incarceration affect gatekeeping behavior, which then affects relationship quality or engagement? These questions of mechanisms are beyond the scope of this research but are potentially important extensions. An additional area worthy of investigation is the inclusion of broader financial contribution types, such as in-kind and other non-formal supports to children and caregivers.

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## APPENDIX A: WI-ONLY TABLES 1–7

Appendix A. Table 1: Sample Characteristics at Baseline: WI Only

	<i>%/M</i>	<i>SD</i>
<b>Incarceration History: Main Treatment</b>		
Never Incarcerated	28%	
Ever Incarcerated Pre-Birth	8%	
Ever Incarcerated Post-Birth	64%	
<b>Incarceration History: Alternative Treatment</b>		
Never Incarcerated	27%	
Incarcerated for 12 Months or Less	48%	
Incarcerated for More Than 12 Months	25%	
<b>Covariates</b>		
<b>Education</b>		
<12 Years	26%	
12 Years/GED	44%	
Some College or Higher	30%	
<b>NCP Age</b>	34.5	8.40
<b>Race and Ethnicity</b>		
Non-Hispanic White	49%	
Non-Hispanic Black	31%	
Hispanic	24%	
Non-Hispanic Other	7%	
<b>Earnings in Past 30 days</b>		
\$0	51%	
\$1–\$300	21%	
\$301–800	15%	
\$801 or More	13%	
<b>NCP Depression (PHQ-8)</b>	29%	
<b>NCP Relationship Quality with and Involvement of Biological Father</b>		
Not At All Involved	39%	
Somewhat Involved and Fair or Poor Relationship	15%	
Somewhat Involved and Excellent, Very Good, or Good Relationship	18%	
Very Involved and a Fair or Poor Relationship	2%	
Very Involved and Excellent, Very Good, or Good Relationship	27%	
<b>Marital and Cohabitation Status</b>		
Married	8%	
Previously Married/Cohabiting	10%	
Never Married/Cohabiting	20%	
Previously Married/Not Cohabiting	24%	
Never Married/Not Cohabiting	39%	
<b>NCP Has Children with More than One Partner</b>	61%	
<b>Gatekeeping</b>	33%	
<b>NCP Lives with Non-Biological Child of Romantic Partner</b>	10%	
<b>Relationship Quality with Children</b>	3.2	1.50
<b>Number of Non-Residential Minor Children</b>		
One	38%	
Two or More	62%	

	<i>%/M</i>	<i>SD</i>
<b>Child Sex</b>		
All Males	27%	
All Females	26%	
Both Sexes	48%	
<b>Average Child Age</b>	8.5	4.27
<b>CSPED Intervention Treatment</b>	50%	
<b>WI County</b>		
Kenosha County	45%	
Brown County	55%	

**Notes:**  $N = 457$  (excluding cases missing on outcomes). Percentage may not add to 100 due to rounding.

**Appendix A. Table 2: Descriptive Statistics for Outcomes by Incarceration History: WI Only**

Outcome Variables	Full Sample	Main Treatment of Incarceration			Alternative Treatment of Incarceration	
		Never Incarcerated	Ever Incarcerated Pre-Birth	Ever Incarcerated Post-Birth	Incarcerated for 12 Months or Less	Incarcerated for More than 12 Months
<b>Parent-Child Relationship</b>						
Days of Any Contact	6.2	6.2 (12.3)	7.7 (33.4)	6.1 (9.2)	6.3 (10.8)	6.2 (15.5)
Very Good or Excellent Relationship Quality	42%	47%	49%	39%	42%	34% <sup>a</sup>
Parental Engagement	4.5	4.5 (9.1)	5.2 (22.74)	4.3 (6.8)	4.6 (8.1)	4.2 (10.7)
Agree or Strongly Agree Decision Making	46%	46%	62% <sup>d</sup>	44%	48%	43%
<b>Financial Contributions</b>						
Any Formal Child Support Payments	91%	93%	98% <sup>e</sup>	89%	93%	86%
Amount of Formal Child Support Paid	123.3	166.9 (260.8)	117.7 (473.5)	105.3 (138.9) <sup>e</sup>	116.9 (173.5) <sup>b,f</sup>	88.9 (194.4) <sup>c</sup>
Compliance	0.41	0.5 (.57)	0.44 (1.0)	0.36 (.37) <sup>e</sup>	0.4 (.42) <sup>b</sup>	0.33 (.61) <sup>c</sup>

<sup>a</sup> Different from Never Incarcerated at  $p < .05$ .

<sup>b</sup> Different from Never Incarcerated at  $p < .01$ .

<sup>c</sup> Different from Never Incarcerated at  $p < .001$ .

<sup>d</sup> Different from Post-Birth at  $p < .05$ .

<sup>e</sup> Different from Post-Birth at  $p < .01$ .

<sup>f</sup> Different from Incarcerated for More than 12 Months at  $p < .05$ .



**Appendix A. Table 3: Ordinary Least Squares and Logistic Regression Analyses Predicting Parent-Child Relationship and Financial Contribution Outcomes Using Main Treatment of Incarceration History: WI Only**

Predictor	Parent-Child Relationship								Financial Contributions			
	Days of Any Contact		Relationship Quality		Engagement		Decision Making		Formal Amount Paid		Compliance	
	Model 1		Model 2		Model 3		Model 4		Model 6		Model 7	
	<i>B</i>	<i>SE</i>	<i>Marg Eff</i>	<i>SE</i>	<i>B</i>	<i>SE</i>	<i>Marg Eff</i>	<i>SE</i>	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>
<b>Incarceration History: Main Treatment</b>												
(Never Incarcerated)												
Ever Incarcerated Pre-Birth	0.52	(1.31)	0.01	(0.10)	0.14	(0.97)	0.18	(0.12)	-37.29	(23.05)	-0.04	(0.06)
Ever Incarcerated Post-Birth	-0.08	(0.79)	-0.05	(0.06)	-0.06	(0.57)	0.05	(0.07)	-51.14***	(13.30)	-0.09**	(0.03)
<b>Education</b>												
(<12 Years)												
12 Years or GED	-0.02	(0.80)	-0.01	(0.06)	0.02	(0.59)	-0.15*	(0.07)	17.09	(13.82)	0.00	(0.04)
Some College or Higher	-0.09	(0.88)	-0.06	(0.07)	0.17	(0.65)	-0.14	(0.08)	36.51*	(15.16)	0.06	(0.04)
<b>NCP Age</b>	0.06	(0.06)	0.01*	(0.00)	0.00	(0.04)	0.01*	(0.01)	2.25*	(0.97)	0.00	(0.00)
<b>Race and Ethnicity</b>												
(Non-Hispanic White)												
Non-Hispanic Black	0.93	(0.80)	-0.03	(0.06)	0.29	(0.59)	0.03	(0.07)	-38.12**	(13.63)	-0.07	(0.03)
Hispanic	1.98	(1.01)	0.15	(0.08)	1.20	(0.74)	0.12	(0.09)	9.30	(17.37)	0.03	(0.04)
Non-Hispanic Other	1.03	(1.33)	0.08	(0.11)	0.77	(0.98)	0.01	(0.12)	-12.80	(22.64)	-0.01	(0.06)
<b>NCP Average Monthly Earnings</b>												
(Earnings \$0)												
Earnings \$1–\$300	-0.52	(0.83)	-0.04	(0.06)	-0.54	(0.62)	0.07	(0.07)	-12.71	(13.94)	0.03	(0.04)
Earnings \$301–800	0.50	(0.95)	-0.07	(0.07)	0.53	(0.71)	-0.04	(0.08)	20.10	(16.05)	0.01	(0.04)
Earnings \$801 or More	0.31	(1.02)	-0.08	(0.08)	0.18	(0.76)	0.01	(0.09)	53.72**	(17.05)	0.18***	(0.04)
<b>NCP Depression (PHQ-8)</b>	0.88	(0.72)	-0.00	(0.06)	0.60	(0.53)	-0.09	(0.06)	1.18	(12.21)	-0.01	(0.03)
<b>NCP Relationship Quality with and Involvement of Father</b>												
(Not At All Involved)												
Somewhat Involved and Fair or Poor Relationship	0.62	(1.00)	-0.03	(0.08)	0.49	(0.73)	-0.00	(0.09)	-23.12	(17.12)	-0.03	(0.04)
Somewhat Involved and Excellent, Very Good, or Good Relationship	-0.08	(0.92)	0.02	(0.07)	0.02	(0.68)	0.04	(0.08)	1.37	(15.68)	-0.02	(0.04)
Very Involved and a Fair or Poor Relationship	0.01	(2.45)	0.06	(0.20)	0.19	(1.80)	0.08	(0.21)	-98.97*	(41.63)	-0.21*	(0.11)
Very Involved and Excellent, Very Good, or Good Relationship	0.31	(0.82)	0.00	(0.07)	0.13	(0.61)	0.13	(0.07)	15.53	(14.12)	0.00	(0.04)
<b>Marital and Cohabitation Status</b>												
(Married)												
Previously Married/Cohabiting	0.08	(1.52)	-0.04	(0.12)	0.23	(1.12)	0.04	(0.13)	29.30	(26.05)	-0.09	(0.07)
Never Married/Cohabiting	0.74	(1.37)	0.05	(0.11)	1.05	(1.01)	0.11	(0.12)	7.84	(23.44)	-0.06	(0.06)
Previously Married/Not Cohabiting	-0.64	(1.33)	0.01	(0.10)	-0.42	(0.98)	0.02	(0.11)	15.16	(22.84)	-0.09	(0.06)
Never Married/Not Cohabiting	0.76	(1.28)	0.05	(0.10)	0.91	(0.94)	0.15	(0.11)	-1.45	(21.90)	-0.11	(0.06)

Predictor	Parent-Child Relationship								Financial Contributions			
	Days of Any Contact		Relationship Quality		Engagement		Decision Making		Formal Amount Paid		Compliance	
	Model 1		Model 2		Model 3		Model 4		Model 6		Model 7	
	<i>B</i>	<i>SE</i>	<i>Marg Eff</i>	<i>SE</i>	<i>B</i>	<i>SE</i>	<i>Marg Eff</i>	<i>SE</i>	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>
<b>NCP Has Children with More than One Partner</b>	-0.07	(0.85)	-0.17**	(0.07)	-0.32	(0.62)	-0.09	(0.08)	-28.33	(14.55)	-0.03	(0.04)
<b>Gatekeeping</b>	-0.38	(0.73)	-0.18***	(0.05)	-0.25	(0.55)	-0.12	(0.06)	13.44	(12.31)	-0.03	(0.03)
<b>NCP Lives with Non-Biological Child of Romantic Partner</b>	-0.00	(1.21)	0.07	(0.10)	-0.07	(0.89)	0.18	(0.10)	-7.73	(20.55)	-0.08	(0.05)
<b>Relationship Quality with Children</b>	2.28***	(0.23)	—	—	1.72***	(0.17)	0.17***	(0.02)	-0.45	(3.99)	0.00	(0.01)
<b>Number of Non-Residential Minor Children</b>												
(One)												
Two or More	0.19	(0.77)	0.00	(0.06)	-0.03	(0.57)	0.00	(0.07)	51.39***	(13.19)	-0.02	(0.03)
<b>Child Sex</b>												
(All Males)												
All Females	0.34	(0.87)	0.10	(0.07)	0.30	(0.64)	0.09	(0.08)	15.74	(14.93)	0.04	(0.04)
Both Sexes	0.60	(0.89)	0.07	(0.07)	0.33	(0.65)	0.06	(0.08)	33.10*	(15.23)	0.06	(0.04)
<b>Average Child Age</b>	-0.07	(0.10)	-0.02**	(0.01)	0.01	(0.07)	-0.02	(0.01)	0.81	(1.74)	-0.00	(0.00)
<b>CSPED Intervention Treatment</b>	0.27	(0.63)	0.03	(0.05)	0.09	(0.46)	-0.07	(0.06)	14.56	(10.78)	0.04	(0.03)
<b>WI County</b>												
(Kenosha County)												
Brown County	0.29	(0.66)	-0.03	(0.05)	0.03	(0.48)	-0.06	(0.06)	6.12	(11.25)	0.05	(0.03)
<b>Number of Observations</b>	457		457		457		457		457		457	

**Notes:** The reference group for the categorical variables is shown in parenthesis. Model 5, which in the full sample analysis examines the “Any child support payment” outcome, is excluded here because of small cell sizes that do not allow the model to run. \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .

**Appendix A. Table 4: Ordinary Least Squares and Logistic Regression Analyses Predicting Parent-Child Relationship and Financial Contribution Outcomes Comparing the Main and Alternative Treatments of Incarceration History: WI Only**

Predictor	Parent-Child Relationship								Financial Contributions			
	Days of Any Contact		Relationship Quality		Engagement		Decision Making		Formal Amount Paid		Compliance	
	Model 1		Model 2		Model 3		Model 4		Model 6		Model 7	
	<i>B</i>	<i>SE</i>	<i>Marg Eff</i>	<i>SE</i>	<i>B</i>	<i>SE</i>	<i>Marg Eff</i>	<i>SE</i>	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>
<b>Panel A</b>												
<b>Incarceration History: Main Treatment</b> (Never Incarcerated)												
Ever Incarcerated Pre-Birth	0.52	(1.31)	0.01	(0.10)	0.14	(0.97)	0.18	(0.12)	-37.29	(23.05)	-0.04	(0.06)
Ever Incarcerated Post-Birth	-0.08	(0.79)	-0.05	(0.06)	-0.06	(0.57)	0.05	(0.07)	-51.14***	(13.30)	-0.09**	(0.03)
<b>Panel B</b>												
<b>Incarceration History: Alternative Treatment</b> (Never Incarcerated)												
Incarcerated for 12 Months or Less	-0.07	(0.79)	-0.04	(0.06)	-0.12	(0.58)	0.06	(0.07)	-40.93**	(13.40)	-0.07*	(0.03)
Incarcerated for More than 12 Months	0.85	(0.97)	-0.12	(0.07)	0.50	(0.72)	0.08	(0.09)	-79.08***	(16.57)	-0.11**	(0.04)
<b>Number of Observations</b>	457		457		457		457		457		457	

**Notes:** The reference group for the categorical variables is shown in parenthesis. All covariates listed in Table 3 are included in the Panel B models. The full set of results for Panel B are available upon request. \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .

**Appendix A. Table 5: Ordinary Least Squares and Logistic Regression Analyses Predicting Parent-Child Relationship Outcomes by Race Comparing the Main and Alternative Treatments of Incarceration History: WI Only**

Predictor	Parent-Child Relationship															
	<i>Non-Hispanic Black NCPs</i>								<i>Non-Hispanic White NCPs</i>							
	Days of Any Contact		Relationship Quality		Engagement		Decision Making		Days of Any Contact		Relationship Quality		Engagement		Decision Making	
	Model 1		Model 2		Model 3		Model 4		Model 1		Model 2		Model 3		Model 4	
	<i>B</i>	<i>SE</i>	<i>Marg Eff</i>	<i>SE</i>	<i>B</i>	<i>SE</i>	<i>Marg Eff</i>	<i>SE</i>	<i>B</i>	<i>SE</i>	<i>Marg Eff</i>	<i>SE</i>	<i>B</i>	<i>SE</i>	<i>Marg Eff</i>	<i>SE</i>
<b>Panel A</b>																
<b>Incarceration History: Main Treatment</b> (Never Incarcerated)																
Ever Incarcerated Pre-Birth	-2.64	(3.07)	-0.14	(0.19)	-1.77	(1.90)	-0.03	(0.26)	0.17	(1.69)	-0.04	(0.15)	-0.13	(1.38)	0.32	(0.17)
Ever Incarcerated Post-Birth	-0.07	(2.17)	-0.06	(0.15)	0.09	(1.30)	0.03	(0.17)	-0.48	(0.90)	-0.04	(0.08)	-0.54	(0.73)	0.09	(0.09)
<b>Panel B</b>																
<b>Incarceration History: Alternative Treatment</b> (Never Incarcerated)																
Incarcerated for 12 Months or Less	-0.96	(2.18)	-0.07	(0.15)	-0.76	(1.37)	-0.17	(0.18)	-0.07	(0.90)	-0.05	(0.08)	-0.22	(0.74)	0.10	(0.09)
Incarcerated for More than 12 Months	1.11	(2.18)	-0.16	(0.16)	0.70	(1.37)	0.17	(0.18)	-1.11	(1.39)	-0.11	(0.12)	-1.05	(1.15)	0.17	(0.15)
<b>Number of Observations</b>	140		140		140		140		226		226		226		226	

**Notes:** The reference group for the categorical variables is shown in parenthesis. All covariates listed in Table 3 are included in these models except race. The full set of results are available upon request. \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .

**Appendix A. Table 6: Ordinary Least Squares and Logistic Regression Analyses of Financial Contribution Outcomes by Race Comparing the Main and Alternative Treatments of Incarceration: WI Only**

Predictor	Financial Contributions							
	<i>Non-Hispanic Black NCPs</i>				<i>Non-Hispanic White NCPs</i>			
	Formal Amount Paid		Compliance		Formal Amount Paid		Compliance	
	Model 6		Model 7		Model 7		Model 7	
	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>
<b>Panel A</b>								
<b>Incarceration History: Main Treatment</b> (Never Incarcerated)								
Ever Incarcerated Pre-Birth	6.69	(39.19)	0.02	(0.11)	-41.71	(36.62)	-0.06	(0.09)
Ever Incarcerated Post-Birth	-45.03	(26.38)	-0.06	(0.07)	-57.16**	(19.32)	-0.11*	(0.05)
<b>Panel B</b>								
<b>Incarceration History: Alternative Treatment</b> (Never Incarcerated)								
Incarcerated for 12 Months or Less	-19.41	(27.84)	-0.05	(0.08)	-45.83*	(19.24)	-0.08	(0.05)
Incarcerated for More than 12 Months	-65.57*	(27.88)	-0.06	(0.08)	-100.32***	(29.03)	-0.18*	(0.07)
<b>Number of Observations</b>	140		140		226		226	

**Notes:** The reference group for the categorical variables is shown in parenthesis. All covariates listed in Table 11 are included in these models except race. The full set of results are available upon request. \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .

**Appendix A. Table 7: Ordinary Least Squares Predicting Formal Amount Paid Comparing Models with and without Amount Owed as a Control Variable**

Predictor	Formal Amount Paid		Formal Amount Paid (Controlling for Amount Owed)	
	Model 6		Model 6	
	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>
<b>Panel A</b>				
<b>Incarceration History: Main Treatment</b> (Never Incarcerated)				
Ever Incarcerated Pre-Birth	-37.29	(23.05)	-7.33	(19.23)
Ever Incarcerated Post-Birth	-51.14***	(13.30)	-33.21**	(11.16)
<b>Panel B</b>				
<b>Incarceration History: Alternative Treatment</b> (Never Incarcerated)				
Incarcerated for 12 Months or Less	-40.93**	(13.40)	-23.77*	(11.39)
Incarcerated for More than 12 Months	-79.08***	(16.57)	-48.74***	(14.33)
<b>Number of Observations</b>	457		457	

**Notes:** The reference group for the categorical variables is shown in parenthesis. All covariates listed in Table 3 are included in the Panel A model. The Panel B model includes all covariates listed in Table 3 plus “amount owed.” The full set of results for Panels A and B are available upon request. \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$