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The relationship between incarceration and premature adult mortality: Gender specific evidence

Michael Massoglia [a,*], Paul-Philippe Pare [b], Jason Schnittker [c], Alain Gagnon [d]

[a] Department of Sociology, University of Wisconsin-Madison, United States
[b] Department of Sociology, Centre for Population, Aging, and Health (CPAH), University of Western Ontario, Canada
[c] University of Pennsylvania, United States
[d] Département de démographie, University of Montreal, Canada

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ABSTRACT

We examine the relationship between incarceration and premature mortality for men and women. Analyses using the National Longitudinal Survey of Youth (NLSY79) reveal strong gender differences. Using two different analytic procedures the results show that women with a history of incarceration are more likely to die than women without such a history, even after controlling for health status and criminal behavior prior to incarceration, the availability of health insurance, and other socio-demographic factors. In contrast, there is no relationship between incarceration and mortality for men after accounting for these factors. The results point to the importance of examining gender differences in the collateral consequences of incarceration. The results also contribute to a rapidly emerging literature linking incarceration to various health hazards. Although men constitute the bulk of inmates, future research should not neglect the special circumstances of female former inmates and their rapidly growing numbers.

1. Introduction

In recent decades, the expansion of the prison system has become one of the defining features of American society. Over three decades, the size of the prison population has increased more than sevenfold. At present, there are well over two million Americans incarcerated in state and federal prisons or jails. Although the average length of a sentence has increased as well, most prisoners are eventually released, creating a cycle of entry and exit affecting large numbers of people. In any given year approximately 700,000 individuals are released from prison, resulting in a large number of community members having some contact with the correctional system in their lifetime. Some characterize this group as sufficiently large and distinctive to constitute a "felon class" (Uggen et al., 2006).

Social scientists have investigated many of the negative consequences of a prison sentence with renewed interest. Research has linked incarceration to increased likelihood of divorce (Hagan and Dinovitzer, 1999; Lopoo and Western, 2005), negative parent–child relationships (Pattillo et al., 2004), and diminished wages and employment opportunities (Pager, 2003; Western, 2002). Health has recently been added to the list, providing an important new direction for future research. Research has linked incarceration to infectious disease (Massoglia, 2008a), chronic health problems (Schnittker and John, 2007) and poor mental health (see Haney, 2003 for a review). Other studies have found a relationship between

* Corresponding author. Address: 8128 William H. Sewell Social Sciences Building, 1180 Observatory Drive, Madison, WI 53706-1393, United States.
E-mail address: mmassoglia@ssc.wisc.edu (M. Massoglia).

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the number of former inmates within a community and rates of infectious disease, including tuberculosis (Farmer, 2002) and HIV/AIDS (Johnson and Raphael, 2009).

Although it is already clear that prison is negatively related to health, a number of elements are still missing from the empirical literature. For one, research has done far more to explore assorted indicators of morbidity than it has to explore mortality (see Patterson, 2013 for a notable exception). This is perhaps surprising given that mortality is the subject of a well-established literature of its own, but its neglect likely reflects some aspects of incarceration that steer researchers toward chronic disease and mental health rather than death. For one, the prison boom is a recent phenomenon and the prison population is relatively young, making death a rare event and, therefore, difficult to observe in numbers sufficient for statistical power. In addition, much of the attention has focused on a handful of mechanisms immediately related to imprisonment, including stress and infectious disease, a focus that renders mortality a more distant outcome and perhaps a less interesting one as well.

More importantly, very few studies have seriously explored gender-differences in the health consequences of incarceration (Steward et al., 2004). Indeed, many studies focus exclusively on men with little discussion of potential gender-specificity (Bird 2004; Joukamaa, 1998; Seaman et al., 1998). This is an especially important limitation given that research in other areas has pointed to gender differences in the experience and consequences of incarceration, differences that are likely relevant to health (see Chesney-Lind, 1997; Lindquist and Lindquist, 1997; Rafter, 1990). The actual role of gender remains unclear—incarceration could plausibly have more or less of an effect on women than it does on men—but it is already clear that gender is relevant to understanding the effects of incarceration and that, without considering gender differences, scholars should be cautious about over-generalizing their findings. Furthermore, recent trends are likely to make gender-differences even more relevant. Although women represent a small fraction of the total inmate population, the number of women in prison has grown (Bloom and Chesney-Lind, 2003).

In this study, we use the National Longitudinal Survey of Youth (NLSY79) to examine the relationship between incarceration and premature adult mortality (mortality between the ages of 24 and 47). The NLSY79 is useful for our purposes. Incarceration is rare among women, as is premature mortality, but the NLSY79 sample size is large enough to estimate gender differences reliably, as we will demonstrate shortly. In addition the NLSY79 includes most of the selective forces that might link incarceration to mortality in a spurious fashion. These include education, income, drug use, and a history of violence prior to incarceration, but they also include more direct forms of spuriousness such as health status prior to incarceration. Altogether these variables allow us to separate the effects of incarceration from the conditions that predate imprisonment and lead to worse health. Finally, the NLSY data collection period spans almost 30 years in the lives of its respondents, allowing for a much longer period of observation than in previous studies. In short, our study is well positioned to add substantially to the literature.

2. Previous research linking incarceration and health

Despite the rise of incarceration and recognition of its various negative consequences, social scientists have been relatively slow to consider the impact of incarceration on health. Other professionals were quicker to the topic. Correctional officials have long recognized the health needs of inmates (e.g. Spaulding et al., 2002; Weiner and Anno, 1992) and some early reports on the high levels of infectious disease in prisons came from journalists (Herivel and Wright, 2002). Since then a number of studies have begun to explore the topic empirically and, in the fashion of social scientists, with an eye toward inferring whether the relationship between incarceration and health is causal. This research is generally consistent with early claims that incarceration impairs health, but also reveals considerable complexity and, at least implicitly, highlights the importance of gender.

Studies have generally employed one of two strategies for understanding the incarceration-health relationship. Some studies have compared mortality rates in prisons to mortality rates among demographically similar populations who are not incarcerated. In general, these studies find that prisons produce a short term protective effect on mortality by removing high-risk persons from dangerous environments and providing inmates with health care (see for instance, Patterson, 2010; Sattar, 2001). A similar protective effect has been found with respect to morbidity, especially among prisoners from disadvantaged backgrounds (Schnittker and John, 2007).

The consequences of incarceration upon release, however, are very different. Here, too, there are few studies, and what exists has been drawn from diverse contexts, but these studies are generally consistent in their conclusions (see, e.g. Hobbs et al., 2006; Steward et al., 2004; Joukamaa, 1998). Using data from Australia, for example, Hobbs et al. (2006) find that those with a history of incarceration have mortality rates at least twice that of those who have never been incarcerated. Similarly, Seaman et al. (1998) find that injection drug users in the United Kingdom have an unusually high risk of death from overdose following release. Using data from the U.S., Binswanger et al. (2007) find that the risk of death is 3.5 times higher among former inmates than among community members without a prison record, with an especially high risk of death occurring shortly after release, particularly because of drug overdoses.

Although this body of research is innovative, valuable, and consistent in its conclusions, it has at least three limitations (Kinner, 2010). First, studies have generally used an incomplete set of control variables. In some instances, these studies are more interested in drawing attention to an *association*, rather than arguing strongly for an *effect*. Yet without adequate control variables it is difficult to infer where the risk for premature mortality among former inmates comes from and what