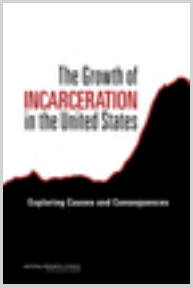

The Growth of Incarceration in the United States: Exploring Causes and Consequences

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Consequences for Families and Children

The dramatic increase in incarceration rates since 1972 has stimulated widespread interest in how this trend is affecting families and children. As incarceration rates increased, more families and children had direct experience with imprisonment of a parent (see Figure 9-1). In a calculation of the number of minor children with fathers in prison or jail in the two decades from 1980 to 2000, Western and Wildeman (2009) found that the number of children with an incarcerated father increased from about 350,000 to 2.1 million, about 3 percent of all U.S. children in 2000. According to the most recent estimates from the Bureau of Justice Statistics, 53 percent of those in prison in 2007 had minor children. In that year, an estimated 1.7 million children under age 18 had a parent in state or federal prison (Glaze and Maruschak, 2008). The racial and ethnic disparities of the prison population are reflected in the disparate rates of parental incarceration. In 2007, black and Hispanic children in the United States were 7.5 and 2.7 times more likely, respectively, than white children to have a parent in prison (Glaze and Maruschak, 2008; see also Box 9-1). While the consequences for families and children can be expected to vary by race and ethnicity, much of the research reviewed for this study does not distinguish outcomes by these characteristics. For the few studies that do, the differences and similarities are noted in the text.

This chapter reviews the empirical evidence on the consequences of incarceration for family behavior and child well-being. We focus on incarceration of men because it is more common than that of women and is the subject of the bulk of the available research. The literature on men's incarceration is large and includes ethnographic studies as well as quantitative

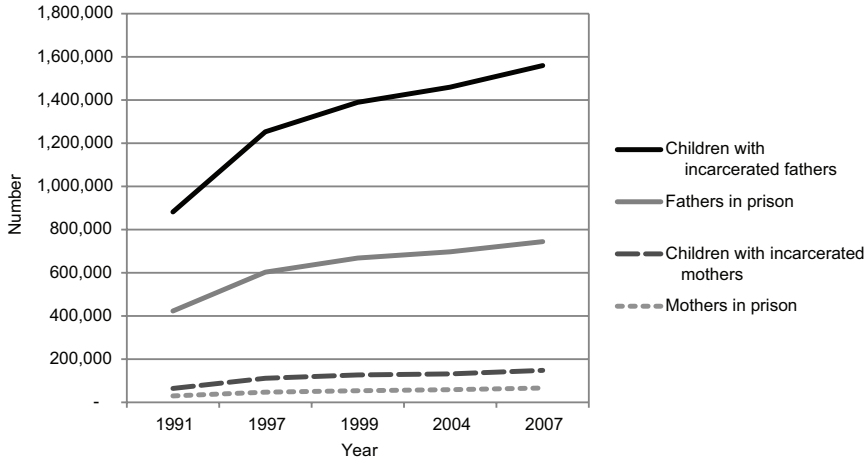

FIGURE 9-1 Estimated number of parents in state and federal prisons and their minor children, by inmate's gender.
SOURCE: Data from Glaze and Maruschak (2008).

analyses of survey data and administrative records. The literature on women's incarceration is limited but growing. Most of the literature examining the consequences of maternal incarceration for families and children is primarily qualitative or limited to specific field sites. While the risk of maternal imprisonment for children is quite small, it has grown much more rapidly in recent years than the risk of paternal imprisonment (Kruttschnitt, 2010; Wildeman, 2009). The number of children with a mother in prison increased 131 percent from 1991 to 2007 (see Figure 9-1), while the number with a father in prison increased 77 percent (Glaze and Maruschak, 2008). As discussed in Chapter 6, incarcerated mothers are more likely than incarcerated fathers to have lived with their children prior to incarceration. In a 2004 survey of inmates, 55 percent of female inmates in state prisons who were parents, compared with 36 percent of male inmates, reported living with their children in the month before arrest. Incarcerated parents in federal prisons were more likely to report living with their children before arrest (73 percent of female inmates, compared with 46 percent of male inmates). In addition, incarcerated mothers are more likely than incarcerated fathers to have come from single-parent households (42 percent versus 17 percent in state prisons, and 52 percent versus 19 percent in federal prisons) (Glaze and Maruschak, 2008).

The available literature on the consequences of incarceration for families and children focuses on incarceration per se and does not examine the

BOX 9-1
Racial and Ethnic Differences in the Cumulative Risk of Parental Imprisonment

Wildeman (2009) calculated the probability that a child would have experienced a parent being sent to prison by the child's teenage years. This cumulative risk of parental imprisonment was calculated for two different birth cohorts of children. For white children born in 1978, Wildeman (2009) found that 2.2 to 2.4 percent had experienced a mother or father being sent to prison by age 14. For a birth cohort born 12 years later, in 1990, the cumulative risk of parental imprisonment for white children had increased to 3.6 to 4.2 percent. Among black children, parental imprisonment in the 1978 cohort was 13.8 to 15.2 percent, compared with 25.1 to 28.4 percent in the 1990 cohort. Similar estimates were developed by Pettit and colleagues (2009), who found that in 2009, 15 percent of white children whose parents had not completed high school had experienced a parent being sent to prison by age 17. Among Hispanic children with similarly low-educated parents, 17 percent had experienced parental imprisonment by age 17. The comparable percentage for African American children is 62 percent (Pettit et al., 2009).

specific effects of the increasing rates of incarceration. Therefore, we cannot discuss any changes in the consequences for families and children of the incarcerated during this period. We consider what is currently known about the potential consequences for individuals, positive and negative, as a result of having a partner or parent incarcerated and believe that the numbers affected have risen. A few studies, however, discussed later, look at the effect of increasing incarceration on the marriage market and childbearing.

Most studies find that incarceration is associated with weaker family bonds and lower levels of child well-being. Men with a history of incarceration are less likely to marry or cohabit and more likely to form unstable partnerships than those who have never been incarcerated, and children of incarcerated fathers tend to exhibit more problems in childhood and adolescence. The picture is not entirely negative, however. There is evidence from at least one state, for example, that increased rates of incarceration are associated with lower rates of nonmarital childbearing. Moreover, some studies find that the negative association between incarceration and family outcomes is limited to families in which the father was living with the family prior to imprisonment. Finally, there is evidence that in cases in which a father is violent, incarceration may actually improve his family's well-being. The few studies that have examined the consequences for children of incarcerated mothers tend to focus on separation from children and housing stability. These studies often find persistent disadvantage in terms of poor

education and financial circumstances, substance abuse, mental illness, domestic abuse, or a combination of these. At this time, findings on the effects of maternal incarceration on child well-being are mixed.

In this chapter, we begin by reviewing available research on the consequences of men's incarceration for families. We then examine the small but growing literature on mothers' incarceration. Next, we discuss the methodological limitations of existing studies in this area. The chapter ends with a review of knowledge gaps and concluding remarks.

INCARCERATION OF PARTNERS AND FATHERS

For this review, we looked at both quantitative research and ethnographic studies. Our review of quantitative studies was limited to studies published within the past decade[1] that meet four criteria: (1) they are based on probability samples; (2) response rates are good, and sample attrition is low; (3) they include good measures of incarceration and family/child outcomes; and (4) the temporal ordering of incarceration and the outcome of interest is correct. We gave special attention to studies that attempt to deal with omitted variable bias. (For other reviews of the incarceration literature, see Hagan and Dinovitzer, 1999; Murray et al., 2009; Schnittker et al., 2011; Wakefield and Uggen, 2010; Wildeman and Western, 2010; and Wildeman and Muller 2012). Our review criteria would exclude most studies linking outcomes to the developmental stage of the child(ren) because these studies typically are based on small, purposive samples. As a result, our review represents a partial look at the literature on the consequences of incarceration for families and children.

Ethnographic studies generally do not allow for statements about causality; however, they describe the experiences of women with incarcerated partners and their children and reveal potential mechanisms for explaining the link between incarceration and family well-being. A key goal of our assessment is to determine whether the use of more complex statistical methods produces findings that are consistent with those from ethnographic studies and quantitative analyses using simpler statistical methods. To the extent that the findings from the various studies tell a similar story, we have greater confidence in the results.

In this section, we review the consequences of incarceration of men in four domains—(1) male-female relationships, (2) economic well-being, (3) parenting, and (4) child well-being.

[1]Recent quantitative work does a better job than older studies of accounting or controlling for possible confounding and unmeasured variables.

Male-Female Relationships

An extensive body of qualitative research examines relationship dynamics between incarcerated men and their female partners. These studies find that although these men view marriage as a desirable goal (Braman, 2004), incarceration (in addition to the father's criminal activity) poses difficulties for maintaining a relationship, and for those who are not yet married, it makes marriage less feasible than for those not incarcerated.

Relationship problems of the incarcerated are attributable to several factors. First, women grow weary of the time, energy, and money required to maintain a relationship with an incarcerated partner. Studies find that while family members often view their role as one of moral and emotional support, making regular visits and phone calls and sending letters and packages to prisoners can be difficult and costly (Grinstead et al., 2001), particularly when visits require long-distance travel and hours of waiting (Christian, 2005; Comfort, 2003; Braman, 2004). Second, women may undergo emotional strain from not knowing what their partner is experiencing while incarcerated (Ferraro et al., 1983) or from feeling socially excluded (some report feeling as if they themselves were incarcerated). Upon visiting their partners, for example, women often are subject to searches, removal of personal belongings, and the enforcement of strict rules (Fishman, 1990; Comfort, 2003; Braman, 2004). Similarly, following release, partners may become subject to some terms of the parolee's supervision, such as searches of their residence or car (Comfort, 2008). Third, either partner may perceive an imbalance in the relationship. Often, this is because men are unable to contribute as much financially while incarcerated. However, Braman (2004) finds that the perceived imbalance is not always material. Incarceration may diminish trust between partners and augment the perception that individuals need to look out for themselves first, that others are selfish, and that relationships are exploitive. Moreover, Goffman (2009) finds that former prisoners and men on parole may feel the need to avoid or carefully navigate their relationships with partners who may use the criminal justice system as a way to control their behavior (e.g., a woman may threaten to call her partner's parole officer if he continues arriving home late, becomes involved with another woman, or does not contribute enough money to the household). In communities with high levels of incarcerated males, the overall gender imbalance also may shape behavior, making men more inclined to seek other partners (Braman, 2004).

Despite these findings, it is important to note that incarceration is not always harmful to relationships. Edin and colleagues (2004) find that while incarceration may strain the bonds between parents who are in a relationship prior to incarceration, it more often proves beneficial to couples whose relationship has been significantly hindered by lifestyle choices (almost

always substance abuse) prior to incarceration. For some of these men, incarceration serves as a turning point, a time to rehabilitate and rebuild ties with their child's mother—at least a cooperative friendship if not a romantic relationship. There is also evidence that marriage prevents dissolution of relationships. Indeed, Braman (2004) reports that wives of incarcerated men often say they would have left their husband had they not been married to him.

Consistent with the ethnographic literature, quantitative studies find that incarceration increases the economic costs of maintaining a relationship and imposes considerable psychological strain on the wives and partners of men in prison, especially those who were living with the man prior to his incarceration. At the same time, these studies highlight the fact that for some couples, prison is a time when men can change their lives and reestablish family relationships. A large number of quantitative studies have examined the association between incarceration and such behaviors as marriage, cohabitation, divorce, and repartnering (Apel et al., 2010; Charles and Luoh, 2010; Lewis, 2010; Lopoo and Western, 2005; Massoglia et al., 2011; Turney and Wildeman, 2012; Waller and Swisher, 2006; Western and McLanahan, 2001; Western et al., 2004). One study examines nonmarital childbearing (Mechoulan, 2011). Some of these studies focus on young adults or men in general, while others focus on parents only. All adjust for observed characteristics, and many employ rigorous methods.

Lewis (2010) and Waller and Swisher (2006) find evidence that fathers' incarceration reduces subsequent marriage and cohabitation. More rigorous studies, however, suggest that these effects are not causally related. Using a lagged dependent variable (LDV) model, Lopoo and Western (2005) find no association between men's incarceration and later marriage. Similarly, using data from a cohort of Dutch men convicted of a crime, Apel and colleagues (2010) find no effect of incarceration on marriage after the first year postrelease. Both studies do, however, find a strong positive effect on divorce/separation. Married men who were incarcerated were three times more likely to divorce than married men who were convicted but not incarcerated. These researchers also report that the effect of incarceration on divorce was stronger among men without children and those convicted of serious offenses. This study is especially noteworthy because, by focusing exclusively on men with a criminal conviction, it can distinguish the effects of incapacitation from those of conviction.

Two studies use state-level variables to examine how variation in marriage market conditions due to increasing incarceration rates affect women's marriage and fertility. Using state-level, race-specific incarceration rates as an indicator of marriage market conditions, Charles and Luoh (2010) find a negative effect of incarceration on the prevalence of marriage among women. They also find a modest and positive effect of incarceration on

women's education and labor force participation. Using a similar approach but more detailed information on mothers' behavior, Mechoulan (2011) finds a weak negative effect of male incarceration on black women's probability of marriage and a strong negative effect on young black women's nonmarital childbearing. This study also finds a positive link between men's incarceration and women's education and employment. The Mechoulan study is of particular interest because it highlights the possible benefits of high rates of male incarceration: namely, more education for women and the prevention of unintended pregnancies among young black women. The author is careful to note that his analysis does not identify the mechanisms underlying these changes in women's behavior, which could be due to the increased incapacitation of more promiscuous men or changes in women's sexual behavior. The author also notes that his findings are driven primarily by changes in incarceration rates in one state—Texas—making it difficult to generalize to other parts of the United States.

In addition to the studies described above, which focus on men rather than fathers, at least one study attempts to estimate the effect of fathers' incarceration on the stability of parents' unions. Using data from the Fragile Families Study, Turney and Wildeman (2012) find that father's incarceration increases the likelihood that the mother will end her relationship with him and form a partnership with a new man. The researchers aim to identify the effect of incarceration by employing a rich set of control variables (including couple's relationship quality); they also limit their sample to couples in which the father has a history of incarceration and compare couples who experienced a recent incarceration with those who did not. The latter results can be interpreted as the effect of a repeat incarceration for men with a history of imprisonment.

The studies described above have several limitations. First, those that use state-level incarceration rates to estimate the effect of incarceration on marriage and divorce must assume that marital status does not affect incarceration (whereas many people would argue it does) or that a third variable—such as social norms—is not causing both high rates of incarceration and high rates of union instability. A second limitation of most studies is that they ignore unions formed by cohabiting couples. Because marriage is rare among men at high risk of incarceration, at least in the United States, the failure to include cohabitating unions makes it difficult to draw strong conclusions about the effect of incarceration on union stability. A third limitation is that most studies do not compare the effect of incarceration with that of other types of forced separation. The one study that makes this comparison (Massoglia et al., 2011) finds that the destabilizing effects of incarceration are similar to those of military deployment, which suggests that the negative consequences of incarceration are due not to stigma but to the stress associated with incapacitation or possibly changes in fathers'

behavior. Both war and incarceration are likely to expose men to violence and undermine their relationship skills.

Economic Well-Being

According to the Bureau of Justice Statistics, more than half of fathers in state prison report being the primary breadwinner in their family (Glaze and Maruschak, 2008). Thus the partners and children of these men are likely to experience a loss of economic resources while the provider is in prison. This effect also is likely to persist after the father returns home, given what is known about the link between incarceration and unemployment (see Chapter 8). Ethnographic studies generally concur that the incarceration of a partner or father can lead to increased economic hardship for members of his family. Financial circumstances are one of the most frequently cited sources of stress or strain among partners of incarcerated individuals (Carlson and Cavera, 1992; Ferraro et al., 1983). Many affected families already were living in unfavorable economic circumstances prior to the incarceration, and many were dependent on public assistance or other financial support. Even so, Arditti and colleagues (2003) find that these families become even more impoverished following the partner's or father's incarceration.

The increased economic stress among families affected by incarceration is due to several factors. One is the extra expenses (collect calls, travel costs, sending money and packages) reported by women trying to maintain a relationship with the incarcerated individual (Grinstead et al., 2001; Christian, 2005; Arditti et al., 2003). Other new expenditures include attorney or other legal fees or job loss stemming from increased work-family conflict (Arditti et al., 2003).

Consistent with the ethnographic literature, quantitative studies indicate that the families of men with an incarceration history experience a good deal of economic insecurity and hardship, resulting in greater use of public assistance among mothers and children. Three studies examine the link between fathers' incarceration and mothers' material hardship (including housing insecurity) (Geller et al., 2009; Geller and Walker, 2012; Schwartz-Soicher et al., 2011); two other studies examine the relationship between fathers' incarceration and mothers' welfare use (Sugie, 2012; Walker, 2011); and one study examines the association between fathers' incarceration and children's homelessness (Wildeman, forthcoming). All of these studies are based on data from the Fragile Families Study.

Geller and Walker (2012) find that the partners of incarcerated fathers are at increased risk of experiencing homelessness and other types of housing insecurity. These authors use a lagged measure of housing insecurity and a rich set of early-life and contemporaneous covariates. They also

distinguish between recent and early incarceration and find that part of the effect of incarceration on housing insecurity is due to a reduction in financial resources (father's earnings or partner's financial contributions). In a third study examining housing insecurity, Wildeman (forthcoming) uses propensity score models and finds that recent paternal incarceration is associated with an increased risk of child homelessness, especially among black children. Foster and Hagan (2007) also find an association with increased homelessness among adolescent girls.

One study in this group examines the influence of fathers' incarceration on other types of material hardship besides housing. Employing several strategies for determining causality, including fixed effects models, a lagged dependent variable, and a placebo test used to examine whether future incarceration is related to current behaviors, Schwartz-Soicher and colleagues (2011) find strong evidence that paternal incarceration leads to increased material hardship for mothers and children, measured as mothers' reports of the difficulty faced by their family in meeting basic needs. Finally, two studies examine whether fathers' incarceration increases mothers' participation in public assistance programs. Using propensity score matching, Walker (2011) finds some evidence that incarceration may increase the probability of mothers' receipt of both food stamps and Temporary Assistance for Needy Families (TANF). In contrast, using fixed effects models and a more recent wave of data, Sugie (2012) finds that recent paternal incarceration is associated with mothers' receipt of food stamps and Medicaid/State Children's Health Insurance Program (SCHIP) assistance, but not TANF. Neither of these studies attempts to estimate the cost of these benefits to taxpayers. On balance, the evidence that father's incarceration increases the family's material hardship and housing insecurity is strong, especially when the father was living in the household prior to incarceration.

Parenting

Ethnographic work examining the effects of incarceration on parenting focuses primarily on fathers, including their contact with the child and their financial contributions to the family. In discussing these findings, it is important to note that men do not father in a vacuum. Key concepts that influence the experiences of an incarcerated father and his children are his relationship with the child's mother and his own behavior and lifestyle before his arrest.

The father's relationship with his child's mother appears to play an important role in the father-child relationship during incarceration and after his release from prison. Fathers who lived with their child prior to incarceration are more likely than nonresident fathers to stay in contact with the child (Martin, 2001). In addition, while some mothers and families

provide encouragement for continuing contact between the child and his or her father, others promote social exclusion (Nurse, 2004). For example, some family members refuse to bring the child when making visits (Martin, 2001), and some fathers feel that mothers use the incarceration to justify limiting or prohibiting contact or painting a negative view of the father so the child does not want to interact with him (Edin et al., 2004).

The father's lifestyle prior to his incarceration and the quality of the father-child relationship also are important influences on the parenting effects of incarceration. As Edin and colleagues (2004) note, if the father's severe substance abuse or criminal activity prior to incarceration was enough to prevent him from making financial contributions to the family or developing a close relationship with his child(ren) prior to his arrest, then his incarceration may serve as a time to rebuild bonds, even allowing parents and children to communicate more frequently (Giordano, 2010). Some fathers believe their incarceration will serve as an example to their children, discouraging them from making similar mistakes (Martin, 2001). On the other hand, among fathers who previously experienced frequent contact with their children, incarceration almost always proves to be detrimental—breaking bonds in terms of physical closeness and financial contributions and eroding relationships that may already have been fragile. Most often, this is because the mother ends her relationship with the father or becomes involved with another man (Edin et al., 2004). Martin (2001) also finds that fathers themselves sometimes refuse to accept visits from their child(ren) to protect themselves and their child(ren) emotionally.

Four quantitative studies examine the association between fathers' incarceration and three outcomes: coparenting, engagement in activities with the child, and contact with the child (Geller and Garfinkel, 2012; Turney and Wildeman, 2012; Waller and Swisher, 2006; Woldoff and Washington, 2008). Generally, researchers find a negative association between fathers' prior or recent incarceration and each of these behaviors.

Waller and Swisher (2006) find a negative association between recent and past incarceration and father-child contact and engagement that is mediated by the father-mother relationship. Similarly, using more rigorous methods and controlling for characteristics likely to be associated with both criminal justice contact and family stability, Geller and Garfinkel (2012) find reductions in father-child contact for resident and nonresident fathers who become incarcerated and weaker coparenting relationships with the child's mother following release. Turney and Wildeman (2012) use a variety of estimation strategies, including lagged dependent variables, fixed effects, propensity score matching, and conditioning on ever-incarcerated fathers. They find that among fathers who were living with their children, the negative effects of incarceration are robust across all measures of involvement (engagement, shared responsibility in parenting, and cooperation in

parenting) and all strategies. They find further that lower levels of father involvement are due to changes in the quality of the parental relationship, changes in fathers' economic conditions, and changes in fathers' health. Effects are similar across racial/ethnic groups. These researchers also examine the effects of fathers' incarceration on mothers' parenting and find that they are much weaker. Among fathers who were not living with their children prior to incarceration, however, the effects are smaller and disappear in fixed effects and other models. The latter finding is likely due to the fact that a large proportion of nonresident fathers have no contact with their children (Amato et al., 2009). Taken together, these studies indicate that incarceration reduces paternal involvement in families in which the father was living with the child prior to incarceration. A major limitation is that the analyses for incarcerated fathers are based on one source of data—the Fragile Families Study.

Child Well-Being

Negative outcomes for children are commonly reported in open-ended interviews with fathers and their families. Mothers and some fathers believe their children perform more poorly or have more difficulties in school following their father's incarceration (Braman, 2004; Martin, 2001; Arditti et al., 2003). And many parents report negative behavioral changes in their children, including becoming more private or withdrawn (Braman, 2004), not listening to adults (Martin, 2001), becoming irritable, or showing signs of behavioral regression (Arditti et al., 2003). Some studies also provide evidence of changes in children's emotional or mental health, with children experiencing such feelings as shame or embarrassment about their father's incarceration; emotional strain, including a belief that the father did not want to live at home; a loss of trust in the father (Martin, 2001); grief or depression (Arditti et al., 2003); or even guilt (Giordano, 2010).

Despite these negative experiences, periods of incarceration are not always viewed as the most challenging circumstance these children face (Giordano, 2010). A father's severe substance addiction or violent behavior at home may lead some children to feel happier when their father is incarcerated. Imprisonment may give the father an opportunity to receive help for his problems and even communicate more with the child (Edin et al., 2004). In such cases, a father's release from prison may be emotionally complex, being both a happy and stressful life event for the child.

In summary, qualitative studies for the most part indicate that fathers' incarceration is stressful for children, increasing both depression and anxiety as well as antisocial behavior. There is also evidence that children of fathers who are violent or have serious substance abuse problems are happier when their father is removed from the household.

The majority of quantitative studies focus on children's problem behaviors, which include both internalizing problems (depression and anxiety) and externalizing problems (aggression and delinquency). Early and persistent aggression and conduct problems are known to be associated with a host of negative outcomes in adulthood, including criminal behavior (Farrington, 1991; Babinski et al., 2003). A few studies investigate the influence of fathers' incarceration on physical health, cognitive ability, and grades and educational attainment.

The strongest and most consistent findings regarding effects of fathers' incarceration on child well-being are for behavior problems and delinquency (also see the meta-analysis of Murray et al., 2012a). Most studies examining behavior problems focus on young children. However, results of these studies generally are consistent with those of studies looking at older children. In both age groups, researchers find that fathers' incarceration increases externalizing behaviors, especially aggression.

Adjusting for other characteristics, Craigie (2011) finds a positive association between fathers' incarceration and children's externalizing behavior problems among blacks (see also Perry and Bright, 2012) and Hispanics, but not whites. Comparing a sample of children whose fathers were incarcerated after their birth with children whose fathers had been incarcerated before birth, Johnson (2009) finds a positive association between incarceration and externalizing behavior, but only for the former children. Walker (2011) uses propensity score matching and finds a similar association with aggressive behavior at age 5 (but not at age 3, when aggressive behavior is more common). Using similar methods, Haskins (2012) finds a positive association between fathers' incarceration and externalizing behavior and attention problems at age 5. Using a series of placebo tests, fixed effects models, and propensity score matching, Wildeman (2010) finds that paternal incarceration increases physical aggression among boys but not girls (see also Geller et al., 2009), particularly among children whose fathers were incarcerated for a nonviolent offense or were not abusive to the child's mother prior to incarceration. Using a similar set of tests, Geller and colleagues (2012) find that the effect of incarceration on young children's aggressive behaviors is nearly twice as large for boys as for girls, but significant for both genders; they find significant (though weaker) effects for fathers who were not living with their child prior to incarceration. Aggressive behavior is much more common among boys than among girls in this age group, which may account for the gender difference in children's response to father's incarceration. Finally, Wakefield and Wildeman (2011) find that across all age groups (young children to young adults), fathers' incarceration increases aggression, especially among boys.

These researchers find no evidence that increased behavior problems and aggression resulting from paternal incarceration differ by race. However,

they do note that in cases in which there is a history of domestic abuse, paternal incarceration may actually reduce aggressive behavior in children. These findings are consistent with research of Jaffe and colleagues (2003) showing that children's response to their father's exit from the household depends on the nature of the mother-father relationship, and suggest that the association between incarceration and aggression is complex.

Another type of problem behavior examined by researchers is delinquency, specifically among older children. Using nationally representative longitudinal data, Roettger and Swisher (2011) find fathers' incarceration to be positively associated with the propensity of adolescent and young adult males for delinquency and risk of arrest. They find no interactions with race or ethnicity and note that father's incarceration both before and after birth is associated with these outcomes, although the relationships are stronger when the incarceration occurred during the child's life. Using data from the Pittsburgh Youth Study, Murray and colleagues (2012b) find that parental incarceration is not associated with boys' marijuana use but is positively associated with theft; in this study, the associations are stronger among white than among black youth. Parenting and peer processes following parental incarceration explained about half of the association. Neither of these studies examines the effect of fathers' incarceration on delinquency among adolescent girls. Using a nationally representative sample of Dutch men convicted in 1977, van de Rakt and colleagues (2012) find a moderate positive association between paternal imprisonment and child convictions (odds 1.2 times greater than for children whose fathers never went to prison). The effect was especially pronounced when the father was imprisoned before the child's twelfth birthday. Again, this study is noteworthy because it is able to estimate the effect of incarceration net of conviction.

The evidence for children's internalizing behavior (depression and anxiety) is more mixed. Craigie (2011) and Geller and colleagues (2012) find no evidence of an effect on internalizing behavior among young children. Similarly, Murray and colleagues (2012b) find no significant influence on depression among adolescents. In contrast, Wakefield and Wildeman (2011) find that paternal incarceration increases internalizing behavior among adolescents and young adults. Part of this disparity in results may be due to the fact that internalizing of problems (depression) often does not appear until adolescence.

Two studies examine the effects of incarceration on children's physical health. Using state and year fixed effects, Wildeman (2012) finds that paternal incarceration increases the risk of early infant mortality, but only among infants whose fathers were not abusive. Similarly, Roettger and Boardman (2012) find that fathers' incarceration is positively associated with higher body mass index (BMI) in young adult women, an effect that operates primarily through depression. Foster and Hagan (2007) find evidence that

fathers' absence due to incarceration increases daughters' risk of physical and sexual abuse and neglect.

Finally, a few studies examine the effects of fathers' incarceration on children's cognitive ability and academic performance, with somewhat mixed results. Using propensity score matching, Walker (2011) finds a negative effect of incarceration on cognitive ability at age 5, whereas Haskins (2012) and Geller and colleagues (2012), using similar and more rigorous methods, find no effect at age 5. Murray and colleagues (2012b) find no relationship between parental incarceration and academic performance after adjusting for youth behavior prior to incarceration. Hagan and Foster (2012) find a negative association between fathers' incarceration (at the individual and school levels) and children's grade point average (GPA), educational attainment, and college completion. Finally, Foster and Hagan (2009), using matching techniques, find a negative effect of incarceration on years of education, even after adjusting for GPA and other characteristics, with variation by race/ethnicity. On balance, the findings for education suggest that insofar as fathers' incarceration has a causal effect on educational attainment, it operates primarily through behavior problems and socioemotional adjustment rather than through cognitive ability.

INCARCERATION OF MOTHERS

More than 200,000 women are in jails or prisons in the United States, representing nearly one-third of incarcerated females worldwide (Walmsley, 2012). The past three to four decades have seen rapid growth in women's incarceration rates—a rise of 646 percent since 1980 compared with a 419 percent rise for men (Mauer, 2013; Frost et al., 2006). Prior to 2000, most of this growth occurred among African American women. In 2000, black women were imprisoned at six times the rate of white women (Guerino et al., 2011; Mauer, 2013). Between 2000 and 2009, however, the rate declined for black women by 31 percent while continuing to increase for white and Hispanic women (by 47 and 23 percent, respectively). Mauer (2013) suggests that much of this recent shift was due to a reduction in drug-related incarcerations among black women and an increase in methamphetamine prosecutions among white women.

As the rate of women's incarceration has grown, so has the risk of maternal imprisonment (Kruttschnitt, 2010). One in 30 children born in 1990 had a mother incarcerated by age 14, compared with 1 in 60 born in 1978 (Wildeman, 2009). Scholars have been examining the experiences of incarcerated women and their children for decades, with a majority of studies using small convenience samples and qualitative methods (for reviews, see Bloom and Brown, 2011; Henriques and Manatu-Rupert, 2001; and Myers et al., 1999). These studies highlight the prevalence of economic and

educational disadvantage, substance use, mental illness, and domestic abuse among mothers with an incarceration history, with some mothers portraying jail or prison as a "safe haven" from battering and problems related to substance addiction (Richie, 1996; Greene et al., 2000; Henriques and Jones-Brown, 2000).

Nearly two-thirds of mothers in state prisons were living with their child(ren) prior to their incarceration, many in single-parent households (Glaze and Maruschak, 2008; Mumola, 2000). Thus, a predominant theme in the literature on incarcerated mothers is mother-child separation. Using single-prison samples, Poehlmann (2005b, 2005c) describes the initial separation as one of intense distress for both mothers and children (see also Fishman, 1983). During the incarceration period, mother-child contact may be limited as a result of travel costs or mother-caregiver relationship issues (Bloom and Steinhart, 1993; Hairston, 1991). Less mother-child contact may be associated with mothers' increased depressive symptoms (Poehlmann, 2005b). Other studies find that maternal incarceration is associated with a host of negative child outcomes, including poor academic performance, classroom behavior problems, suspension, and delinquency (see the review of Myers et al., 1999). Poehlmann (2005a) examines the role of caregiver arrangements and modified home environments during mothers' incarceration and finds that among children of incarcerated mothers, cognitive outcomes may be influenced by caregiver socioeconomic characteristics and the quality of the home environment. This topic merits more attention in future research.

A few recent studies use longitudinal data and more rigorous methods to examine the effect of maternal incarceration on child academic performance, housing arrangements, and behavioral outcomes. Using data from two large samples of children in Chicago public schools and propensity score and fixed effects modeling techniques, Cho (2009a, 2009b) finds no association between maternal incarceration and children's standardized test scores, but a negative effect on grade retention in the years immediately following mother's prison entry. Another study (Cho, 2011), using administrative records and event history analysis, finds that adolescents are at higher risk of dropping out of school in the year their mother enters jail or prison.

Two studies use data from the Fragile Families Study to examine the effect of maternal incarceration on housing instability. Geller and colleagues (2009) find that incarceration is associated with an increase in the likelihood of residential mobility. Wildeman (forthcoming) finds no effect on child homelessness. This latter finding may be due to the fact that children of incarcerated mothers are more likely than children of incarcerated fathers to enter foster care (Dallaire, 2007; Mumola, 2000).

Finally, Wildeman and Turney (forthcoming) use data from the Fragile Families Study to examine the effect of maternal incarceration on child

behavior problems. Using propensity score models for both parent and teacher reports, they find no association between mothers' incarceration and children's behavior problems at age 9. Dallaire (2007), however, finds that adult children of incarcerated mothers are more likely than adult children of incarcerated fathers to be incarcerated.

Taken together, then, the small amount of evidence on the effect of maternal incarceration on overall child well-being is mixed. This subject, too, deserves more attention in future research.

METHODOLOGICAL LIMITATIONS

To put the above discussion in proper context, it is important to note the major limitations of the studies reviewed. First, all of the ethnographies and many of the quantitative studies are based on convenience samples obtained in specific cities or communities. While these studies provide rich descriptions of the family lives of men and women with an incarceration history, and while they generate a multitude of intriguing hypotheses, their findings may not be generalizable to families in other cities or other parts of the country.

Second, although a number of more recent quantitative studies use probability samples of the national population, these studies are based on only three data sets: the Fragile Families Study, the National Longitudinal Study of Adolescent Health, and the Panel Study of Income Dynamics. At this time, these are the only large, nationally representative data sets that include information on incarceration. The field would benefit and more would be known about outcomes for families if other large national surveys did more to capture data from families with incarcerated or previously incarcerated parents.

A third limitation involves the measurement of other criminal justice contact or criminal behavior. With a few exceptions, studies do not take account of factors that precede incarceration (offending, arrests, and convictions), so the consequences of imprisonment are not sharply distinguished from those of other factors.

A fourth, and perhaps most important, limitation of the literature is that all of the studies are based on observational rather than experimental data. Men who go to prison are different from other men in ways that are likely to affect their family relationships as well as their chances of incarceration. As noted elsewhere in this report (see Chapters 2 and 7), men and women with an incarceration history are less educated and more likely to have mental health problems and alcohol and drug addictions than the general population. In turn, their families are likely to be unstable and to experience economic hardships and their children to be at risk of doing less well in school regardless of whether the father or mother spends time in jail;

BOX 9-2
Techniques for Dealing with Omitted Variable Bias

Researchers use a variety of statistical techniques to deal with the problem of omitted variable bias. The oldest and most widely used is to control for all of the characteristics that might affect both incarceration and family well-being. Unfortunately, this technique is limited because the data sets available for examining the effects of incarceration do not measure all the relevant characteristics.

A second technique is to measure the outcome variable of interest before and after fathers' incarceration to see whether spending time in prison is associated with a change in the outcome. This approach—the lagged dependent variable (LDV) model—requires longitudinal data and allows the researcher to estimate the effect of incarceration net of the factors that affect the preincarceration outcome. In one of the studies we examined (Geller et al., 2012), for example, the researchers controlled for children's behavior problems at age 3 and looked at whether those whose fathers went to jail or prison when the children were between ages 3 and 5 were more likely to exhibit behavior problems at age 5 than those whose fathers did not go to jail or prison. Longitudinal data also allow the researcher to conduct a placebo test to see whether fathers' future incarceration predicts current family problems. In the example given above, the researchers looked at whether children whose fathers were incarcerated when the children were between ages 3 and 5 showed higher levels of behavior problems at age 3. A positive outcome would indicate that something other than incarceration was causing the behavior problems.

Other researchers use longitudinal data to estimate a fixed effects model, which examines the association between a change in incarceration and a change in behavior. While this model does a better job than the LDV model of controlling for omitted variable bias, it does not eliminate the possibility that a change in an omitted variable might have led to the incarceration as well as the change in behavior. Continuing with the previous example, a father might have become

that is, the correlation between incarceration and family hardship may be due to conditions other than incarceration. The failure to take account of characteristics that affect incarceration as well as social and economic hardships leads to what researchers call "omitted variable bias." This problem is endemic in the literature on incarceration effects.

The best way to deal with omitted variable bias is to run an experiment in which people are randomly assigned to incarceration status. Because people cannot be randomly assigned to prison,[2] researchers have used a

[2]Note, however, that some studies have tested an overnight stay in jail as treatment (Sherman and Berk, 1984). In their study of police interventions for family violence, Sherman and Berk (1984), for example, found that a night in jail was not strongly associated with reduced offending. In addition, researchers have considered differing practices as natural experiments. In a recent study, Loeffler (2013) used randomization to judges, which led to variation in time

unemployed during the 2-year period after the child reached age 3 and before age 5 and responded by engaging in criminal activity that ultimately led to incarceration. In this case, the father's unemployment and criminal behavior may also have a role in the child's increasing behavior problems, or may be the primary causes rather than incarceration.

A fifth technique is to use a state policy, or natural experiment, to estimate the effect of incarceration on family well-being. For example, several researchers have used state differences in race-specific incarceration rates to determine whether these policies and practices affect family formation behaviors, such as marriage, divorce, and nonmarital childbearing. By using a state-level measure of incarceration, the researcher avoids the problem of omitted variable bias at the individual level. But the problem still exists at the aggregate level unless the researcher can find a policy or practice that affects an individual's chances of incarceration but is unrelated to the outcome of interest except via this pathway.

Finally, some researchers use a propensity score matching approach, which entails calculating a probability of incarceration for each man (or father) in the study, and then comparing the family outcomes of men with the same probability (or propensity) but different incarceration experiences to see whether they differ. Although this approach does not deal with omitted variable bias—propensity scores are based on observed variables only—it has certain advantages over standard regression analyses and may yield more accurate estimates of the association between incarceration and outcomes of interest. One of the more convincing studies is one that starts with a sample of convicted men, constructs a matched sample of men with the same propensity for incarceration, and then looks at whether those who were incarcerated had different outcomes than those who did not go to jail or prison (Apel et al., 2010). This study found that men who were incarcerated were more likely to divorce than their counterparts who were not incarcerated.

variety of statistical techniques to deal with the problem of omitted variable bias (see Box 9-2).

KNOWLEDGE GAPS

As discussed above, the studies reviewed in this chapter have several limitations. A more robust research program is needed to answer the questions considered here with greater confidence. We offer the following observations on how to address some of the knowledge gaps in this area.

served, to assess the effects of incarceration on crime and unemployment. While this approach has limitations, it would provide additional information to be considered along with findings based on the other approaches to dealing with omitted variable bias.

Understanding Variations

More work is needed to understand how the effects of fathers' incarceration on families and children vary depending on living arrangements prior to incarceration, the quality of relationships, and the ages and developmental stages of affected children. Information on the level of involvement and quality of the parental relationship prior to conviction could be incorporated into an experiment, as well as longitudinal data collection. Note, however, that measuring fathers' residence would be a challenge because men who are likely to spend time in prison and jail also are likely to be involved in multiple households before and after release.

Still missing is important descriptive information that bears on the causal questions at hand. The field would benefit from tackling the problem of omitted variables by observing them. How dangerous, violent, drug involved, and/or mentally unstable are the individuals who go to prison? What do their personal histories (as children) of family instability and family violence look like? How does incarceration contribute to family complexity—multiple partners, attachments, and households?

The collection of longitudinal data tracking individuals before and after their contact with the criminal justice system is needed. Partnering with existing longitudinal studies would be a useful avenue to explore to this end. Indicators of the quality of family life need to be tracked to better understand the influences on spousal and/or parental behaviors.

Aggregate Effects

Little attention has to date been paid to estimating the aggregate effects of high rates of incarceration on family stability, poverty and economic well-being, and child well-being. Given that incarceration is concentrated among men with low education, one might expect that recent trends in incarceration have affected aggregate poverty rates as well as trends in family structure and intergenerational mobility. To address aggregate effects, better estimates are needed of the proportion of families and children exposed to incarceration and the differential effects of incarceration depending on living arrangements and the quality of preincarceration relationships. Estimates also are needed of the proportion of families likely to benefit from a family member's incarceration.

CONCLUSION

This chapter has reviewed the literature on the consequences of parental incarceration for the children and families of those incarcerated,

a question of importance at any level of incarceration but particularly in the current era of high U.S. incarceration rates. Our literature review has included both recent ethnographic studies and quantitative analyses and studies using convenience samples as well as population-based samples. Such a review represents a partial look at the literature on the consequences of incarceration for families and children; a more thorough review would be beyond the scope of this study. Nonetheless, our review suffices to provide a sense of the consequences. Although the evidence from individual studies is limited and findings across some studies are mixed, our review leads to the conclusion that parental incarceration, on balance, is associated with poorer outcomes for families and children. Whether these associations reflect causality is much less certain.

We find consistent evidence, in both the ethnographic and quantitative studies, of a link between men's incarceration and instability in male-female unions. We find a strong and consistent link between fathers' incarceration and family economic hardship, including housing insecurity, difficulty meeting basic needs, and use of public assistance. Incarceration tends to reduce fathers' involvement in the lives of their children after release, in large part because it undermines the coparenting relationship with the child's mother. Finally, both ethnographic and quantitative studies indicate that fathers' incarceration increases children's behavior problems, notably aggression and delinquency. The consequences are especially pronounced among boys and among children who were living with and positively involved with their father at the time of his incarceration. Recent surveys indicate that roughly 4 of 10 incarcerated fathers report living with their children prior to incarceration. Of interest, although father's incarceration is associated with poorer grades and lower educational attainment, it is not associated with lower cognitive ability. Rather, school failure appears to arise from social-emotional problems rather than a lack of intellectual capacity.

In reviewing the literature on the consequences of parental incarceration for the families and children of those incarcerated, we have been mindful of the broad charge to this committee. Ideally, the research evidence would help in determining whether the dramatic increase in incarceration rates over the past four decades, viewed as a distinct phenomenon, has affected, for better or worse, the families and children of those incarcerated. There are, however, no studies explicitly examining the effect of the prison buildup on the families and children of incarcerated parents. As a statistical matter, the number of children with a parent in prison continued to grow with increasing incarceration, reaching an estimated 1.7 million in 2007. Thus we might hypothesize that greater numbers of individuals and families have experienced the predominantly negative consequences of a partner's or

parent's incarceration as the extent of incarceration has expanded, but that hypothesis has not been tested. There remain unanswered questions about the aggregate effects of the incarceration buildup. Nonetheless, the close correlation between having a partner or parent who has been incarcerated and poor outcomes among families and children is unmistakable.