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Health Consequences of Family Member Incarceration for Adults in the Household

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The vast expansion of the US penal system since the 1970s is often characterized in terms of the nearly fivefold increase in incarceration rates.[1,2] Before this period of mass incarceration, having a family member imprisoned was a rare event affecting only the most unfortunate families. Having a family member imprisoned is common in the United States today; roughly 8% of US children born in 1990 had a father imprisoned by the time the child was age 14.[3] Parental imprisonment is also unequally distributed by race: 25% of African American children and 3% of white children have a parent who is imprisoned at some point in their childhood.[4] High and unequally distributed rates of paternal imprisonment in US families also imply high and unequally distributed rates of imprisonment of adult family members, that is, adults aged $\geq$18 who are no longer considered minors, which includes siblings, adult children, and partners.[1] Maternal imprisonment, although less common than paternal imprisonment, occurs more frequently among African American children than among white children.[4] Estimates generated using data from the 2006 General Social Survey showed that 44% of African American women and 12% of white women had a family member—counting not only immediate family members but also aunts, uncles, and cousins—who was imprisoned.[5] All of these estimates, moreover, markedly understate the burden of family member incarceration (that is, prison and jail incarceration), because most current surveys include information only on prisoners.

The prevalence and concentration of imprisonment among the most socioeconomically disadvantaged Americans has caused concern about how mass incarceration could affect racial disparities in the health and well-being of US families.[1,6-8] Although we recognize that other populations (eg, Hispanic people) have also been disproportionately affected by exponential increases in incarceration in recent decades,[9] we focus largely on the implications of this phenomenon for health disparities between African American and white populations. Not only is the difference in cumulative risk of incarceration the largest among these 2 groups,[4] but extensive criminal justice and health disparities literature also has focused on the experiences of African Americans relative to white people. Much, although certainly not all, of the research on the health consequences of incarceration has focused on how parental incarceration affects the health and well-being of children,[9-14] with an eye toward considering the macro-level consequences of mass incarceration for disparities in child well-being (eg, consequences related to education, housing, and behavioral problems).[15,16] Far less research has considered the health consequences of having an incarcerated family member, particularly for those men and women who are left to manage household and childcare responsibilities during the time that their loved one is incarcerated, emotionally and financially support the family member who is incarcerated, and integrate the incarcerated family member into the household when he or she returns. To our knowledge, no articles in the literature have focused exclusively on these effects.

In light of recent attention to the health consequences of mass incarceration,[17] the goal of this article is to provide the first review focused on the small but rapidly growing literature on the consequences of family member incarceration for the health and well-being of other adults in the household. We do so in 3 ways. First, we review research on the broader ways in which having an incarcerated family member affects other adults in the household, focusing on shifts in family structure, economic strain, and stigma. Second, we review research on how family member incarceration affects the health of other adults in the household. Third, we discuss

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improvements in survey design and data collection strategies that could better facilitate such research.

Although much of this third section critiques the data available, it is important to note that existing research has 2 implications. First, having a family member incarcerated has profound effects on the health and well-being of the adult women left behind. Second, because of the dramatically unequal concentration of incarceration among African American families relative to white families,[1] mass incarceration has almost certainly exacerbated racial health disparities in the United States. The next vein of work in this area will need to decipher not whether mass incarceration has indirectly increased health disparities among US adults, but exactly by how much it has done so. Absent data with more specific measures to quantify these particular effects, however, the magnitude of these effects is an open question.

In conducting our review, we considered all peer-reviewed journal articles on the health of adults tied to incarcerated people, either through kin relations and/or through shared childcare or household responsibilities. We relied largely on Google Scholar and PubMed to assess studies conducted in the United States since 2000, a period during which the literature on the health implications of incarceration for family members increased considerably. From these articles, we settled on a small number of articles that we considered exceptionally strong, that is, those that used a rigorous research design, used nationally representative samples, and/or considered outcomes that were otherwise understudied in the literature (eg, family structure). In conducting this review, we also considered qualitative research on the broader consequences of family member incarceration. Whereas quantitative research is useful for deriving nationally representative estimates and has the potential to support causal claims, qualitative research that relies on interviews and ethnographies is especially useful in uncovering insights into potential mediators and moderators of these relationships. Although we were systematic in our appraisal of the literature, we considered the literature on the health consequences of family member incarceration for adults in the household to be too small for a proper systematic review; thus, we focused on a more narrative form in this article.

Family Member Incarceration and Household Functioning

Before examining research on the health consequences of family member incarceration for adults, it is important to review the more extensive literature on how this event affects the broader family system (ie, relationships beyond partners or children). We begin with this discussion because characteristics of the broader family system are one set of mediators that have received relatively more research attention than others. In addition, these factors are often directly relevant for the family members of the incarcerated and therefore are especially likely to have health implications for others in the household.

This attention is vital because it is unlikely that family member incarceration would influence the health of other adults in the household without also affecting other aspects of the household or family system. People who are most likely to have an incarcerated family member are also likely to have other circumstances that negatively affect health, including poverty, neighborhood disorder (ie, neighborhoods characterized by crime, danger, high drug use, and litter),[18] and poor access to health care.

Available data are poorly equipped to distinguish issues related to (family member) incarceration from these types of unobserved factors that may confound relationships between family member incarceration and health outcomes. Given that most data sets are cross-sectional in nature, include limited covariates for adjustment, and/or have few or no details on the timing of family member incarceration relative to the measurement of health outcomes, researchers often have difficulty making causal inferences about this relationship using such data sets. It is worth noting that in many cases, the same outcomes we observe after spells of family member incarceration are also likely to occur before this experience as a result of these chronic social and environmental factors. In this commentary, we focus on changes in family structure, economic strain, and stigma that result from having a family member incarcerated and that may mediate the relationship between family member incarceration and health outcomes. These factors are most readily measured through available data sets. Even if the effect of family member incarceration is not causal, it is still a readily ascertainable risk factor for poor familial outcomes and therefore represents a key opportunity for public health interventions.

Of the findings in this area, perhaps the most consistent is that incarceration increases the risk of union dissolution for men and women who were in sexual relationships before incarceration.[19,20] These shifts in family composition have important implications not only for how they could exacerbate preexisting tensions between parents,[21] but also for how fathers will share parenting duties with the mothers of their children.[22] Therefore, these shifts may have important ramifications for the health and well-being of women who share children with incarcerated men. Union dissolution is generally associated with declines in well-being, particularly psychological health, although the strength of these associations depends in part on the quality and duration of the relationship.[23,24] More indirectly, union dissolution may shape negative health outcomes through its association with declines in economic well-being, especially for disadvantaged families,[25] because relationship dissolution often represents the loss of a key source of social support and results in single parenthood—all of which may tax health by acting as stressors.

Although many unions dissolve during the incarceration period or immediately thereafter, for those who stay with their partner, the quality of the relationship decreases after incarceration.[26] This decrease is not felt universally. Some qualitative research relying largely on interviews shows that

incarceration can strengthen the relationship with the incarcerated partner, providing a "safe space" in which partners can address their individual and relational issues.[27] Future research is needed to assess whether these relationships continue to benefit after the incarceration period or dissolve thereafter.

The loss of earnings associated with union dissolution—provided they are not replaced by earnings from a new sexual partner—will have negative consequences for the economic situation of families with an incarcerated or formerly incarcerated member. Analyses published in 2011 and 2002, respectively, indicated that men with histories of incarceration contributed 25% less to the mothers of their children than did similar men who had not been incarcerated,[28] and their wages decreased by 10% to 20% after release.[29] Consequently, women who are tied to formerly incarcerated men are more economically disadvantaged as a result of this experience than are women who are not tied to formerly incarcerated men, ultimately affecting their ability to pay for basic needs such as food, housing, and health care.

In large part because of these declines in household income and increases in household expenditures, adults in households affected by incarceration are more reliant on welfare,[30] more likely to have unstable housing,[31] and more likely to have material hardship[32] than adults in households that are not affected by incarceration, all of which likely have health consequences.[33-35] One example of such expenditures is the cost associated with keeping in touch with an incarcerated loved one. Precise estimates of how much family member incarceration affects household expenditures do not exist, but research based on convenience samples suggests that the expenses associated with keeping in touch with an incarcerated family member, which represent only a fraction of the expenses associated with the loss of a family member, are substantial. Some estimates indicate that poor households (ie, households with an annual income <$20 000) spend more than one-third of their household income to visit, call, and send packages to their incarcerated loved ones.[36,37]

If the incarceration of a family member affected only the family structure and functioning and economic well-being of families, it would still likely have a substantial effect on the health of adults in the household. Yet, some qualitative research also suggests that the sense of shame or stigma attached to incarceration[38,39] affects not only those who have ever been incarcerated but also their children and other adults in the family.[27,40,41] Further tests are needed to determine the magnitude of this stigma. However, to the degree that this stigma explains why this event is associated with the greater social isolation that family members of those who are incarcerated face compared with families without an incarcerated family member,[42] or the lower levels of social support they feel they have,[43] stigma may be one of the mechanisms through which the incarceration of a family member could harm the health of other adults in the household.[44]

Family Member Incarceration and Adult Health

Most of the research on the health effects of family member incarceration focuses on the effects on sexual behaviors and the increased risk of sexually transmitted diseases. In this section, we review the broader literature on the health effects of family member incarceration by focusing on mental and physical health. We close with a discussion of one example of an understudied adult health consequence of family member incarceration—the risk of domestic violence victimization—and show how the lack of evidence in this area makes it difficult to fully assess the complex combination of health effects of incarceration for families.

Qualitative research paints a portrait of family member incarceration and subsequent community reentry as intensely stressful for women who take care of incarcerated men, including mothers and/or sexual partners, because this experience is punctuated by depression and anxiety.[27,40,41,45,46] The quantitative research also tends to find negative effects of family member incarceration on the mental health of adults left behind.[47,48] Having a child incarcerated increases psychological distress for mothers, and the financial burdens that these mothers assume to care for their incarcerated adult child's children play a central role in explaining these effects.[47] The story is much the same for mothers of children with incarcerated fathers. Women in these situations have a 25% increase in the risk of presenting symptoms consistent with major depressive disorder and a decline in their life satisfaction.[48]

Much less evidence indicates how the incarceration of a family member affects the mental health of the men who are left to manage the family in the absence of a loved one, and the few available studies arrive at confusing conclusions. For example, one article showed that family member incarceration had no effect on the psychological distress of men in the household after adjusting for other stressors.[49] However, the study also found that family member incarceration increased the psychological distress of men who had never been incarcerated themselves. The authors constructed a theoretical edifice to explain these findings, but absent confirmation of average negative effects of family member incarceration on men's health, the complex interactions of various contributing factors should not be overinterpreted when assessing these effects. The mental health effects of family member incarceration are more consistently observed in the literature for women than they are for men. In part, the differences in what we know about the health effects of this event on women and men is attributable to the limited research available on men.

Although the mental health effects of family member incarceration are ambiguous, researchers know fairly well how family member incarceration affects risky sexual behaviors and the risk of contracting sexually transmitted infections (STIs). Because this set of outcomes has been analyzed extensively in the literature on the indirect health outcomes

of mass incarceration, we reviewed this research briefly. Put most succinctly, most evidence shows that the disruptions to sexual relationships caused by incarceration increase engagement in risky sexual behaviors and the risk of contracting STIs, both at the individual and community levels.[50-53] Although few studies considered the indirect effects of mass incarceration on infectious diseases that are not primarily spread through sexual contact, one report linked increases in incarceration to substantial population-level increases in the incidence of tuberculosis and multidrug-resistant tuberculosis.[54] Future research might further examine the association between family member incarceration and other non-STIs.

Beyond research on the consequences of family member incarceration and reentry for mental health, sexual behaviors, and risk of contracting STIs, little research exists on the broader physical health effects of family member incarceration. The one exception is cardiovascular disease. Some research suggests that family member incarceration could increase women's risk factors for cardiovascular disease[5] through various pathways.[55] Some research also indicates that having an incarcerated family member has no effect on men's risk factors for cardiovascular disease.[56] Consistent with other research finding no main effect of family member incarceration on men's psychological distress,[49] the literature suggests that the consequences of family member incarceration for men's health are more ambiguous than they are for women's health. This ambiguity is due to the fact that more men than women are incarcerated, and more women than men have an incarcerated family member. Furthermore, more research has focused on the consequences for female partners of the incarcerated persons than on the consequences for other persons in social relationships with the incarcerated persons (eg parents), who may also be affected by a household member's incarceration.[56]

Perhaps the most disappointing gap in research is the insufficient attention paid to the effects of family member incarceration on women's risk of domestic violence victimization. Indeed, few studies considered how the removal of an abusive or otherwise violent individual from a household may have a protective effect on women who may have been victims of domestic violence while living with the later-incarcerated abusive individual. This relative gap in research attention is despite the fact that most studies that considered the effects of incarceration on families indicated that those who had a family member who was incarcerated also were at higher risk for experiencing domestic violence before the family member's incarceration than were persons who did not have an incarcerated family member.[2,19,27,48,57] Although some data (mostly qualitative data) are available on this topic, virtually no research has tested the association between incarceration of a family member—especially a sexual partner—and a woman's risk of exposure to domestic violence after the family member's incarceration, a gap that should be filled.

Implications for Health Disparities

Because family member incarceration occurs disproportionately among socioeconomically disadvantaged African American families,[1,4] we also believe that these family-level health effects have likely increased health disparities in the United States. Little evidence of substantial racial differences in the association between family member incarceration and health exists. Therefore, our beliefs about the implications for racial disparities are driven by the higher prevalence of family member incarceration for the African American population than for the white population.

Family member incarceration affects the health of those involved with the incarcerated individual, and the concentration of these effects within disadvantaged populations likely exacerbates health disparities in the United States. However, it is unclear how large the effects of family member incarceration are for affected families and for population health disparities, as well as how the magnitude of such effects may differ across racial groups. For example, if the health effects for African Americans are less severe than they are for white persons, perhaps because family member incarceration is more common among African Americans, then overall disparities may still increase, albeit less sharply. However, if the health effects of a family member's incarceration are more severe among African Americans than among white persons, perhaps because family member incarceration augments or intensifies mechanisms that contribute to other sources of racial health disparities, then incarceration has the potential to intensify racial disparities in health.

Data Limitations and Future Directions

Some of this lack of insight may be the result of oversights by the research community. Yet, some of these gaps are likely caused by data limitations, that is, the lack of survey questions or linked administrative data that make it possible to rigorously examine the health effects of family member incarceration. We consider 2 ways to better combat the lack of data on this topic.

The first way is simple: add questions about current family member incarceration and history of family member incarceration to nationally representative health surveys such as the National Health and Nutrition Examination Survey (NHANES)[58] that include high-quality, objectively measured indicators of health. Adding questions would have 2 major benefits. First, it would provide nationally representative estimates of the number of men and women who currently have an incarcerated family member or who have ever had an incarcerated family member. Research in this area has used either data that are not representative of the US population[56] or a broad definition of family (eg, cousins, aunts, and uncles).[5] Just knowing the population incidence and cumulative prevalence of these risk factors would therefore greatly benefit the field. Second, including these questions on major national health surveys that also include high-

quality, objectively measured health indicators (eg, NHANES) would also make it possible for researchers to have a more comprehensive assessment of the associations between family member incarceration and a range of physical and mental health outcomes.

Family member incarceration is associated with a certain number of outcomes. The outcomes we do know about are mostly based on self-reports, which is an important problem. Adding questions on family member incarceration to these types of surveys would advance our knowledge of the range of health outcomes, both diagnosed and self-reported, affected by family member incarceration.

Yet just knowing how substantial the associations are between family member incarceration and health across a wide range of appropriately measured mental and physical health conditions leads to only a partial understanding of how consequences of incarceration contribute to health disparities. To truly know the magnitude of this contribution, we also need to identify the causal effects of family member incarceration on health. However, the cross-sectional data structure of most nationally representative health surveys is poorly equipped for teasing out causal effects, leaving 2 options. First, we could use quasi-experimental variation in criminal justice policies—either across geographic locations (eg, states) or across time within a specific location—to estimate causal effects of family member incarceration on health by using linked administrative data. Broadly speaking, this type of strategy involves linking official birth records, death records, and/or other medical records for certain persons with records of incarceration experiences of certain family members from state or federal departments of correction. This strategy, although promising, involves identifying such quasi-experimental variation in a location that also has linkable data on health outcomes, neither of which are easily identified or achieved. Second, researchers could embed high-quality, objectively measured health outcomes into longitudinal studies that measure incarceration, which would allow scholars to better understand how the incarceration of a family member affects that person's household. For example, disease diagnoses and/or death certificates maintained by health departments could be matched with existing data sets that include measures of family member incarceration (eg, the Fragile Families and Child Well-Being Study[9,59]). Future waves of these data sets could also add to the collection of data on objective health measures (eg, salivary or blood-based biomarkers) that could substantially enhance our understanding of family member incarceration and stress-related health outcomes. This strategy is promising, yet it also comes with limitations, including the increased costs associated with collecting these data (eg, interviewer training, sample analysis, and respondents' cooperation with data collection procedures).

Longitudinal surveys that accurately measure incarceration at the household level either focus on a narrow range of family relationships (eg, child, partner, mother)[10,60] or have high attrition,[28,59] making the addition of health questions to surveys a poor option. This approach also relies on family members to know about any previous incarceration and accurately report on it. Absent this information, the other logical choice would be to design a new longitudinal survey that captures high-quality data on incarceration and health for multiple family members. Yet even rolling out a pilot of such a study would require a substantial expenditure of resources.

Conclusion

Evidence on adult health effects of family member incarceration is limited, yet virtually all signs point toward negative consequences of this event for the health and well-being of women who have an incarcerated family member. The evidence is less clear for men; 1 study found no effect and another study found a substantial effect but only after introducing a nuanced interaction term. This inconsistent evidence notwithstanding, most research suggests that family member incarceration has negative effects on the health of adults in the household.

Although barriers to any substantial investment in data in this area exist, analysis of existing data shows that mass incarceration has dramatically changed the landscape for the most socioeconomically disadvantaged families, especially African American families, with likely implications for their health and for health disparities at the national level. Yet, absent substantial investments in data collection to study these effects, it will be difficult to gauge how dramatic these effects have been and will continue to be. Future research and investment could provide insight into which criminal justice policy levers need to be adjusted to minimize health disparities.

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