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Original Research Article

A Study of Prevalence of Substance Use among Prisoners and its Association to the Type of Crime

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Abstract

Background: Recently, India has witnessed an increase in the rates of crimes as well as convictions, resulting in rise in the number of prisoners and prisons. Nonetheless, prison's occupancy rate is continuously rising beyond capacity. Similarly, there is increasing prevalence of mental disorders among prisoners, of which most common is substance use. Many foreign researchers have studied the prevalence of substance use among prisoners and association of substance use with crime, but surprisingly there is paucity of Indian data. This study was planned to help understand this in order to curb this social menace.

Objectives: The objectives of this study were to estimate the prevalence of substance use, type, severity among convicted prison inmates from Khandwa district jail and to find the association between substance use and crime.

Materials and Methods: This descriptive, cross-sectional study was conducted in District prison/jail, Khandwa, Madhya Pradesh, India, over a period of nine months from April 2022 to December 2022. Total 119 convicted prisoners were finally enrolled for data collection for our study after applying inclusion and exclusion criteria.

Results and Conclusion: Majority of the prison inmates (49.57%) were middle aged from age group 31-50 years, followed by 18-30 years (36.13%). Most of the participants belonged to rural area (81.5%) and lower socio-economic class (66.38%). Majority were married (68.06%). Family history of substance use was reported by 61.34% and criminal history by 21.84%. 73 participants (61.34%) had AUDIT score more than cut off and 21 participants (17.64%) had DAST-10 score more than cut off. Among alcohol users majority (57.53%) were incarcerated for criminal offences and nearly half (53.42%) were repeat offenders, while among drug users, 76.19% were incarcerated for criminal offences and 61.9% were repeat offenders.

Introduction

In recent years, there has been an increase in crimes as well as convictions, which led to a rise in the number of prisoners in India. In 2021, National Crime Records Bureau (NCRB) reported an increase of 13.41% in prisoners across India. Highest number of prisoners was recorded in Uttar Pradesh followed by Bihar and Madhya Pradesh. The occupancy rate also increases from 118% in 2020 to 130.2% in 2021. Out of 5,54,034 prisoners recorded in 2021, 77.1% were under-trial prisoners [1].

Additionally, previous studies report a prevalence upto 16.1% of various psychiatric illnesses [2–4]. Recent data from NCRB also reports an increasing prevalence of mental disorders in prisoners [5]. Addiction or substance use is most prevalent among various mental health disorders with prevalence of up to 65% in Indian prisons [2,6,7]. National Drug Abuse Survey of India, 2004 reports a prevalence of 76-82% of substance users among inmates. Many patients with mental illnesses are incarcerated due to crimes committed because of their psychiatric symptoms like suspiciousness, delusion, hallucination etc. [4]. Other factors like life imprisonment, poor prison facilities, overcrowding, limited space, poor availability and accessibility of health care services etc. can exacerbate an existing mental illness or give rise to new mental health issues [8].

Substance use has also been implicated to have a causal relation with crime [9,10], whether as a means to generate money via drugs or psychopathological symptoms due to drug consumption or crime committed in drug distribution. Association of substance use with crime has also been established in previous studies [11]. Rising substance use in prisoners has various implications including multiple incarcerations, difficulty in social rehabilitation, poverty etc. [12], which highlights the need for current study.

Data on drug abuse in prisoners from India is virtually absent, though estimated to be significant. Furthermore, fewer studies have attempted to correlate type of crime with substance use. Therefore, the current study is aimed to assess the socio-demographic profile of prisoners in Khandwa district, Madhya Pradesh and prevalence of substance use among them, and correlation of crime with substance use.

Material and Methods

This cross-sectional study was conducted in district prison/Jail, Khandwa, Madhya Pradesh, India, over a period of nine months from April 2022 to December 2022. Institutional ethics committee permission was obtained prior to the study (No. 40/IEC/NSCGMCK/2022 date 01/04/2022). During the study period, all the prison inmates who were willing to participate and ready to give consent for the study were included in the study. Our sampling method was convenience sampling, as the visit to prison and sample collection could be done on feasibility basis, due to time constraint of visitation hours and distance of prison from our institute. At any cross section of time, during the study period, approximately 500-600 inmates were registered in prison (including convicted, under-trial and excluding inmates on parole); therefore we interviewed and collected data of the consequent study participants available on the day of interview.

Participants: In total, 421 inmates were selected as study population, of which exclusion was done for prisoners who were violent offenders with close supervision, segregation, or seclusion and requiring maximum security. Prisoners with chronic and severe psychiatric disorders such as schizophrenia, dementia, and intellectual disability were also excluded. Those unwilling to give consent and with stay in prison more than one year were also excluded. Total 119 convicted prisoners

were finally enrolled for data collection for our study.

Assessment: Demographic, crime details and history related to substance use were collected on each participant from participants and prison records. The data was obtained in a semi structured proforma which included personal details (such as name, gender, education, residence, family history of substance use and criminal history) and crime related details (civil or criminal and repeat offenders). The screening tools Alcohol Use Disorders Identification Test (AUDIT) [13] and Drug Use Questionnaire (DAST - 10) [14] were then administered by interviewers. AUDIT, which was developed on initiation of World Health Organization (WHO), has been evaluated over a period of two decades. It has been found to provide an accurate measure of risk across gender, age, and cultures. It was validated on primary health care patients in six countries. It is the only screening test specifically designed for international use. It consists of 10 questions about recent alcohol use, alcohol dependence symptoms, and alcohol-related problems. A cut-off value of 8 points yields sensitivities for the AUDIT for various indices of problematic drinking, generally in the mid 0.90's. Specificities across countries and across criteria averaged in the 0.80's [15–17].

The DAST-10 was developed by the Dr. Harvey Skinner, York University, Toronto, Canada and published and marketed by the Centre for Addiction and Mental Health, Toronto, Canada. It was designed to provide a brief instrument for population screening, clinical case finding and treatment evaluation research. It yields a quantitative index of the degree of consequences related to drug abuse. The DAST-10 correlated very high (r = .98) with the DAST-20 and has excellent internal consistency reliability for such a brief scale (.92 total sample and .74 drug abuse). It consists of 10 questions and can be administered in either an interview or self-report format [14].

Statistical Analysis: The recorded data were entered in a Microsoft Excel spreadsheet and analyzed using descriptive statistics. The data were presented as frequencies and percentages.

Result

We studied a total of 119 convicted male prison inmates, from 18-70 years of age group. Majority of the prison inmates (49.57%) were middle aged from age group 31-50 years, followed by 18-30 years (36.13%). Most of the participants belonged to rural area (81.5%) and lower socio-economic class (66.38%). Nearly half (52.94%) were illiterate and unskilled worker (47.89%). Majority were married (68.06%). Family history of substance use was reported by 61.34% and criminal history by 21.84%. The socio-demographic characteristics of the participants are summarized in Table 1

Table 1: The socio-demographic characteristics of the participants

		Number (n)	Percentage
Age (years)	**18-30**	43	36.13%
	31-50	59	49.57%
	51-70	17	14.3%
Residence	**Urban**	22	18.48%
	Rural	97	81.5%
Socio-economic class	**Lower**	79	66.38%
	Middle	29	24.36%
	Upper	11	9.24%
Education	**Illiterate**	63	52.94%
	Primary	39	32.77%

	Secondary or higher	17	14.28%
Employment status	**Unemployed**	19	15.96%
	Unskilled	57	47.89%
	Skilled	36	30.25%
	Professional	7	5.88%
Family history	**Addiction**	73	61.34%
	Crime	26	21.84%
Marital status	**Married**	81	68.06%
	Unmarried/divorced	38	31.93%

In the substance use details, 73 participants (61.34%) had AUDIT score more than cut off and 21 participants (17.64%) had DAST-10 score more than cut off. The AUDIT and DAST-10 score of participants is summarized in Table 2 and Table 3.

Table 2: The AUDIT score of the participants

AUDIT scoring	Number (n)	Percentage
<8 (cut off)	46	38.65%
8-15 (advice)	15	12.6%
16-19 (counseling and monitoring)	21	17.6%
>20 (alcohol dependence)	37	31.09%
Total	119	100%

Table 3: The DAST-10 score of the participants

DAST-10 scoring	Number (n)	Percentage
<3 (cut off)	99	83.19%
3-5 (moderate)	3	2.52%
6-8 (substantial)	7	5.88%
9-10 (severe)	11	9.24%
Total	119	100%

Among participants who scored more than cut off for AUDIT, majority (57.53%) were incarcerated for criminal offences and nearly half (53.42%) were repeat offenders, while among drug users assessed by DAST-10, three fourth (76.19%) were incarcerated for criminal offences and 61.9% were repeat offenders. The difference was statistically not significant. The distribution of civil and criminal offences among participants is summarized in Table 4.

Table 4: The distribution of civil, criminal offences and repeat offenders among participants

	Civil offences	Criminal offences	Repeat offenders
AUDIT (73)	31(42.46%)	42 (57.53%)	39 (53.42%)
DAST (21)	5 (23.8%)	16 (76.19%)	13 (61.9%)

Discussion

This study provides a cross sectional picture of the problem of substance use among prisoners from central region of India. As far as we are cognizant there are almost no such studies conducted in India, however, Singh et al did research on "pattern of drug abuse along with the criminal and demographic profile of prisoners" but their study population were prisoners admitted at the de-addiction

facility at a Central Jail in Punjab contrary to ours [18]. They studied 65 subjects including both under-trial and convicted with duration since imprisonment from less than one month to 3 years. In contrast we included only convicted prisoners with duration since imprisonment within one year, to minimize recall bias of substance use details in accordance to the criteria of our screening tools.

The study confirms the high prevalence of substance use disorders in incarcerated offenders, consistent with other prison-based studies [11,19–23].

Overrepresentation of men in our study is due the fact that male prisoners comprise 95.84% of total prisoners in India, as per Prison statistics 2021 [1] and also in accordance with the prevailing prevalence of addiction among males in India, which is 17 times higher among men than women [24,25]. In our study majority of the prison inmates (49.57%) were middle aged from age group 31-50 years, comparable to 43.3% according to prison statistics India, 2021[1]. However, there is slight variance in the percentage of prisoners from age group 18-30 in Indian prison statistics (43.6%) and our study population (36.13%) possibly due to fact that we included only convicted prisoners.

Similar to Singh et al, most of our participants also belonged to rural area (81.5%) and lower socio-economic class (66.38%) [18]. Bennett and Holloway (2009) did a qualitative study of "the causal connection between drug misuse and crime" on 41 prisoners from U.K found that the most common mechanisms were "economic" (56%) [10].

Our majority participants were married (68.06%), higher than found by Singh et al (53%), likely due to age distribution of our study population and the regional differences in age at marriage, with an average age at marriage of 15–17 years in central states like Madhya Pradesh, and a higher average age at marriage in Punjab [26]. Family history of substance use was reported by 61.34% of our participants. Epidemiological research has clearly demonstrated the importance of a family history as a determinant of future alcohol and possibly, drug use in offspring of alcoholics [27]. Family history of criminality was reported by 21.84%. A child with criminal parents faces a greater likelihood of becoming a delinquent than children with law-abiding parents [28].

Nearly two third participants (61.34%) had AUDIT score more than cut off. As per the national level survey conducted in 2019, by All India Institute of Medical Sciences (AIIMS), New Delhi on "Magnitude of Substance Use in India" sponsored by the Ministry of Social Justice and Empowerment, alcohol was the most common substance consumed by general population of India [25]. More than 5.7 crore people were estimated to be affected by harmful or dependent alcohol use. In other words, every third alcohol user in India needs help for alcohol related problems. Similarly 17.64% had DAST-10 score more than cut off, which is much higher than estimated in the survey [24,25]. However, the data on prevalence of substance use among offenders are not available. Among alcohol users 31.09% scored >20 (alcohol dependence). Survey also stated that in general, access to treatment services were grossly inadequate. Just about one in 38 people with alcohol dependence were able to get any treatment and only about one in 180 people with alcohol dependence reported getting inpatient treatment / hospitalization for help with alcohol problems. Among people suffering from dependence on illicit drugs, one out of 20 people had ever received inpatient treatment/ hospitalization for help with drug problems.

Among participants who scored more than cut off for AUDIT, majority (57.53%) were incarcerated for criminal offences and nearly half (53.42%) were repeat offenders, similarly among drug abusers three fourth

(76.19%) were incarcerated for criminal offences and 61.9% were repeat offenders. One of the troubling trends that have arisen in the past decades in correctional settings has been the increasing proportion of mentally ill and/or addicted offenders. Alcohol and drug use may induce or trigger violent behaviors, suppress inhibitions, detect less threat, and produce violent impulses and impair subject's executive functioning leading to incorrect assessment of risks. It may also trigger paranoid or psychotic symptoms when violence is likely to occur [29,30].

Among participants with alcohol addiction nearly half (53.42%) were repeat offenders, while among drug users three fourth 61.9% were repeat offenders. Many of our participants admitted having been intoxicated or under the influence of drugs while committing crime. A social hypothesis suggests recidivism is the result of compounding social factors. Mentally ill individuals often find themselves in less than ideal circumstances of compounding social factors such as illicit substances and unemployment [31]. Reduced recidivism has been positively associated with a longer duration of involvement with the Drug treatment courts (DTC) program in U.S.A. [32].

The use of illicit drugs is also dependent on sociopolitical factors and there is a huge gap in knowledge regarding what constitutes evidence-based programs [33]. Our study highlights the role of scarcity of substance related treatment services in India and other social factors such as illiteracy, poverty, easy access to substance and lack of awareness about mental effects of substance in the criminality and recidivism. [34]

Limitations: There are several limitations to this study. The sample consisted of offenders from one prison only and under-trial, parolees were excluded; the results may not generalize to incarcerated offenders as a whole or parolees and prison inmates from other states. The substance related details were gathered from prisoners self-report, no medical records or laboratory data were available, hence chances of social conformation bias maybe high.

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