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Accumulation of Jail Incarceration and Hardship, Health Status, and Unmet Health Care Need Among Women Who Use Drugs

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A B S T R A C T

Background: Jail is frequently described as a "revolving door," which can be profoundly destabilizing to people moving in and out of the system. However, there is a dearth of research attempting to understand the impacts of the accumulation of incarceration events on women who use drugs. We examined the association of the frequency of jail incarceration with hardship, perceived health status, and unmet health care need among women who use drugs.
Methods: Our community-based sample included women who use heroin, methamphetamine, crack cocaine, and/or powder cocaine ($N = 624$) in Oakland, California, from 2012 to 2014. Poisson regression models with robust variances were built to estimate adjusted prevalence ratios between the frequency of jail incarcerations and measures of hardship, perceived health, and unmet health care need, adjusting for a set of a priori specified covariates.
Results: We observed associations between high levels of jail frequency and higher levels of homelessness ($p = .024$), feeling unsafe in their living situation ($p = .011$), stress ($p = .047$), fair to poor mental health ($p = .034$), unmet mental health care need ($p = .037$), and unmet physical health care need ($p = .041$). We did not observe an association between jail frequency and unmet subsistence needs score or fair to poor physical health.
Conclusions: We observed associations between higher levels of jail frequency and a higher prevalence of hardship, poor mental health, and unmet health care need. Our findings suggest areas for additional research to untangle the impacts of frequent incarceration on women's health and well-being.

Incarceration is often a recurrent experience. Jail, in particular, is frequently described as a "revolving door," with people passing through repeatedly for low-level misdemeanors such as possession of small amounts of illegal drugs and probation violations (Fu et al., 2013; Subramanian, Delaney, Roberts, Fishman, & McGarry, 2015). People churn through jail facilities at a remarkable rate. Although the average daily population in U.S. jails was 721,000 in 2015, the total number of jail admissions was 10.9 million—15 times the daily population (Minton & Zeng, 2016). Jails are typically administered at the county level, and recidivism data are difficult to find. One study of human immunodeficiency virus-positive jail inmates in 10 cities found that 31% were re-incarcerated within 6 months (Fu et al., 2013). Another study found that 40% of people in Chicago jails were readmitted at least once during a 5-year period from 2007 to 2012 (Olson & Huddle, 2013). Current estimates suggest that up to two-thirds of jail inmates have been in jail previously at some point (Nellis, 2009).

The number of women in the U.S. criminal justice system continues to increase steadily. Women made up 19% of the total correctional population in 2015, compared with 4% in 1980 (The Sentencing Project, 2012). In 2015, there were 1.25 million women under correctional control, defined as being incarcerated or on community supervision (Kaeble, Glaze, Tsoutis, & Minton, 2016). Women in the criminal justice system have disproportionately high levels of physical and mental health issues (Braithwaite, Treadwell, & Arriola, 2008; Cloyes, Wong, Latimer, & Abarca, 2010; El-Bassel et al., 2016; Lynch et al., 2014). For

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example, a nationally representative study of jail inmates found that, compared with their male counterparts, women had a significantly higher prevalence of psychiatric morbidities and drug dependence (Binswanger et al., 2010), factors previously shown to be associated with repeated incarceration (Fu et al., 2013; Huebner, DeJong, & Cobbina, 2010).

The experience of cycling between correctional and community settings can be destabilizing for individuals' health and well-being. Many women who use illicit drugs live at the nexus of repeated, short-term incarceration, poor health, and social and physical vulnerability, but studies attempting to understand these dynamics are limited. In our prior work, we have introduced the concept of "accumulation," arguing that measuring the scope of criminal justice involvement (e.g., type and frequency) rather than treating it as a binary variable is a key component of understanding marginalized women's health (Lorvick, Comfort, Kral, & Lambdin, 2017). In this article, we focus on a particular type of criminal justice involvement—being jailed—that is highly destabilizing, often entailing the loss of possessions, medications, paperwork (including identification cards), and housing (Comfort, Lopez, Powers, Kral, & Lorvick, 2015). As a form of criminal justice involvement that people may experience repeatedly over the lifetime, it is important to extend our understanding of how higher frequencies of exposure to this disruptive event intersect with health, well-being, and access to health care among women. Our aim was to address this gap in the literature by examining the associations between the accumulation of jail incarceration events and hardship, health, and unmet health care need outcomes among women who use drugs.

Methods

Study Setting and Sample

The primary aims of this study were to characterize the accumulation of jail incarceration in a community-based sample of women who use illicit drugs and to examine the association between the accumulation of jail incarceration events and hardship, health, and unmet health care need outcomes. Data collection was conducted from September 2014 to August 2015 in Oakland, California. Oakland is a racially diverse, midsized city (population 420,000) in Alameda County with documented health inequities by race and income (Alameda County Health Department, 2013). Using targeted sampling techniques (Kral et al., 2010; Watters & Biernacki, 1989), we conducted recruitment in street settings in two neighborhoods with high levels of poverty, police activity, drug trade, and urban blight. Recruitment was conducted by an outreach worker who had prior experience recruiting people who use drugs (Lambdin, Kral, Comfort, Lopez, & Lorvick, 2017). The outreach worker approached potentially eligible women on the streets, in parking lots, and at homeless encampments and similar venues; briefly explained the study procedures; and referred potential participants to the community field site, where they were screened for eligibility. Because the recruitment process was separate from the screening process, and no identifying information was requested from referred participants, refusal rates could not be documented. Eligibility criteria were (1) biological female, (2) age 18 years or older, and (3) used heroin, methamphetamine, crack cocaine, or powder cocaine in the 30 days before the interview. Eligible women gave informed consent and participated in a 30- to 45-minute quantitative survey interview. The survey was administered by trained interviewers, who read items aloud and recorded responses in laptop-based survey instrument using Blaise (Westat, Rockville, MD). Referrals to health and social services were provided as needed after completion of the survey. Data were uploaded daily to a secure server and deleted from laptops immediately afterwards. All procedures were reviewed and approved by RTI-International's Institutional Review Board.

Measures

Outcomes

Our self-reported outcome indicators included dichotomous measures in three different categories—hardship, perceived health status, and unmet health care need. Measures for hardship were selected based on the literature regarding factors influencing health outcomes among women who use drugs (Logan, Cole, & Leukefeld, 2002) and included homelessness, defined as currently considers themselves to be homeless; unmet subsistence needs score, as measured by a 16-point scale developed by Gelberg, Gallagher, Andersen, and Koegel (1997); feeling unsafe, defined as feeling unsafe or very unsafe in their current living situation; and stress, as measured by a 20-point scale developed by Cohen, Kamarck, & Mermelstein (1983).

Unmet physical health care need was defined as a yes response to the question, "In the past year, were there times when you thought you should see a health care provider for a physical health problem but didn't go?" The same wording was used for an item on mental health care. Fair to poor physical health was defined as having responded poor or fair when asked to rate their general physical health. The same wording was also used to ask participants to rate their general mental health. These questions preceded the assessment of jail history.

Exposures

Our primary exposure of interest was frequency of jail incarceration, defined as the number of jail incarcerations since the age of 18. We categorized this variable as a three-level ordered variable, split at the tertile of the distribution—low, none to two times; medium, three to five times; and high, six or more times.

Covariates

The following, a priori specified, set of covariates were considered as potential confounders in the analysis: age (in years), race/ethnicity (African American/non-Latina, Caucasian/non-Latina, Latina, or other), high school education (received high school diploma, GED, or more), long-term partnership (>12 months), insurance status (currently has health insurance), the amount of time incarcerated in jail or prison since the age of 18 (in years), the number of times arrested since the age of 18, a history of juvenile incarceration, type of drugs used in the past 30 days (heroin only, cocaine only, crack only, methamphetamine only, or polysubstance use), and a history of foster care. For the amount of time incarcerated, we asked survey participants how much time they spent in jail or prison since the age of 18, and this variable was included as a continuous variable in the statistical models.

Statistical Analysis

Descriptive statistics, including frequencies, medians, and interquartile ranges (IQRs) were calculated to describe the