# Self-Reported Health Among Recently Incarcerated Mothers

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*Objectives.* We examined self-reported health among formerly incarcerated mothers.

*Methods.* We used data from the Fragile Families and Child Wellbeing Study (n = 4096), a longitudinal survey of mostly unmarried parents in urban areas, to estimate the association between recent incarceration (measured as any incarceration in the past 4 years) and 5 self-reported health conditions (depression, illicit drug use, heavy drinking, fair or poor health, and health limitations), net of covariates including health before incarceration.

*Results.* In adjusted logistic regression models, recently incarcerated mothers, compared with their counterparts, have an increased likelihood of depression (odds ratio [OR] = 1.60; 95% confidence interval [CI] = 1.18, 2.17), heavy drinking (OR = 1.79; 95% CI = 1.19, 2.68), fair or poor health (OR = 1.49; 95% CI = 1.08, 2.06), and health limitations (OR = 1.78; 95% CI = 1.27, 2.50). This association is similar across racial/ethnic subgroups and is larger among mothers who share children with fathers who have not been recently incarcerated.

*Conclusions.* Recently incarcerated mothers struggle with even more health conditions than expected given the disadvantages they experience before incarceration. Furthermore, because incarceration is concentrated among those who are most disadvantaged, incarceration may increase inequalities in population health. (*Am J Public Health.* 2015;105:2014–2020. doi:10.2105/AJPH.2015.302743)

The US incarceration rate, though recently stabilized, has increased rapidly over the past 4 decades. Accordingly, researchers have become acutely aware of the sheer number of individuals who experience incarceration and the vulnerabilities these individuals face before, during, and after incarceration.[1] In particular, a growing literature has documented the consequences of mass incarceration, defined as the historically and comparatively extreme rates of incarceration in the United States, for population health.[2–5] Formerly incarcerated individuals, compared with their counterparts, have elevated rates of mortality,[6] infectious diseases,[7] cardiovascular diseases,[8] and disability,[9] as well as an array of mental health problems including depression,[10] anxiety,[9] and life dissatisfaction.[11]

Despite the fact that, since the early 1980s, women's incarceration rates have increased faster than men's incarceration rates,[12,13] very little research has explicitly considered the health of formerly incarcerated women. Instead, research on incarcerated women often focuses on the consequences of incarceration for their families and children.[14–19] The dearth of research on formerly incarcerated women's health is an important oversight because these women are an extremely vulnerable population and present a pressing public health concern. Formerly incarcerated mothers are an especially important group because poor physical and mental health among mothers may have deleterious consequences for their children.[20–23]

We used data from the Fragile Families and Child Wellbeing Study, a longitudinal study of mostly unmarried parents living in urban areas, to provide the first examination of the relationship between recent incarceration, measured as any incarceration experience in the past 4 years, and 5 self-reported health conditions among mothers: depression, illicit drug use, heavy drinking, fair or poor health, and health limitations. First, we estimated the association between recent incarceration and self-reported health. We then estimated this association by race/ethnicity and by romantic partner's incarceration history. Our analyses adjusted for a large number of individual characteristics that may render the association between recent incarceration and health conditions spurious (including health before incarceration). Adjusting for these characteristics is especially important because incarcerated mothers are at risk for poor physical and mental health before incarceration.[5,24–26]

## METHODS

The Fragile Families and Child Wellbeing Study is a population-based cohort of children and their parents.[27] Approximately 5000 children, most of them born to unmarried parents, were sampled across 20 US cities between February 1998 and September 2000. These analyses use data from the baseline survey (when parents were interviewed in person after the focal child's birth) and the next 3 follow-up surveys (when parents were interviewed by telephone when the focal child was approximately 1, 3, and 5 years old). Of the 4898 mothers in the baseline survey, 89%, 86%, and 85% participated in the 1-, 3-, and 5-year surveys, respectively. Because the study includes a large number of unmarried and economically disadvantaged mothers, a substantial number of mothers experienced incarceration, and therefore it was possible to make meaningful comparisons between recently incarcerated mothers and their not recently incarcerated counterparts. Moreover, incarcerated mothers in the Fragile Families and Child Wellbeing Study have demographic characteristics similar to mothers incarcerated in local jails, state prisons, and federal prisons in the United States.[19]

First, we excluded the 779 mothers missing data on any of the 5 dependent variables (nearly all of which are missing because of attrition, not item nonresponse). Second, because we were

interested in the health of recently incarcerated mothers, we excluded the additional 23 mothers who were currently incarcerated at the 5-year survey. The analytic sample thus consisted of 4096 mothers. Only 1 statistically significant observed difference existed in the demographic characteristics of the full and analytic samples. Mothers in the analytic sample, compared with mothers in the full sample, were less likely to be born outside the United States (14.9% compared with 17.0%; $P<.01$). We preserved observations missing covariate data to retain as much of the analytic sample as possible (see Table 1 for the percentage of observations missing for each of the variables). We produced 20 multiply imputed data sets and averaged results across them.

## Measures

*Self-reported health conditions.* We examined 5 dichotomous health conditions, all of which were reported by mothers at the 5-year survey:

1. depression, indicating the mother had major depressive disorder in the past 12 months[28,29];
2. illicit drug use, indicating the mother reported using drugs (sedatives, tranquilizers, amphetamines, analgesics, inhalants, marijuana, cocaine or crack, LSD, heroin, or other illicit drugs) without a doctor's prescription, in larger amounts than prescribed, or for a longer period than prescribed in the past month[30];
3. heavy drinking, indicating the mother reported having 4 or more drinks in 1 sitting in the past month[30];
4. fair or poor health, indicating overall health[31]; and
5. health limitations, indicating that the mother reported a serious health problem that limited the amount of work she could do (the most common of which included back problems [18.1% of all mothers who report health limitations], asthma [15.0%], mental health [8.8%], diabetes [7.9%], high blood pressure [6.0%], and pain [6.0%]).

In supplemental analyses, we created a measure of health limitations that indicated that the mother reported only physical health limitations (and not mental health limitations); these results were substantively similar to those presented.

**TABLE 1—Descriptive Statistics for Variables Used in Analyses: Fragile Families and Child Wellbeing Study, United States, 1998–2000 through 2003–2006**

| Characteristic | % or Mean (SD) | % Missing |
|---|---|---|
| Depression | 16.8 | 0.0 |
| Illicit drug use | 3.8 | 0.0 |
| Heavy drinking | 6.5 | 0.0 |
| Fair or poor health | 13.8 | 0.0 |
| Health limitations | 10.1 | 0.0 |
| Recent incarceration | 7.0 | 0.0 |
| Race/ethnicity | | |
| Non-Hispanic White | 21.0 | 0.2 |
| Non-Hispanic Black | 49.0 | 0.2 |
| Hispanic | 26.5 | 0.2 |
| Non-Hispanic other race | 3.5 | 0.2 |
| Foreign-born | 14.9 | 0.3 |
| Age, y | 25.211 (6.051) | 0.0 |
| Lived with both biological parents at age 15 | 42.8 | 1.0 |
| Education | | |
| < high school | 33.3 | 0.1 |
| High school diploma or GED | 31.0 | 0.1 |
| Postsecondary education | 35.7 | 0.1 |
| In poverty (≤ 100% FPL) | 41.3 | 8.1 |
| Material hardship | 1.129 (1.606) | 6.3 |
| Employment | 53.6 | 6.4 |
| Lives with parent | 19.1 | 6.7 |
| Relationship with child's father | | |
| Married | 29.9 | 6.5 |
| Cohabiting | 27.4 | 6.5 |
| Nonresidential romantic | 9.9 | 6.5 |
| Separated | 32.8 | 6.5 |
| Relationship quality with child's father | 3.298 (1.409) | 19.0 |
| New partner | 11.2 | 6.3 |
| Number of children in household | 2.307 (1.330) | 6.7 |
| Parenting stress | 2.185 (0.676) | 18.6 |
| Smoked during pregnancy | 19.2 | 0.2 |
| Used drugs or drank alcohol during pregnancy | 13.2 | 0.2 |
| Impulsivity | 1.526 (0.479) | |
| Incarcerated between the baseline and 1-year surveys | 0.6 | 21.4 |
| Father education | | |
| < high school | 32.0 | 3.5 |
| High school diploma or GED | 36.4 | 3.5 |
| Postsecondary education | 31.6 | 3.5 |
| Father employment | 77.3 | 26.8 |
| Father impulsivity | 2.011 (0.669) | 36.3 |
| Father engaged in domestic violence | 7.4 | 0.0 |
| Father incarcerated | 31.3 | 0.0 |
| Child born low birth weight | 9.7 | 2.8 |
| Child temperament | 0.567 (0.127) | 6.5 |
| Depression (lagged) | 15.5 | 6.3 |

*Continued*

**TABLE 1—*Continued***

| | | |
|---|---|---|
| Illicit drug use (lagged) | 2.0 | 6.4 |
| Heavy drinking (lagged) | 6.3 | 6.4 |
| Fair or poor health (lagged) | 13.2 | 6.3 |

*Note.* FPL = federal poverty level; GED = general educational development. FPL is determined by the US Census. All variables refer to mother's characteristics unless otherwise noted. Missing values were preserved with multiple imputation. The sample size was n = 4096.

*Recent incarceration.* Recent incarceration is a dichotomous variable indicating that the mother was incarcerated at any point after the 1-year survey and up to (but not including) the 5-year survey. Information about the mother's recent incarceration came from (1) mother's or father's reports that she experienced incarceration between survey waves or (2) mother's or father's indirect reports of incarceration (e.g., a report that the child stopped living with the mother because she was incarcerated or a report that the mother had never been incarcerated at the 1-year survey and that she subsequently reported experiencing incarceration at a later survey). We considered the mother to have experienced recent incarceration if either she or the father reported that she had been incarcerated, because individuals underreport incarceration and this approach is consistent with other research using these data.[19,32,33]

*Covariates.* Incarcerated mothers experience disadvantages before incarceration; therefore, the analyses adjusted for a wide array of demographic, socioeconomic, family, and behavioral characteristics associated with incarceration and health.[1,18,34] All covariates were measured at the baseline or 1-year surveys to ensure that they were measured temporally before the measure of incarceration. Mother's demographic characteristics included race/ethnicity (non-Hispanic White [reference], non-Hispanic Black, Hispanic, non-Hispanic other race), foreign-born status, age, and childhood family structure (1 = *lived with both biological parents at age 15,* 0 = *did not live with both biological parents at age 15*). Socioeconomic characteristics included educational attainment (< high school [reference], high school or general educational development, postsecondary education), poverty (≤ 100% of the federal poverty level), material hardship,[35] and employment. Family characteristics included mother's residence with a parent, relationship with the child's father (married [reference], cohabiting, nonresidential romantic, separated), relationship quality with the child's father (rated on a scale ranging from 1 = *poor* to 5 = *excellent*), new partner besides the child's father, number of children in the household, and parenting stress (measured by 4 questions, including "Being a parent is harder than I thought it would be").[36]

Behavioral characteristics included smoking during pregnancy, using drugs or drinking alcohol during pregnancy, impulsivity (measured by 6 questions, including "I will often say whatever comes into my head without thinking first"),[37] prior incarceration (between the baseline and 1-year surveys), and health conditions before incarceration (depression, illicit drug use, heavy drinking, and fair or poor health at the 1-year survey). We also adjusted for some characteristics of the father (education, employment, impulsivity, engagement in domestic violence, and incarceration between the 1- and 5-year surveys) and the child (low birth weight and temperament).[38]

### Statistical Analyses

The analyses, all conducted in Stata version 13.1 (StataCorp LP, College Station, TX), proceeded in 2 stages. In the first analytic stage, we used logistic regression models to estimate each of the 5 self-reported health conditions as a function of recent maternal incarceration for the entire analytic sample. Model 1 estimated the unadjusted association between recent incarceration and health conditions. Model 2 adjusted for all covariates except the lagged dependent variable. Model 3 included the lagged dependent variable (e.g., the dependent variable measured at the 1-year survey). Adjusting for a lagged dependent variable allowed us to consider the relationship between recent incarceration and health net of health before incarceration. Note that mothers were first asked about health limitations at the 5-year survey; therefore, we could not adjust for a lagged indicator of health limitations and, hence, do not show estimates for health limitations in model 3.

In the second analytic stage, we estimated health conditions as a function of recent incarceration across racial/ethnic subgroups (non-Hispanic White, non-Hispanic Black, and Hispanic) and across father incarceration subgroups (father incarcerated between the 1- and 5-year surveys and father not incarcerated between the 1- and 5-year surveys).

## RESULTS

Table 1 presents descriptive statistics for the analytic sample. About one sixth (16.8%) of mothers reported experiencing depression in the past year. About 3.8% of mothers reported illicit drug use, 6.5% reported heavy drinking, 13.8% reported fair or poor health, and 10.1% reported health limitations. About 7.0% of mothers were incarcerated at some point between the 1- and 5-year surveys. In addition, descriptive statistics showed that mothers in the sample were a relatively disadvantaged group. Nearly four fifths (79.0%) of them were racial/ethnic minorities, and nearly two thirds (64.3%) did not have education beyond high school. More than two fifths (41.3%) lived in poverty.

**TABLE 2—Percentage of Mother's Self-Reported Health Outcomes by Recent Incarceration: Fragile Families and Child Wellbeing Study, United States, 1998–2000 through 2003–2006**

| Outcome | Recent incarceration (n = 287), % | No recent incarceration (n = 3809), % |
|---|---|---|
| Depression | 29.9 | 15.8* |
| Illicit drug use | 8.7 | 3.4* |
| Heavy drinking | 14.2 | 5.9* |
| Fair or poor health | 24.3 | 13.1* |
| Health limitations | 21.2 | 9.3* |

*Note.* The sample size was n = 4096.
*$P < .001$.

Table 2 presents descriptive statistics of the 5 health conditions by recent maternal incarceration. Recently incarcerated mothers, compared with their counterparts, were about twice as likely to report each of the health conditions. For example, 29.9% of recently incarcerated mothers and 15.8% of not recently incarcerated mothers reported depression ($P<.001$). In addition, illicit drug use (8.7% vs 3.4%; $P<.001$), heavy drinking (14.2% vs 5.9%; $P<.001$), fair or poor health (24.3% vs 13.0%; $P<.001$), and health limitations (21.2% vs 9.3%; $P<.001$) were all more common among recently incarcerated mothers.

Table 3 presents results of the logistic regression models that estimate health conditions as a function of recent maternal incarceration. In model 1, which presents the unadjusted association, recently incarcerated mothers, compared with their nonincarcerated counterparts, had 2.27 (95% confidence interval [CI] = 1.74, 2.97) times the odds of depression, 2.69 (95% CI = 1.72, 4.20) times the odds of illicit drug use, 2.63 (95% CI = 1.84, 3.76) times the odds of heavy drinking, 2.14 (95% CI = 1.61, 2.85) times the odds of fair or poor health, and 2.62 (95% CI = 1.94, 3.55) times the odds of health limitations.

In model 2, which adjusted for an array of individual-level covariates that might have confounded the association between recent maternal incarceration and health, incarceration continued to be statistically significantly associated with an increased likelihood of depression (odds ratio [OR] = 1.49; 95% CI = 1.11, 2.01), heavy drinking (OR = 1.78; 95% CI = 1.20, 2.65), fair or poor health (OR = 1.47; 95% CI = 1.08, 2.02), and health limitations (OR = 1.78; 95% CI = 1.27, 2.50).

Finally, in model 3, which also adjusted for a lagged dependent variable that was measured before incarceration, recent maternal incarceration was statistically significantly associated with an increased likelihood of depression (OR = 1.60; 95% CI = 1.18, 2.17), heavy drinking (OR = 1.79; 95% CI = 1.19, 2.68), and fair or poor health (OR = 1.49; 95% CI = 1.08, 2.05).

Table 4 presents results by race/ethnicity and father's incarceration history. The results by race/ethnicity show that few of these associations reached statistical significance. The associations seen in the full sample were not driven by 1 group, suggesting that the association between recent incarceration and health conditions was shared relatively equally across non-Hispanic White, non-Hispanic Black, and Hispanic mothers.

The results by father's incarceration history show that, across 4 of the 5 outcomes, the association between recent incarceration and health conditions was stronger for mothers connected to fathers without an incarceration history than for mothers connected to fathers with an incarceration history. Among mothers who shared children with fathers not incarcerated in the past 4 years (between the 1- and 5-year surveys), recent incarceration was associated with an increased likelihood of depression (OR = 1.87; 95% CI = 1.25, 2.78), illicit drug use (OR = 1.98; 95% CI = 1.00, 3.92), fair or poor health (OR = 1.72; 95% CI = 1.13, 2.62), and health limitations (OR = 2.08; 95% CI = 1.35, 3.22). With 1 exception—heavy drinking (OR = 1.91; 95% CI = 1.01, 3.62)—these statistically significant associations did not exist for mothers who shared children with fathers who had been incarcerated in the past 4 years.

**TABLE 3—Estimating Mother's Self-Reported Health Outcomes as a Function of Recent Incarceration: Fragile Families and Child Wellbeing Study, United States, 1998–2000 through 2003–2006**

| | Model 1, OR (95% CI) | Model 2, OR (95% CI) | Model 3, OR (95% CI) |
|---|---|---|---|
| Depression | 2.27 (1.74, 2.97) | 1.49 (1.11, 2.01) | 1.60 (1.18, 2.17) |
| Illicit drug use | 2.69 (1.72, 4.20) | 1.34 (0.81, 2.22) | 1.24 (0.74, 2.09) |
| Heavy drinking | 2.63 (1.84, 3.76) | 1.78 (1.20, 2.65) | 1.79 (1.19, 2.68) |
| Fair or poor health | 2.14 (1.61, 2.85) | 1.47 (1.08, 2.02) | 1.49 (1.08, 2.05) |
| Health limitations | 2.62 (1.94, 3.55) | 1.78 (1.27, 2.50) | . . . |

*Note.* CI = confidence interval; OR = odds ratio. Model 1 estimated the unadjusted association. Model 2 adjusted for all covariates except the lagged dependent variable. Model 3 adjusted for all covariates including the lagged dependent variable (except for health limitations, for which a lagged dependent variable did not exist). The sample size was n = 4096.

## DISCUSSION

Using longitudinal data from the Fragile Families and Child Wellbeing Study, we have provided the first examination of self-reported health among recently incarcerated mothers. The results suggest 3 main conclusions. First, recently incarcerated mothers, net of an array of covariates including health before incarceration, reported an increased likelihood of depression, heavy drinking, fair or poor health, and health limitations, consistent with the broader literature on the adverse consequences of incarceration for health among those who were formerly incarcerated.[3,5] These findings extend previous research, much of which has focused on men's incarceration, by specifically considering women, and suggest that the health consequences of incarceration may apply to both men and women. There are a variety of pathways through which incarceration may have deleterious consequences for health among mothers. Stress proliferation theory suggests that social contexts differentially expose individuals to social stressors (e.g., incarceration) and that these social stressors trigger additional stressors that negatively influence health.[7,10,39,40,41] Indeed, incarceration may diminish economic resources,[42] destabilize romantic relationships,[43,44] and impair parenting,[36,45] all of which may increase maternal health problems.[46–48] Investigating these pathways is an important direction for future research.

Second, considering racial/ethnic subgroups, few of the associations between incarceration and health reached statistical significance. These null findings may be attributed to the smaller sample sizes. Some of these null findings may also have been driven by preincarceration racial/ethnic health disparities. Non-Hispanic Blacks and Hispanics are more likely

**TABLE 4—Estimating Mother's Self-Reported Health Outcomes as a Function of Recent Incarceration, by Race/Ethnicity and Father's Incarceration: Fragile Families and Child Wellbeing Study, United States, 1998–2000 through 2003–2006**

| Subgroup | Depression, OR (95% CI) | Illicit Drug Use, OR (95% CI) | Heavy Drinking, OR (95% CI) | Fair or Poor Health, OR (95% CI) | Health Limitations, OR (95% CI) |
|---|---|---|---|---|---|
| Race/ethnicity | | | | | |
| Non-Hispanic White (n = 859) | 1.24 (0.61, 2.49) | 1.64 (0.56, 4.74) | 1.49 (0.65, 3.43) | 1.11 (0.51, 2.45) | 2.40 (1.10, 5.26) |
| Non-Hispanic Black (n = 2001) | 1.42 (0.93, 2.18) | 1.22 (0.62, 2.41) | 1.16 (0.58, 2.34) | 1.34 (0.85, 2.10) | 1.51 (0.94, 2.43) |
| Hispanic (n = 1082) | 2.34 (1.19, 4.60) | 0.60 (0.04, 8.96) | 3.22 (1.49, 6.94) | 2.02 (1.01, 4.05) | 1.65 (0.71, 3.82) |
| Father incarceration | | | | | |
| Father incarcerated (n = 1008) | 1.22 (0.75, 1.99) | 0.74 (0.32, 1.75) | 1.91 (1.01, 3.62) | 1.10 (0.66, 1.85) | 1.51 (0.86, 2.67) |
| Father not incarcerated (n = 3088) | 1.87 (1.25, 2.78) | 1.98 (1.00, 3.92) | 1.66 (0.96, 2.88) | 1.72 (1.13, 2.62) | 2.08 (1.35, 3.21) |

*Note*. CI = confidence interval; OR = odds ratio. All models include all covariates including the lagged dependent variable (except for health limitations, for which a lagged dependent variable did not exist). The sample size was n = 4096.

than their non-Hispanic White counterparts to experience health problems regardless of incarceration; thus, there may have been no association for these groups because of what is commonly called a *floor effect*.[49] Although the results show no racial/ethnic differences in the association between incarceration and health, because maternal incarceration rates are highest among non-Hispanic Blacks, this group will disproportionately feel the population health consequences of maternal incarceration.

Third, recent incarceration was less detrimental to maternal health when the child's father was incarcerated during the same time period. It may be that mothers who experience the incarceration of a romantic partner, compared with those who do not, experience their own incarceration as less of a stressful or unanticipated life event. Relatedly, partner incarceration is associated with its own adverse health consequences, so it is possible that these women simply experience little added deleterious consequences of their own incarceration.[50–52] These findings, which should be interpreted cautiously because of the overlapping confidence intervals across the 2 groups, provide preliminary evidence that incarceration history is a more serious risk factor for deleterious health among women who may not have indirect connections to the criminal justice system through their romantic partners.

The deleterious consequences of recent incarceration for health among mothers have several implications for population health. First, incarceration may exacerbate already existing racial/ethnic and social class inequalities in health among mothers.[53] Incarceration, because of its sheer concentration among economically disadvantaged minority mothers,[1,54] may exacerbate racial/ethnic inequalities in health even in the absence of racial/ethnic differences in the association between incarceration and health. Second, these findings suggest that the health consequences of mass imprisonment for poor women may not be limited to the indirect health effects they experience through their romantic partners.[51–53] Third, although the results do not speak directly to this, because mothers' health is associated with children's health,[20,22] incarceration may have intergenerational consequences for population health.

These findings also have a number of implications for practitioners and policymakers. Perhaps most importantly, these results suggest that recently incarcerated mothers are a vulnerable population and that incarceration is a unique risk factor for health conditions, including depression, heavy drinking, fair or poor health, and health limitations. Physicians, especially those in poor communities in which incarceration is common, may consider screening mothers for incarceration. In addition, the results suggest that the negative association between recent incarceration and health is strongest among women who share children with men who have not been recently incarcerated. Therefore, physicians should be especially careful to not assume that screening for a history of family incarceration will capture the same risk factors as screening for a history of own incarceration.

## Limitations

This examination has several limitations. First, all 5 health outcomes, though broad in nature, were reported by mothers themselves, and future research should consider more objective, physician-reported indicators of health. Second, the data included little information about the incarceration experience, and it was not possible to precisely measure length of incarceration, reason for incarceration, type of correctional facility (e.g., prison vs jail), or conditions of correctional facility (e.g., visiting hours). Third, the sample included only mothers; therefore, the results are not generalizable to all women. Understanding the consequences of incarceration among mothers is, however, especially important given that children of incarcerated mothers are an extremely vulnerable and disadvantaged group, and that the majority of women who are incarcerated are, in fact, mothers to minor children.[19] Finally, these observational data preclude causal conclusions. Incarcerated mothers are likely to experience health disadvantages before incarceration and, although we attempted to isolate the relationship between incarceration and health by adjusting for an extensive set of covariates, unobserved covariates may render the relationship spurious.[24–26]

## Conclusions

Research on the health consequences of mass imprisonment tends to focus on the physical and mental health consequences of imprisonment for the poor men for whom incarceration has become so common, with new veins of research also demonstrating that high levels of male incarceration may have implications for the health of the children and women attached to them. The health of women may be compromised not only by the incarceration of men with whom they share children but also by their own incarceration, and the consequences of mass incarceration for population health and inequality in population health may be even greater than typically suspected. ■


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## Contributors

K. Turney made substantial contributions to conceptualization of the study, data preparation, data analysis, interpretation, revisions, and final approval of the article. C. Wildeman made substantial contributions to conceptualization of the study, interpretation, revisions, and final approval of the article.


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## Human Participant Protection

The secondary data analysis was deemed exempt from institutional review board review at the University of California, Irvine and Cornell University.

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