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Predictors of drug use in prison among incarcerated Black men

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1. Introduction

1.1. Background

Over the past several decades, the U.S. incarceration rate has dramatically increased. This increase has been primarily driven by the dramatic increase in drug-related arrests over the past several decades. Black men have borne the brunt of these arrests and now represent 46 percent of those completing a prison term for drug-related offenses (1), despite the fact that they make up only six percent of the general U.S. population (2). Moreover, a substantial proportion is drug dependent when arrested (3).

Housing more serious drug users than any other institution (4), U.S. prisons are high-risk environments for drug use (5). Although conventional wisdom suggests that the highly structured and regimented prison environment serves as a barrier (6), drug use is not necessarily interrupted by a prison sentence (7–12). Drug use in this environment is particularly problematic for Black men, whose drug use and disproportionate incarceration significantly worsen health outcomes (13–15). Incarcerated Black men are also more likely to be overburdened with drug-related problems such as infectious diseases such as HIV (16), creating a significant public health problem that has largely been neglected. Since drug use in the prison environment may intensify harms associated with drug addiction (17), examining the extent to which drug use is continued in prison is critical to assessing treatment needs of such a vulnerable population.

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Even though prior studies clearly indicate that drugs are readily available in prisons (8,9), there is no formal reporting system to collect information on drug use in prisons. Because drug use in prison is considered misconduct, or a violation of the institutional rules (18), correctional officials' are often reluctant to address such behaviors within their facilities. Thus, empirical estimates of the prevalence and predictors of illicit drug use within U.S. prisons are limited. Without a reliable estimate of the number of prisoners using drugs in their respective facilities, it is difficult for correctional officials to recognize potential public health harms associated with illicit drug use in prison environments, and to effectively administer drug treatment programs.

Therefore, the goal of this study was to examine drug use in prison among incarcerated Black men. Given that previous research on drug use in prison suggests that prior history of drug use, drug preference, and incarceration duration predict prison drug use (19–22), the second purpose of this study is to better understand predictors of drug use in prison among this population. To our knowledge, this is the first study to examine drug use in the prison environment in an exclusive sample of incarcerated Black men.

2. Research Methodology

2.1. Participants and Procedures

Participants were housed in one of the largest maximum-security male state correctional facilities in the U.S., located in the northeast. This institution housed over 2,800 male inmates. Prisoners were eligible to participate if they met the following inclusion criteria: Black; male; at least 18 years old; incarcerated for at least one year; and achievement of at least a 6^{th} grade reading level. Inmates segregated from the general population during recruitment were excluded from participating, including those experiencing serious behavioral and medical problems, and in protective custody.

Over 1,100 individuals incarcerated at the institution met the inclusion criteria, constituting approximately 39 percent of the total prison population at this institution, and over half of the Black men incarcerated within this institution. These 1,100 individuals comprised this study's sampling frame, and were identified via the Department of Corrections (DOC) database containing information on all prisoners in its custody. From this larger sampling frame, participants from this institution were randomly selected using the random number generator from the Statistical Packages for the Social Sciences (SPSS).

2.2. Recruitment

Participants were recruited between April and August 2008. The research coordinator at the correctional institution delivered recruitment letters providing information about the study in sealed envelopes to potential participants chosen from the DOC mainframe. The research coordinator is a licensed psychologist who is responsible for overseeing the research activities within the institution. He was the only employee within the DOC who had any involvement with the research study.

Inmates who expressed interest in participating were given an appointment time and a pass to meet with the principal investigator (PI). Self-report qquestionnaires were completed during one-on-one sessions with the PI. Prior to completing the questionnaire, all participants read a non-signatory consent form; a checkmark at the end of the consent form confirmed their agreement to participate in the study. To remain consistent with the DOC's policy, participants were not compensated for participating in this study. Neither the research coordinator nor correctional officials knew which inmates declined or chose to participate. Recruitment and enrollment yielded a 70 percent response rate. This study was approved by the institutional review boards of the research community and the DOC, and

the Office for Human Research Protections. A certificate of confidentiality further protected participants' rights.

2.3. Measurement

2.3.1. Sociodemographics—Participants provided information on their age, marital status, highest level of education completed, and religion. To measure criminal background, participants were asked to provide information regarding sentence(s) received, total time incarcerated, and offense(s) committed for which they had been previously and/or currently convicted. Participants were also asked whether they were on probation or parole when arrested for committing their current offense(s).

2.3.2. Drug Use History—Questions from the Drug/Alcohol Use section of the Addiction Severity Index (ASI), 5th edition (23) measured participants' past and current drug use. To measure drug use history, participants were asked to specify types of drugs used during their lifetime (defined as drug use 3 or more times per week), the duration of such use (in years), and the route of administration. Participants who reportedly regularly used more than one drug regularly were classified as polydrug users.

2.3.3. Drug Use in Prison—To measure drug use in prison, participants were asked to indicate how many months or years ago they stopped using drugs. To determine whether they had used drugs while incarcerated, the total number of months ago that they stopped using drugs was subtracted from the date in which they completed the survey, and that date was compared to the date in which the respondent entered the facility. The specific types of drugs used during incarceration were not examined.

2.4. Analytic Plan

Descriptive statistics on the characteristics of participants were calculated to examine the distribution of each variable. Crosstabulations were used to test whether categorical demographic and criminal background characteristics, including prior periods of incarceration and history of drug use, were significantly associated with illicit drug use while incarcerated in the current facility. Logistic regression was used to compute odds ratios and associated 95% confidence intervals (95% CI) for associations with the dependent variable of drug use in prison. All analyses were conducted using SPSS v. 17.0.

3. Results

3.1. Demographics

The age range of the 134 participants in this study ranged from 23 to 74 years old (M=42.1, SD= 10.8). The vast majority (84%) of the participants possessed at least a high school diploma or GED. Half (n=67) of all participants reported being previously incarcerated. Almost 18 percent (n=24) were on probation and 30 percent (n=40) were on parole when they were arrested for committing their current offense(s). The vast majority of the participants were currently incarcerated for committing at least one violent offense (69%, n=93), 22 percent (n=30) committed property and drug offenses, seven percent (n=10) were reportedly sex offenders. On average, participants had spent 13 years incarcerated, and were sentenced to 37 years (excluding life sentences).

There was a high rate of history of drug use within this sample, with 75 percent (n=100) of the participants reportedly using drugs on a regular basis (at least 3 times per week) at some point during their lifetime. Over 90 percent of those who acknowledged a history of drug use reported using one drug regularly (n=91); the remaining 9 percent of drug users in this sample reportedly used at least two drugs on a regular basis. Overall, the average number of

drugs used regularly was 1.23. For illicit drug users in this study, the average length of illicit drug use was 10 years. The most frequently reported drugs used were cannabis (77%), cocaine (38%) and heroin (16%). Thirteen percent (n=13) of those with a history of drug use were injection drug users.

Based on our calculations, twenty percent (n=25) of the participants, or 25 percent of drug users, used drugs while incarcerated in the current facility. Table 1 compares background characteristics of prisoners who did and did not use drugs in prison. Those who used drugs while incarcerated had spent, on average, 20 years in the facility. Drug use in prison was associated with types of drug used ($\chi^2 = 18.5$, df=5, $p < .05$), with cannabis users comprising the majority of those who used drugs while incarcerated (52%, or 13 participants). Cocaine users and heroin users each comprised 24 percent (n= 6) of the prison drug users.

Although injection drug users comprised 13 percent of drug users in this sample, they comprised over half of those who used drugs in prison (54%, n=7), and injection drug use was significantly associated with drug use in prison ($\chi^2 = 11.7$, df=1, $p < .001$). Eight percent (n= 11) of those who used drugs in prison were incarcerated for committing a drug-related offense. On average, prison drug users had spent 19 years in the current institution. Being on probation and/or parole status when arrested was significantly associated with using drugs in prison ($\chi^2 = 3.8$, df=1, $p < .05$).

A logistic regression was conducted to estimate the impact of demographic characteristics, criminal history, and history of illicit drug use (including types of drugs used and length of use) on prison drug use (Table 2). Duration of illicit drug use history in years was positively associated with illicit drug use while incarcerated (OR: 1.1, 95% CI = 1.0–1.2). Spending more time incarcerated also increased the odds of using drugs in prison (OR: 1.1, 95% CI = 1.0–1.2). The odds of using drugs in prison were lower for participants on probation or parole when arrested (OR: .2, 95% CI = .1–.8), polydrug (OR: .1, 95% CI = .0–.9) and cannabis users (OR: .1, 95% CI = .0–.7).

4. Discussion

This study suggests that drug use is occurring in prison environments, a finding that complicates efforts to rehabilitate offenders, and challenges public health campaigns aimed at reducing risks associated with drug use. Twenty percent of the participants, or 25 percent of the drug users in this sample, report using drugs during a time frame consistent with use during incarceration, which is consistent with previous research in this area (20). Also consistent with previous research in this area, participants with more extensive drug use histories and those who had been incarcerated longer were more prone to using drugs in prison (22), underscoring the need for comprehensive drug treatment programs in prison settings. Since prisons may provide the first opportunity for Black men to receive proper diagnosis and subsequent treatment for drug addictions (24), individual and community health could be improved by ambitious efforts to deliver drug treatment services within this context.

Participants with a history of polydrug and cannabis use were less likely to use drugs in prison, perhaps suggesting that these individuals did not have access to cannabis or a variety of illicit substances within the confines of the prison system. However, since we were unable to collect data on specific types of substances used within the facility, this explanation is somewhat speculative. More research is needed to explore the relationship between drug preference and prison drug use, and to specify the nature of drug use within the confines of the prison system.

Participants on parole or probation when arrested were also less likely to use drugs in prison, which may signify a reluctance to engage in behavior that might jeopardize future requests for early release or favor with the parole board. Another possibility is that probationers and parolees in this study represented chronic offenders who are likely to eventually desist from criminal and institutional misconduct after extensive criminal careers (25). Offenders with a history of drug use are especially prone to institutional misconduct (21), therefore, this finding is especially encouraging.

Incarcerated Black men in this study had substantial illicit substance use histories. The vast majority (75%) of the participants had a history of drug use, a figure that is elevated compared to previous research on illicit drug use among male prisoners (26), in the general population, and Black Americans (27), indicating that incarcerated Black mens' treatment needs may be considerable.

Although the findings from this study are of significant public health importance, there are some limitations that should be recognized. First, although the study involved a random selection of incarcerated Black men, the results might not be generalizable to other populations (e.g. excluded segregated prison populations, prisoners who have achieved less than a 6^{th} grade reading level). Second, drug use in prison is a highly sensitive topic, and reporting involvement in institutional misconduct has many consequences for participants, including stigmatization and the possibility of a lengthened sentence. Therefore, participants may have underreported their involvement in drug misconduct in an effort to preserve their identity and avoid punishment. Additionally, the prison administration imposed restrictions on the data collection procedures which affected the researcher's ability to more directly measure drug use in the environment. For instance, because it is considered institutional misconduct, the PI was not allowed to directly ask participants about their drug use in prison. Instead, the PI asked participants to estimate abstention from drug use to see whether this period began during incarceration, which may have affected their ability to accurately recall drug use.

These challenges notwithstanding, the findings provide valuable information on predictors of prison drug use among incarcerated Black men; future research in this area could help improve the provision of drug treatment for such a vulnerable population. Despite convincing evidence that such in-prison drug treatment services and interventions reduce drug use (5), offender misconduct (28) and subsequent involvement in illegal activity (29), such programs are limited in correctional institutions (30). Since formerly incarcerated individuals may have substantial barriers accessing drug treatment programs once released (31), incarcerated Black men would greatly benefit from the opportunity to undergo intensive corrections-based drug treatment. Given firm evidence that former inmates are especially prone to drug overdoses within two weeks post-release (32), it is critical to enhance the capacity of prisons to provide adequate drug treatment services and programming. Delivering such services in prison could potentially be instrumental in helping prisoners recognize drug dependence during a period in which they may be more receptive to behavioral modification. Drug treatment programs that address long-standing addictions and coping mechanisms for lengthy prison stays, specifically, would be especially useful for this population.

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Table 1

Selected Demographic Characteristics of Prisoners who reportedly Used Drugs in Prison (n=25) and those who did not (n=109)

	Used Drugs in Prison		Did Not Use Drugs in Prison		
Variables	**n(%)**	**Mean(SD)**	**n(%)**	**Mean(SD)**	**χ^2**
Demographics					
Age		46.3(9.8)		41.2(10.9)	
Married	4(16)		23(21)		.33
At least HS Education	23(92)		90(83)		1.37
Criminal Background					
Been Previously Incarcerated	14(56)		53(49)		.44
Length of Previous Incarceration (months)		63.7(96.1)		36.2(59.9)	
On Probation/Parole	14(56)		38(35)		3.83
Current Offense					1.00
Drug-related	5(20)		27(25)		
Non-violent	1(4)		9(8)		
Violent	19(76)		73(67)		
Current Sentence (years)		45.2(24.2)		35.7(25.4)	
Total Time Incarcerated (years)		20.3(9.6)		11.5(9.7)	
Drug(s) Used Prior to Incarceration					
History of Cannabis Use	23(92)		54(49)		14.99**
History of Cocaine Use	7(28)		31(28)		.00
History of Heroin Use	8(32)		8(7)		11.76*
Injection Drug Use	7(28)		6(6)		
Polydrug User	5(20)		4(4)		
Lifetime Drug Use(years)		14.9(11.6)		5.4(6.6)	

*$p<.01$

**$p<.001$

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Table 2

Logistic regression to examine predictors of prison drug use among incarcerated Black men (N=134)

Variable	Unadjusted OR	95% CI	Adjusted OR	95% CI
On Probation/Parole (reference: no)	.4*	.2–1.0	.2*	.1–.8
Polydrug Use (reference: no)	.1*	.0–.6	.1*	.0–.9
Lifetime Drug Use (in years)	1.1*	1.0–1.1	1.1*	1.0–1.2
Injection Drug Use (reference: no)	.1*	.0–.5	.1	.0–1.7
Heroin Use (reference: no)	.2*	.0–.5	2.5	.2–26.3
Cocaine Use (reference: no)	1.0	.3–2.7	2.5	.5–12.8
Cannabis Use (reference: no)	.1*	.0–.4	.1*	.0–.7
Time Incarcerated (in years)	1.1*	1.0–1.1	1.1*	1.0–1.2
Constant			1.1	

* $p < .05$