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Hopelessly Devoted? Relationship Quality During and After Incarceration

A growing literature highlights the multifaceted consequences of incarceration for family life, but little is known about the quality of relationships between couples who remain together during and after 1 partner's incarceration. In this article, the author used data from the Fragile Families and Child Wellbeing Study (N = 1,848), a longitudinal cohort of parents, to consider the association between paternal incarceration and 4 measures of relationship quality: (a) overall relationship quality, (b) supportiveness, (c) emotional abuse, and (d) physical abuse. The results showed that paternal incarceration in the past 2 years was, by and large, associated with lower mother-reported (but not father-reported) relationship quality. However, across some outcome variables, current paternal incarceration was positively associated with relationship quality. Taken together, these findings suggest that current and recent incarceration have countervailing consequences for relationship quality and, more generally, that the penal system exerts a powerful influence even among couples who maintain relationships.

The dramatic rise in incarceration in the United States, as well as its consequences for offenders and those connected to them, is by now well known (Sampson, 2011; Wakefield & Uggen,

2010). The 2.3 million individuals currently incarcerated, as well as the many others released annually from prisons and jails, are not solitary individuals but are instead connected to family members as romantic partners and parents (Glaze, 2011). Given the family roles inhabited by currently and formerly incarcerated individuals, the majority of whom are men, it is unsurprising that mass incarceration has wide-ranging collateral consequences for family life (for reviews, see Wakefield & Uggen, 2010, and Wildeman & Muller, 2012). Perhaps most substantially, a relatively large literature documents that incarceration increases the risk of marital dissolution (Apel, Blokland, Nieuwbeerta, & van Schellen, 2010; Lopoo & Western, 2005; Massoglia, Remster, & King, 2011; Western, 2006; also see Geller, 2013).

But the focus on marital dissolution leaves a number of answered questions about the collateral consequences of incarceration for family life. For one, although many individuals behind bars are in nonmarital romantic relationships, relatively few of the incarcerated are in marital unions (Western, Lopoo, & McLanahan, 2004). Therefore, any examination of incarceration's consequences for marital dissolution is inapplicable to a large segment of the incarcerated population, potentially underestimating the familial consequences of incarceration, and it may be at least equally informative to examine incarceration's consequences for *relationship quality* among (marital and nonmarital) romantic partners. On a related note, incarceration does not unequivocally lead to relationship dissolution (e.g., Comfort, 2008), and understanding the quality of the relationships among couples who remain together may provide broad

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insight into family functioning that has been overlooked in studies of marital dissolution.

It is not immediately obvious whether incarceration will be deleterious, beneficial, or inconsequential for relationship quality among couples who maintain their romantic relationships. On the one hand, there are a number of challenges associated with maintaining a relationship during or after incarceration—including lack of shared time together, the economic costs of maintaining contact, and the emotional toll experienced by both partners—that may strain romantic relationships (e.g., Comfort, 2008; Massoglia et al., 2011). On the other hand, qualitative research suggests that the time spent apart during one partner's incarceration allows couples to find their relationship stride in ways not possible outside of the prison walls (e.g., Braman, 2004; Comfort, 2008). Alternatively, because the incarcerated are not a random slice of the population and are instead disadvantaged across an array of characteristics, it is also possible that incarceration has no independent association with relationship quality.

In this study, I considered these possibilities with data from the Fragile Families and Child Wellbeing Study (FFCWB; see <http://www.fragilefamilies.princeton.edu/>), a longitudinal cohort of new parents and their children, to provide the first systematic quantitative examination of the association between incarceration and relationship quality among couples who remain together despite incarceration. Understanding the potentially complex association between incarceration and relationship quality is important given that high-quality romantic relationships are positively associated with health (e.g., House, Landis, & Umberson, 1988), parenting (e.g., Grych & Fincham, 1990), and relationship longevity (e.g., Gottman, 1994) among adults and positively associated with child well-being (e.g., Crosnoe & Cavanagh, 2010; Grych & Fincham, 1990). Furthermore, research suggests that parental relationships may be one mechanism through which paternal incarceration exerts deleterious effects on children (Geller, Cooper, Garfinkel, Schwartz-Soicher, & Mincy, 2012).

BACKGROUND

Mass Incarceration and Family Stress Theory

Family stress theory suggests that stressful events generate transformations to the family

system (McCubbin, 1979). Family stress, especially nonnormative stress such as incarceration, may cause families to disintegrate and deteriorate (Lavee, McCubbin, & Olson, 1987). Indeed, incarceration is a stressor for families (Patterson, 2002; Pearlin, 1989). Prior to incarceration, men contribute both economic and social resources to family life (Wildeman, Schnittker, & Turney, 2012). Romantic partners who endure incarceration along with the incarcerated—albeit outside of the prison walls—may experience stigma (Braman, 2004), economic hardship (Schwartz-Soicher, Geller, & Garfinkel, 2011), poor mental health (Wildeman et al., 2012), and reduced social support (Turney, Schnittker, & Wildeman, 2012), all of which may create friction and vulnerability in relationship stability and quality. Also, upon release, the stress of reintegration into family life may yield further deterioration. Given that these marginal men are connected to families—before, during, and after release—a burgeoning literature has documented the collateral and unintended consequences of incarceration for family life (Wildeman & Muller, 2012).

Consistent with family stress theory, relationship dissolution is one of the most commonly considered familial consequences of incarceration. There are many reasons to expect why maintaining a relationship with a currently or formerly incarcerated romantic partner is difficult. Incarcerated men are forcefully removed from their households. Contact with incarcerated men is expensive and time consuming, which is to say nothing of the dignity women lose while visiting prisons (Comfort, 2008), and the lack of shared time together may strain relationships (Rindfuss & Stephen, 1990). Indeed, an array of quantitative research studies, mostly using data from the National Longitudinal Study of Youth 1979, have found that incarceration was associated with an increased risk of divorce (e.g., Lopoo & Western, 2005; Massoglia et al., 2011; Western, 2006; for research on dissolution among married and cohabiting couples, see Western et al., 2004). But not all couples are in marital unions, and not all couples dissolve their unions during or after incarceration. Accordingly, considering the relationship quality of the marital and nonmarital couples who remain together might provide a broad understanding of how incarceration affects family functioning.

Deleterious Consequences of Incarceration for Relationship Quality

In accordance with family stress theory, there are good reasons to expect that incarceration is deleterious for relationship quality. To begin, incarceration's influence on economic hardship may play a role. It is well known that incarceration has damaging economic consequences (e.g., Western, 2006). Prior to incarceration, most men are employed, and nearly all incarcerated men—and their households—experience income loss during incarceration. Upon release, the resultant stigma, discrimination, and loss of human and social capital makes finding employment difficult, which may place financial strain on family life. Indeed, family stress theory highlights how financial strain, through its facilitation of strained marital interactions, reduces relationship quality (Conger et al., 1990).

In addition, the association between incarceration and relationship quality may operate through reduced physical and mental health of both partners. For men who experience confinement, regimentation, and identity transformations associated with their time behind bars (Arditti, Smock, & Parkman, 2005), incarceration has negative and lasting effects on mental health (Schnittker, Massoglia, & Uggen, 2012). Incarceration may socialize men to engage in violent behaviors (Nurse, 2002). Furthermore, the women in relationships with incarcerated and formerly incarcerated men also experience resultant distress associated with their confinement (Lowenstein, 1984; Wildeman et al., 2012). The mental health challenges do not dissipate upon a man's release, because reintegration may be especially anxiety producing and challenging, especially if the woman suspects he will go back to prison (Goffman, 2009). Men's participation in illegal activities or return to substance abuse, may crush the high expectations that women have during the incarceration period (Braman, 2004). In turn, impaired mental health associated with imprisonment may reduce relationship quality (e.g., Booth & Johnson, 1994).

Additional Possibilities

Although incarceration may be a stressor to the family system and have deleterious consequences for relationship quality among couples who remain together, it is also possible that incarceration is beneficial or inconsequential for

relationship quality. Qualitative research, especially, provides a nuanced understanding of how these couples thrive. For example, some men use their time behind bars as an occasion to reflect on their roles as romantic partners and fathers (Edin, Nelson, & Paranal, 2004). This reflection often leads to a recommitment to family life and, if men express these feelings to their romantic partners, their partners may also be hopeful for the future (Braman, 2004; Roy & Dyson, 2005). In Braman's (2004) ethnographic account of incarceration and family life, he described the behavior of a respondent's partner while in prison: "He was promising to reform his ways, writing long letters of regret, talking about his religious reform in prison, and suggesting that they get married on his release" (p. 47). In addition, because men often stop or dramatically reduce their drug and alcohol use while in prison, partners—whose relationships were once burdened with substance abuse—remain optimistic that these men have turned over a new leaf and, therefore, remain by their side (Braman, 2004; also see Comfort, 2008). Furthermore, the secondary incarceration experienced by some women—as they learn to navigate and adapt to the correctional environment, especially when visiting their partners—may help women, many of whom share children with these men, preserve family relationships (Comfort, 2008). Women, especially, may stay in relationships because of pressure from family members to give men another chance or because they are acutely aware of the shortage of marriageable men in their communities (Braman, 2004).

Finally, it is also possible that incarceration has no independent effect on relationship quality. In the United States, incarceration is not randomly distributed across the population but instead is especially concentrated among disadvantaged groups. For example, incarcerated individuals, compared to their counterparts, are less likely to be in marital relationships. They also have lower socioeconomic status, more health problems, and less self-control (e.g., Wildeman et al., 2012, pp. 237–238). The same factors associated with incarceration may also be associated with poor relationship quality, and therefore it is quite plausible that any effect of incarceration on relationship quality—or on family life, more broadly—results not from incarceration but from characteristics associated with selection into incarceration.

Additional Characteristics Associated With Incarceration and Relationship Quality

One way to account for nonrandom selection into incarceration is to adjust for a host of characteristics that may render spurious the association between incarceration and relationship quality. Therefore, the analyses adjusted for a host of demographic, relationship, economic, and health characteristics that were associated with both incarceration and relationship quality. Demographic characteristics included race, immigrant status, age, and childhood family structure, given that previous research shows all were associated with incarceration and relationship quality (Bradbury, Fincham, & Beach, 2000; Brown & Booth, 1996; Glenn, 1990; Wakefield & Uggen, 2010; Webster, Orbuch, & House, 1995). The analyses also controlled for an array of pre-incarceration relationship characteristics, such as relationship type (Brown & Booth, 1996), duration (Brown & Booth, 1996), joint children (Kurdek, 1989), and attitudes about marriage and gender (Amato & Rogers, 1999; Karney & Bradbury, 1995; Waller & McLanahan, 2005). Economic characteristics (Conger et al., 1990; Hardie & Lucas, 2010; Wakefield & Uggen, 2010) and health characteristics (Booth & Johnson, 1994; Wakefield & Uggen, 2010) were associated with both incarceration and relationship quality.

METHOD

Data Source

I examined the association between paternal incarceration and relationship quality with data from the FFCWB, a longitudinal study of parents born in urban areas between February 1998 and September 2000. Mothers and fathers were first interviewed when their children were born and were reinterviewed when their children were approximately 1, 3, 5, and 9 years old. For more information about the study design and response rates, see Reichman, Teitler, Garfinkel, and McLanahan (2001).

The FFCWB data were limited to a sample of parents and were thus not a representative sample of adults in romantic relationships, but they were ideal to consider the association between incarceration and relationship quality. First, because the data included an oversample of unmarried parents, a disproportionately disadvantaged group, they comprised a relatively

large number of previously incarcerated men, some of whom were in stable romantic relationships. The data also included multiple measures of relationship quality reported by both partners. In addition, although the data were observational and were therefore limited in their ability to provide causal estimates, their longitudinal nature allowed for various strategies to reduce unobserved heterogeneity, as discussed below. Finally, examining relationship quality among parents, specifically, was especially important because these households included already vulnerable children for whom poor relationship quality may be especially consequential (e.g., Grych & Fincham, 1990).

The two analytic samples, one for mothers' reports of relationship quality ($N = 1,848$) and one for fathers' reports of relationship quality ($N = 1,585$), relied on data through the 5-year survey because paternal incarceration was most precisely measured between the 3- and 5-year surveys. In constructing both analytic samples, I first deleted the 1,051 observations (21%) in which the mother did not participate in the 3- or 5-year surveys and the additional 1,997 (41%) observations in which the parents were not in a relationship with each other at the 5-year survey. I then deleted an additional two mothers (<1%) and 265 fathers (5%) who were missing responses to their respective dependent variables. Supplemental analyses, which estimated mothers' reports of relationship quality with the smaller analytic sample used to estimate fathers' reports, produced substantively similar results. Therefore, any observed differences between mothers' and fathers' reports of relationship quality are not a function of the different samples.

The multivariate analyses took into account selection into the analytic sample, as described below. Because the analytic sample excluded some of the most likely disadvantaged parents, those not in romantic relationships with each other at the 3- and 5-year surveys, there were important differences between the baseline and analytic samples. Indeed, the analytic sample was more advantaged than the baseline sample in nearly all aspects considered. Parents in the analytic sample, for example, were less likely to be racial/ethnic minorities, were older, had greater educational attainment, and were more likely to be married. Fathers in the analytic sample were less likely to be recently incarcerated (5% compared to 15%). The majority of the control

variables—excluding mother's parenting stress, father's parenting stress, and father's impulsivity, which had about 20% of observations with missing data—were missing fewer than 4% of observations. I preserved missing observations with multiple imputation.

The data in Table 1 show that the sample was relatively disadvantaged across a wide range of demographic characteristics (though, as noted above, was less disadvantaged than the full FFCWB sample). More than 70% of mothers were racial/ethnic minorities. More than half of mothers (55%) did not have education beyond high school. At the 1-year survey, about 43% of couples were married, 39% were cohabiting, 16% were in a nonresidential romantic relationship, and 3% were not in a relationship. Couples, on average, had known each other for nearly 6 years prior to the birth of their child, and nearly half (47%) had additional children together. More than one quarter (27%) of fathers in the analytic sample were incarcerated prior to the 3-year survey.

Measures

Dependent variables. The primary outcome variables included four indicators of mothers'

Table 1. *Descriptive Statistics of Variables Used in Analyses (N = 1,848)*

Variables	% or <i>M</i>	<i>SD</i>
Mother-reported relationship quality		
Overall relationship quality (range: 1–5)	3.95	0.98
Supportiveness (range: 1–3)	2.61	0.40
Emotional abuse (range: 1–3)	1.12	0.21
Physical abuse (range: 1–3)	1.04	0.15
Father-reported relationship quality		
Overall relationship quality (range: 1–5)	4.15	0.88
Supportiveness (range: 1–3)	2.69	0.35
Emotional abuse (range: 1–3)	1.16	0.24
Physical abuse (range: 1–3)	1.07	0.21
Key independent variables		
Father recent incarceration	6.2%	
Father current incarceration	2.1%	
Control variables		
Race/ethnicity		
Non-Hispanic White	29.1%	
Non-Hispanic Black	35.1%	
Hispanic	31.0%	
Non-Hispanic other race	4.8%	

Table 1. *Continued*

Variables	% or <i>M</i>	<i>SD</i>
Mother and father mixed-race couple	12.4%	
Mother immigrant	22.2%	
Mother age	26.72	6.15
Mother lived with both parents at 15	53.7%	
Mother and father relationship status		
Married	43.0%	
Cohabiting	38.5%	
Nonresidential romantic	15.7%	
No relationship	2.8%	
Relationship duration (years)	5.80	4.90
Mother and father have additional children	46.6%	
Relationship commitment	2.43	0.58
Mother pro-marriage attitudes	2.66	0.42
Mother traditional attitudes	2.10	0.65
Mother gender distrust	1.96	0.56
Mother education		
Less than high school	27.6%	
High school diploma or GED	27.2%	
More than high school	45.2%	
Mother employment	70.8%	
Mother income-to-poverty ratio	2.97	2.94
Mother depression	12.2%	
Father depression	7.1%	
Mother parenting stress	2.12	0.66
Father parenting stress	2.04	0.65
Mother fair or poor health	11.5%	
Father fair or poor health	8.9%	
Mother substance abuse	6.5%	
Father substance abuse	29.8%	
Mother reports domestic violence	2.5%	
Father impulsivity	1.91	0.64
Father prior incarceration	27.0%	
Mother overall relationship quality ^a	3.99	0.99
Mother supportiveness ^a	2.64	0.37
Mother emotional abuse ^a	1.14	0.22
Mother physical abuse ^a	1.04	0.17
Father overall relationship quality ^a	4.11	0.96
Father supportiveness ^a	2.69	0.34
Father emotional abuse ^a	1.19	0.24
Father physical abuse ^a	1.09	0.25

Note: Data are from the Fragile Families and Child Well-being Study. The sample was limited to parents in a romantic relationship at the 3- and 5-year surveys. Recent paternal incarceration signifies that the father was incarcerated after the 3-year survey and up to and including the 5-year survey (when relationship quality was measured). All control variables were measured at the baseline or 1-year surveys. *N*s for father-reported relationship quality are smaller ($N = 1,585$) because fewer fathers than mothers participated in the 5-year survey.

^aLagged.

and fathers' relationship quality at the 5-year survey: (a) overall relationship quality, (b) supportiveness, (c) emotional abuse, and (d) physical abuse. First, *overall relationship quality* was measured with an ordinal variable (1 = *poor* to 5 = *excellent*).

Second, *supportiveness* was measured by averaging the following items asked of mothers and fathers (range: 1 = *never* to 3 = *often*): (a) [mother/father] is fair and willing to compromise when you have a disagreement, (b) [mother/father] expresses affection or love for you, (c) [mother/father] encourages or helps you to do things that are important to you, (d) [mother/father] listens when you need someone to talk to, and (e) [mother/father] really understands your hurts and joys ($\alpha = .76$ and $.70$ for mothers and fathers at the 5-year survey, respectively). A principal-components factor analysis showed that these individual items loaded onto the same factor.

Third, mothers and fathers were each asked 11 questions about abuse in their relationship. *Emotional abuse* was measured as an average of the following seven items (range: 1 = *never* to 3 = *often*): (a) [mother/father] insults or criticizes you or your ideas; (b) [mother/father] tries to keep you from seeing or talking with your friends or family; (c) [mother/father] tries to prevent you from going to work or school; (d) [mother/father] withholds money, makes you ask for money, or takes your money; (e) [mother/father] tries to make you have sex or do sexual things you don't want to do; (f) [mother/father] withholds sex or tries to control your behavior; and (g) [mother/father] insults or criticizes you for not taking good enough care of the child or your home ($\alpha = .67$ and $.69$ for mothers and fathers).

Physical abuse was measured as an average of the following four items (1 = *never* to 3 = *often*): (a) [mother/father] slaps or kicks you; (b) [mother/father] hits you with a fist or an object that could hurt you; (c) [mother/father] throws something at you; and (d) [mother/father] pushes, grabs, or shoves you ($\alpha = .65$ and $.60$ for mothers and fathers). The two scales were informed by a principal-components factor analysis. One item ([mother/father] tries to make you have sex or do sexual things you don't want to do) loaded onto both the emotional abuse and physical abuse scales. The factor loading was slightly stronger if included in the emotional abuse measure, though results remain

unchanged if I instead included it in the physical abuse measure.

On average, parents reported high overall relationship quality at the 5-year survey (3.95 among mothers and 4.15 among fathers, on a scale of 1 to 5). Parents also reported high supportiveness (2.61 and 2.69, respectively, on a scale of 1 to 3), low emotional abuse (1.04 and 1.16, respectively, on a scale of 1 to 3), and low physical abuse (1.04 and 1.07, respectively, on a scale of 1 to 3).

Independent variables. The two independent variables included (a) recent paternal incarceration and (b) current paternal incarceration. *Recent paternal incarceration* was coded affirmatively if the father spent time in prison or jail at any point after the 3-year survey up to and including the 5-year survey. Consistent with other research suggesting individuals may underreport incarceration (e.g., Geller et al., 2012), fathers were considered recently incarcerated if either parent reported the father was incarcerated during this time period. *Current paternal incarceration*, which is necessary to account for the fact that some measures of relationship quality may not apply to fathers currently incarcerated, indicated that the father was in prison or jail at the 5-year survey. In the analytic sample, about 6% and 2% of fathers were recently and currently incarcerated, respectively.

Control variables. The multivariate analyses adjusted for an array of individual-level characteristics associated with incarceration and relationship quality. It is important to note that all variables were measured at the baseline or 1-year surveys and, therefore, prior to the measure of recent paternal incarceration. Demographic control variables included mothers' race (non-Hispanic White, non-Hispanic Black, Hispanic, non-Hispanic other race), as well as dummy variables indicating the mother and father were a mixed-race couple, the mother was foreign born, and the mother lived with both parents at age 15. Mothers' age was represented by a continuous variable. The analyses also adjusted for an array of relationship characteristics, including baseline relationship status (married, cohabiting, nonresidential romantic, no relationship), relationship duration, relationship commitment (sum of mothers' baseline reports of the following: [a] father provided

financial support during pregnancy, [b] the child will have fathers' last name, and [c] the father visited the mother in the hospital; see Tach & Edin, 2013), promarriage attitudes (e.g., "It is better for a couple to get married than to just live together," ranging from 1 [*strongly disagree*] to 4 [*strongly agree*]; $\alpha = .60$), traditional attitudes (e.g., "The important decisions in the family should be made by the man of the house," ranging from 1 [*strongly disagree*] to 4 [*strongly agree*]; $\alpha = .60$), and gender distrust (e.g., "Men cannot be trusted to be faithful," ranging from 1 [*strongly disagree*] to 4 [*strongly agree*]; $\alpha = .64$). A dummy variable indicated that the parents shared additional children besides the focal child. The analyses also adjusted for economic characteristics, including education (less than high school, high school or GED, more than high school); employment in the past week; and income-to-poverty ratio. The analyses adjusted for health characteristics, including depression, parenting stress, and fair or poor health. Finally, the analyses adjusted for characteristics especially associated with incarceration, including fathers' engagement in domestic violence, substance abuse, impulsivity (e.g., "I will often say whatever comes into my head without thinking first," ranging from 1 [*strongly disagree*] to 4 [*strongly agree*]; $\alpha = .83$), and prior incarceration (any incarceration at or before the 3-year survey).

Analytic Plan

The analytic strategy was straightforward. I first documented bivariate differences in parents' relationship quality by paternal incarceration; these data are shown in Table 2. The multivariate analyses, presented in Tables 3 and 4, proceeded in three stages. Because the analytic sample included only couples in a relationship (as relationship quality was relevant only for these couples), I used a first-stage logistic regression model to estimate the propensity for being in a relationship at the 5-year survey as a function of an array of covariates, all measured prior to the 3-year survey. Essentially, this model estimated each couples' probability of being included in the analysis (see Appendix Table A1). Second, I saved this propensity score. Third, I used ordinary least squares (OLS) regression models to estimate relationship quality as a function of recent paternal incarceration, weighting the analyses by the inverse probability of treatment

Table 2. Means of Relationship Quality, by Recent Paternal Incarceration (N = 1,848)

Variable	Recent paternal incarceration		Cohen's <i>d</i>
	Yes (<i>n</i> = 114)	No (<i>n</i> = 1,734)	
Mother-reported			
relationship quality			
Overall relationship quality	3.35	3.99	0.66***
Supportiveness	2.50	2.62	0.32**
Emotional abuse	1.20	1.12	-0.38***
Physical abuse	1.12	1.03	-0.56***
Father-reported			
relationship quality			
Overall relationship quality	3.82	4.17	0.40***
Supportiveness	2.60	2.70	0.28*
Emotional abuse	1.26	1.16	-0.45***
Physical abuse	1.18	1.07	-0.53***

Note: Data are from the Fragile Families and Child Wellbeing Study. *N*s for father-reported relationship quality are smaller (85 fathers experienced recent incarceration and 1,500 fathers did not experience recent incarceration) because fewer fathers than mothers participated in the 5-year survey. Asterisks represent statistically significant differences between the two groups. * $p < .05$. ** $p < .01$. *** $p < .001$ (two-tailed tests).

(with the "treatment" being the probability of being in the analysis). Ordered logistic regression models may be more appropriate for estimates of overall relationship quality, which was not normally distributed, but supplemental analyses produced results that were substantively similar to the OLS results. Therefore, for ease of interpretation, I used OLS regression across all outcome variables.

Because there were substantial threats to causal inference, as discussed above, these OLS models took steps to account for unobserved heterogeneity between couples who did and did not experience paternal incarceration. I adjusted for a wide array of covariates—all measured prior to the measurement of incarceration—that may render the association between incarceration and relationship quality spurious (including a lagged dependent variable). In additional analyses, I restricted the sample to those couples most at risk of experiencing paternal incarceration: those who had previously experienced paternal incarceration. In this model, the

Table 3. Ordinary Least Squares Regression Models Estimating Mother-Reported Relationship Quality (N = 1,848)

Variable	Overall relationship quality		Supportiveness		Emotional abuse		Physical abuse	
	β	SE	β	SE	β	SE	β	SE
Father recent incarceration	-0.14	0.18**	-0.15	0.07*	0.02	0.04	0.12	0.03 [†]
Father current incarceration	0.06	0.32	0.11	0.10*	-0.05	0.05	-0.12	0.04**
Race/ethnicity ^a								
Non-Hispanic Black	-0.09	0.09*	0.00	0.03	0.01	0.02	0.05	0.02
Hispanic	-0.02	0.09	0.03	0.03	-0.04	0.02	-0.05	0.01
Non-Hispanic other race	0.02	0.17	0.03	0.06	-0.04	0.04	-0.04	0.02
Mother and father mixed-race couple	-0.04	0.15	0.01	0.03	0.06	0.04	0.13	0.04 [†]
Mother immigrant	0.01	0.10	0.00	0.03	0.06	0.02*	0.04	0.02
Mother age	-0.03	0.01	-0.02	0.00	0.04	0.00	0.04	0.00
Mother lived with both parents at 15	-0.04	0.08	-0.03	0.02	0.02	0.02	0.06	0.02
Relationship status ^b								
Cohabiting	-0.07	0.10 [†]	-0.03	0.04	0.09	0.02*	0.06	0.02
Nonresidential romantic	-0.05	0.11	0.00	0.04	0.01	0.02	-0.01	0.02
No relationship	-0.07	0.19	-0.05	0.07	0.07	0.05	0.10	0.04
Relationship duration	0.01	0.01	-0.03	0.00	-0.08	0.00**	-0.08	0.00*
Mother and father have more children	0.02	0.08	-0.05	0.03	0.03	0.02	0.03	0.01
Relationship commitment	0.07	0.08	-0.03	0.03	-0.03	0.02	-0.05	0.01
Mother pro-marriage attitudes	-0.05	0.10	-0.02	0.04	0.09	0.02*	0.10	0.02*
Mother traditional attitudes	0.04	0.05	0.00	0.02	-0.02	0.01	-0.04	0.01
Mother gender distrust	-0.03	0.07	-0.05	0.02 [†]	0.04	0.01	0.03	0.01
Mother education ^c								
High school diploma or GED	-0.02	0.09	-0.04	0.04	0.03	0.02	0.00	0.02
More than high school	0.00	0.10	-0.04	0.04	0.01	0.02	-0.09	0.02 [†]
Mother employment	0.00	0.08	-0.02	0.03	0.02	0.02	0.01	0.01
Mother income-to-poverty ratio	-0.01	0.02	0.01	0.00	0.06	0.00	0.08	0.00
Mother depression	0.00	0.11	-0.04	0.05	0.02	0.03	0.00	0.02
Father depression	0.03	0.15	0.00	0.05	0.01	0.03	0.03	0.02
Mother parenting stress	0.01	0.05	-0.04	0.02	-0.02	0.01	-0.03	0.01
Father parenting stress	-0.01	0.05	0.06	0.02 [†]	-0.02	0.01	-0.03	0.01
Mother fair or poor health	-0.12	0.16*	-0.05	0.04 [†]	0.10	0.04	0.14	0.04 [†]
Father fair or poor health	-0.01	0.10	-0.10	0.05**	0.01	0.03	-0.03	0.02
Mother substance abuse	0.01	0.12	-0.05	0.05 [†]	0.07	0.03 [†]	0.08	0.03 [†]
Father substance abuse	-0.03	0.08	0.01	0.03	0.01	0.02	0.03	0.02
Mother reports domestic violence	0.01	0.18	-0.03	0.11	0.12	0.10	0.09	0.06
Father impulsivity	-0.03	0.05	-0.11	0.02**	0.03	0.01	0.01	0.01
Father prior incarceration	-0.04	0.08	-0.02	0.03	0.12	0.02**	0.11	0.01**
Dependent variable (lagged)	0.39	0.04***	0.39	0.04***	0.34	0.05***	0.09	0.06
Constant		3.11		1.97		0.26		0.81
R ²		.30		.27		.49		.17

Note: Data are from the Fragile Families and Child Wellbeing Study. Coefficients are standardized; robust standard errors are listed as well. All analyses are weighted by the inverse probability of treatment (i.e., the probability of being in a relationship between the 3- and 5-year surveys).

^aReference category: non-Hispanic White. ^bReference category: married. ^cReference category: less than high school diploma.

[†] $p < .10$. * $p < .05$. ** $p < .01$. *** $p < .001$ (two-tailed tests).

reference group was couples in which the father had been previously but not recently incarcerated. I do not present these additional analyses because results were nearly identical to those presented.

The nonindependence of the couples was another threat to estimating nonbiased results, and, in supplemental analyses, I implemented seemingly unrelated regressions, which allowed for the estimation of two equations

Table 4. Ordinary Least Squares Regression Models Estimating Father-Reported Relationship Quality (N = 1,585)

Variable	Overall relationship quality		Supportiveness		Emotional abuse		Physical abuse	
	β	SE	β	SE	β	SE	β	SE
Father recent incarceration	-0.09	0.17	0.00	0.07	0.05	0.05	0.13	0.04*
Father current incarceration	0.16	0.21***	0.08	0.14	-0.06	0.07	-0.08	0.06 [†]
Constant		3.91		2.07		0.31		0.17
R ²		.21		.19		.40		.73

Note: Data are from the Fragile Families and Child Wellbeing Study. Coefficients are standardized; robust standard errors are listed as well. All analyses are weighted by the inverse probability of treatment (i.e., the probability of being in a relationship between the 3- and 5-year surveys).

[†] $p < .10$. * $p < .05$. *** $p < .001$ (two-tailed tests).

simultaneously and took into account the correlation of errors across the two equations (Greene, 2002). The results from these seemingly unrelated regression models produced coefficients and standard errors that were almost identical to those from OLS models and therefore are not presented here. Because individuals were clustered in cities, all analyses included robust standard errors.

RESULTS

Bivariate Association Between Incarceration and Relationship Quality

Table 2, which presents descriptive statistics for the four measures of relationship quality separately for couples who did and did not include a recently incarcerated father, showed substantial variation by incarceration. Among couples in a relationship at the 5-year survey, recent paternal incarceration was associated with lower relationship quality among both parents. For example, mothers in relationships with recently incarcerated men reported an overall relationship quality of 3.35. This is in comparison to their counterparts in relationships with not recently incarcerated men, who reported an overall relationship quality of 3.99. Mothers in relationships with recently incarcerated fathers also reported less supportiveness (2.50 compared to 2.62), more emotional abuse (1.20 compared to 1.12), and more physical abuse (1.12 compared to 1.03). These differences, all of which were statistically significant, were medium to large in magnitude (Cohen's $d = .66$ for overall relationship quality, $.32$ for supportiveness, $-.38$ for emotional abuse, and $-.56$ for physical abuse).

The patterns of fathers' reports of relationship quality by recent paternal incarceration mirrored the patterns of mothers' reports. Recently incarcerated fathers, compared to their counterparts, reported lower overall relationship quality (3.82 compared to 4.17), less supportiveness (2.60 compared to 2.70), more emotional abuse (1.26 compared to 1.16), and more physical abuse (1.18, compared to 1.07). Again, these differences were statistically significant and medium to large in magnitude (Cohen's $d = .40$ for overall relationship quality, $.28$ for supportiveness, $-.45$ for emotional abuse, and $-.53$ for physical abuse).

Estimating Mothers' and Fathers' Relationship Quality

Given the selectivity of recently incarcerated men, as described above, it is possible that the above associations result not from incarceration but from other individual-level characteristics associated with incarceration and relationship quality. The data in Table 3 consider the multivariate association between paternal incarceration and mothers' relationship quality. These models, which adjusted for a wide array of covariates, including a lagged dependent variable, showed that recent paternal incarceration was associated with overall relationship quality ($\beta = -.14$, $p < .01$) and supportiveness ($\beta = -.15$, $p < .05$) and was marginally associated with physical abuse ($\beta = .12$, $p < .10$). But the statistically significant bivariate association between recent paternal incarceration and emotional abuse, observed in Table 2, was no longer statistically significant when I controlled for factors that were associated with selection into

incarceration (though the relationship was in the expected direction, $\beta = .02$, *ns*).

Table 3 also shows that, for mothers, current paternal incarceration operated differently than recent paternal incarceration. Mothers in relationships with currently incarcerated fathers, compared to mothers not in relationships with currently incarcerated fathers, reported more supportiveness ($\beta = .11$, $p < .05$). In addition, current paternal incarceration was negatively associated with physical abuse ($\beta = -.12$, $p < .01$), consistent with expectations, given that these couples had few, if any, opportunities to engage in physical abuse. It is important to note that the coefficients for recent and current paternal incarceration were statistically different from one another ($p = .010$ for supportiveness and $p = .017$ for physical abuse).

In addition, the control variables operated in the expected direction and magnitude. For example, the estimates for the full sample showed that non-Hispanic Blacks, compared to non-Hispanic Whites, reported lower overall relationship quality ($\beta = -.09$, $p < .05$). Cohabiting mothers reported lower relationship quality than married mothers ($\beta = -.07$, $p < .10$), and mothers' health ($\beta = -.12$, $p < .05$) was inversely associated with overall relationship quality. Importantly, for estimates of both overall relationship quality and supportiveness, only one variable was larger in magnitude than recent or current paternal incarceration: the lagged dependent variable. Prior overall relationship quality was positively associated with overall relationship quality at the 5-year survey ($\beta = .39$, $p < .001$), and prior supportiveness was positively associated with supportiveness at the 5-year survey ($\beta = .39$, $p < .001$).

Results estimating father-reported relationship quality are presented in Table 4. These models show that recently incarcerated fathers, compared to their not recently incarcerated counterparts, reported more physical abuse ($\beta = .13$, $p < .05$). In these multivariate analyses, however, recent paternal incarceration was not associated with overall relationship quality ($\beta = -.09$, *ns*), supportiveness ($\beta = .00$, *ns*), or emotional abuse ($\beta = .05$, *ns*). Current incarceration was associated with higher overall relationship quality ($\beta = .16$, $p < .001$) and was marginally associated with less physical abuse ($\beta = -.08$, $p < .10$). Again, the coefficients for recent and current paternal incarceration were statistically different from one another ($p = .002$

for overall relationship quality and $p = .026$ for physical abuse). The covariates, not presented in the interest of parsimony, also operated in the expected direction.

Supplemental analyses

Although the measure of recent paternal incarceration was appropriate and precisely measured, it is limited because it did not consider the possibility that the association between incarceration and relationship quality may vary by incarceration duration or offense type. When fathers experienced recent incarceration, mothers (but not fathers) were asked how long the incarceration lasted (or, if it was ongoing, its length until the interview date) and the reason for the incarceration. In supplemental analyses, I first substituted the measure of recent paternal incarceration with dummy variables capturing incarceration duration: less than 3 months (2.6%), 3 months or longer (2.3%), missing (0.4%), and no recent incarceration (94.6%). I then substituted the measure of recent paternal incarceration with dummy variables capturing incarceration offense type: violent offense (0.7%), nonviolent offense (3.4%), missing (1.3%), and no recent incarceration (94.6%). The results provided virtually no evidence that duration differentially affected relationship quality or that offense type differentially affected relationship quality. There is one exception: When fathers were incarcerated for less than 3 months, compared to when they were incarcerated for 3 months or longer, mothers reported more physical abuse (see Appendix Table A2). Given the few individuals in each of these cells as well as the fact that many of these fathers had been previously incarcerated (and, therefore, this measure does not represent lifetime duration), these results should be interpreted cautiously.

DISCUSSION

This article extends the growing literature on the collateral consequences of incarceration for family life by providing the first quantitative examination of the association between incarceration and relationship quality. Data from the FFCWB, a longitudinal survey of parents, documented two main findings that highlight the complicated spillover effects of incarceration. First, by and large, although paternal incarceration in the past 2 years was mostly

inconsequential for fathers' reports of relationship quality, mothers connected to these recently incarcerated men reported lower overall relationship quality, lower supportiveness, and greater physical abuse. Second, as current paternal incarceration is positively associated with some indicators of relationship quality, current paternal incarceration and recent paternal incarceration were differentially consequential for couples.

Family stress theory, often used to describe how economic circumstances can impair relationship quality, provides some guidance as to why recent paternal incarceration is negatively associated with relationship quality among the romantic partners of the incarcerated. Incarceration is a stressor to the family system and, even when it occurs for only short periods of time, is disruptive to family life. Maintaining a romantic relationship during incarceration is economically, emotionally, and logistically complicated, and the challenges associated with incarceration of a partner—for example, stigma, economic insecurity, or depression—do not subside after release and, in some cases, may be magnified while the formerly incarcerated transition back to their pre-incarceration lives. These challenges, along with the incapacitation and separation associated with incarceration, likely make maintaining high-quality relationships during reintegration challenging.

Recent paternal incarceration was not uniformly associated with all four measures of mother-reported relationship quality, given that its effects on emotional abuse likely result from selection processes. It seems reasonable to assume that positive and negative aspects of relationships are inversely correlated and that incarceration would be similarly associated with supportiveness because it is associated with emotional and physical abuse. But although positive aspects of relationship quality are considered less often than negative aspects (White & Rogers, 2000), these findings are consistent with other research showing that the predictors of positive aspects of relationship quality are not necessarily the same as the predictors of negative aspects of relationship quality. For example, one examination of the link between economic factors and relationship quality found that economic factors predict conflict, but not affection (Hardie & Lucas, 2010).

Although family stress theory provides a framework for understanding the association

between paternal incarceration and mothers' reports of relationship quality, it provides little guidance as to why recent paternal incarceration is, with one exception, not associated with fathers' reports of relationship quality. Several possibilities may explain why paternal incarceration differentially affects the incarcerated and their romantic partners. One possibility is that incarceration alters men's personalities (e.g., socializing them to become violent) and, upon release, romantic partners (but not the men themselves) have a difficult time adjusting to these altered personalities. Another related possibility is that fathers, happy to no longer be behind prison walls, are simply less likely to notice relationship difficulties. Although it is beyond the scope of this article—and these data—to adjudicate between these and other possibilities, doing so is an important direction for future research. More generally, future research should investigate the mechanisms linking incarceration to relationship quality. These include stigma and the resentment that accompanies stigma (Braman, 2004), fear that a partner will be sent back to prison or jail (Goffman, 2009), fathers' identity transformation (Arditti et al., 2005), the dashed hopes following optimism during incarceration (Braman, 2004; Roy & Dyson, 2005), and the idea that incarceration increases the perception "relationships are inherently exploitative" (Braman, 2004, p. 88).

Furthermore, the findings suggest that although recent paternal incarceration is deleterious to some measures of mothers' (overall relationship quality, supportiveness, physical abuse) and fathers' (physical abuse) relationship quality, current paternal incarceration is beneficial for some measures of mothers' (supportiveness, physical abuse) and fathers' (overall relationship quality, physical abuse) relationship quality. These findings help reconcile the differences between quantitative research suggesting that incarceration destroys romantic relationships by leading to dissolution (e.g., Apel et al., 2010; Massoglia et al., 2011; Western, 2006) and qualitative research describing incarceration as a time when couples become optimistic about and recommitted to their relationships (Braman, 2004; Comfort, 2008). This ethnographic research often examines couples during one partner's incarceration and rarely follows couples into their postincarceration lives (though see Braman, 2004). The fact

that current and recent paternal incarceration have countervailing consequences for relationship quality suggests that future research must continue to rigorously interrogate the timing of incarceration's effects on family life.

Limitations

It is important to note that these analyses have several limitations. First, the sample was restricted to couples in relationships at the 3- and 5-year surveys. Importantly, though, the analyses accounted for selection into romantic relationships, which is in contrast to most research examining predictors of relationship quality. On a related note, I observed these relationships during a relatively short time window and, given that poor relationship quality predicts relationship dissolution (Gottman, 1994), these unions may eventually dissolve. Furthermore, these analyses are limited by threats to causal inference. Although it is infeasible to randomly assign men to incarceration, and the analyses paid careful attention to causal processes (e.g., considering the time ordering of variables, controlling for a wide array of characteristics), the observed associations should not be interpreted as causal.

There are additional limitations regarding variable measurement. To begin, the incarceration measure did not distinguish between prisons and jails despite the fact that these two types of correctional facilities may differentially affect relationship quality. Prison incarceration may have more detrimental effects than jail incarceration, because prisons are often located far from romantic partners, and future survey designs should collect information about correctional facilities. In addition, the alpha coefficients for several of the control variables are low, which may signal that the individual items are not measuring the same construct (though, with the exception of pro-marriage attitudes, factor analysis suggests this is not true). I included these variables in the analyses despite their low alphas because they are theoretical predictors of relationship quality and have been used extensively in prior research (e.g., Tach & Edin, 2013). Finally, paternal incarceration was captured by both mothers' and fathers' reports, and both parents reported on relationship quality, suggesting that shared methods variance may bias the results.

Conclusion

Taken together, these results suggest that cycling through the criminal justice system, which has become increasingly common among disadvantaged men in the United States, has deleterious consequences for the quality of relationships between parents. Some couples remain in relationships during and after incarceration, perhaps because of the anticipation and optimism associated with the incarceration period, but ultimately these relationships do not thrive (compared to their starting point or compared to couples who do not experience paternal incarceration). These nuanced findings, which are consistent with other research documenting the consequences of incarceration for family life (e.g., Turney & Wildeman, 2013), point to a neglected yet important piece of the incarceration ledger (Sampson, 2011). It is now well known that researchers need to understand the spillover effects of incarceration on family life to construct an appropriate incarceration ledger. However, to not underestimate the consequences of incarceration for family life, researchers must also consider the quality of relationships among couples who remain together.

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REFERENCES

- Amato, P. R., & Rogers, S. J. (1999). Do attitudes toward divorce affect marital quality? *Journal of Family Issues*, 20, 69–86. doi:10.1177/019251399020001004
- Apel, R., Blokland, A. A. J., Nieuwbeerta, P., & van Schellen, M. (2010). The impact of imprisonment on marriage and divorce: A risk set matching approach. *Journal of Quantitative Criminology*, 26, 269–300. doi:10.1007/s10940-009-9087-5

- Arditti, J. A., Smock, S. S., & Parkman, T. (2005). "It's been hard to be a father": A qualitative exploration of incarcerated fatherhood. *Fathering, 3*, 267–288. doi:10.3149/fth.0303.267
- Booth, A., & Johnson, D. R. (1994). Declining health and marital quality. *Journal of Marriage and the Family, 56*, 218–223.
- Bradbury, T. N., Fincham, F. D., & Beach, S. R. H. (2000). Research on the nature and determinants of marital satisfaction: A decade in review. *Journal of Marriage and the Family, 62*, 964–980. doi:10.1111/j.1741-3737.2000.00964.x
- Braman, D. (2004). *Doing time on the outside: Incarceration and family life in urban America*. Ann Arbor: University of Michigan Press.
- Brown, S. L., & Booth, A. (1996). Cohabitation versus marriage: A comparison of relationship quality. *Journal of Marriage and the Family, 58*, 668–678.
- Comfort, M. (2008). *Doing time together: Love and family in the shadow of the prison*. Chicago: University of Chicago Press.
- Conger, R. D., Elder, G. H., Jr., Lorenz, F. O., Conger, K. J., Simons, R. L., Whitbeck, L. B., . . . Melby, J. N. (1990). Linking economic hardship to marital quality and instability. *Journal of Marriage and the Family, 52*, 643–656.
- Crosnoe, R., & Cavanagh, S. E. (2010). Families with children and adolescents: A review, critique, and future agenda. *Journal of Marriage and Family, 72*, 594–611. doi:10.1111/j.1741-3737.2010.00720.x
- Edin, K., Nelson, T. J., & Paranal, R. (2004). Fatherhood and incarceration as potential turning points in the criminal careers of unskilled men. In M. Patillo, D. Weiman, & B. Western (Eds.), *Imprisoning America: The social effects of mass incarceration* (pp. 46–75). New York: Russell Sage Foundation.
- Geller, A. (2013). Paternal incarceration and father-child contact in Fragile Families. *Journal of Marriage and Family, 75*, 1288–1303. doi:10.1111/jomf.12056
- Geller, A., Cooper, C. E., Garfinkel, I., Schwartz-Soicher, O., & Mincy, R. B. (2012). Beyond absenteeism: Father incarceration and its effects on children's development. *Demography, 49*, 49–76. doi:10.1007/s13524-011-0081-9
- Glaze, L. E. (2011). *Correctional populations in the United States, 2010*. Washington, DC: U.S. Department of Justice.
- Glenn, N. (1990). Quantitative research on marital quality in the 1980s: A critical review. *Journal of Marriage and the Family, 52*, 818–831.
- Goffman, A. (2009). On the run: Wanted men in a Philadelphia ghetto. *American Sociological Review, 74*, 339–357. doi:10.1177/000312240907400301
- Gottman, J. M. (1994). *What predicts divorce? The relationship between marital processes and marital outcomes*. New York: Routledge.
- Greene, W. H. (2002). *Econometric analysis* (5th ed.). Englewood Cliffs, NJ: Prentice Hall.
- Grych, J. H., & Fincham, F. D. (1990). Marital conflict and children's adjustment: A cognitive-contextual framework. *Psychological Bulletin, 108*, 267–290. doi:10.1037/0033-2909.108.2.267
- Hardie, J. H., & Lucas, A. (2010). Economic factors and relationship quality among young couples: Comparing cohabitation and marriage. *Journal of Marriage and Family, 72*, 1141–1154. doi:10.1111/j.1741-3737.2010.00755.x
- House, J. S., Landis, K. R., & Umberson, D. (1988, July 29). Social relationships and health. *Science, 241*, 540–545.
- Karney, B. R., & Bradbury, T. N. (1995). The longitudinal course of marital quality and stability: A review of theory, methods, and research. *Psychological Bulletin, 118*, 3–34. doi:10.1037/0033-2909.118.1.3
- Kurdek, L. A. (1989). Relationship quality for newly married husbands and wives: Marital history, stepchildren, and individual-difference predictors. *Journal of Marriage and the Family, 51*, 1053–1064.
- Lavee, Y., McCubbin, H. I., & Olson, D. H. (1987). The effect of stressful life events and transitions on family functioning and well-being. *Journal of Marriage and the Family, 49*, 857–873.
- Lopoo, L. M., & Western, B. (2005). Incarceration and the formation and stability of marital unions. *Journal of Marriage and Family, 67*, 721–734. doi:10.1111/j.1741-3737.2005.00165.x
- Lowenstein, A. (1984). Coping with stress: The case of prisoners' wives. *Journal of Marriage and the Family, 46*, 699–708.
- Massoglia, M., Remster, B., & King, R. D. (2011). Stigma or separation? Understanding the incarceration-divorce relationship. *Social Forces, 90*, 133–155. doi:10.1093/sf/90.1.133
- McCubbin, H. I. (1979). Integrating coping behavior in family stress theory. *Journal of Marriage and the Family, 41*, 237–244.
- Nurse, A. M. (2002). *Fatherhood arrested: Parenting from within the juvenile justice system*. Nashville, TN: Vanderbilt University Press.
- Patterson, J. M. (2002). Integrating family resilience and family stress theory. *Journal of Marriage and Family, 64*, 349–360. doi:10.1111/j.1741-3737.2002.00349.x
- Pearlin, L. (1989). The sociological study of stress. *Journal of Health and Social Behavior, 30*, 241–256.
- Reichman, N. E., Teitler, J. O., Garfinkel, I., & McLanahan, S. S. (2001). Fragile Families: Sample and design. *Children and Youth Services*

- Review*, 23, 303–326. doi:10.1016/S0190-7409(01)00141-4
- Rindfuss, R. R., & Stephen, E. H. (1990). Marital noncohabitation: Separation does not make the heart grow fonder. *Journal of Marriage and the Family*, 52, 259–270.
- Roy, K. M., & Dyson, O. L. (2005). Gatekeeping in context: Babymama drama and the involvement of incarcerated fathers. *Fathering*, 3, 289–310. doi:10.3149/fth.0303.289
- Sampson, R. J. (2011). The incarceration ledger: Toward a new era in assessing societal consequences. *Criminology & Public Policy*, 10, 819–828. doi:10.1111/j.1745-9133.2011.00756.x
- Schnittker, J., Massoglia, M., & Uggen, C. (2012). Out and down: Incarceration and psychiatric disorders. *Journal of Health and Social Behavior*, 53, 448–464. doi:10.1177/0022146512453928
- Schwartz-Soicher, O., Geller, A., & Garfinkel, I. (2011). The effect of paternal incarceration on material hardship. *Social Service Review*, 85, 447–473.
- Tach, L., & Edin, K. (2013). The compositional and institutional sources of union dissolution for married and unmarried parents in the United States. *Demography*, 50, 1789–1818. doi:10.1007/s13524-013-0203-7
- Turney, K., Schnittker, J., & Wildeman, C. (2012). Those they leave behind: Paternal incarceration and maternal instrumental support. *Journal of Marriage and Family*, 74, 1149–1165. doi:10.1111/j.1741-3737.2012.00998.x
- Turney, K., & Wildeman, C. (2013). Redefining relationships: Explaining the countervailing consequences of paternal incarceration for parenting. *American Sociological Review*, 78, 949–979. doi:10.1111/j.1741-3737.2012.00998.x
- Wakefield, S., & Uggen, C. (2010). Incarceration and stratification. *Annual Review of Sociology*, 36, 387–406. doi:10.1146/annurev.soc.012809.102551
- Waller, M. R., & McLanahan, S. S. (2005). “His” and “her” marriage expectations: Determinants and consequences. *Journal of Marriage and Family*, 67, 53–67. doi:10.1111/j.0022-2445.2005.00005.x
- Webster, P. S., Orbuch, T. L., & House, J. S. (1995). Effects of childhood family background on adult marital quality and perceived stability. *American Journal of Sociology*, 101, 404–432.
- Western, B. (2006). *Punishment and inequality in America*. New York: Russell Sage Foundation.
- Western, B., Lopoo, L. M., & McLanahan, S. (2004). Incarceration and the bonds between parents in Fragile Families. In M. Patillo, D. Weiman, & B. Western (Eds.), *Imprisoning America: The social effects of mass incarceration* (pp. 21–45). New York: Russell Sage Foundation.
- White, L., & Rogers, S. J. (2000). Economic circumstances and family outcomes: A review of the 1990s. *Journal of Marriage and the Family*, 62, 1035–1051. doi:10.1111/j.1741-3737.2000.01035.x
- Wildeman, C., & Muller, C. (2012). Mass imprisonment and inequality in health and family life. *Annual Review of Law and Social Science*, 8, 11–30. doi:10.1146/annurev-lawsocsci-102510-105459
- Wildeman, C., Schnittker, J., & Turney, K. (2012). Despair by association? The mental health of mothers with children by recently incarcerated fathers. *American Sociological Review*, 77, 216–244. doi:10.1177/0003122411436234

APPENDIX

Table A1. Logistic Regression Model Estimating the Propensity for Being Included in the Analytic Sample (N = 3,841)

Variable	OR	SE
Race/ethnicity ^a		
Non-Hispanic Black	0.57	0.11***
Hispanic	0.98	0.13
Non-Hispanic other race	1.04	0.26
Mother and father mixed-race couple	0.63	0.12***
Mother immigrant	2.04	0.14***
Mother age	1.02	0.01**
Mother lived with both parents at 15	1.21	0.08*
Mother and father relationship status ^b		
Cohabiting	0.24	0.14***
Nonresidential romantic	0.14	0.14***
No relationship	0.08	0.19***
Relationship duration (years)	1.02	0.01*
Relationship commitment	1.92	0.07***
Mother pro-marriage attitudes	1.18	0.11
Mother traditional attitudes	1.10	0.07
Mother gender distrust	0.86	0.08 [†]
Mother education ^c		
High school diploma or GED	0.98	0.10
More than high school	1.07	0.11
Mother employment	0.98	0.09
Mother income-to-poverty ratio	1.06	0.02*
Father prior incarceration	0.75	0.09**
Constant		-1.13
Log likelihood		-2,006

Note: Data are from the Fragile Families and Child Wellbeing Study. Robust standard errors are listed. OR = odds ratio.

^aReference category: non-Hispanic White. ^bReference category: married. ^cReference category: less than high school diploma.

[†] $p < .10$. * $p < .05$. ** $p < .01$. *** $p < .001$ (two-tailed tests).

Table A2. Ordinary Least Squares Regression Models Estimating Mother-Reported Relationship Quality (N = 1,848)

Variable	Overall relationship quality		Supportiveness		Emotional abuse		Physical abuse	
	β	SE	β	SE	β	SE	β	SE
Estimating mother-reported outcomes								
Incarceration duration ^a								
Less than 3 months	-0.13	0.22**	-0.08	0.08*	0.06	0.04	0.14	0.04**
3 months or greater	-0.05	0.23	-0.10	1.04 [†]	-0.01	0.05	0.00	0.04
Missing	-0.03	0.31	-0.14	0.20*	-0.11	0.09 [†]	-0.05	0.04
Statistically different coefficients?	No		No		No		Yes	
Incarceration offense type ^a								
Violent offense	-0.03	0.33	-0.02	0.11	0.02	0.07	0.11	0.11
Nonviolent offense	-0.14	0.21**	-0.10	0.08*	0.03	0.04	0.10	0.03*
Missing	-0.05	0.29	-0.14	0.13*	-0.03	0.07	0.02	0.05
Statistically different coefficients?	No		No		No		No	
Estimating father-reported outcomes								
Incarceration duration ^a								
Incarceration for less than 3 months	-0.07	0.19	0.02	0.10	0.02	0.06	0.08	0.05 [†]
Incarceration for 3 months or greater	-0.09	0.24	-0.05	0.07	0.07	0.08	0.09	0.05 [†]
Missing	0.07	0.22*	0.03	0.10	-0.01	0.06	0.05	0.08
Statistically different coefficients?	No		No		No		No	
Incarceration offense type ^a								
Violent offense	-0.02	0.26	0.00	0.14	0.05	0.13	0.07	0.10
Nonviolent offense	-0.07	0.16	-0.02	0.09	0.00	0.04	0.06	0.04
Missing	-0.06	0.33	0.03	0.09	0.09	0.10	0.13	0.06*
Statistically different coefficients?	No		No		No		No	

Note: Data are from the Fragile Families and Child Wellbeing Study. Coefficients are standardized; robust standard errors are listed as well. *Ns* for father-reported relationship quality are smaller (N = 1,585). All analyses are weighted by the inverse probability of treatment (i.e., the probability of being in a relationship between the 3- and 5-year surveys). Rows indicating “Statistically different coefficients?” refer to difference in coefficients between less than 3 months and 3 months or greater (for incarceration duration) and violent offense and nonviolent offense (for incarceration offense type).

^aReference category: no incarceration.

[†] $p < .10$. * $p < .05$. ** $p < .01$. *** $p < .001$ (two-tailed tests).