

Examining the Impact of Criminal Justice Involvement on Health Through Federally Funded, National Population-Based Surveys in the United States

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Keywords

justice-involved persons, prisoners, surveillance system, national survey, health disparities

From 1980 to 2014, the number of incarcerated persons in the United States increased from 501 886 to 2 224 400—an increase of 343%.^{1,2} In 2014, about 1 in 110 adults were incarcerated in prisons and jails, and an additional 4.7 million adults were on probation or parole.² In the same year, 636 346 persons were released from state and federal prisons,³ and an estimated 11 million persons cycled through local jails.⁴ More than 95% of incarcerated persons eventually return to their communities.⁵ Given the high rates of incarceration and subsequent release to the community, a large segment of the US population is involved in the criminal justice system. In this article, the terms “criminal justice involvement” and “justice-involved” refer to persons who have had contact with the criminal justice system in 1 or more of the following capacities: arrest, booking, charging, sentencing, incarceration in jail or prison, probation, or parole.

Marginalized populations, including persons who are homeless, are uninsured, or belong to a racial/ethnic minority group, are often overrepresented in prisons and jails.^{3,6–8} Persons in these vulnerable populations also have a high burden of disease. In 2004, an estimated half of state prisoners and two-thirds of jail detainees met the diagnostic criteria for drug dependence or abuse.⁹ In 2014, the seroprevalences of HIV and hepatitis C infection were thought to be 10 times higher in the justice-involved population than in the general population.^{10,11} Chronic conditions (eg, hypertension and asthma) and mental health disorders also affect incarcerated persons at higher rates than the general population.^{11,12} However, many of the population-based studies that examine the relationship between justice involvement and health that led to these conclusions are limited by their reliance on self-reported measures of health or extrapolations of the findings from community-based studies to the justice-involved population.¹³

Nationally representative data on health for incarcerated persons are collected through the US Department of Justice

Bureau of Justice Statistics¹¹ and rely on self-report. Little is known about the health status of the justice-involved population after release from incarceration or about the health of persons who are justice involved in the community, such as persons on parole or probation, because national population-based surveys on health conducted in the community do not include currently incarcerated populations, and most do not include measures on individual or family exposure to incarceration. Excluding incarcerated populations from national population-based surveys is problematic given that these surveys are used to provide nationally representative estimates of disease prevalence, monitor trends, identify health disparities and determinants, and document the health status of the justice-involved population and its subgroups,¹⁴ informing decisions on national and local funding and policymaking.

This commentary examines justice involvement measures in federally funded, national population-based surveys. Building on a study that examined the absence of data on incarceration in 36 studies included in the Society of General Internal Medicine database on general health, we examined the available national population-based studies financed by the federal government that examine health outcomes.¹³ We provide an overview of the national population-based

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Table 1. Objectives of federally funded, national population-based surveys on health in the United States

Survey	Objective
National Health Interview Survey ¹⁵	Monitors the health status of the population and tracks progress toward achieving national health objectives
National Health and Nutrition Examination Survey ¹⁶	Assesses the health and nutritional status of adults and children
National Survey of Family Growth ^{17,18}	Describes characteristics of families, fertility, and health
Behavioral Risk Factor Surveillance System ¹⁹	Collects state-level data on health-related risk behaviors, chronic health conditions, and use of preventive services
National Longitudinal Survey of Youth (NLSY) ²⁰⁻²²	Describes lifetime trends in labor market activity, health, and important life events following 3 cohorts: NLSY—1997 Cohort (NLSY97) NLSY—1979 Cohort (NLSY79) NLSY79 Children and Young Adults Survey
National Survey on Drug Use and Health ²³	Provides national and state-level data on use of alcohol and drugs
Youth Risk Behavior Surveillance System ²⁴	Monitors health-risk behaviors that contribute to the leading causes of death and disability among young persons and adults

surveys that were selected for inclusion in this commentary and describe items in each survey that pertain to justice involvement and health among persons who have a history of incarceration and their family members. Our commentary further expands on the previous study by describing what studies have been conducted using these data sets and which questions could be answered given the domains that are included. We then summarize research questions that have recently been answered using these surveys. Finally, we outline future directions and offer recommendations for how national population-based surveys could best be used to understand the health status and health needs of the justice-involved population.

Justice Involvement in Federally Funded, National Population-Based Surveys

Data collected from federally funded, national population-based surveys on health are integral to understanding the health status of the general population and documenting the health disparities borne by its subgroups. We selected 9 national population-based surveys for inclusion (Table 1). We did not include surveys that were limited to regional samples (eg, the New York City Community Health Survey) or surveys that were funded entirely or in part by private

organizations (eg, the National Longitudinal Study of Adolescent to Adult Health). We focused specifically on the fully federally funded surveys because these national population-based surveys are the ones that the federal government uses to allocate federal resources for public health prevention and treatment of diseases. Nevertheless, including or expanding measures relating to justice involvement in regional and privately funded surveys, although exceeding the scope of this commentary, warrants further exploration. In addition, we did not include national vital records, provider surveys, and surveys lacking high relevance for justice-involved populations (eg, the National Youth Fitness Survey). Finally, we excluded surveys that were not population-based (eg, the National Inmate Survey) because they did not sample the general, nonincarcerated population. Nevertheless, the expansion of survey items on justice involvement in surveys of this kind may improve our understanding of the health of the justice-involved population.

Although all of these federally funded, national population-based surveys on health serve similar roles in generating key health statistics, each survey has a unique set of objectives (Table 1). The items pertaining to health in each survey also differ and span a wide array of domains, including existing medical conditions and medical history, risk behaviors, nutrition, alcohol and other substance use, mental health, fertility, family life, health care access and use, and health insurance.

The methodologies used for each survey vary in accordance with their respective domains of inquiry and study objective. The sampling methods used in population-based studies are often complex and multistaged. In some cases, oversampling techniques or multiple samples are used to increase the reliability and precision of health status indicator estimates. These features of the sampling methods used in various studies create limitations and subtle differences in the samples between the studies that are nuanced and complex, and readers should consider how various sampling approaches might influence the data collected (Table 2).

The National Health Interview Survey (NHIS), National Health and Nutrition Examination Survey (NHANES), and Youth Risk Behavior Surveillance System (YRBSS) have no items that assess criminal justice involvement. In 2 surveys, the Behavioral Risk Factor Surveillance System (BRFSS) and the National Longitudinal Survey of Youth—1979 Cohort (NLSY79), the data collected are insufficient to assess recent or lifetime criminal justice involvement (Table 2). The National Survey of Family Growth (NSFG), National Longitudinal Survey of Youth—1997 Cohort (NLSY97), NLSY79 Children and Young Adults, and National Survey on Drug Use and Health (NSDUH) include measures that assess recent and/or lifetime criminal justice involvement (Tables 3 and 4).

With the exception of the NLSY97, federally funded, national population-based surveys collect relatively limited data on previous justice involvement. Surveys that do collect data on justice involvement are often constrained by a 12-month recall period or collect data on justice involvement

Table 2. Key characteristics of federally funded, national population-based surveys on health in the United States

Survey	Funding Federal Agency	Data Source	Target Population	Sampling Method	Sampling Frequency	Target Sample Size (Persons per Year)	Includes Recent or Lifetime Justice Involvement Measures
National Health Interview Survey ¹⁵	CDC National Center for Health Statistics	Personal interviews	Adults aged ≥ 18	Cross-sectional sampling of households	Annual	87 500	No
National Health and Nutrition Examination Survey ¹⁶	CDC National Center for Health Statistics	Personal interviews, physical examinations, laboratory tests, nutritional assessment, DNA and bio-specimen repository	All ages	Multi-stage, unequal probability, and cluster sampling methods	Continuous with 2-year survey cycles	5000	No
National Survey of Family Growth ^{17,18}	CDC National Center for Health Statistics	Personal interviews	Persons aged 15-49	Stratified multi-stage area probability sampling	Continuous	5000	Yes—men only
Behavioral Risk Factor Surveillance System ¹⁹	CDC Division of Population Health	Telephone	Adults aged ≥ 18	Two samples used: (1) landline sample (household sampling and disproportionate stratified sampling) and (2) cellular telephone sample (randomly selected)	Monthly	<400 000	No ^a
National Longitudinal Survey of Youth—1997 Cohort ²⁰	US Department of Labor, Bureau of Labor Statistics	Personal interviews or telephone	Cohort members born between 1980 and 1984	Cross-sectional sampling of households	Previously annual; biennial beginning in 2011	7141	Yes
National Longitudinal Survey of Youth—1979 Cohort (NLSY79) ²¹	US Department of Labor, Bureau of Labor Statistics	Personal interviews or telephone	Cohort members born between 1957 and 1964	Cross-sectional sampling of households	Previously annual; biennial beginning in 1994	7301	No ^a
NLSY79 Children and Young Adults ²²	US Department of Labor, Bureau of Labor Statistics	Personal interviews or telephone	Cohort members born to NLSY79 women	Comprises all children born to NLSY79 women	Biennial until age 30; then 4-year cycle	6323	Yes
National Survey on Drug Use and Health ²³	Substance Abuse and Mental Health Services Administration	Personal interviews	Persons aged ≥ 12	Cross-sectional sampling of households	Annual	70 000	Yes
Youth Risk Behavior Surveillance System ²⁴	CDC Division of Adolescent and School Health	Computer-scannable answer sheet	Students in grades 9-12	Two stages: (1) schools are selected with probability proportional to school enrollment size and (2) intact classes (chosen based on a required subject or a particular school day period) are selected randomly	Biennial	15 425	No

Abbreviation: CDC, Centers for Disease Control and Prevention.

^aData collected in Behavioral Risk Factor Surveillance System and NLSY79 are insufficient to assess recent or lifetime criminal justice involvement. In the former, the only item pertaining to justice involvement is “Where did you have your last HIV test?” [Option: jail]. In the latter, only present incarceration can be assessed through the item “What type of residence or dwelling unit are you living in?” [Option: jail].

Table 3. Items pertaining to involvement in the criminal justice system in the current round of federally funded, national population-based surveys in the United States^a

Survey	Most Recent Available Survey Year	Justice Involvement Items
National Health Interview Survey ¹⁵	2015	— ^b
National Health and Nutrition Examination Survey ¹⁶	2013-2014	— ^b
National Survey of Family Growth (NSFG) ^{17,18}	2011-2013	The NSFG poses questions pertaining to justice involvement only to men. Among those surveys that include recent and lifetime justice involvement measures, those items provided in the NSFG are the least comprehensive. In the most recent available survey year, NSFG has 4 items that assess lifetime and prior 12-month justice involvement, and all items pertain only to experience with incarceration.
Behavioral Risk Factor Surveillance System (BRFSS) ¹⁹	2014	The BRFSS asks a single question on where participants had their last HIV test. One of the responses is that they had their last test in a jail or prison. The measure is insufficient to assess recent or lifetime criminal justice involvement.
National Longitudinal Survey of Youth—1997 Cohort (NLSY97) ²⁰	2013-2014	The NLSY97 offers the most robust assemblage of items pertaining to justice involvement. The survey asks questions related to the following types of justice involvement: arrest, charges/convictions, probation, community service, sentencing, incarceration in prison or jail, release, and parole. The time frame of these items is lifetime or since the last interview date. The survey also asks questions about support from or contact with family during imprisonment.
National Longitudinal Survey of Youth—1979 Cohort (NLSY79) ²¹	2014	The NLSY79 asks a single question about residence or dwelling unit, with 1 option being jail. The measure is insufficient to assess recent or lifetime criminal justice involvement. ^c
NLSY79 Children and Young Adults ²²	2014	The NLSY79 Children and Young Adults survey offers a collection of justice involvement items that are slightly more comprehensive than the NSFG. Data are collected in the following domains: prior convictions (eg, number and type of convictions), probation, incarceration, and court-ordered community service. The time frame of these items is lifetime or since last interview date.
National Survey on Drug Use and Health (NSDUH) ²³	2016	The NSDUH offers a collection of justice involvement items that are slightly more comprehensive than the NLSY79 Children and Young Adults survey. The NSDUH assesses lifetime experience with arrest or booking and collects 12-month data in the following domains: arrest/booking, type of offense, probation, parole/supervised/other conditional release, treatment for alcohol or drug use while incarcerated, and incarceration.
Youth Risk Behavior Surveillance System ²⁴	2017	— ^b

^aAll items are summarized from the most recent available questionnaire documents. Information was current as of 2017.

^bNo justice involvement items are available for the survey.

^cIn 1980, the NLSY79 included a series of items pertaining to justice involvement; however, these items were excluded from subsequent iterations of the NLSY79. Earlier iterations of each survey were excluded from comparisons.

from men only. Because of these constraints, research that examines the intersection of health status and justice involvement using these surveys is limited.

Justice Involvement in Federally Funded, National Population-Based Surveys: Recent Literature

Peer-reviewed articles and federal health reports that examine the health status and disparities of the justice-involved

population are essential for developing evidence-based public health policies for persons in this vulnerable population. In this section, we summarize peer-reviewed studies and federal reports that examine the impact of justice involvement on health outcomes using data from federally funded, national population-based surveys. We conducted a comprehensive review of the literature using the selected bibliographies available on survey websites, PubMed, and Google Scholar. We restricted our search to peer-reviewed articles and federal reports published from January 1, 2006, through August 1, 2016. We looked for the presence of search terms

Table 4. Questions on criminal justice involvement in federally funded, national population-based surveys on health, United States^a

Survey	Items on Criminal Justice Involvement
National Health Interview Survey ¹⁵	— ^b
National Health and Nutrition Examination Survey ¹⁶	— ^b
National Survey of Family Growth ^{17,18}	Where is your husband/wife/partner currently living? [Option: in correctional institution (jail, prison)] Items below are asked only of adolescent and adult males: <ul style="list-style-type: none"> • In the last 12 months, have you spent any time in a jail, prison, or a juvenile detention facility? • Have you ever spent time in a jail, prison, or juvenile detention center? • Have you been in jail, prison, or a juvenile detention facility only one time or more than one time? • How long were you in jail, prison, or juvenile detention? OR The last time you were in jail, prison, or juvenile detention, how long were you in?
Behavioral Risk Factor Surveillance System ¹⁹	Where did you have your last HIV test—at a private physician or HMO (health maintenance organization) office, at a counseling and testing site, at an emergency room, as an inpatient in a hospital, at a clinic, in a jail or prison, at a drug treatment facility, at home, or somewhere else?
National Longitudinal Survey of Youth—1997 Cohort ^{20,c}	In what type of place are you currently living? [Option: in jail/prison/detention/work release] Arrest <ul style="list-style-type: none"> • Have you been arrested by the police or taken into custody for an illegal or delinquent offense (do not include arrests for minor traffic violations)? • In total, how many times have you been arrested? • In what month and year were you first arrested? • In what month and year was your most recent arrest? • In what month and year was your [number] arrest since the last interview? • At the time of that arrest, were you on probation or parole? Charges/convictions <ul style="list-style-type: none"> • Did the police charge you with an offense? • Which of the following offenses did the police charge you with? • As a result of these charges, did you go to juvenile or adult court? • Which of the following charges have you been arrested for? • As a result of these charges, did you go to juvenile court? • As a result of these charges, did you go to adult court? • On which of the following charges have you been convicted? • Since [last interview date], which of the following charges have you been convicted for? • Have you been convicted of a felony? • Have you received a court decision or had an out-of-court resolution on any police charges brought against you [prior to date of last interview]? • In what year were you arrested for the charges that were decided or resolved? If charges were finalized from different arrests, please enter the earliest arrest year. • Which of the following charges were you convicted of or did you plead guilty to? • Were you convicted of or did you plead guilty to a felony? • What was the outcome? [Options: brought home or no further action, pre-court diversion program or counseling, court appearance—no further action, other] Probation <ul style="list-style-type: none"> • Were you put on probation? • In what month and year did you begin your probation? • Did the terms of your probation restrict . . . [Options: where you could live, how far you could travel from home, what hours of the day you could be away from home, whom you could associate with?] • Are you still on probation? • In what month and year did your probation end? Community service <ul style="list-style-type: none"> • In what month and year did you first complete a sentence to perform community service? Sentencing <ul style="list-style-type: none"> • Were you sentenced to spend time in a corrections institution, like a jail, prison, a youth institution like juvenile hall or reform school or training school, or to perform community service? • Which of the following have you been sentenced to for even 1 day? [Options: jail, adult corrections institution, juvenile corrections institution, reform or training school, community service, other]

(continued)

Table 4. (continued)

Survey	Items on Criminal Justice Involvement
	<ul style="list-style-type: none"> • Are you currently serving a sentence? • Are you serving a sentence in . . . [Options: jail, adult corrections institution, juvenile corrections institution, reform or training school, community service, other]. • In what month and year did you begin serving your current sentence?
	Incarceration
	<ul style="list-style-type: none"> • In what month and year did you first serve time in a jail or a corrections institution? • Are you still serving that sentence? • Have you lost [or did you lose] a job because of your current [or past] incarceration? • Have you lost [or did you lose] custody of any children because of your current [or past] incarceration? • During the time that you've been incarcerated, have you received [or did you receive] any of the following services? [Options: re-entry preparation, substance abuse treatment, mental health treatment, employment training, GED or other schooling, religious services/ministry] • How far would you say it is from the place you are currently incarcerated [or were incarcerated] to the place you were living before you became incarcerated? [report in miles] • Since you have been incarcerated [or while you were incarcerated], how many times have you received a visit from friends or family members? • Since you have been incarcerated [or while you were incarcerated], how many times have you talked on the phone with friends or family members? • While you have been incarcerated [or while you were incarcerated], how many times did you receive a letter, email, or package from friends or family members?
	Release
	<ul style="list-style-type: none"> • In what month and year were you first released from a corrections facility, including an adult or juvenile institution or reform or training school? • In what month and year were you released from that first sentence to jail or a corrections institution? • In what month and year were you released from that sentence to jail or a corrections institution? • Where did you spend the first night that you were released from incarceration? • In the first 3 months after your release, did you contribute to the cost of your housing, for example helping to pay the rent or mortgage? • Since [release date], have you had trouble finding a place to live? • Since your release, how easy or hard has it been for you to stay out of prison? • Since your release, how easy or hard has it been to not commit crimes? • How easy or hard do you think it will be to stay out of prison for the next 5 years? • What do you think is the percent chance that you will be (re-) incarcerated within the next 5 years?
	Parole
	<ul style="list-style-type: none"> • At the time of your release, were you placed on parole? • Did the terms of your parole restrict . . . [Options: where you could live, how far you could travel from home, what hours of the day you could be away from home, whom you could associate with]? • Are you still on parole for that sentence?
National Longitudinal Survey of Youth—1979 Cohort (NLSY79) ²¹	What type of residence or dwelling unit are you living in? [Option: jail]
NLSY79 Child and Young Adult ^{22,c}	What type of residence or dwelling unit are you living in? [Option: jail] <ul style="list-style-type: none"> • Have you been convicted of any charges other than a minor traffic violation? • How many times have you been convicted of something? • How old were you when you were convicted? • What charges were you convicted of? • Have you been sentenced to spend time in a corrections institution, like a jail, prison, or a youth institution like a training school or reform school? • Have you been on probation? • In what month and year did you enter this jail or prison to serve your current sentence? • For all the types of volunteer work you have done, was any of it court ordered?
National Survey on Drug Use and Health ²³	<ul style="list-style-type: none"> • Not counting minor traffic violations, have you ever been arrested and booked for breaking the law? • Not counting minor traffic violations, how many times during the past 12 months have you been arrested and booked for breaking a law? • In the past 12 months, were you arrested and booked for [crime]? • In the past 12 months, were you arrested and booked for some other offense besides these that have been named? • Please type one of the offenses for which you were arrested and booked during the past 12 months. • Were you on probation at any time during the past 12 months?

(continued)

Table 4. (continued)

Survey	Items on Criminal Justice Involvement
	<ul style="list-style-type: none">• Were you on parole, supervised release, or other conditional release from prison at any time during the past 12 months?• During the past 12 months, have you received treatment for your [alcohol use, drug use, or both alcohol and drug use] in a prison or jail?• Was the treatment you received in a prison or jail for your alcohol use, your drug use, or both?• What is the main place where you are currently receiving treatment for your alcohol or other drug use, not counting cigarettes? [Option: a prison or jail]• During the past 12 months, that is, since [date of last interview], did you stay overnight or longer in any type of juvenile detention center, sometimes called “juvie,” prison, or jail?• During the past 12 months, how many nights altogether did you stay in any type of juvenile detention center, prison, or jail?• While you were in a juvenile detention center, prison, or jail during the past 12 months, did you receive treatment or counseling for emotional or behavioral problems that were not caused by alcohol or drugs?
Youth Risk Behavior Surveillance System ²⁴	— ^b

^aAll items are summarized from most recent available questionnaire documents. Information was current as of 2017.
^bNo justice involvement items are available for the survey.
^cThe time frame for all questions in this survey other than the question about the current dwelling is lifetime or since last interview date.

pertaining to justice involvement (eg, incarceration, prison, jail, parole, probation) in the full and abbreviated versions of each study’s title. We excluded dissertations, conference proceedings, and other academic but non–peer-reviewed findings. As a result of this methodology, a number of existing and eligible studies that examined the impact of justice involvement on health may not be represented.

NHIS and NHANES

Because NHIS and NHANES lack measures pertaining to justice involvement, the role of these surveys in examining the impact of justice involvement on health has been limited to studies that use NHIS and NHANES data to produce a comparison group of noninstitutionalized adults. Specifically, they explore how the prevalence of selected chronic conditions differs among federal and state prisoners, jail inmates, and members of the noninstitutionalized US population.

Examples of research questions addressed by such studies include:

- What is the prevalence of chronic medical conditions among jail and prison inmates in the United States as compared with the general US population?¹²
- What is the prevalence of obesity among male jail and prison inmates in the United States as compared with men in the general US population?²⁵
- What is the prevalence of chronic medical conditions among inmates in the Texas prison system as compared with the general US population?²⁶

NSFG

The NSFG poses items pertaining to justice involvement only of men. Given the study objective and domains of inquiry in

this survey, the research questions that have been answered using NSFG data have primarily explored the impact of incarceration on sexual risk behaviors. Examples include:

- What is the impact of prior 12-month incarceration on HIV risk behaviors for men?²⁷
- What is the impact of lifetime and prior 12-month incarceration on HIV testing behaviors for men?²⁸
- What is the impact of lifetime and prior 12-month incarceration on condom use among men?^{29,30}
- How has the Affordable Care Act affected the rates of insurance coverage among men in the justice-involved population?³⁰

BRFSS

Because data collected in the BRFSS are insufficient to assess recent or lifetime criminal justice involvement, we found no studies that examined the impact of justice involvement on health using this survey. However, from 2009 to 2012, the BRFSS included the item “Did you live with anyone who served time or was sentenced to serve time in a prison, jail, or other correctional facility?” Correspondingly, several studies used data on the responses to this new BRFSS item to examine the impact of adverse childhood experiences (including the incarceration of a household member) on long-term health outcomes and risk behaviors.^{31–33}

NLSY97

Although the NLSY97 offers the most comprehensive collection of items pertaining to justice involvement, we identified only 2 studies that examined the impact of justice involvement on health outcomes that used data from the NLSY97. The underuse of NLSY97 data may be attributable

to the relatively young age of the cohort (12-17 years) when first interviewed in 1997. Studies that used NLSY97 data addressed the following research questions:

- How do individuals who become incarcerated compare with those who do not become incarcerated on 4 measures of health: depression, self-rated health, functional limitations, and injury or illness requiring medical attention? Do individuals need to be healthy to commit crimes and become incarcerated?³⁴
- What is the impact of incarceration on premature adult mortality after controlling for health status and criminal behavior prior to incarceration, the availability of health insurance, and other sociodemographic factors?³⁵

Given the objective and domains of inquiry in this survey, the research questions that have been answered using NLSY97 data have primarily explored the impact of incarceration on employment outcomes and educational attainment.

NLSY79

Recent or lifetime criminal justice involvement cannot be reliably ascertained using the NLSY79, which has only 1 item pertaining to justice involvement: “What type of residence or dwelling unit are you living in?” Because incarcerated persons can participate in the study, “jail” is provided as an option. Incarcerations that occurred between interviews—which were conducted annually from 1979 to 1994 and biennially thereafter—are not reflected in these data. Nevertheless, we identified 4 studies that addressed the following research questions on the impact of incarceration on health outcomes using this indirect measure for lifetime incarceration:

- What is the impact of incarceration on the prevalence of infectious disease and other stress-related illnesses?³⁶
- What is the impact of incarceration on health functioning?³⁷
- What is the impact of incarceration on premature adult mortality?³⁵
- What is the impact of incarceration on men’s midlife health?³⁸

NLSY79 Children and Young Adults

Although the NLSY79 Children and Young Adults contains several items that assess justice involvement, we identified no studies examining the impact of justice involvement on health outcomes that used data from this survey.

NSDUH

We identified a number of studies that used NSDUH data to examine the impact of justice involvement on health

outcomes. The research questions that have been answered using NSDUH data have primarily explored associations between justice involvement and substance use, although 3 studies explored health care use and insurance status among the justice-involved population:

- Is lifetime incarceration associated with concurrent illegal drug use in alcohol-dependent persons?³⁹
- Is the relationship between serious mental illness and lifetime arrest mediated by substance use?⁴⁰
- Is lifetime incarceration among adolescents associated with increased odds of heroin and injection drug use?⁴¹
- How does recent justice involvement affect hospitalization and emergency department use among adults and juveniles?⁴²⁻⁴⁴
- How does the prevalence of chronic health conditions among adolescents with justice involvement compare with the prevalence of chronic health conditions among adolescents without justice involvement?⁴⁵
- What were the trends in insurance coverage and access to behavioral health care among justice-involved adults before and after the Affordable Care Act?⁴⁵

YRBSS

The YRBSS contains no items pertaining to justice involvement, and we did not identify any studies that used YRBSS data to examine the impact of justice involvement on health outcomes.

Only 2 federally funded, national population-based surveys that lack items assessing previous justice involvement—NHIS and NHANES—have been helpful in providing a sample of noninstitutionalized adults that can then be compared with the justice-involved population. We did not identify any studies that examined the impact of individual justice involvement on health outcomes using data from the BRFSS, the NLSY79 Children and Young Adults, or the YRBSS surveys. Altogether, surveys that include items pertaining to justice involvement appear to be underused in examining the impact of justice involvement on health outcomes.

Justice Involvement in Federally Funded, National Population-Based Surveys: Opportunities and Limitations

Four federally funded, national population-based surveys collect data to assess recent or lifetime criminal justice involvement: NSFG, NLSY97, NLSY79 Children and Young Adults, and NSDUH. Given the number of research questions that have yet to be answered using these surveys, in this section, we present the various research domains that have yet to be queried and those that have yet to be queried in greater depth, as potential opportunities to examine the

impact of criminal justice involvement on health outcomes. We also note the limitations of each survey. An important constraint across all surveys is their reliance on self-reported measures, which are vulnerable to response bias, in the realms of both justice involvement and health outcomes.

NSFG

The NSFG collects data on lifetime incarceration, prior 12-month incarceration, number of incarcerations (ie, once vs more than once), and duration of incarceration. The impact of these experiences with incarceration can be explored in the following domains of health outcomes:

- Health care use, including the use of emergency departments, urgent care centers, and community health centers
- Prior 12-month insurance coverage, including type (eg, Medicaid, private insurance) and duration of periods without coverage
- Severe physical, mental, or emotional conditions
- Lifetime cancer diagnosis, including cancer type

NLSY97 and NLSY79 Children and Young Adults

The NLSY97 collects data on lifetime (as well as “since last interview”) arrests, charges and convictions, probation, community service, sentencing, incarceration in prison or jail, release, and parole. The NLSY79 Children and Young Adults has identical recall periods and collects data on convictions, incarceration, probation, and court-ordered volunteer work. The impact of these types of justice involvement can be explored in the following domains of health outcomes:

- Fertility and menstruation
- Self-reported perceived health status
- Severe physical, emotional, or mental health conditions
- Health care use, insurance coverage, and type of insurance
- Preventive health services use, including influenza shots, blood tests for cholesterol and diabetes, Papanicolaou smear, and blood pressure (collected in the Health-At-Age-29 module)
- Alcohol and other substance use
- Chronic conditions

The NLSY97 also collects data on visual impairments, hearing impairments, and family history of chronic conditions. The NLSY79 Children and Young Adults solicits additional health information in the following domains: nutrition and exercise, severe injuries and hospitalizations, height, weight, and oral hygiene.

Although data from NLSY97 have been used to examine the impact of incarceration on depression, self-rated health, functional limitations, injury or illness requiring medical

attention, and premature adult mortality, the impact of other types of justice involvement on these health outcomes has not yet been determined. Several opportunities exist to explore the impact of pre- and postconviction stages of justice involvement on key health outcomes. In addition, the immediate effects of incarceration on health outcomes can be assessed using this survey because NLSY97 administers the survey to cohort members who are incarcerated. Finally, these surveys can also be used to examine the impact of incarceration on health outcomes using a life course or longitudinal approach.

We identified no studies that used data collected from the NLSY79 Children and Young Adults to examine the impact of justice involvement on health outcomes. Nevertheless, opportunities exist to explore the impact of convictions, incarceration, probation, and court-ordered volunteer work on key health outcomes. In addition, as with the NLSY97, the immediate effects of incarceration on health outcomes can be assessed using this survey because the NLSY97 Children and Young Adults administers the survey to cohort members who are incarcerated.

NSDUH

NSDUH collects data on lifetime arrest and booking, as well as prior 12-month arrest and booking, type of offense, probation, parole/supervised/other conditional release, treatment for alcohol or drug use while incarcerated, and incarceration. The impact of these types of justice involvement can be explored in the following domains of health outcomes:

- Height and weight
- Health care use, including hospitalizations and emergency department use
- Chronic conditions, including heart disease, diabetes, respiratory disorder, cirrhosis of the liver, hepatitis B or C infection, kidney disease, asthma, HIV/AIDS, cancer and cancer type, and hypertension
- Tobacco, alcohol, and other drug use
- Mental health service use

In addition, associations between justice involvement and substance use disorders (eg, opioid use disorder) could be explored in greater depth. Given the sample size and sampling frame of the survey, one could also examine state differences in the health of the justice-involved population, but these data are currently unavailable.

Limitations

Although these surveys offer numerous opportunities to examine the impact of justice involvement on health outcomes in various domains, several limitations should be noted. None of these studies include clinically measured health outcomes. In all surveys except for NLSY97, the impact of certain types of justice involvement (eg, arrests, charges, probation, parole) and the impact of incarceration in

differing facilities (ie, prison, jail, juvenile detention) on health outcomes cannot be determined. Both NLSY97 and NLSY79 Children and Young Adults are longitudinal studies; therefore, the findings generated from these studies may not be generalizable to persons who were born outside of the birth years of these cohorts. Finally, the NSDUH recall period of prior 12-month justice involvement rather than lifetime justice involvement is a notable constraint.

Justice Involvement in Population-Based Surveys: Future Directions

As the growth of the US correctional population—and its associated societal costs—has gained national attention, research exploring the impact of justice involvement on social, economic, and health outcomes has also gained momentum. Recently, the National Research Council of the National Academies of Sciences, Engineering, and Medicine issued an extensive report that detailed what is known and remains unknown about the causes and consequences of mass incarceration.⁴⁶ National databases on health have been underused in efforts to understand the full impact of justice involvement on health outcomes. As noted throughout this commentary, several gaps in knowledge and empirical research remain. Looking forward, we offer several recommendations, both for surveys that have items pertaining to justice involvement and those that do not.

Four surveys collect sufficient data to assess recent or lifetime criminal justice involvement: NSFG, NLSY97, NLSY79 Children and Young Adults, and NSDUH. As compared with other federally funded, national population-based surveys, NLSY97 offers an especially rich collection of measures pertaining to justice involvement; however, we identified no studies using these data that focused on health outcomes. Although all aforementioned surveys offer yet-unexplored opportunities to examine the impact of justice involvement on a multitude of health outcomes—including health care use, chronic conditions, and risk behaviors—data derived from NLSY97 are particularly underused. The inclusion of lifetime recall periods on justice involvement items is also important for studies aiming at understanding the long-term impacts of justice involvement. NSDUH could greatly improve the utility of its justice involvement items by supplementing its 12-month recall periods with lifetime recall.

We identified 5 surveys that lacked sufficient data to assess the impact of recent or lifetime criminal justice involvement on health: NHIS, NHANES, BRFSS, NLSY79, and YRBSS. Although the inclusion of items pertaining to justice involvement in all 5 surveys would be ideal, it is particularly important for surveys with large sample sizes—namely, NHIS and BRFSS—to include items pertaining to justice involvement because this inclusion would enable researchers to use large samples to develop nationally representative estimates of disease prevalence and monitor the health status of the justice-involved population. At a minimum, items that solicit data on lifetime experience of

incarceration should be considered for inclusion. Additional items that solicit data on the number of lifetime incarcerations, lifetime total months of incarceration, and type of justice involvement (ie, arrest, probation, parole) would allow for the exploration of how greater degrees of justice involvement might moderate the effects of justice involvement on health.

Surveys with small sample sizes (eg, NHANES) should consider including items on justice involvement (at least for male respondents) or asking questions about familial history of incarceration. NHANES, because it supplements personal interview information with data collected through physical examinations, laboratory tests, and other clinical measures, provides the most accurate estimates of the prevalence of health conditions. Thus, adding questions to this survey is of particular importance. Furthermore, the NHANES methodology includes using a health evaluation vehicle; this vehicle could be brought to some correctional facilities to survey persons who are incarcerated and to obtain a representative sample for comparison purposes.

A final consideration is to explore the possibility of linking national population-based studies to administrative data from correctional facilities to identify persons with a history of incarceration. NHIS, NHANES, and NSDUH all collect personal identifiers of participants and can potentially be linked to corrections administrative data sets. Providing funding to support linkages of these surveys to the data from local and state departments of corrections, jails, or even the Bureau of Justice Statistics' National Corrections Reporting Program is yet another way of ascertaining persons' experience with incarceration.

Conclusions

Federally funded, national population-based surveys on health are used to develop nationally representative estimates of disease prevalence and document the health status of key population subgroups. Presently, only some of these surveys collect sufficient data to assess recent or lifetime criminal justice involvement, and those surveys either do not contain adequate measures for justice involvement or do not contain any clinical measures of health outcomes. Nevertheless, these surveys offer several opportunities to examine the impact of justice involvement on a multitude of health outcomes, including chronic conditions, risk behaviors, and health care use, as well as to study the impact of health policy changes on the justice-involved population.

Although items pertaining to justice involvement should ideally be added to all federally funded, national population-based surveys on health, given the expanse of the US criminal justice system, we recommend that surveys that have large sample sizes (eg, NHIS, BRFSS) prioritize inclusion of questions on criminal justice involvement. Furthermore, small studies such as NHANES should consider adding at least 1 item on lifetime exposure to incarceration or family exposure to incarceration. Finally, surveys that collect data

on HIPAA (Health Information Portability and Accountability Act) personal health identifiers (eg, date of birth, first name, last name) offer opportunities for linkages to correctional data, providing yet another way to measure exposure to the criminal justice system. Altogether, these surveys offer an important opportunity to examine the health status and health disparities that are borne by the justice-involved population in the United States.

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