COMPARING THE EFFECTS OF MATERNAL AND PATERNAL INCARCERATION ON ADULT DAUGHTERS' AND SONS' CRIMINAL JUSTICE SYSTEM INVOLVEMENT

A Gendered Pathways Analysis

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This analysis compares the effects of maternal and paternal incarceration on adult daughters' and sons' criminal justice system (CJS) involvement. Data from the National Longitudinal Study of Adolescent to Adult Health (Add Health) are used to examine differences by parent and offspring sex in the effect of parental incarceration on respondents' self-reported arrest, conviction, and incarceration after age 18 ($N = 15{,}587$). Net of controls, both maternal and paternal incarceration significantly increase log odds of adult offspring CJS involvement. This effect is especially pronounced for same-sex parent–child dyads, suggesting that the salience of parental incarceration for adult offending outcomes is gendered. In addition, intimate partner abuse and running away are significant predictors of adult CJS involvement for women, but not for men. The results suggest the importance of examining parental incarceration using a gendered, developmental framework such as gendered pathways, as well as the need for gender-responsive correctional programming.

Keywords: parental incarceration; gendered pathways; mothers' incarceration; fathers' incarceration; trauma; feminist criminology

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INTRODUCTION

As mass incarceration has proliferated in recent decades, there has been a corresponding increase in research examining outcomes among children of incarcerated parents (e.g., see Hagan & Foster, 2014; Uggen & McElrath, 2014). Despite the gains in knowledge this scholarship has produced, the gendered effects of parental incarceration for offspring into adulthood remain poorly understood. Most of the quantitative parental incarceration research to date has examined fathers' incarceration only; the body of research on mothers' incarceration is smaller by comparison and mainly qualitative in nature. Even fewer studies compare whether the effects of parental incarceration differ for daughters and sons. In addition, most studies utilize childhood measures focusing on behavioral outcomes among children from birth to age 18 (e.g., see Murray, Farrington, & Sekol, 2012 for a review). Therefore, the potentially sex-specific impact of parental incarceration for offspring into adulthood remains an important area of scholarly inquiry (Muftic, Bouffard, & Armstrong, 2016). As scholars increasingly have called for use of life-course models in studies of this type (Mears & Siennick, 2016; Muftic et al., 2016), a gendered pathways theoretical framework has particular value for examining these issues as it is both developmental and gender focused.

Gendered pathways combines life-course insights about the role of social bonds in shaping trajectories of offending and desistence (Sampson & Laub, 1993) with feminist insights about how gender moderates these processes (Belknap & Holsinger, 2006; Daly, 1992; J. Miller & Mullins, 2006). This model is used to situate women's offending in the context of their prior victimization experiences, as well as to examine life-course processes such as offending and desistence more generally using a gendered lens (Burgess-Proctor, 2014). A growing body of research uses gendered pathways to examine offending, reentry, and recidivism trajectories for girls and women (Huebner & Pleggenkuhle, 2015; Jones, Brown, Wanamaker, & Greiner, 2013; Reisig, Holftreter, & Morash, 2006; Salisbury & Van Voorhis, 2009), which in turn has increased awareness of the need for gender-responsive treatment and correctional programming for women (see Wattanaporn & Holtfreter, 2014, for a review). Despite its popularity, the gendered pathways model has been infrequently used in parental incarceration studies—an unfortunate reality given its relevance for this body of research.

First, there is evidence that the consequences of parental incarceration vary by both parent and offspring sex. A number of studies find that having an incarcerated mother produces unique (and uniquely negative) consequences (Arditti, 2012b; Dallaire, 2007; Siegel, 2011; Tasca, Rodriguez, & Zatz, 2011), although research comparing the effects of maternal and paternal incarceration is limited. Likewise, recent research suggests that parental incarceration differentially affects daughters and sons (Geller, Garfinkel, Cooper, & Mincy, 2009; Hagan & Foster, 2014; Wildeman, 2010), although this remains an even less examined area in the field. Recognizing these questions, Foster and Hagan (2015) echo the call for research that considers how gender might condition the effects of parental incarceration, particularly for adult daughters and sons.

Second, researchers have emphasized the need for analyses that capture how parental incarceration may serve as a "tipping point for problematic outcomes" among offspring (Kruttschnitt, 2011, p. 831), and how the effects of parental incarceration may vary over time and across the life course. Indeed, research has documented the intergenerational effects of parental criminal involvement. Beyond childhood, parental incarceration—especially maternal incarceration—increases risk of offending and incarceration among adult offspring (Dallaire, 2007; Huebner & Gustafson, 2007; Muftic et al., 2016). Notably, the

negative consequences of parental incarceration are evident among, and may impair the adjustment patterns of, currently incarcerated adult offspring (Novero, Loper, & Warren, 2011).

To explore these issues, this study uses a gendered pathways framework to examine the effects of maternal and paternal incarceration on adult daughters' and sons' criminal justice system (CJS) involvement. Data from the National Longitudinal Study of Adolescent to Adult Health (Add Health) are used to examine differences by parent and offspring sex in the effect of parental incarceration on three outcomes: respondents' self-reported arrest, conviction, and incarceration after age 18. After reviewing our research findings, we conclude by identifying implications for gender-responsive correctional research and policy.

OVERVIEW OF PARENTAL INCARCERATION

The voracity of contemporary U.S. penal policy is evidenced by a fivefold increase since the 1970s in the number of incarcerated citizens, which currently stands at approximately 2.2 million people (Glaze & Kaeble, 2014). One by-product of mass incarceration is a corresponding surge in the number of incarcerated parents. Between 1991 and 2007, the number of parents in state and federal prisons increased by 79%, and the number of children with an incarcerated parent increased by a similar margin (80%) during this time. Today, just over half of all state inmates (52%) and nearly two thirds of federal inmates (63%) are parents, and together they report having approximately 1.7 million minor children (Glaze & Maruschak, 2010).

On balance, the consequences of parental incarceration appear to be profoundly detrimental. With the exception of violent, abusive, or otherwise troubled parents from whose absence children may benefit (Jaffee, Moffitt, Caspi, & Taylor, 2003; Wildeman, 2010; but see Arditti, 2012b), having an incarcerated parent is linked to "a cascade of negative outcomes" for children (Wakefield & Wildeman, 2014, p. 7). These negative outcomes include poorer educational attainment (Foster & Hagan, 2009), increased risk of antisocial behavior (Murray & Farrington, 2008a; Murray et al., 2012), physical aggression (Wildeman, 2010), internalizing problems such as depression and anxiety (Murray & Farrington, 2008b), and increased likelihood of homelessness (Wakefield & Wildeman, 2014). In addition, parental incarceration negatively affects not just children but the entire family unit by stressing alternative caregivers (Arditti, 2012a; Siegel, 2011) and compromising the family's financial stability (Geller, Garfinkel, & Western, 2011). These consequences may depend in part on the timing and duration of incarceration (van de Rakt, Murray, & Nieuwbeerta, 2012), and may be felt even when the parent was not living with the child at the time of incarceration (Geller et al., 2009). However, there is disagreement about whether these detrimental outcomes are the result of parental incarceration itself, or due to preexisting characteristics of the individual, family, and/or community that are associated with increased risk of parental incarceration (e.g., see Hagan & Dinovitzer, 1999; Wakefield & Wildeman, 2014).

THE GENDERED CONTEXT OF PARENTAL INCARCERATION

Between 1980 and 2010, the incarceration rate for women overall increased by one and a half times the rate for men (646% vs. 419%; Glaze & Kaeble, 2014). Accordingly, between 1991 and 2007, the number of children with an incarcerated father grew by 77%, whereas the number of children with an incarcerated mother grew by nearly twice that margin at

131% (Glaze & Maruschak, 2010). There is growing recognition that sex of the incarcerated parent might play a role in shaping outcomes for offspring. For example, Dallaire (2007) finds that children of incarcerated mothers are two and a half times more likely than children of incarcerated fathers to themselves be incarcerated as adults. Likewise, using both quantitative and qualitative data, Tasca and colleagues (2011) find that maternal but not paternal incarceration is linked to likelihood of youth rearrest among offspring. However, Turney and Wildeman (2015), in examining the effects of maternal incarceration on childhood well-being, find detrimental outcomes only among children of mothers with a low propensity to be incarcerated. For children whose mothers have a greater likelihood of being incarcerated, the effects are limited or non-existent. Of course, it is possible that a focus on average effects elides heterogeneity across groups—that is, that contemporaneous positive and negative effects wash out to yield null effects. Summarizing these sometimes conflicting observations, Wildeman, Wakefield, and Turney (2013) note that whether parental incarceration has a positive, null, or negative impact on children may depend on parental sex, an issue they state is "essential for understanding this literature" (p. 254).

Despite these trends, there are still many times more fathers than mothers in prison (744,200 vs. 65,600; Glaze & Maruschak, 2010). As such, few contemporary analyses of parental incarceration examine the effects of maternal incarceration, and even fewer compare the effects of maternal and paternal incarceration (Murray et al., 2012). More research is needed to determine whether maternal and paternal incarceration initiate distinct pathways toward social exclusion, for example through homelessness risk (Foster & Hagan, 2015; see also Wakefield & Wildeman, 2014). Still, we know that women have unique experiences with criminal offending and CJS processing (Daly & Chesney-Lind, 1988; Simpson, 1989), and it may be that the consequences of maternal incarceration are disproportionate to the relatively small number of women who are incarcerated (Kruttschnitt, 2010, p. 39).

Likewise, comparatively little research has examined whether parental incarceration differentially affects daughters and sons, although there is some evidence of differences by offspring sex. For example, Wildeman (2010) finds that fathers' incarceration increases physical aggression among sons but not daughters, whereas Geller and colleagues (2009) find that sons of incarcerated fathers display more behavioral problems than their counterparts, although the differences are not statistically significant. One explanation for the dearth of knowledge on this topic may be that studies examining outcomes like delinquency involvement that are more typical among boys may miss the effect of parental incarceration on girls, who are less likely to exhibit these behaviors in the first place (Wakefield & Wildeman, 2011). Acknowledging these trends, Dallaire (2007) cautions that future research—especially prospective, longitudinal designs—is needed to explore how these relationships may vary by child sex. We heed this call in the present analysis.

THEORETICAL PERSPECTIVES ON PARENTAL INCARCERATION

Several theoretical perspectives have been used to explain the collateral consequences of parental incarceration for children. First, from a strain perspective, parental incarceration alters family composition and can cause significant resource deprivation for families (Hagan & Dinovitzer, 1999; Porter & King, 2012). Children of incarcerated parents can suffer financially due to the loss of parental income and/or provision of child support, as well as other social service benefits (Sharp, Marcus-Mendoza, Bentley, Simpson, & Love, 1999; Travis, Cincotta, & Solomon, 2003).

Next, incarceration compromises opportunities for effective attachment between parents and children. Many incarcerated parents were actively involved in their children's lives prior to being confined (Geller, 2013; Uggen & McElrath, 2014). Moreover, children benefit from close relational ties even with criminally involved parents, whose incarceration-related absence can be traumatic (Siegel, 2011). Furthermore, correctional facilities maintain strict visiting regulations and typically are located far from family, making it difficult and expensive for incarcerated parents to maintain contact with their families (Young & Smith, 2000).

Finally, incarceration of a parent can produce a harmful stigma that does not occur in parental absence due to divorce, abandonment, or death (Porter & King, 2012). Unlike other forms of parental absence, social attitudes toward incarceration of a parent are likely to be "hostile, disapproving, or indifferent" (Arditti, 2012a, p. 184). Therefore, many parents report carefully guarding information about their spouse's incarceration status to protect their children from stigmatization (Braman, 2002), while children of incarcerated parents report purposefully concealing from others the whereabouts of their incarcerated parent (Nesmith & Ruhland, 2008).

THEORIZING PARENTAL INCARCERATION USING GENDERED PATHWAYS

A gendered pathways theoretical framework enables consideration of the ways in which these three mechanisms—strain, attachment, and stigma—operate in a gendered context throughout the life course. For example, whereas fathers' incarceration places particular strain on the family's financial circumstances (Wakefield & Wildeman, 2014), mothers' incarceration may be most acutely felt within family social networks, yielding familial strain for their children—particularly those living in disadvantaged neighborhoods (Kruttschnitt, 2010). Parental incarceration also can lead to changes in guardianship and increased residential instability which have been linked to CJS involvement, especially in the case of maternal incarceration (Tasca et al., 2011).

Incarcerated women also are more likely than incarcerated men to be the primary caregiver and/or sole custodial parent of their minor children (Glaze & Maruschak, 2010). Given women's disproportionately higher likelihood of living in poverty, maternal incarceration thus may yield greater risk of out-of-home placement for children (Swann & Sylvester, 2006; see also Kruttschnitt, 2010). Disruption of these attachment bonds with children and the ensuing negative consequences may be especially salient in cases of maternal incarceration (Dallaire, 2007; Siegel, 2011).

Finally, while incarceration is sufficiently common to be considered a routine life-course event for young, unskilled Black men living in disadvantaged urban areas (Pettit & Western, 2004), the same is not true for women. Coupled with public perceptions of criminal women as bad mothers, the infrequency of women's incarceration relative to men's might engender more stigmatic—and therefore less supportive—responses from friends and relatives of incarcerated women (Kruttschnitt, 2010; see also Murray & Farrington, 2008a).

In addition, a gendered pathways perspective recognizes that women's offending trajectories often are precipitated by victimization experiences such as physical and sexual abuse, neglect, and traumatic childhood experiences (DeHart, Lynch, Belknap, Dass-Brailsford, & Green, 2014; McDaniels-Wilson & Belknap, 2009). One way this happens is through the criminalization of girls' and women's trauma responses, such as substance abuse and running away, which are likely to facilitate CJS involvement (Bloom, Owen, & Covington,

2003; Chesney-Lind, 1989). Although parental incarceration has been considered using a traumatological lens (e.g., see Arditti, 2012a), little is known about whether parental incarceration behaves like other sources of childhood trauma in influencing women's offending trajectories. However, there is some evidence that parental incarceration increases risk of substance abuse among offspring (Roettger, Swisher, Kuhl, & Chavez, 2011), and at least one study found that maternal incarceration in particular imposes risk factors including substance abuse and physical and sexual victimization (Greene, Haney, & Hurtado, 2000) that are known correlates of women's offending. Therefore, we see value in using gendered pathways to examine the effect of maternal and paternal incarceration on offending outcomes among adult daughters and sons.

METHOD

DATA

This analysis uses data from Waves I and IV of Add Health, a nationally representative survey of seventh- through 12th-grade students in the United States. Wave I data were collected between 1994 and 1995, and Wave IV data were collected in 2008 when the respondents were young adults between the ages of 24 and 32. Wave I included 20,745 students, 76% of whom (n = 15,701) were retained in Wave IV. The subsequent removal of individual missing responses for more than half of the variables included in the models yielded a final sample of 8,925 women and 7,292 men (N = 15,587). Stata 13's Multiple Imputation (MI) procedure was used to approximate missing values; estimates were calculated using the median value taken from 10 imputations.

MEASURES

Dependent Variables

The primary focus of this study is self-reported CJS involvement among adult women and men. We measure adult CJS involvement using three dichotomous Wave IV variables: self-reported adult arrest (1 = respondent reported being arrested after age 18, 0 = respondent reported no arrests after age 18); self-reported adult conviction (1 = respondent reported being convicted of or pleading guilty to a charge other than a minor traffic violation after age 18, 0 = respondent reported no convictions after age 18); and self-reported adult incarceration (1 = respondent reported spending time in a jail, prison, or other correctional facility after age 18, 0 = respondent reported no incarceration after age 18). As displayed in Table 1, 25% of the total sample reported adult arrest, 12% reported adult conviction, and 7% reported adult incarceration. When considered by sex, 37% of men reported adult arrest compared with only 15% of women. In addition, 19% of men reported adult conviction and 12% reported adult incarceration, whereas only 5% of women reported adult conviction and 2% reported adult incarceration. These findings are consistent with other national prevalence estimates (see Brame, Bushway, Paternoster, & Turner, 2014).

Independent Variables

We operationalize parental incarceration using two dichotomous measures, maternal incarceration and paternal incarceration, self-reported by respondents at Wave IV (see H. V. Miller & Barnes, 2015, for similar operationalization of parental incarceration). Individuals

TABLE 1: Descriptive Statistics

	Total (N = 15,587)		Women (n = 8,295)		Men (n = 7,292)	
	M/%	*SD*	*M*/%	*SD*	*M*/%	*SD*
Dependent variables						
Adult arrest	25%	—	15%	—	37%	—
Adult conviction	12%	—	5%	—	19%	—
Adult incarceration	7%	—	2%	—	12%	—
Independent variables						
Maternal incarceration	2%	—	3%	—	2%	—
Paternal incarceration	10%	—	10%	—	10%	—
Individual controls						
Female	53%	—	—	—	—	—
Black	22%	—	23%	—	20%	—
Hispanic	15%	—	15%	—	16%	—
Other race	8%	—	8%	—	9%	—
Age at Wave IV	28.99	1.75	28.88	1.74	29.10	1.76
High school dropout	7%	—	6%	—	8%	—
Delinquency	1.58	2.49	1.08	1.99	2.14	2.86
Self-control						
Antisocial behavior	6.35	4.53	6.02	4.52	6.74	4.50
Anger	5.23	1.90	5.23	1.90	5.24	1.90
Impulsivity	8.77	2.51	8.79	2.48	8.74	2.53
Low self-esteem	9.86	2.58	10.34	2.63	9.32	2.41
Pathways controls						
Childhood physical abuse	7%	—	6%	—	7%	—
Childhood sexual abuse	5%	—	5%	—	5%	—
Intimate partner abuse	18%	—	18%	—	18%	—
Forced sex	5%	—	8%	—	2%	—
Ran away	8%	—	10%	—	7%	—
Substance abuse	10%	—	8%	—	12%	—
Family controls						
Lived with both parents	65%	—	63%	—	67%	—
Parental supervision	1.54	1.28	1.58	1.27	1.50	1.29
Family socioeconomic status	3.03	1.05	3.01	1.06	3.06	1.04
Mother involved	1.83	1.18	1.99	1.17	1.66	1.16
Father involved	0.97	1.19	0.86	1.11	1.11	1.25
Mother close	4.52	0.80	4.45	0.85	4.60	0.72
Father close	4.24	0.98	4.10	1.05	4.38	0.88
Mother died	2%	—	2%	—	1%	—
Father died	4%	—	4%	—	3%	—
Community controls						
>30% non-White	34%	—	35%	—	33%	—
>30% poverty	13%	—	14%	—	12%	—
Population density	2.00	3.51	2.03	3.59	1.98	3.42

who responded affirmatively to the question, "Has your biological mother (or father) ever spent time in jail or prison?" were coded as 1, whereas respondents who reported no lifetime parental incarceration serve as the reference category. Although the original variable includes the range of ages at which the respondent might have experienced parental incarceration, we truncated it to only include parental incarceration occurring while the respondent was 17 or younger to ensure that the independent measure preceded the outcome

measure (respondents' CJS involvement after age 18). Parental incarceration generally was restricted to only one parent; only 121 respondents reported incarceration of both parents.[1] As maternal incarceration was relatively rare and no person in the sample reported prebirth maternal incarceration, we opted to use dichotomous measures instead of items capturing timing of parental incarceration.[2] However, we simultaneously include both dichotomous measures of parental incarceration in the regression models to control for the opposite parent's incarceration; thus, the effects of maternal and paternal incarceration respectively are unique and notwithstanding the effect of the other parent's incarceration. In total, five times as many respondents (women and men alike) reported having an incarcerated father (n = 1,229, 10%) than an incarcerated mother (n = 220, 2%).

Control Variables

We use four categories of control variables in this analysis: individual controls, pathways controls, family controls, and community controls. All controls are measured at Wave I, except for intimate partner abuse (Wave II), childhood sexual abuse (Wave III), and age and childhood physical abuse (Wave IV). We selected these control measures because they are correlated with adult offending and many have been used in prior studies of this type (e.g., Roettger & Swisher, 2011).

Individual Controls

First we include three demographic control measures. Sex is a dichotomous measure (1 = female, 0 = male). Race/ethnicity is measured via three dichotomous variables in which White/non-Hispanic is the reference category for each (1 = Black, Hispanic, and Other race, respectively). We also control for age at Wave IV. The sample is split almost equally by sex (53% female); is 53% White, 22% Black, 15% Hispanic, and 8% other race; and has a mean Wave IV age of 29.

Next we include two individual controls, high school dropout and delinquency, that are correlated with adult offending (e.g., see Guo, Roettger, & Shih, 2007). The measure of high school dropout is dichotomous (1 = did not complete high school, 0 = completed high school). The self-report delinquency measure captures the frequency of delinquent acts committed in the 12 months prior to the Wave I interview (0 = no delinquent acts, 1 = one to two delinquent acts, 2 = three to four delinquent acts, 3 = five or more delinquent acts). Following Guo et al. (2007), we use the Add Health composite measure of delinquency which includes both non-violent (selling drugs, stealing less than $50, holding stolen property, and breaking and entering a home) and violent (injurious physical fighting between individuals and/or groups, using a weapon, shooting or stabbing someone, pulling a knife or gun on someone, and damaging property) offenses.[3] Roughly the same proportion of women (6%) and men (8%) reported dropping out of high school, but the mean delinquency score was roughly twice as high for men (2.14) as for women (1.08).

Our last individual control variable is a measure of respondents' self-control, as researchers recently have highlighted this correlate of adult offending (Turanovic, Reisig, & Pratt, 2014). We relied on the 23-item self-control scale used by Beaver, DeLisi, Mears, and Stewart (2009) to identify a previously validated item pool. We then used exploratory factor analysis (in predicting delinquency and each of our outcomes individually) to develop four

subscales.[4] Responses for all items were self-reported by respondents, except for the Anger scale items which were self-reported by respondents' parents or legal guardians. The four self-control scales are Antisocial Behavior (e.g., "Do you have trouble paying attention in school?"), Anger (e.g., "Your child has a bad temper"), Impulsivity (e.g., "After carrying out a solution to a problem, you usually try to analyze what went right and what went wrong"), and Low Self-Esteem (e.g., "You like yourself just the way you are"). Higher scores on all four scales indicate lower self-control. Sample means for the Anger (5.23 and 5.24) and Impulsivity (8.79 and 8.74) scales were nearly identical for women and men; however, men scored higher than women on the Antisocial Behavior scale (6.74 vs. 6.02), whereas women scored higher than men on the Low Self-Esteem scale (10.34 vs. 9.32).

Pathways Controls

We include gendered pathways control measures designed to capture respondents' victimization and trauma histories. Inclusion of these measures helps isolate the impact of parental incarceration from documented risk factors for women's offending more generally. Here we include four dichotomous indicators of prior victimization. Childhood physical abuse identifies respondents who reported being slapped, kicked, or hit by a parent or caregiver more than five times before age 10 (1 = childhood physical abuse, 0 = no childhood physical abuse). Childhood sexual abuse identifies respondents who reported ever being forced to touch in a sexual way, ever being forced to have sex with, or ever having been touched in a sexual way by a parent or other adult caregiver (1 = childhood sexual abuse, 0 = no childhood sexual abuse). Intimate partner abuse identifies respondents who reported ever having been called names, sworn at, threatened, shoved, or had objects thrown at them by an intimate partner (1 = intimate partner abuse, 0 = no intimate partner abuse). Forced sex identifies respondents who reported ever being forced into sexual intercourse (1 = forced sex, 0 = no forced sex). Nearly identical proportions of women and men reported childhood physical abuse (6% and 7%), childhood sexual abuse (5% for both), and intimate partner abuse (18% for both). However, four times as many women as men (8% vs. 2%) reported having been forced into sexual intercourse.

We also include two measures of trauma responses that are criminalized and thereby facilitate girls' and women's entrance into the CJS (Belknap & Holsinger, 2006; Bloom et al., 2003). A dichotomous measure of ran away from home is included (1 = ran away from home, 0 = did not run away from home), whereas substance abuse identifies respondents who reported that they got drunk or very high multiple times a month (1 = got drunk or very high multiple times a month, 0 = little or no alcohol or drug use). A greater proportion of women than men (10% vs. 7%) reported having run away from home, but the opposite is true of substance abuse which was reported by a greater proportion of men than women (8% vs. 12%).

Family Controls

We include family control measures intended to capture respondents' early family and home environments that may influence likelihood of adult CJS involvement. We use a dichotomous measure indicating if the respondent lived with both biological parents during childhood (1 = lived with two biological parents, 0 = lived with one biological parent or had

other living arrangements). Here we also include a five-item summary score measuring parental supervision (1 = yes, 0 = no for each item; range = 0-5), indicating if the respondents' parents set weekend curfews, controlled access to friends, and/or set limits on bedtime, TV viewing, and clothes worn (see Guo, Roettger, & Cai, 2008). The family's socioeconomic status (SES) was captured by a four-item scale that includes measures of mothers' and fathers' occupational and education status, where a higher score indicates higher SES (see Ford, Bearman, & Moody, 1999). Approximately two thirds of women and men alike (63% and 67%) reported living with both parents during childhood. The mean parental supervision score was roughly the same for women and men (1.58 and 1.50), as was the mean family SES score (3.01 and 3.06).

In addition, a series of family-level measures was selected to assess respondents' relationship with their parents at Wave I. Mother's and father's involvement is a five-item summary score (1 = yes and 0 = no for each item; range = 0-5) measuring respondents' reported activities with each of their parents during the past month, including going shopping, playing a sport, attending a religious service or church event, talking about relationship issues, and attending concerts, sporting events, movies, plays, or a museum. Closeness with mother and father measures how close respondents reported feeling toward each of their parents (1 = *not at all*, 2 = *very little*, 3 = *somewhat*, 4 = *quite a bit*, 5 = *very much*). Third, we measured whether the respondents' mother and father died during Wave I to better understand how child strain and parental absence might have influenced their offending outcomes (1 = mom/dad died, 0 = no parental death). Overall, respondents indicated greater involvement of and closeness to their mothers than their fathers. However, mean scores indicate that reported maternal involvement was higher among women than men (1.99 vs. 1.66), whereas reported paternal involvement was higher among men than women (1.11 vs. 0.86). This pattern is not true of the mean scores for closeness, as men reported higher closeness than women to both their mothers (4.60 vs. 4.45) and their fathers (4.38 vs. 4.10). Although parental death occurred in a very small proportion of the sample, a greater proportion of women than men reported losing their mother (2% vs. 1%) and father (4% vs. 3%).

Community Controls

We include three community control measures designed to capture respondents' Wave I community context. Neighborhood racial composition is a dichotomous indicator of the non-White population measured at the block group level (1 = 30% or more of the population is non-White, 0 = less than 30% of the population is non-White). Population poverty also is a dichotomous measure of the percent of the population living below the poverty line (1 = 30% or more of the population is living in poverty, 0 = less than 30% of the population is living in poverty). Last, population density represents the number of individuals per square kilometer. Women and men lived in similar community contexts; approximately one third of the total sample grew up in non-White neighborhoods (34%), just over one tenth (13%) were reared in impoverished neighborhoods, and the mean population density score was 2.

LOGISTIC REGRESSION ANALYSES

The goal of this analysis is to determine whether there is a difference by parent and offspring sex in the effect of parental incarceration on CJS involvement among adult offspring. We estimate a series of logistic regression models for women and men. In addition, *z* scores

were calculated for each of the exogenous predictors in the models according to the formula presented by Paternoster, Brame, Mazerolle, and Piquero (1998). These analyses are designed to underscore possible gendered differences in parental incarceration effects on three adult offspring outcomes: arrest, conviction, and incarceration after age 18.

RESULTS

ADULT ARREST

After controlling for a host of criminogenic risk factors, both maternal and paternal incarceration significantly increase the log odds of adult arrest among offspring in the total sample, with mothers' incarceration yielding a stronger effect than paternal incarceration (odds ratio [*OR*] = 1.71 vs. 1.50; $p < .01$; see Table 2). When the full model is separated by offspring sex, the magnitude of the effect is greater for same-sex parental incarceration. Adult daughters' arrest is more strongly predicted by incarceration of their mothers than their fathers (*OR* = 1.91 vs. 1.32; $p < .01$); in fact, having an incarcerated mother nearly doubles the likelihood of adult arrest for women. Conversely, adult sons' arrest is more strongly predicted by incarceration of their fathers than their mothers (*OR* = 1.66; $p < .01$ vs. 1.46; $p < .05$). However, differences in the effects of maternal and paternal incarceration across daughters and sons were not statistically significant. Notably, the effect of opposite-sex parental incarceration on adult arrest also remains significant but smaller for both women and men.

Several other important relationships emerge. Black women (*OR* = 1.32; $p < .01$) and Black men (*OR* = 1.29; $p < .01$) were more likely than their White counterparts to be arrested, whereas Latina women (*OR* = 0.85; $p < .05$) and men from other racial/ethnic minority groups (*OR* = 0.73; $p < .01$) were less likely to be arrested compared with Whites. As anticipated, respondents who dropped out of high school and who had higher delinquency scores were more likely to be arrested as adults. The dropout effect is stronger for women than men (*OR* = 1.86 vs. 1.64; $p < .01$), but the delinquency effect is nearly identical for both groups (*OR* = 1.11 and 1.12; $p < .01$). In addition, anger is an equivalent risk factor for arrest among both women and men (*OR* = 1.13 and 1.12; $p < .01$), but low self-esteem is a slight buffer against adult arrest for men only (*OR* = 0.97; $p < .01$). For women, several of the gendered pathways measures achieved statistical significance. Intimate partner abuse (*OR* = 1.24; $p < .05$), forced sex (*OR* = 1.27; $p < .05$), and running away (*OR* = 1.39; $p < .01$) all significantly increased likelihood of adult arrest among women but not among men, although differences by offspring sex are not statistically significant. Experiences of child physical abuse and substance abuse increased risk of adult arrest for women and men alike, with the substance abuse effect for men being particularly strong (*OR* = 1.79; $p < .01$) when compared with women (*OR* = 1.25; $p < .05$). The family-level controls had small and inconsistent effects across models and for women and men alike. Living with both parents reduced the arrest risk for women (*OR* = 0.79; $p < .01$), higher family SES reduced the arrest risk for men (*OR* = 0.94; $p < .05$), and maternal death increased the arrest risk for men (*OR* = 1.62; $p < .05$). Finally, the community controls had largely non-significant effects.

ADULT CONVICTION

Both maternal and paternal incarceration significantly increase the log odds of adult conviction for offspring in the total sample, with the former again having the stronger

TABLE 2: Adult Arrest Outcome

	Total (*N* = 15,587)			Women (*n* = 8,295)			Men (*n* = 7,292)		
	Coefficient	*SE*	Sig. *OR*	Coefficient	*SE*	Sig. *OR*	Coefficient	*SE*	Sig. *OR*
Independent variables									
Maternal incarceration	0.54	0.12	1.71**	0.65	0.15	1.91**	0.38	0.19	1.46*
Paternal incarceration	0.41	0.06	1.50**	0.28	0.10	1.32**	0.50	0.09	1.66**
Individual controls									
Female	–1.18	0.05	0.31**	0.00	—		0.00	—	
Black	0.27	0.05	1.31**	0.28	0.08	1.32**	0.25	0.07	1.29**
Hispanic	–0.07	0.05		–0.17	0.08	0.85*	–0.04	0.07	
Other race	–0.22	0.06	0.80**	–0.08	0.10		–0.31	0.08	0.73**
Age at Wave IV	–0.03	0.01	0.97**	–0.04	0.02	0.96*	–0.03	0.02	0.97*
High school dropout	0.55	0.07	1.73**	0.62	0.11	1.86**	0.49	0.10	1.64**
Delinquency	0.11	0.01	1.11**	0.11	0.02	1.11**	0.11	0.01	1.12**
Self-control									
Antisocial behavior	0.01	0.01		0.01	0.01		0.01	0.01	
Anger	0.12	0.01	1.13**	0.12	0.02	1.13**	0.11	0.02	1.12**
Impulsivity	0.01	0.01		0.01	0.01		0.01	0.01	
Low self-esteem	–0.02	0.01	0.98**	–0.01	0.01		–0.03	0.01	0.97**
Pathways controls									
Child physical abuse	0.30	0.08	1.35**	0.33	0.12	1.39**	0.27	0.10	1.31**
Child sexual abuse	0.20	0.10	1.22*	0.23	0.14		0.17	0.13	
Intimate partner abuse	0.16	0.06	1.17**	0.21	0.09	1.24*	0.12	0.07	
Forced sex	0.24	0.09	1.27*	0.24	0.11	1.27*	0.11	0.21	
Ran away	0.17	0.07	1.19*	0.33	0.10	1.39**	0.01	0.11	
Substance abuse	0.46	0.07	1.59**	0.22	0.11	1.25*	0.58	0.08	1.79**
Family controls									
Lived with both parents	–0.15	0.05	0.86**	–0.24	0.08	0.79**	–0.10	0.06	
Parental supervision	–0.02	0.02		–0.03	0.03		–0.01	0.02	
Family socioeconomic status	–0.06	0.02	0.95*	–0.04	0.04		–0.07	0.03	0.94*
Mother involved	–0.03	0.02		0.00	0.03		–0.05	0.03	
Father involved	–0.01	0.02		–0.03	0.04		0.00	0.03	
Mother close	0.02	0.03		0.03	0.04		0.02	0.04	
Father close	–0.02	0.03		–0.02	0.04		–0.03	0.04	
Mother died	0.18	0.15		–0.13	0.23		0.48	0.22	1.62*
Father died	0.14	0.10		0.23	0.14		0.04	0.15	
Community controls									
>30% non-White	0.02	0.05		–0.03	0.08		0.07	0.07	
>30% poverty	0.05	0.06		0.10	0.10		0.00	0.09	
Population density	–0.02	0.01	0.98**	–0.02	0.01		–0.02	0.01	

Note. *OR* = odds ratio.
*$p < .05$. **$p < .01$.

relationship (*OR* = 1.87 vs. 1.59; $p < .01$; see Table 3). When the full model is separated by offspring sex, the effect is again greatest in cases of same-sex parental incarceration. That is, adult daughters' conviction is more strongly predicted by incarceration of their mothers than their fathers (*OR* = 2.47 vs. 1.45; $p < .01$), whereas adult sons' conviction is more strongly predicted by incarceration of their fathers than their mothers (*OR* = 1.68; $p < .01$ vs. 1.49; $p < .05$). The effect of maternal incarceration on daughters is particularly strong, as it increases by two and a half times their risk of adult conviction. In fact, in the conviction

TABLE 3: Adult Conviction Outcome

	Total (*N* = 15,587)			Women (*n* = 8,295)			Men (*n* = 7,292)		
	Coefficient	*SE*	Sig. *OR*	Coefficient	*SE*	Sig. *OR*	Coefficient	*SE*	Sig. *OR*
Independent variables									
Maternal incarceration	0.62	0.14	1.87**	0.90	0.20	2.47**	0.41	0.19	1.49*
Paternal incarceration	0.46	0.08	1.59**	0.37	0.14	1.45**	0.51	0.09	1.68**
Individual controls									
Female	–1.35	0.06	0.26**	0.00	—		0.00	—	
Black	0.27	0.06	1.31**	0.12	0.11		0.35	0.08	1.41*
Hispanic	–0.18	0.07	0.84**	–0.36	0.13	0.70**	–0.11	0.08	
Other race	–0.19	0.08	0.82*	0.11	0.14		–0.30	0.10	0.74**
Age at Wave IV	–0.05	0.02	0.96**	–0.07	0.03	0.94**	–0.04	0.02	
High school dropout	0.31	0.09	1.36**	0.19	0.18		0.34	0.10	1.41**
Delinquency	0.11	0.01	1.11**	0.14	0.02	1.15**	0.10	0.01	1.10**
Self-control									
Antisocial behavior	0.00	0.01		–0.01	0.01		0.00	0.01	
Anger	0.12	0.01	1.13**	0.13	0.03	1.14**	0.12	0.02	1.13**
Impulsivity	0.02	0.01		0.01	0.02		0.02	0.01	
Low self-esteem	–0.02	0.01	0.98*	–0.03	0.02		–0.02	0.01	
Pathways controls									
Child physical abuse	0.37	0.09	1.45**	0.33	0.17	1.39*	0.38	0.11	1.46**
Child sexual abuse	0.02	0.12		0.02	0.21		0.02	0.15	
Intimate partner abuse	0.15	0.08		0.24	0.13		0.10	0.09	
Forced sex	0.08	0.13		0.14	0.16		–0.08	0.23	
Ran away	0.28	0.09	1.33**	0.33	0.15	1.39**	0.24	0.11	1.27*
Substance abuse	0.15	0.08		–0.05	0.17		0.19	0.09	
Family controls									
Lived with both parents	–0.08	0.06		–0.16	0.12		–0.06	0.08	
Parental supervision	–0.01	0.02		–0.02	0.04		0.00	0.03	
Family socioeconomic status	–0.10	0.03	0.91**	–0.12	0.06	0.89**	–0.10	0.03	0.91**
Mother involved	–0.04	0.03		–0.05	0.05		–0.04	0.03	
Father involved	–0.02	0.03		0.04	0.06		–0.04	0.03	
Mother close	0.05	0.04		0.05	0.07		0.06	0.05	
Father close	–0.02	0.04		–0.01	0.07		–0.04	0.05	
Mother died	0.16	0.20		–0.43	0.38		0.47	0.24	
Father died	0.17	0.13		0.21	0.22		0.13	0.17	
Community controls									
>30% non-White	–0.04	0.07		–0.18	0.13		0.02	0.08	
>30% poverty	–0.16	0.09		–0.05	0.16		–0.21	0.10	0.81*
Population density	–0.02	0.01	0.98**	–0.03	0.02		–0.02	0.01	

Note. *OR* = odds ratio.
*$p < .05$. **$p < .01$.

model, differences in the effects of maternal and paternal incarceration across daughters and sons approach statistical significance ($z = 1.88$). Consistent with the arrest model, opposite-sex parental incarceration has a stronger effect on conviction outcomes for sons, but the effect also is moderately strong for daughters.

Again, several controls reached significance. Black men ($OR = 1.41$; $p < .05$) but not Black women were more likely than their White counterparts to be convicted, whereas Latina women ($OR = 0.70$; $p < 0.01$) and men from other racial/ethnic minority groups

(*OR* = 0.74; $p < .01$) were less likely to be convicted compared with Whites. Dropping out of high school increases the conviction risk only for men (*OR* = 1.41; $p < .01$), whereas prior delinquency increases risk for both groups, with the effect being slightly more pronounced among women than men (*OR* = 1.15 vs. 1.10; $p < .01$). Anger significantly increases risk of adult conviction for both women and men (*OR* = 1.14 and 1.13; $p < .01$). Among the pathways controls, conviction risk was higher among both women and men who reported childhood physical abuse (*OR* = 1.39 and 1.46; $p < .01$) and having run away from home (*OR* = 1.39; $p < .01$ and 1.27; $p < .05$). In this model, intimate partner abuse and substance abuse fail to achieve statistical significance for either women or men. Other than higher family SES which is a protective factor for both women and men (*OR* = 0.89 and 0.91; $p < .01$), none of the family controls emerged as significant. Finally, the effects of the community controls were again either small or non-significant.

ADULT INCARCERATION

Both maternal and paternal incarceration significantly increase the log odds of adult incarceration for offspring in the total sample, with mothers' incarceration again yielding the stronger effect (*OR* = 1.92 vs. 1.81; $p < .01$; see Table 4). When the full model is separated by offspring sex, a different pattern emerges than in previous models: In predicting adult incarceration among offspring, maternal incarceration has a stronger effect than paternal incarceration for both daughters and sons. That is, adult daughters' incarceration is more strongly predicted by incarceration of their mothers than their fathers (*OR* = 1.81 vs. 1.68; $p < .05$), but for the first time the same is also true for adult sons as well (*OR* = 2.01 vs. 1.84; $p < .01$). The effect of having an incarcerated mother here is particularly strong, as it doubles the risk of adult incarceration for sons—the strongest effect of maternal incarceration on sons' adult CJS involvement in any of the three outcomes models. Here again, though, differences in the effects of maternal and paternal incarceration across daughters and sons are not statistically significant.

Several controls achieved significance in this model as well. Race/ethnicity is a significant predictor only among Black men, who were more likely than their White counterparts to be incarcerated (*OR* = 1.68; $p < .01$). Consistent with prior models, respondents who dropped out and who had higher delinquency scores were more likely to be incarcerated. The dropout effect is stronger for women than men (*OR* = 2.44 vs. 1.83; $p < .01$), whereas the delinquency effect is smaller and similar for both groups (*OR* = 1.18 and 1.14; $p < .01$). Anger significantly increases risk of adult incarceration for women and men alike (*OR* = 1.18 vs. 1.21; $p < .01$). None of the pathways control measures achieved significance for women in the incarceration model, but childhood physical abuse (*OR* = 1.47; $p < .01$) and prior substance abuse (*OR* = 1.30; $p < .05$) significantly increase risk of adult incarceration for men. Other than higher family SES, which is a protective factor for women and men alike (*OR* = 0.78 and 0.81; $p < .01$), the remaining family and community-level controls had mostly non-significant effects.

DISCUSSION

Although the collateral consequences of mass incarceration continue to be at the forefront of criminological scholarship (e.g., see Hagan & Foster, 2014), much remains to be learned about the effects of parental incarceration throughout the life course. Like other

TABLE 4: Adult Incarceration Outcome

	Total (*N* = 15,587)			Women (*n* = 8,295)			Men (*n* = 7,292)		
	Coefficient	*SE*	Sig. *OR*	Coefficient	*SE*	Sig. *OR*	Coefficient	*SE*	Sig. *OR*
Independent variables									
Maternal incarceration	0.65	0.17	1.92**	0.59	0.30	1.81*	0.70	0.20	2.01**
Paternal incarceration	0.59	0.09	1.81**	0.52	0.20	1.68*	0.61	0.11	1.84**
Individual controls									
Female	−1.81	0.10	0.16**	—	—		—	—	
Black	0.38	0.08	1.46**	0.06	0.18		0.52	0.11	1.68**
Hispanic	−0.23	0.09	0.79*	−0.20	0.19		−0.19	0.12	
Other race	−0.19	0.11		−0.03	0.22		−0.16	0.15	
Age at Wave IV	−0.03	0.02		−0.01	0.05		−0.04	0.02	
High school dropout	0.67	0.10	1.95**	0.89	0.21	2.44**	0.60	0.11	1.83**
Delinquency scale	0.14	0.01	1.14**	0.17	0.03	1.18**	0.13	0.01	1.14**
Self-control									
Antisocial behavior	0.00	0.01		−0.01	0.02		0.01	0.01	
Anger	0.18	0.02	1.20**	0.17	0.04	1.18**	0.19	0.02	1.21**
Impulsivity	0.00	0.01		0.02	0.03		−0.01	0.02	
Low self-esteem	−0.03	0.02	0.97*	−0.04	0.03		−0.03	0.02	
Pathways controls									
Child physical abuse	0.33	0.12	1.40**	0.05	0.27		0.38	0.13	1.47**
Child sexual abuse	0.27	0.15		0.46	0.30		0.20	0.17	
Intimate partner abuse	0.11	0.10		0.28	0.20		0.06	0.11	
Forced sex	0.26	0.16		0.32	0.23		0.11	0.25	
Ran away	0.24	0.11	1.27*	0.33	0.21		0.19	0.13	
Substance abuse	0.22	0.10	1.25*	−0.01	0.24		0.26	0.11	1.30*
Family controls									
Lived with both parents	0.06	0.08		−0.19	0.19		0.12	0.09	
Parent supervision	0.02	0.03		0.03	0.06		0.02	0.03	
Family socioeconomic status	−0.22	0.04	0.81**	−0.25	0.09	0.78**	−0.21	0.04	0.81**
Mother involved	−0.05	0.03		−0.03	0.08		−0.05	0.04	
Father involved	−0.07	0.04		0.06	0.09		−0.09	0.04	0.91*
Mother close	0.10	0.05		0.14	0.12		0.08	0.06	
Father close	0.02	0.05		0.03	0.12		0.02	0.06	
Mother died	0.06	0.27		−0.41	0.55		0.21	0.31	
Father died	0.15	0.17		0.10	0.35		0.15	0.20	
Community controls									
>30% non-White	0.11	0.09		−0.09	0.20		0.14	0.10	
>30% poverty	−0.03	0.11		−0.10	0.24		0.00	0.12	
Population density	−0.03	0.01	0.97*	−0.03	0.03		−0.03	0.01	

Note. *OR* = odds ratio.
*$p < .05$. **$p < .01$.

studies of this type, our analysis demonstrates that parental incarceration significantly increases the odds of adult CJS involvement for offspring, net of a host of controls that are strongly correlated with adult offending. This study is particularly unique as it considers how the sex composition of the parent–child dyad influences the relationship between parental incarceration and criminal offending among adult offspring.

Overall, the effect of parental incarceration on adult CJS involvement among offspring is more pronounced for the same-sex parent: Maternal incarceration is a stronger predictor

than paternal incarceration of adult daughters' arrest, conviction, and incarceration, whereas paternal incarceration is a stronger predictor than maternal incarceration of adult sons' arrest and conviction, although the differences across daughters and sons are not statistically significant. The only exception to this pattern is in the incarceration model, where maternal incarceration has a stronger effect than paternal incarceration for adult daughters and sons alike.

More importantly, in both the arrest and conviction models, the effect of maternal incarceration on adult daughters is stronger than the effect of paternal incarceration on adult sons, and in the incarceration model the effects are nearly identical. Put differently, daughters of incarcerated mothers were more likely than sons of incarcerated fathers to experience adult arrest and conviction, and were nearly as likely to experience adult incarceration. Thus, the sex composition of the parent–child dyad is essential for contextualizing the effect of parental incarceration—an important finding that affirms the need for gendered analyses.

It is possible that this finding may be a product of disrupted attachment. For example, perhaps incarceration of a same-sex parent has important implications for later role identification. Or, perhaps loss of a same-sex parent imparts unique emotional or familial strain, or is especially stigmatizing. However, we believe that a return to our gendered pathways theoretical framework offers additional context. In light of insights from life course and feminist research, it seems clear that maternal incarceration plays a particularly powerful role in initiating offending trajectories that lead to CJS involvement among adult daughters. That is, perhaps for daughters, loss of a mother to incarceration is a particularly traumatic event that functions like other forms of trauma in initiating long-term offending pathways. If current incarceration trends continue apace, disproportionately more women—and, thus, mothers—will end up behind bars in the coming years. Given the results of our analysis, this trend is worrisome from a long-term intergenerational perspective, as the daughters of these incarcerated women are equally or more likely even than sons of incarcerated fathers to experience CJS involvement of their own as adults. Thus, consistent with gendered pathways research, our findings suggest that parental incarceration may be a traumatic experience on par with other forms of childhood maltreatment in shaping adult offending pathways, and this is especially true for daughters of incarcerated mothers.

Beyond parental incarceration, our research findings emphasize the role of gendered pathways in understanding adult CJS involvement in other ways. For example, intimate partner abuse and forced sex significantly increase risk of adult arrest for women but not men, whereas physical abuse by a parent or caregiver significantly increases risk of adult incarceration for men but not women. This finding is particularly important given that prior research has shown a strong link between violent victimization histories and adult offending, particularly among women (Bloom et al., 2003; McDaniels-Wilson & Belknap, 2009). Similarly, running away from home—a common trauma response, especially among girls—significantly increases risk of adult arrest for women but not men. It is possible that girls who lose their mothers to incarceration respond by running away, which in turn increases their risk of adult arrest. Beyond running away, dropping out of high school likewise may function as a gendered trauma response. Although significant for both groups, dropping out had a stronger effect for women than men in both the arrest and incarceration models. Thus, victimization history and trauma responses can be predictive of adult CJS involvement and

have differential influence on women and men, providing evidence of women's and men's distinct pathways to adult offending. Somewhat surprisingly, measures of parental quality played only a small role in the models, highlighting the need to better explore the potential mechanisms by which parental incarceration affects offending outcomes among adult offspring. Finally, with the exception of anger, measures of self-control were not significant predictors, casting doubt on their relevance for understanding women's and men's CJS involvement.

Although the current study highlights several important findings, certain limitations should be noted. Most pressingly, the primary independent variables rely upon an imprecise measure of parental incarceration. Specifically, our parental incarceration measure confounds brief jail and lengthy prison stays and does not capture incarceration length, the number of incarceration experiences, or the nature of the criminal charge that precipitated imprisonment; as a result, it is unable to measure the "dosage" of parental incarceration. Imperfect measures of parental incarceration are an inherent limitation of using data sets like Add Health (e.g., see H. V. Miller & Barnes, 2015; Roettger et al., 2011) or the Fragile Families & Child Well-Being Study (e.g., see Geller, Cooper, Garfinkel, Schwartz-Soicher, & Mincy, 2012; Geller et al., 2009; Turney & Wildeman, 2015; Wildeman & Turney, 2014) that were not designed to collect nuanced data on parental incarceration. Still, for adult respondents to remember and report a period of parental incarceration that occurred during their childhood suggests that this event had some meaningful and lasting impact, or at the very least was not so inconsequential as to have been forgotten. And, as scholars who have used similarly broad indicators of parental incarceration have noted, "Even short incarceration spells have the potential to compromise labor market performance and destabilize family relationships" (Geller et al., 2012, p. 54). That noted, incarceration is not a monolithic experience, and outcomes among offspring may well differ based on length and type of parental incarceration. Thus, the creation of new data sets that are specifically designed to collect information about parental incarceration may be a fruitful avenue for researchers to pursue.

Similarly, the large, heterogeneous sample may underestimate the magnitude of the parental incarceration effect. Other scholars have used propensity score analyses to examine the effect of parental incarceration using similarly situated samples (Roettger & Swisher, 2011). The magnitude of the parental incarceration effect in our study is similar to that observed by Roettger and Swisher (2011), albeit with a different dependent variable. Given the large, varied sample used in the current analysis, the magnitude of the parental incarceration effect is likely reduced. However, much remains to be learned about selecting the appropriate comparison samples in research of this type, particularly when samples are delineated by sex or other subcategories, which makes propensity score matching more difficult. Similarly, our measures of adult CJS involvement are static and hence do not capture the dynamic nature of young adult CJS involvement. The measurement scheme also does not consider the potential reciprocal nature of trauma, parental incarceration, and adult outcomes. Although extensive controls are used in the analyses, the potential for omitted variable bias exists. Future research might utilize mixed-method designs to further explore the impact that parental relationships and experiences have on minor and adult children of incarcerated parents. In particular, qualitative studies could better illuminate the complex interplay between parental

incarceration and absence, child maltreatment, stress, parenting quality, and offspring CJS involvement.

Finally, the study does not adequately consider the unique experiences of women and men of color. This limitation is especially noteworthy given the differential effects for women and men by race/ethnicity. For example, Black women had higher risk of arrest while Black men had higher risk of CJS involvement across all three outcomes; Latina women, on the other hand, had lower risk of arrest and conviction. There is a rich body of literature that highlights the intersections of race/ethnicity, class, gender, and community context in understanding long-term continuity and change among offending populations (Burgess-Proctor, 2006; Giordano, Cernkovich, & Rudolph, 2002). These analyses were beyond the scope of our work but are urgently needed areas of research. We encourage scholars to examine how sociostructural factors interact with and inform the relationship between parental incarceration and women's and men's adult CJS involvement.

Our results suggest several implications for feminist correctional research and policy. First, despite a persistent trend of studying only fathers' incarceration, there is a clear need to study the effects of maternal incarceration, and especially to examine how the salience of mothers' and fathers' incarceration differs for daughters and sons. Likewise, there is a need for research that moves beyond childhood outcomes and examines adult outcomes as well, especially as loss of a same-sex parent may be more acutely felt during adulthood than childhood. Indeed, given our findings, it remains centrally important to identify ways to mitigate the collateral consequences of incarceration, especially for women. There has been a broad movement to develop and implement gender-specific programming in corrections (Bloom et al., 2003), and our findings support the development of these initiatives. In addition, programs like Girl Scouts Beyond Bars have shown great promise; however, these programs are small in scope, require substantial resources, and do not include extensive after care components (Wright, Van Voorhis, Salisbury, & Bauman, 2012). In addition, the potential impact of incarceration on children also can be mitigated by reducing the number of parents in prison, and perhaps time served in an institution. The justice reinvestment movement represents a comprehensive effort to increase the opportunities available in the community in lieu of incarceration (Clear, 2011).

CONCLUSION

Overall, the results of our analysis affirm the utility of gendered pathways for studying parental incarceration, and offer support for future research examining the long-term consequences and gendered context of parental incarceration. Despite the comparatively small proportion of incarcerated mothers relative to incarcerated fathers, the results of our analysis suggest that maternal incarceration has negative consequences for offspring into adulthood, and this is especially true for adult daughters. Thus, an important area of concern for feminist criminologists is the continued development of both gender-responsive correctional programming and gender-focused parental incarceration research in the years ahead. This analysis offers support for feminist scholars to advance these aims using a gendered pathways theoretical model, in the hope that the pervasive harm of parental incarceration may be reduced, especially for incarcerated women and their daughters.

APPENDIX

COMPOSITE SCALES USED IN ANALYSES

Antisocial behavior	Four item scale. Since school started this year, how often have you had trouble: Getting along with your teachers, paying attention in school, getting your homework done, or getting along with other students (1 = *just a few times*, 2 = *about once a week*, 3 = *almost every day*, 4 = *every day*).
Anger	Four item scale, parental/caregiver response. All things considered, how is your child's life going? How often would it be true for you to make the following statement about your child? You get along well with (him/her). How often would it be true for you to make the following statement about your child? You feel you can really trust (him/her). Does your child have a bad temper? Responses include 1 = *very well*, 2 = *fairly well*, 3 = *not so well*, 4 = *not well at all*.
Impulsivity	Four item scale. When you have a problem to solve, one of the first things you do is get as many facts about the problem as possible. When you are attempting to find a solution to a problem, you usually try to think of as many different ways to approach the problem as possible. When making decisions, you generally use a systematic method for judging and comparing alternatives. After carrying out a solution to a problem, you usually try to analyze what went right and what went wrong. Respondents were asked to 1 = *strongly agree*, 2 = *agree*, 3 = *neither agree nor disagree*, 4 = *disagree*, or 5 = *strongly disagree*.
Low self-esteem	Four item scale. You never get sad. You like yourself just the way you are. You feel like you are doing everything just about right. You feel socially accepted. Respondents were asked to comment on the following statements if they 1 = *strongly agree*, 2 = *agree*, 3 = *neither agree nor disagree*, 4 = *disagree*, or 5 = *strongly disagree*.
Delinquency	Twelve item scale. In the past 12 months, how often did you: hurt someone badly enough to need bandages or care from a doctor or nurse, did someone hurt you badly enough to need bandages or care from a doctor or nurse, did you use or threaten to use a weapon to get something from someone, did you take part in a fight where a group of your friends was against another group, did you deliberately damage property that didn't belong to you, did you carry a handgun to school or work, did you steal something worth more than $50, did you steal something worth less than $50, did you go into a house or building to steal something, did you sell marijuana or other drugs, shot or stabbed someone, or pulled a knife or gun on someone? Responses range from zero to three (0 = *never*, 1 = *1 or 2 times*, 2 = *3 or 4 times*, 3 = *5 or more times*).

NOTES

1. As a robustness check, we also ran the analyses without the 121 respondents who reported both maternal and paternal incarceration. The effects of the independent variables on our three primary dependent variables were even stronger, suggesting that our findings are not the result of the disproportionate impact of dual parental incarceration.

2. The timing of parental incarceration has been linked to differential outcomes among offspring (Porter & King, 2012; van de Rakt, Murray, & Nieuwbeerta, 2012). In preliminary models (results not shown), we combined an age-at-parental-incarceration measure with the sex composition of the parent–child dyad. The results for adult sons do not appear to be influenced by age at first parental incarceration. Limited sample size made it impossible to perform a comparative analysis of adult daughters.

3. See Appendix for a complete description of the composite measures used in the analyses.

4. The regression models also were run using the original 23-item scale, both with and without imputation of missing values. The odds ratios were consistent with those calculated using our four subscales, giving us confidence in our measures.

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