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Mass Incarceration, Race Inequality, and Health: Expanding Concepts and Assessing Impacts on Well-Being

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Abstract

We explore race differences in how individuals experience mass incarceration, as well as in mass incarceration's impacts on measures of well-being that are recognized as major social determinants of health. We draw on baseline data from a sample of 302 men and women recently released from prison/jail or placed directly onto probation in New Haven, CT for drug related offenses and followed at 6-month intervals for two years (2011–2014). We describe race differences in experiences of mass incarceration and in its impacts on well-being; and we conduct mediation analyses to analyze relationships among race, mass incarceration, and well-being. Blacks reported fewer adult convictions than whites, but an average of 2.5 more adult incarcerations. Blacks were more likely to have been incarcerated as a juvenile, spent time in a juvenile facility and in an adult facility as a juvenile, been on parole, and experienced multiple forms of surveillance. Whites were more likely to report being caught by the police doing something illegal but let go. Blacks were more likely to report any impact of incarceration on education, and dropping out of school, leaving a job, leaving their longest job, and becoming estranged from a family member due to incarceration. Whites were more likely to avoid getting needed health or social services for fear of arrest. Overall, Blacks reported a larger number of impacts of criminal justice involvement on well-being than whites. Number of adult incarcerations and of surveillance types, and being incarcerated as a juvenile, each mediated the relationship among race, mass incarceration, and well-being. Though more research is necessary, experiences

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of mass incarceration appear to vary by race and these differences, in turn, have implications for interventions aimed at addressing the impacts of mass incarceration on health and well-being.

Keywords

United States; Mass incarceration; race inequities; social determinants

There is growing recognition of the extent to which “mass incarceration” in the United States both reflects and participates in the structuring of race inequality in contemporary society generally, and in health in particular (Alexander, 2012; Bobo & Thompson, 2010; Foreman, 2012; Schnittker, Massoglia and Uggen, 2011). And yet, research linking mass incarceration, race, and health, has been relatively limited by conceptualizations of “mass incarceration” that focus on the size of the incarcerated population, typically measured by personal incarceration (incarcerated or not incarcerated) or incarceration rates, and by insufficient attention to how mass incarceration intersects with race to produce health impacts. We contribute to this discussion by extending both the conceptualization and measure of mass incarceration and the analysis of its impacts on well-being. In particular, we suggest that the concept of “mass incarceration” signifies the myriad ways that the criminal justice (CJ) system *extends its reach* into life in contemporary US society including, but not limited to, through personal incarceration. We also explore the racialization of mass incarceration so conceptualized, by analyzing both how it is differentially experienced by Blacks and whites and how these differences, in turn, impact on indicators of well-being that represent major social determinants of health. Finally, we consider the implications of these processes for understanding how mass incarceration promotes race inequities in health.

At 2,217,000, the United States incarcerates more people than any other country in the world; and at a higher rate than all but one (“Highest to Lowest,” n.d.). While this signifies a decline since peaking in 2008, rates are still above the early 2000s and quadruple those of 1980 (“Pre-trial Remand,” n.d.). More noteworthy still is their disproportionate distribution by race. In 2013 about 37% of men incarcerated in federal or state prisons were Black and 32% were white; the comparable proportions for women were 49% and 22% (Carsen, 2014). Almost 3000 of 100,000 Black male US residents are imprisoned, compared to 488 whites (Carsen, 2014). Across all age ranges, incarceration rates for Black males were at least 6 times those of white males; and for 18–19 year-old males, Blacks were 9 times more likely to be imprisoned (Carsen, 2014). Though the differences are smaller, Black female incarceration rates were twice those of white females across all ages, and for ages 18–19, they were almost 5 times higher (Carsen, 2014).

Incarceration statistics, however, capture only a portion of the size of the US population under the jurisdiction of the CJ system. Community supervision—probation, parole, or some other post-prison supervision—accounted for 4,751,400 adults in 2013; Blacks were overrepresented among both probationers (30%) and parolees (40%) (Herbermann & Bonczar, 2015). Once viewed as alternatives to incarceration, increasingly, these forms of community supervision can be considered extensions of the CJ system (Wacquant, 2010;

Braman, 2007). As such, they subject large numbers of people to extensive monitoring in the community; for example, by making early release (parole) or diversion from incarceration (probation) conditional on meeting various goals (e.g. gainful employment, staying drug free or away from friends who may have a “harmful influence”) and investing CJ personnel with the ability both to define what success at achieving goals means (Gurusami, 2017) and to monitor progress towards success so defined. Thus, a large number of US citizens are subject to the alert gaze of CJ authorities—a form of “hypersurveillance” (Foucault, 1991) that may bring with it the possibility of (re)incarceration (Cooper, Moore, Gruskin & Krieger, 2004; Hinton, 2016, Chapter 6) even if a crime is not committed (e.g. when probation is violated because someone is stopped in a car with a friend who possesses drugs).

One need not be incarcerated or under community supervision to feel the reach of the CJ system. Over half of prisoners in 2007 were parents of minor children, representing 1.7 million children (2.3% of the population under 18); with Black children 7.5 times more likely than white children to have a parent in prison (Glaze & Maraschuk, 2010). And many who are incarcerated are themselves the children, siblings, relatives, or partners of non-incarcerated individuals (Braman, 2007; Comfort, 2008; Lee, Porter & Comfort, 2014). Research indicates that their lives too are impacted when a loved one is incarcerated (Comfort, 2008; Cooper et al., 2015; Lee, Wildeman, Wang, Matsuko, & Jackson, 2014; Wildeman, Lee, & Comfort, 2013). They may also be impacted when a loved one is under community supervision (Braman, 2007), or when individuals in their personal networks have a CJ history (Lee, McCormick, Hicken, & Wildeman, 2015).

Hyperpolicing extends the reach of the CJ system to entire communities. Accordingly, predominantly minority neighborhoods are subject to extraordinary levels of police attention such that police not only “notice” more crime here, but define a large portion of spaces in these neighborhoods as places where criminal activity may take place, and a large portion of people in those spaces as criminals or potential criminals (Braga, 2001; Cooper et al., 2004; Cooper, 2015; Hinton, 2016). Recent urban ethnographies clearly document how hyperpolicing brings the CJ system into the daily lives of the residents of such neighborhoods (Goffman, 2014; Rios, 2011; Sampson, 2012). And growing attention to police killings of black and brown men and women highlights just how deadly this can be (Devolder et al., 2017; Hughey, 2015; “Mapping police violence,” n.d.).

Increasingly, research demonstrates an association between *incarceration* and health (Binswanger, Redmond, Steiner, & Hicks, 2011; Schnittker et al., 2011; Wildeman, 2012). At the population level, imprisonment is negatively associated with life expectancy and positively associated with infant mortality; the associations are strongest for Blacks (Wildeman, 2012). It is also related to Black-white disparities in life expectancy, although notably, higher rates of imprisonment are associated with lower mortality rates among young Black men, apparently due to incarceration’s impact on homicide rates (Wildeman, 2012). While currently incarcerated individuals gain some short-term health benefits (e.g., through links to care they might not otherwise have), over the long term incarceration contributes to their poor health (Schnittker et al., 2011), as does a prior history of incarceration (Massoglia, Pare, Schnittker, & Gagnon, 2014; Wang et al., 2009; Wildeman, 2012). Research also

demonstrates incarceration's negative effects on the health of the wives and children of prisoners (Lee, Wildeman, et al., 2014; Turney & Wildeman, 2015; Turney, Wildeman, & Schnittker, 2012; Wildeman, 2009; Wildeman et al., 2013) and of those in their communities (Freudenberg, 2001; Hatzenbuehler et al., 2015), although in some instances, children may benefit from their father's incarceration (Wakefield & Powell, 2016).

While acknowledging an association between mass incarceration and health, much of the research focuses on incarceration as the measure of CJ involvement. What we know less about is how variations in the incarceration histories of individuals, experiences with other forms of CJ involvement, and hypersurveillance and hyperpolicing, which together comprise the full spectrum of mass incarceration—indicating *both the breadth and depth* of the CJ system's reach—impact on health and well-being. Further, current research does not adequately address the intersection of race inequality and mass incarceration, for, as the above statistics indicate, race is clearly signified by and embedded in the concept of mass incarceration itself. Indeed, sociologist Loic Wacquant (2010) considers “mass incarceration” a misnomer by suggesting that incarceration is experienced en masse when it is, rather, concentrated by class, race and place. And, while scholars debate the specific sources of race disparities in incarceration—for example, some attribute them to the war on drugs (Alexander, 2012), others to prosecutorial discretion (Pfaff, 2017)—there is considerable agreement both that they are not fully accounted for by race differences in criminality and that drug policies undoubtedly account for at least some share of these differences. In addition to their impact on race differences in incarceration rates, drug policies impose some distinct penalties (collateral consequences), including restrictions on access to subsidized housing and to welfare benefits, not associated with other felonies, and thereby may contribute to race differences in the effects of incarceration on wellbeing (The Sentencing Project, 2011; Walter et al., 2017).

In this paper, we argue that incarceration history, community supervision, hypersurveillance, and hyperpolicing all comprise the broader concept of mass incarceration and represent *the breadth and depth* of the CJ system's reach. Accordingly, we identify measures to capture mass incarceration so defined and explore race differences in the extent to which they are experienced. We also analyze race differences in the impacts of incarceration on measures of well-being that signify major social determinants of health. Finally, we examine how race differences in the experience of mass incarceration may operate as mediating mechanisms in producing race inequities in these social determinants of health (well-being).

Methods

Study design and sample.

Data for this analysis were collected as part of the Structures, Health and Risk among Reentrants, Probationers, and Partners (SHARRPP) study, which examined how the incarceration/re-entry cycle, particularly as impacted by drug policies, creates instability in the lives of re-entrants (e.g. in relationships, housing, employment) and through this, HIV related risks generally and race inequities in these risks in particular. A total of 302 participants were recruited through flyers posted in community agencies serving CJ-involved populations (e.g. employment agencies, halfway houses, parole and probation offices, and

drug treatment centers). We also encouraged staff working in these programs to refer potentially eligible participants, and gave presentations to prospective participants at relevant community agencies. To ensure that those not engaged in services or supervision knew of the study, we advertised in a local free newspaper and on city buses and placed standalone street signs in neighborhoods throughout the city. We also posted the study flyer in public places such as libraries, laundromats, and grocery and convenience stores.

Participants were 18 or older, and in the past year had either been released from prison/jail or placed directly on probation in New Haven, CT for a non-violent drug-related offense. After individuals were deemed eligible via a check of public records and confirmation from the Connecticut Department of Corrections or Court Support Services Division, and consented to participate, they completed a self-administered computer assisted structured survey of approximately 90 minutes in length at baseline and over four follow-up visits (2011–2014). This paper is based exclusively on baseline data. The study protocol was approved by the IRBs at American University and Yale University.

Measures.

Basic *demographic* information includes age, gender, race, marital status, and number of children. For the present analyses, we focus only on selfidentified Black and white respondents. *Socio-economic* measures include whether respondents reported spending the night in a shelter or other place not designated for sleeping after the age of 18 (homeless); highest level of schooling, from which we created a dichotomous variable of high school graduate/GED or less; whether they had earned an average of less than \$1000/month over the past 6 months; and whether the longest job they ever held had lasted more than a year. Additionally, we include an indicator of whether participants have ever injected drugs.

Participants were asked a series of questions regarding *history of CJ involvement* that allow us to move beyond a simple measure of incarceration. These include: total number of adult (≥ 18) convictions, total number of incarcerations as an adult, ever convicted as a juvenile, ever incarcerated as a juvenile, ever spent time in a juvenile correctional facility, ever incarcerated in an adult facility as a juvenile, length of first incarceration, and whether the charge that resulted in their first incarceration was drug-related. To allow for likely difficulties in recalling the actual number of adult convictions or adult incarcerations when those numbers were large, we coded all responses over 20 as 20 for these variables.

To measure extent of *community supervision* we asked number of times placed on parole and on probation (Never, 1, 2–5, 6–10, >10), current probation/parole status, and whether their parole or probation had ever been revoked.

Measures of *CJ surveillance* included whether the respondent reported a parole or probation officer had ever: sanctioned them for a parole/probation violation, required them to wear a monitoring bracelet, or visited their home. From these, we also constructed three variables: “any surveillance,” “more than 1 type of surveillance,” and a count of different types of surveillance reported.

To assess experiences with *hyperpolicing* we created measures of *exposure to police control and power* from responses to the questions: Have the police ever stopped you (on street or in car), to search or question you, and then released you? Have you ever been caught doing something illegal, but the police let you go? We also asked if respondents had ever had an outstanding warrant against them or had ever had sex with or given money or drugs to a police officer to avoid arrest.

We asked respondents a series of questions to determine their incarceration history's *impact on aspects of their social and economic well-being* considered to be major social determinants of health including whether, as a result of incarceration or having a criminal record they had: to drop out of or withdraw from school, been denied financial aid for school, to leave a job, to leave their longest job, trouble getting a job, been forced to break a lease or sell a home, someone refuse to let them live with them for fear of being evicted, or lost housing assistance. From these questions, we created three composite measures of whether their CJ history had any impact on, respectively, their education, employment, or housing. Additionally, we asked questions about the impact of their incarceration on others in their lives and on their relationships, including whether: people they were living with were forced to move, had been evicted, or had become homeless as a result of their incarceration; they had become estranged from a family member as a result of incarceration; or they had been divorced or separated as a result of (first or most recent) incarceration or had broken up with someone they had been in a committed relationship with (first or most recent incarceration). From the latter two sets of questions, we constructed a variable indicating whether their incarceration had ever had an impact on a relationship. Additionally, we asked whether they had ever avoided getting health or social services from fear of being arrested. Finally, as a summary indicator of the impact of incarceration on well-being, we created a count variable of how many areas (education, employment, housing, relationships, and service use) each participant reported as having been impacted by incarceration; with a possible value from 0 to 5.

Analysis.

We begin with bivariate analyses to analyze race differences in demographic and socio-economic characteristics, in experiences along different dimensions of mass incarceration, and in self-reports of its impacts on well-being.

Additionally, we conducted mediation analyses to further assess the relationships among race, mass incarceration, and self-reported assessments of the impacts of incarceration on well-being. For these, because the number of women in the sample was small, and to simplify interpretation of findings, we ran multiple models for a reduced sample of 196 only Black/white men, using as our outcome the summary indicator: count of areas impacted by incarceration. For each model the main predictors were race (0= Blacks, 1= Whites) and one of five mass incarceration-related mediators: (1) number of adult incarcerations, (2) whether the first incarceration was drug-related (to account for the potential early impact of collateral consequences associated with drug convictions), (3) ever incarcerated as a juvenile, (4) number of different types of CJ surveillance reported and (5) whether they reported more than one type of surveillance. All models controlled for age, whether respondent indicated

he had ever injected drugs, and time since first incarceration. For analyses using number of incarcerations and number of surveillance types, we used Hayes' PROCESS macro (Hayes, 2013). For the dichotomous CJ history variables (first incarceration drug-related, ever incarcerated as a juvenile and more than one surveillance type), we used Herr's (2006) tool for calculating logistic regression mediation with dichotomous mediators. Mediation analyses were conducted in SPSS version 23.

Results

Table 1 indicates race differences in the demographic and socio-economic characteristics of our sample. The average age of both Blacks and whites is similar and both have relatively low rates of marriage, but Blacks report having significantly more children on average. By some measures, Blacks in the sample are "better off" than whites—nearly three-fourths (70.1%) of whites reported ever being homeless as compared to slightly over half (54.1%) of Blacks ($p<.01$); and though not statistically significant, whites were more likely than Blacks to report an average monthly income below \$1000 ($p=.12$). By other measures, whites appear "better off" than Blacks: onethird of whites had more than a high school education/GED compared to only 17.8% of Blacks, and 83.2% of whites as compared to less than two-thirds (64%) of Blacks reported that their longest job had lasted more than a year ($p<.01$).

Mass incarceration and race.

In Table 2 we present overall, as well as race differences in frequencies of different aspects of CJ involvement, community supervision, CJ surveillance and hyperpolicing/exposure to police control and power.

History of criminal justice involvement—Although all but 7 respondents were incarcerated at least once, there remains considerable variation in their incarceration histories. The average number of adult convictions in this sample of non-violent drug offenders was 8.1. and the average number of adult incarcerations was 6.5. Half were convicted and 42.5% incarcerated as a juvenile. Nearly a third of respondents (31.6%) spent time in a juvenile correctional facility and over a quarter (28.6%) spent time as a juvenile incarcerated in an adult facility. The first incarceration of a little more than one-third (35.8%) was over a year in length, and for about half (51.3%), first incarceration was the result of a drug-related crime.

There are important race differences in these CJ histories. While Blacks reported significantly fewer adult convictions than whites (an average of 7.5 vs 9.7, $p<.01$), they also reported an average of two more incarcerations than whites ($p<.01$). Blacks were significantly more likely than whites to be incarcerated as a juvenile (52.7% vs 23.7%, $p<.001$), to have spent time in a juvenile facility (37.7% vs 18.6%, $p<.01$) and to have spent time as a juvenile in an adult facility (34.9% v. 16.5%, $P<.01$). With regard to their first incarceration, Blacks were more likely to serve a sentence of more than a year in length (39.9% vs. 26.1%, $p<.05$), and to be incarcerated on a drug-related charge (57.0% vs 26.5%, $p=.003$).

Community supervision—Almost three-fourths of respondents (73.8%) have been on parole at least once; over a third (34.4%) of respondents and 47.9% of those who have been on parole reported having it revoked. Nearly all have been on probation, with about half having probation revoked at least once. Perhaps reflecting their higher number of incarcerations, Blacks were significantly more likely than whites to ever have been on parole ($p < .001$). While there are no race differences in parole revocation among those who have been on parole, in the full sample, 40% of Blacks as compared to 30% of whites have had parole revoked. There were no race differences in probation or probation revocation.

Criminal justice surveillance—Nearly three-fourths (74.9%) of respondents reported ever being under some form of surveillance: 60.0% have worn a parole bracelet, 74.1% were visited by a parole officer at their home, 20.9% wore a probation bracelet, and 49.0% had a probation officer check on them at home. Over half of respondents (56.6%) have experienced more than one form of surveillance. There were no significant race differences on specific measures of surveillance, but Blacks were significantly more likely than whites to report having experienced multiple forms of surveillance (60.8% vs 45.8%, $p < .05$).

Exposure to police control/power—Fully 70.7% of respondents indicate that the police have stopped them on the street or in a car to search or question them, but did not end up arresting them. Whites (60.0%) were more likely ($p < .01$) than Blacks (42.3%) to report being caught by the police doing something illegal but being let go. Very small, but not inconsequential numbers of respondents report having had sex with ($N=12$, 9 men and 3 women) or given money or drugs to ($N=25$) a police officer to avoid arrest. There were no race differences in these forms of exposure to police power. Three-fourths of respondents have had an outstanding warrant for their arrest, with whites more likely to report this than Blacks (84% vs. 73%, $p < .05$).

Criminal justice history, well-being, and race.

Many respondents report impacts of incarceration on major social determinants of health associated with their well-being (Table 3). One-third reported that incarceration had some impact on their education. Of those with at least one incarceration, 31% reported ever dropping out of school due to incarceration. Among those who ever applied for it ($n=191$), 11.5% reported they were denied financial aid because of their criminal record. Blacks were significantly more likely than whites to report any impact of incarceration on education (39.0% vs 23.7%, $p < .05$) and dropping out of school due to incarceration (35.7% vs 19.1%; $p < .01$).

Most (88.4%) reported that their criminal record has been a problem in getting a job. Half ever left a job because they went to prison or jail. Blacks were significantly more likely than whites to report this (59.6% vs. 41.3%, $p < .05$) and to report incarceration as a reason for leaving their *longest* job (40.6% vs. 17.6%, $p < .001$).

Sixty percent of respondents reported some impact of incarceration on their housing. Thirty-seven percent said that other people have refused them a place to live because of their (respondent's) incarceration. Of those who owned a home or were on a rental lease ($n = 151$), 45.9% reported selling their home or breaking their lease due to incarceration. And

54% of those who have ever received housing assistance ($n = 64$) reported losing it because of incarceration; Blacks were more likely than whites to report all of these impacts (n.s.)

Respondents reported that their own incarceration histories have also affected housing for others living with them. More than a third (38.9%) reported the people they were living with at the time of their incarceration were forced to move or were evicted, and of these, 43.9% became homeless as a result of respondents' incarceration. Blacks were more likely than whites to report these impacts (n.s.).

About 60% of respondents reported their incarceration had ever had an impact on their relationships with family and partners; Blacks were more likely to report such impacts than whites (65.8% vs 52.6%, $p < .05$). More than one-third (37.8%) of participants indicated that incarceration had caused them to become estranged from family members, with estrangement significantly more common for Blacks (44.8%) than whites (29.8%, $p < .05$). Incarceration also led to ruptures in committed relationships, although there were not significant differences by race in this regard. Among those who were legally married or in a committed relationship at the time of their first incarceration ($n = 153$), about half (48.4%) reported that those relationships ended as a result of incarceration as did over a third (36.3%) of marriages or committed relationships at most recent incarceration.

One fifth of respondents indicated that they had avoided getting needed health or social services out of fear of being arrested, with whites more likely than Blacks to report such impacts (n.s.). And, respondents indicated that incarceration had impacted, on average, almost 3 of the 5 areas assessed in the survey, with Blacks reporting significantly more areas impacted ($M = 2.9$; $SD = 1.1$) than Whites ($M = 2.5$; $SD = 1.2$; $p < .05$).

Finally, results of our mediation analyses indicate that differences in some dimensions of CJ involvement, particularly number of incarcerations, number of surveillance types and being incarcerated as a juvenile, help account for associations among race and well-being. The association between race and well-being was mediated by number of incarcerations (Table 4), as indicated by the significant indirect effect ($b = -0.17$; 95%CI = $-0.35, -0.06$). Similarly, number of surveillance types mediated the link between race and impact on well-being (Indirect effect: $b = -0.13$; 95%CI = $-0.29, -0.03$). Having ever been incarcerated as a juvenile (Table 5) also mediated the association between race and incarceration's impact on well-being ($b = 0.061$; Sobel's test $p = .012$). On the contrary, whether the first incarceration was drugrelated and whether participants reported more than one surveillance type were not significant mediators of the link between race and incarceration's impact on well-being (Table 5).

Discussion

A growing literature demonstrates the racialization of mass incarceration. It indicates how racism (defined at multiple levels and including intentional expressions of race hatred as well as seemingly neutral institutional processes, structures and policies) and race inequality produce mass incarceration, and how mass incarceration in turn reproduces racism and race inequality (Alexander, 2012; Bobo & Thompson, 2010; Foreman, 2012; Walker, 2016). But

with respect to health, this literature has largely been translated into explorations of how being incarcerated or not incarcerated, impacts on health. Such analyses have demonstrated incarceration's significant impacts on the health of those who have been incarcerated, their children, and their sexual partners (Comfort, 2008; Cooper et al., 2015; Lee, Wildeman et al., 2014; Wildeman et al., 2013).

One of our goals in this paper has been to explore ways of capturing variation in CJ experiences, and the extent to which such variations may also signify race. In doing so, we seek to identify additional and specific mechanisms through which mass incarceration may perpetuate race inequalities in well-being, with implications, in turn, for a range of health outcomes. Our analysis demonstrates that there are important race differences in the CJ histories of individuals recently released from prison/jail or placed on probation for non-violent drug offenses. Not only did Blacks have a higher average number of adult incarcerations than whites (even while whites had a higher average number of adult convictions) (Rosenberg et al, 2017). They also were more likely to have a first conviction as a drug-related offense, a longer first sentence, and both to be incarcerated as a juvenile and to spend time in an adult facility as a juvenile. Our analysis suggests that some of these differences in incarceration history, are in turn associated with race differences in reports of the impact of CJ-involvement on wellbeing.

While many in our sample reported that their CJ history had harmed their education, employment, housing, and family and intimate relationships, Blacks were more likely to report these negative impacts than whites. Particularly significant were race differences in impacts on education, employment, and relationships. A substantial literature on the social determinants of health demonstrates how general measures of well-being such as education and employment are in turn associated with a range of health-related outcomes (Diamond & Freudenberg, 2016; Freudenberg, 2001; Montez & Berkman, 2014; Williams & Mohammed, 2013). As well, marital stability and marital quality has been associated with physical and mental health benefits (Carr & Springer, 2010; Zheng & Thomas, 2013), as has housing access and housing stability (Burgard, Seefeldt, & Zeiner, 2012; Desmond & Kimbro, 2015; Shaw, 2004).

Our mediation analyses indicate that race-based differences in CJ histories, including number of incarcerations, number of surveillance types, and incarceration as a juvenile, help account for some of these reported differences in impacts on well-being. Consider juvenile incarceration, for example. Historian Elizabeth Hinton (2016) describes how the law enforcement system created by the Juvenile Justice and Delinquency Prevention Act of 1974 created an enforcement structure "fractured ... along racial lines" (p. 222). Accordingly, while white and middle-income youth were handled by the "social welfare arm of the state," the "punitive arm of the state" became responsible for youth in segregated urban neighborhoods. Poor, largely Black youth were classified as (potentially) delinquent *before* they committed any crime, so they were more likely to come under the gaze of the police and subsequently, to be arrested, charged, convicted and incarcerated (Hinton, 2016, Chapter 6). In such a system, incarceration as a juvenile embodies systemic racism and a finding that being incarcerated as a juvenile mediates the relationship between race and well-being

suggests one specific mass incarceration-related mechanism through which race impacts on well-being.

We have also sought to expand the representation of mass incarceration beyond the individual experience of incarceration, to capture the *breadth and depth* of the reach of the CJ system and the myriad ways that individuals experience life in a society characterized by mass incarceration. Our measures of community supervision, CJ surveillance, and exposure to police control/power, have only skimmed the surface in this regard. Still, they provide additional insight into how race inequality is embedded within and potentially perpetuated by mass incarceration. In our sample of individuals with a recent history of incarceration or community supervision, beyond their greater likelihood of being incarcerated, Blacks were more likely than whites to report being on parole and being under more than one form of surveillance. Not only may heavy surveillance put individuals at greater risk of arrest, but data indicate that deadly police incidents often begin with police attempting to pull over a vehicle or approaching an individual in public (Swaine & McCarthy, 2017).

There are a number of limitations to this analysis. First, it is based on a convenience sample of individuals recently released from prison/jail or placed onto probation for non-violent drug offenses in New Haven, CT. Findings may not be generalizable. Still, the sample includes individuals who have committed other types of crimes in their past. Furthermore, at least some of the disproportionate representation of Blacks among the incarcerated (e.g. Alexander, 2012) result from drug policies, and this, along with the unique collateral consequences that attach to drug-related offenses, make this an important subgroup of the CJ-involved population to analyze. Indeed, our sample provides a rare opportunity to develop a detailed understanding of the CJ experience and its impacts among a group of returning citizens. Nevertheless, more research should explore the heterogeneous (though potentially racialized) experiences of different CJ-involved populations, including their interactions with the CJ system (e.g. via different types of offenses) and the subsequent impacts on their own well-being, and that of their family members (e.g. Wakefield & Powell, 2016). Additionally, because our indicators of CJ involvement are measured at the individual level, they only begin to capture the reach of the CJ system. We need to develop indicators at multiple levels. Longitudinal research exploring the many different ways that the CJ system reaches into and impacts upon the lives of individuals is also needed. It is worth noting that our outcomes represent individuals' own assessments of the impact of CJ involvement on their well-being. Though not direct measures of specific health impacts, they provide an opportunity to understand the potential impacts on many different health outcomes that are associated with these social determinants of health. Finally, while our data are from participants most recently convicted for "non-violent" (drug-related) crimes, research suggests that distinctions between violent and non-violent offenses can be "blurry" (Wakefield & Powell, 2016, page 197). Rather than potentially reifying these categories, future research would be better served by problematizing them.

Implications

A recent editorial in the *American Journal of Public Health* (Cloud, Parsons, & Delaney-Brumsey, 2014) calls the consequences of mass incarceration "one of the great public health

challenges of our time” (p. 390) and asks public health to “reinvigorate its core values in social justice to improve the health of poor, underserved communities affected by mass incarceration” (p. 391). Our analysis suggests that the consequences for health and well-being of mass incarceration vary significantly by race, even in a sample recently incarcerated on similar charges. It is critical that interventions, including structural interventions, recognize the racially distinct experiences of mass incarceration so that as they target the harms associated with it, they do so in ways that don’t systematically privilege some experiences over others, and thereby, perpetuate, or even exacerbate race-based health inequities.

A research agenda dedicated to addressing race inequities in health and wellbeing must also include attention to the multi-level factors, including policies, that bring individuals and their communities into reach of the CJ system to begin with. Interventions aimed at reducing this reach arguably represent health interventions. Finally, it is critical to scrutinize the extent to which and conditions under which access to subsidies, programs, and other opportunities with consequences for health and wellbeing (for example, access to welfare benefits, subsidized housing) are constrained based on a criminal record. Such restrictions jeopardize a goal of eliminating racebased health inequities.

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Research Highlights:

- Identifies measures capturing both breadth and depth of mass incarceration
- Analyzes race differences in experiences of mass incarceration
- Analyzes race differences in impacts of mass incarceration on well-being/health

Table 1:**SELECTED SAMPLE CHARACTERISTICS BY RACE**

	Black (n=146)	White (n=97)	Total (N=302) Includes Black, white, Hispanic and Other
Age	40.1 (10.4)	38.4 (10.7)	38.7 (10.6)
Male *	85.6% (125)	75.3% (73)	81.7% (246)
Ever married	34.9% (51)	42.3% (41)	37.4% (113)
# of children **	2.1 (2.2)	1.3 (1.4)	1.8 (1.9)
Ever homeless **	54.1% (79)	70.1% (68)	60.9% (184)
High school education or less **	82.2% (120)	66.0% (64)	78.5% (237)
Income in last 6 months < \$1000/month	35.8% (48)	46.2% (42)	37.4% (113)
Longest job lasted 1 year **	36.0% (50)	16.8% (16)	30.0% (86)
Ever inject	13.7% (20)	60.0% (57)	32.4% (97)

*
p<.05**
p<.01***
p<.001

Table 2:**MASS INCARCERATION AND RACE**

Variable	% or Mean (SD)		
	Black (N=146)	White (N=97)	Total (N=302) Includes Black, white, Hispanic and Other
<i>History of CJ Involvement</i>			
Ever incarcerated	98.0% (143)	96.9% (94)	97.7% (294)
# of adult convictions**	7.5 (6.0)	9.7 (6.5)	8.1 (6.2)
Total # adult incarcerations**	7.4 (5.8)	5.5 (4.9)	6.5 (5.5)
Ever convicted as a juvenile	54.8% (80)	45.4% (44)	50.8% (153)
Ever incarcerated as juvenile***	52.7% (77)	23.7% (23)	42.5% (128)
Ever time in juvenile facility**	37.7% (55)	18.6% (18)	31.6% (95)
Ever time in adult facility as a juvenile**	34.9% (51)	16.5% (16)	28.6% (86)
First incarceration > 1 year*	39.9% (55)	26.1% (23)	35.8% (101)
First charge a drug charge**	57.0% (77)	26.5% (22)	51.3% (141)
<i>Community Supervision</i>			
Ever on parole***	81.8% (117)	62.8% (59)	73.8% (217)
Ever had parole revoked	49.6% (58)	49.2% (29)	47.9% (104)
Ever on probation	97.3% (142)	96.9% (94)	97.0% (292)
Ever probation revoked	51.4% (73)	50.0% (47)	51.0% (149)
<i>Criminal Justice Surveillance</i>			
Any surveillance	76.2% (109)	69.8% (67)	74.9% (221)
Ever parole bracelet	62.7% (74)	54.1% (33)	60.0% (132)
Ever parole home visit	77.1% (91)	68.9% (42)	74.1% (163)
Ever probation bracelet	21.8% (31)	13.8.0% (13)	20.9% (61)
Ever probation home visit	43.7% (62)	54.3% (51)	49.0% (143)
More than one form of surveillance*	60.8% (87)	45.8% (44)	56.6% (167)
<i>Hyperpolicing/Exposure to Police Control and Power</i>			
Police ever stopped (on street or in car) to search or question (no arrest)	72.3% (99)	74.7% (71)	70.7% (205)
Ever caught doing something illegal and let go**	42.3% (58)	60.0% (57)	45.5% (132)
Ever had sex with police officer to avoid arrest	3.6% (5)	3.2% (3)	4.1% (12)
Ever given \$ or drugs to police officer to avoid arrest	8.0% (11)	9.5% (9)	8.6% (25)
Ever an outstanding warrant for arrest*	73% (100)	84.2% (80)	75.9% (220)

$$\begin{aligned} &^{\wedge} \\ &p < .10 \\ &^* \\ &p < .05 \\ &^{**} \\ &p < .01 \\ &^{***} \\ &p < .001 \end{aligned}$$

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Table 3:**MASS INCARCERATION, WELL-BEING, AND RACE**

Variable	% or Mean (SD)		
	Black (N=146)	White (N=97)	Total (N=302) Includes Black, white, Hispanic and Other
<i>Education</i>			
Any impact of CJ history on education [*]	39.0% (57)	23.7% (23)	33.8% (102)
Ever withdrawn from school due to incarceration ^{**}	35.7% (51)	19.1% (18)	31.0% (91)
Ever been denied financial aid for college due to CJ record (N=191 applied for aid)	7.6% (11)	8.2% (8)	11.5% (22)
<i>Employment</i>			
Any impact of CJ record on employment	89.0% (130)	87.6% (85)	88.4% (267)
Incarceration reason for leaving job ^{**}	59.6% (81)	41.3% (38)	50.9% (142)
Incarceration reason for leaving longest job ^{***}	40.6% (52)	17.6% (16)	32.1% (86)
<i>Housing</i>			
Any impact of incarceration on housing	60.3% (88)	57.7% (56)	59.6% (180)
Someone refused to let you live with them b/c afraid they would be evicted b/c of your CJ record	35.6% (52)	34.0% (33)	37.1% (112)
Forced to break lease or sell home due to incarceration (N=151 on lease/own home)	47.5% (28)	46.9% (30)	45.9% (67)
Ever lost housing assistance due to incarceration (N=64 ever received housing assistance)	61.3% (19)	47.6% (10)	54.1% (33)
People living with you forced to move or were evicted when you went to jail/prison	40.8% (58)	33.0% (31)	38.9% (114)
People living w/ became homeless as result of your incarceration (N=114 people forced to move/evicted)	39.7% (23)	29.0% (9)	43.9% (50)
<i>Relationships</i>			
Any impact of incarceration on relationships [*]	65.8% (96)	52.6% (51)	60.9% (184)
Incarceration caused estrangement from a family member [*]	44.8% (64)	29.8% (28)	37.8% (111)
Breakup of marriage or committed relationship during first incarceration (N=153 married or in committed relationship)	45.0% (36)	48.9% (22)	48.4% (74)
Breakup of marriage or committed	36.7% (29)	39.1% (18)	36.3% (57)

Variable	% or Mean (SD)		
	Black (N=146)	White (N=97)	Total (N=302) Includes Black, white, Hispanic and Other
relationship during most recent incarceration (N=158 married or in committed relationship)			
<i>Service Use</i>			
Ever avoided getting health or social services from fear of arrest	16.8% (23)	25.3% (24)	20.7% (60)
<i>Extent of CJ history impact across well-being domains</i>			
Average number of impacted areas*	2.9 (1.1)	2.5 (1.2)	2.8 (1.2)

*
p<.05

**
p<.01

p<.001

Table 4.

Mediation analyses of race on number of impacted areas of wellbeing with continuous mediators (PROCESS macro)

Effect ^a	Coefficient	SE	BootLLCI	BootULCI
Mediator – Number of incarcerations				
Direct	–0.24	0.20	–0.64	0.15
Indirect	–0.17	0.07	–0.35	–0.07
Mediator – Number of surveillance types				
Direct	–0.29	0.20	–0.68	0.10
Indirect	–0.12	0.06	–0.29	–0.03

Notes:

^a. All analyses controlled for age, history of IDU, and time since first incarceration.

SE = Standard error; BootLLCI = bootstrapping lower limit 95% confidence interval; BootULCI = bootstrapping upper limit 95% confidence interval

Table 5.

Mediation analyses of race on number of impacted areas of wellbeing with dichotomous mediators (Sobel test)

Effect ^a	Coefficient	p-value ^b	% Mediated
Mediator – First incarceration was drug-related			
Direct	–0.067		
Indirect	–0.016	.196	19.7%
Mediator – Ever incarcerated as juvenile			
Direct	–0.025		
Indirect	–0.061	.012	75.3%
Mediator – More than one surveillance type			
Direct	–0.048		
Indirect	–0.036	.056	43.9%

Notes:

^a. All analyses controlled for age, history of IDU, and time since first incarceration.^b. p-value associated with Sobel test