

The effects of having an incarcerated family member on Black women's health

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TAKEAWAYS

Among women, having an incarcerated family member is associated with an increased risk of poor cardiovascular health.

Black women are disproportionately likely to have an incarcerated family member compared to White women.

Family member incarceration likely contributes to racial disparities in women's health given the disproportionate experience of Black women.



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Disparities in health outcomes between Black and White

Americans are well-documented.¹ Individuals who are Black are at higher risk of obesity, diabetes, hypertension, and cardiovascular disease, and are more likely than those who are White to experience these adverse health outcomes at younger ages.² The social determinants of health—the conditions in the places where people live, learn, work, and play—are important in explaining health inequities.³ One such determinant that may affect health is the incarceration of a family member. Research on the consequences of incarceration for men, their children, and their communities has focused on both mental and physical health. However, studies of the effects of male incarceration on female family members have been restricted to examining mental health rather than physical health outcomes. The study described in this article seeks to help fill in this gap by examining the effects of family member incarceration on women's cardiovascular health.⁴ We address the following research questions:

- What is the association of family member incarceration to cardiovascular disease and related risk factors?
- Is this association only found among women with incarcerated family members, or also among men?

An estimated three million women annually have an incarcerated partner; an unknown number have another incarcerated male family member, such as a son, brother, or father.

Black male incarceration and women's health

Black men are disproportionately likely to be incarcerated compared to White men, particularly if they have low levels of education or reside in poor neighborhoods.⁵ Around one in five Black men is expected to be imprisoned at some point in his lifetime, and an estimated 60 to 70 percent of Black men with less than a high school education will experience incarceration by their early 30s. Many of these incarcerated men leave female family members behind. An estimated three million women annually have an incarcerated partner; an unknown number have another incarcerated male family member, such as a son, brother, or father.⁶ These women are disproportionately likely to be poor and Black themselves.

Having an incarcerated family member could result in decreased economic resources, compromised family functioning, reduced social support, and higher levels of chronic stress. All of these factors are associated with adverse health effects, particularly with regard to cardiovascular health.⁷ While these associations

are not specific to race or gender, Black women are more likely than those in other groups to experience the incarceration of a family member, and people who are Black are more likely than people who are White to experience chronic stress through other avenues.⁸ Indeed, research suggests that because of the accumulation of experience with economic and social adversity, the incarceration of a family member may contribute to early health deterioration among disadvantaged Black women.⁹

Our study examines the association of family member incarceration with cardiovascular disease and related risk factors. We hypothesize that such an association will exist for women but not for men, because of the disproportionate level of responsibility that women bear for childcare and household management, the degree to which women tend to maintain connections to their imprisoned male family members or romantic partners, and the coping mechanisms that women are likely to choose in response to stress.¹⁰ We also suggest some ways that future research could further explore the links between family incarceration and other types of criminal justice contact on women's health, and how these associations might contribute to racial health disparities.

Methods

Our analysis uses data from the National Survey of American Life (NSAL) conducted throughout the United States between February 2001 and June 2003.¹¹ The survey was intended to gather information about the physical, emotional, mental, structural, and economic conditions of Black Americans. The sample included African Americans and Blacks of Caribbean descent in representative proportions, and Non-Hispanic Whites who resided in areas where Black individuals made up at least 10 percent of the population. The NSAL is the only broadly-representative data set that includes questions about health and incarceration and has a sample size sufficient for this analysis.

All measures used in this analysis were self-reported by respondents. We examined five health outcomes based on reports of cardiovascular risk factors and disease:

- Obesity (body mass index, or BMI, of 30 or higher);
- Diabetes (ever diagnosed);
- Hypertension or high blood pressure (ever diagnosed);
- Heart attack, cardiovascular disease, or stroke (ever diagnosed); and
- Fair or poor health (self-reported).

About 8 percent of the women in the sample and 5 percent of the men reported currently having a family member missing from the household because of jail or prison incarceration. About 1 in 20 of the women had ever spent time in jail or prison, compared with about 1 in 5 of the men.

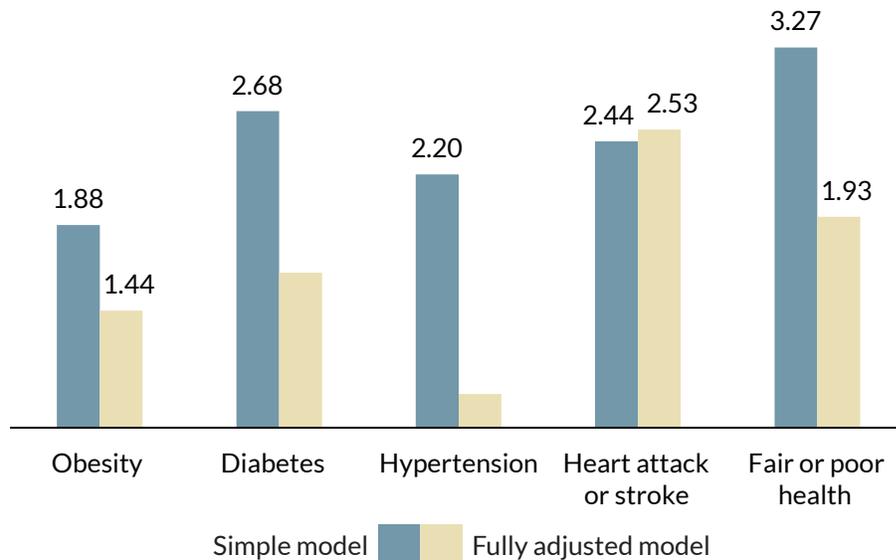
We used logistic regression to examine the association of family member incarceration with each health outcome, by gender, and controlling for demographic, socioeconomic, and health characteristics. Our results are weighted to be nationally representative of the given population and subpopulations.

Family member incarceration is associated with an increased likelihood of poor health among women.

Association of family member incarceration with likelihood of poor health

Our analysis shows that family member incarceration is associated with an increased likelihood of poor health among women. Figure 1 shows the odds that a woman with an incarcerated family member would report a poor health outcome, compared to the odds of a poor health outcome for women without an incarcerated family member. Taller columns indicate higher odds of reporting an adverse outcome.

Figure 1. Family member incarceration is associated with an increased likelihood of poor health among women.



Notes: Figure shows odds ratios, indicating the likelihood of a woman with an incarcerated family member reporting an adverse health outcome, compared to the likelihood of a women without an incarcerated family member reporting that outcome. Odds ratios are shown only when the ratio is statistically significant at $p < .05$. See text box for lists of control variables in each model.

Source: H. Lee, C. Wildeman, E. A. Wang, N. Matusko, and J. S. Jackson, "A Heavy Burden: The Cardiovascular Health Consequences of Having a Family Member Incarcerated," *American Journal of Public Health* 104, No. 3 (2014): 421–427, Table 3, models 1 and 5.

Odds ratios are only shown for statistically significant results; columns without a number indicate that the association between having an incarcerated family member and reporting a poor health outcome is not statistically significant. The figure shows odds ratios calculated with two different models; the lighter-colored columns show results controlling only for age and for having a family member missing for reasons other than incarceration, while the darker-colored columns show results with all control variables included (see text box). While both models show that family member incarceration is associated with an increased likelihood of poor health, the fully adjusted model (darker-colored columns) shows smaller odds ratios and fewer statistically significant outcomes. Note that neither of these models allow us to make causal claims about the association between family member incarceration and health.

Looking first at the results controlling for age and for family member missing for reasons other than incarceration (lighter-colored columns), we find that family member incarceration is strongly associated with an increased likelihood of poor health across all five outcomes. For women with an incarcerated family member, the odds of reporting an adverse health outcome are between 1.9 and 3.3 times higher than those for women without an incarcerated family member. Because this model includes few controls, it is possible that some of this association is

Control variables

Simple Model:

- Age
- Family member missing for reasons other than incarceration

Fully Adjusted Model:

- Age
- Family member missing for reasons other than incarceration
- Race and ethnicity
- Ratio of income to needs
- Education
- Self-rated health as a child
- Hardship during childhood
- Marital status
- Health insurance status
- Born outside the United States
- Physical activity (for obesity outcome only)
- BMI (for diabetes, hypertension, and heart attack/stroke outcomes)
- Diabetes and hypertension (for heart attack/stroke outcome)
- Own incarceration history

explained by differences between the two groups on other characteristics that are associated with health outcomes.

Indeed, the darker-colored columns showing results with all control variables included indicate a somewhat less strong association between family member incarceration and health. These results are particularly rigorous because they control for women's own history of incarceration. Here we still find significant associations of family member incarceration with three out of the five health outcomes—obesity, heart attack or stroke, and fair or poor health—with the odds of reporting those health outcomes 1.4 to 2.5 times the odds for women without an incarcerated family member. However, the inclusion of these additional control variables makes the association of family member incarceration with hypertension and diabetes not statistically significant.

Note that our results may underestimate the effects of family member incarceration on women's health, as there is likely a significant proportion of men who will experience imprisonment at some point, but were not incarcerated at the time our data were collected.

Mechanisms through which family member incarceration could affect women's health

Previous research has identified a number of mechanisms through which the incarceration of a family member could have a negative effect on women's health, particularly their cardiovascular health. The first of these mechanisms is reduced economic resources.¹² Any income that had been provided by the incarcerated family member is likely lost; prisoners earn almost nothing, and are often prohibited from providing any money to their friends and family.¹³ Communicating with the incarcerated family member—calling, visiting, or sending packages—costs money; these costs may be borne not only by romantic partners, but also by other relatives including mothers, sisters, and aunts.¹⁴ Finally, women's future economic resources may also be reduced, both because incarceration greatly increases the risk of a romantic relationship ending (and thus loss of a partner's future income), and because incarceration greatly diminishes men's future earnings.¹⁵

Another way that family member incarceration can negatively affect women's health is through compromised family functioning.¹⁶ For women with children at home, the loss of a partner to help with childcare and other household responsibilities could be consequential. If the relationship ends during incarceration—as is likely—there could be significant tension between the parents, particularly after the father is released from prison and new relationships form.¹⁷ Family functioning could also be negatively affected by older children having to take on additional responsibilities, while simultaneously having one less adult to turn to for support.¹⁸ Even for women whose children are grown, the incarceration of an adult son could have a significant effect on an older woman's life if they take on a larger role in caring for grandchildren.¹⁹

Having an incarcerated family member can also affect women's health through the mechanism of increased chronic stress. Ethnographic research suggests that romantic partners, mothers, and other relatives may all experience dramatically increased stress and social isolation when they have an incarcerated family member.²⁰ Stress can also directly increase the risk of obesity, diabetes, hypertension, and other risk factors for cardiovascular disease through biological pathways.²¹ Although these effects may be the most difficult to quantify, they may be particularly severe since they could be exacerbated by the difficulty of dealing with both reduced economic resources and changes in family arrangements.

Research suggests that women are more likely than men to cope with chronic stress by overeating and by being sedentary, possibly increasing their risk of adverse cardiovascular outcomes.

Disproportionate effects of family member incarceration on women

Among men, we found no statistically significant associations of family member incarceration with any of the five health measures. This gender difference is likely due in part to the fact that women tend to be responsible for the majority of childcare and household management; as noted above, the incarceration of a family member often increases this burden.²² Women are more likely than men to maintain connections to their imprisoned male family members or romantic partners.²³ Research also suggests that women, particularly those who are disadvantaged and Black, are more likely than men to cope with chronic stress by overeating.²⁴ In addition, while men are more likely to respond to stress by increasing levels of physical activity, women are more likely to be sedentary.²⁵ These coping mechanisms may increase women's risk of adverse cardiovascular outcomes, while higher demands on their time as a result of family member incarceration could make it more challenging for them to undertake preventative care that could help protect them from these health risks.²⁶

Through a supplemental analysis, we determined that the effects of family member incarceration did not vary by race or ethnicity. However, because such a high proportion of women experiencing family incarceration are Black, it should be considered a unique risk factor that contributes to racial disparities in women's health.

Note that many families experiencing family member incarceration are also disadvantaged and have experienced multiple stressors such as poverty and community violence, which can themselves lead to poor health. Our study is not able to distinguish the health effects of family member incarceration from these other factors. Still, research on incarceration and family dynamics suggests that the loss of a family member is an additional burden that can exacerbate the effects of other stress factors.²⁷

Although incarceration is not a traditional risk factor for cardiovascular disease, our results suggest that current family member incarceration should be understood as part of a woman's risk profile for poor health outcomes.

Research and policy implications

Millions of women, many of them Black, experience the incarceration of a family member each year. When this annual risk of incarceration is accumulated over a lifetime, it becomes clear that the effects we identify could significantly contribute to racial disparities in women's health. As a result, there is a need for further research to explore the pathways that connect family member incarceration to adverse health effects. Including family incarceration questions in large, nationally representative longitudinal data sets would greatly facilitate such research. Longitudinal data would provide the opportunity to separate the effect on health of family member incarceration from other factors to provide more confidence in causal associations, and to better assess the mechanisms through which family member incarceration harms health.

Future research should also examine how having family members subject to other types of correctional supervision, and the long-term presence of the criminal justice system in some families' lives, affect women's health. Men's experience with the criminal justice system goes well beyond their time incarcerated, as they may be under community supervision (probation and parole) in lieu of or following time in prison or jail.²⁸

Although incarceration is not a traditional risk factor for cardiovascular disease, our results suggest that current family member incarceration should be understood as part of a woman's risk profile for poor health outcomes.²⁹ Physicians who work in communities where incarceration is prevalent should consider screening for family history of incarceration. Waiting rooms in prisons and jails present a notable opportunity to screen female partners of inmates for cardiovascular risk factors and provide them with prevention resources. Such an approach has been used in prevention interventions for HIV and other sexually transmitted diseases.³⁰

Conclusions

This study is the first to use nationally representative data to examine the association of family incarceration with cardiovascular health. It represents an important first step in assessing how racial disparities in incarceration could be a mechanism through which the social determinants of health influence the health and well-being of poor women and exacerbate already large racial health disparities. Moreover, extreme racial disparities in mass incarceration (also described as discriminatory incarceration) represent an important form of structural racism in the United States and amplify inequities across a variety of domains in addition to population health.³¹ To be sure, mass incarceration is the outgrowth of a long history of state-sanctioned racial control and violence affecting the health, well-being, and autonomy of Black Americans since the inception of slavery. However, there are some policy changes that could begin to reverse this history. For example, policies that reduce discriminatory criminal sanctions, allow for alternative sentencing practices that keep families together, and directly reduce jail and prison populations, could improve health outcomes for individuals, families, and communities and, ultimately, reduce health disparities.³² ■

Research to watch

Black men are over-represented in the criminal justice system; approximately 1 in 3 report some contact. Paternal incarceration is also associated with negative effects on children's health. Prior research suggests that Black populations in the United States are at risk of "weathering", which is accelerated aging in response to chronic stress. This could result in health inequities across the life-course, though less is known about the effects specifically on Black youth. In addition, few studies have explored how Black parents and communities understand and resist the ways that exposure to the criminal justice system directly and indirectly constrain their ability to build healthy futures for their children. To address these gaps, Tawandra Rowell-Cunsolo, Rahwa Haile, and Anthonine Pierre are conducting a study that will provide an in-depth understanding of the sources of both disadvantage and resilience experienced by Black fathers with criminal justice system involvement, and that of their children between the ages of 18 and 24 and examine the relationship between weathering in Black youth and paternal exposure to disadvantage.

The study, which is scheduled to run from 2020 through 2023, will focus on central Brooklyn, NY. The first phase of the study will involve in-depth semi-structured interviews with 20 father-child pairs, with each individual being interviewed separately. The second phase will involve conducting a cross-sectional survey of 100 Black late adolescents to examine the correlation between weathering, paternal exposure to incarceration, and other key paternal social exposures identified during phase one. Empirically demonstrating that these exposures harm child and community health could powerfully compel a responsive policy approach. This would help to create conditions to better foster health equity and create a "culture of health" in central Brooklyn communities, and New York City more broadly.

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Type of analysis: Logistic regression

Data source: The National Survey of American Life

Type of data: Survey

Unit of analysis: Individuals

Sample definition: National household probability sample of African Americans (n = 3,570), Blacks of Caribbean descent (n = 1,621), and non-Hispanic Whites (n = 891) residing in areas where Blacks accounted for at least 10 percent of the population.

Time frame: February 2001 through June 2003

Limitations: Because the data are cross-sectional, it is not possible to establish causality. The measure of family member incarceration does not differentiate family members who are in prison or jail, the length of time they have been institutionalized, when they were institutionalized, or the characteristics of the family member (for example, whether the person was a man or a woman) that was incarcerated. The measure also excludes family members who were incarcerated but never lived in the household, which might occur for some romantic partners. Health measures were self-reported, and thus may be inaccurate. The results cannot be generalized to populations living in communities where Blacks account for less than 10 percent of the population. Estimates may be conservative, as there is likely a significant proportion of men who will experience imprisonment at some point, but had not yet experienced it during data collection.

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