



Behind bars and under the influence: understanding substance use among prison inmates in Sri Lanka

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Abstract

Introduction: Substance use among prison inmates is a challenge for many countries around the world and this problem has imposed great waste of human, financial capital which leads to several health costs and social harm to the general community. Objective of this study is to determine the pattern of substance use among prison inmates in Sri Lanka. **Methods:** The study design was a descriptive cross-sectional study. This study was conducted in 22 selected prison institutions in Sri Lanka covering the entire country. Multi-stage probability proportionate to size stratified cluster sampling method was used. The total sample used for the study was 1730 prison inmates. A validated interviewer administrated questionnaire was used for the data collection. **Results:** Among the 1730 prison inmates the response rate was 98.7%. The total study sample (1708) was consisted with 938 (55%) convicted prison inmates and 770 (45%) un-convicted prison inmates. The mean age of the study sample was 39.2 years, with a standard deviation of 13.6 years. The highest educational qualification of the majority (36.9%) of the study sample was passing grade 9-11. More than four fifths (1373, 80.4%) of prison inmates had ever used a substance while 335 (19.6%) prison inmates had never used a substance. Among ever users of substances 760 (55.3%) were convicted prison inmates. The most prevalent (81.6%) substance used by prison inmates before imprisonment (82.3%) as well as after imprisonment (19.2%) was cigarettes. Almost four fifth (79.3%) of prison inmates had used alcohol before imprisonment followed by betel (47.6%) and heroine (35.2%). Usage of all the types of substances have declined after imprisonment. More

than one tenth (10.8%) of prison inmates had used heroine after imprisonment followed by betel (10.8%) and cannabis (2.7%). Thirteen prison inmates (0.9%) had used injectable non prescribed drugs following imprisonment. Among study participants 14.9% had newly started substance use after imprisonment.

Conclusions: The habits of substance use among prison inmates before imprisonment shows a higher value compared to the general population. Significant number of prison inmates had continued their habits substance use even after being imprisoned considering the restricted environment within the prison institutions. Among prison inmates a significant number has started the use of substances for the first time in their life while they were imprisoned.

Keywords: Substance use. Prison inmates. Drugs. Alcohol. Imprisonment.

Introduction

Substance use among prison inmates is a challenge for many countries around the world and this problem has imposed great waste of human, financial capital which leads to several health costs and social harm to the general community [1]. In studies many countries in Asia and Europe have revealed that the percentage that uses substances among the prison inmates is higher than the percentage that uses substances in the general population [2,3].

Due to the challenging environment with in prison institutions in the majority of countries world-wide such as isolation from the society, poor physical environment, overcrowding, violence, lack of safety and inadequate healthcare, physical and mental well-being of prisoners

are at risk. These conditions precipitate distress, depression and anxiety among most prisoners, which may develop in to more serious mental disabilities with time [4]. Due to above prevailing conditions within the prison system, prisoners tend to use different types of substances to avoid the psychological conditions such as anxiety, distress, depression and other mental health problems has contributed to the high prevalence of substance use in prisons [5]. The substance use within prison institutions has been found to be a protective factor for psychological distress among prison inmates as well [6].

The substance use within the prison institutions can threaten the security and the stability of its system as well as the health and safety of other prison inmates and the staff. This has direct impact on violence within prison institutions, contribute to the reoffending outcomes [7,8]. A large percentage of young inmates would return to the society after serving their sentence. If these people enter society with damage or harm, it would spread social harms, and social costs will rise [9].

The conditions are not at all different in Sri Lanka. Many factors which prevail in prison institutions like overcrowding, inadequate nutrition, poor health services, drug use, unsafe sexual practices, violence, corruption and poor prison management in turn lead to the prison being a high-risk environment for transmission of HIV, tuberculosis and other communicable diseases [10]. Substance use in Sri Lankan prison institutions remains at a higher rate. The prevalence of lifetime and last 12-month use of alcohol among male prison inmates in a prison institution in Sri Lanka was 95% and 84% respectively. Among last 12-month alcohol users 54.5% used alcohol on a weekly basis. In that study it was found that most frequently used drugs were heroin and cannabis. Among cannabis users 27.9% were daily users and majority of heroin users (53.8%) has consumed heroine three times a day [11].

Even though, high rates of narcotic crimes in Sri Lanka, very little data is available on substance use patterns among prison inmates. This data would be useful in developing health promotion, prevention and treatment strategies for the prison inmates. Currently there are no establish programmes within the prison institutions to address these issues. This is the first study carried out covering the whole country to identify the substance use patterns among prison inmates in Sri Lanka.

Given this, the present study determined the pattern of substance use among prison inmates in Sri Lanka.

Methods

The study design was a descriptive cross-sectional study, following the STROBE (Strengthening the

Reporting of Observational Studies in Epidemiology) rules. Available at: <https://www.strobe-statement.org/checklists/>. Accessed on 10/14/2024. This study was conducted in 22 selected prison institutions in Sri Lanka covering the entire country. These included closed prisons, remand prisons, work camps, open prison camps and facilities for youthful offenders and drug abuser inmates. Inclusion criteria was, convicted and un-convicted (remand) prison inmates who have been in the prison for more than 3 consecutive months of duration and prison inmates with a diagnosis of a mental disorder, prison inmates of non-Sri Lankan nationality and prison inmates who had been given capital punishment (due to security reasons) were excluded from the study.

Multi-stage probability proportionate to size stratified cluster sampling method was used. The stages were clustering, stratification and selection of clusters by probability proportionate to size method. The number of male and female prison inmates was taken separately. The total sample used for the study was 1,730 prison inmates.

A validated interviewer administrated questionnaire was used for the data collection. Four graduates in sociology with one assistant being fluent in Tamil, were used for data collection. This study was conducted during the 2019 February to 2019 July. Permission to carry out the study within the prison institutions was sought from the Commissioner General of Prison.

Ethical Approval

Ethical clearance to conduct the study was obtained from the Ethical Review Committee, University of Colombo.

Results

Among the 1,730 prison inmates the response rate was 98.7%. The total study sample (1,708) was consisted with 938 (55%) convicted prison inmates (who have been convicted of offences under the law by various courts in the island and sentenced to a term of imprisonment) and 770 (45%) un-convicted prison inmates (Remandee/ inmates who are awaiting trial).

The mean age of the study sample was 39.2 years, with a standard deviation of 13.6 years. More than half of the study participants (n=921) were between the 25-44 years. Ninety-three percent of the study sample (n=1,593) was male. Majority of the study participants (84.5%) were Sinhalese. Buddhist was the religion of the majority (76.5%) of the study sample. The highest educational qualification of the majority (36.9%) of the study sample was passing grade 9-11. There were 15 graduates and 11 diploma holders in the study sample.

Majority of the study participants (n=1,029) were currently married. Almost one third (31.8%) of the study participants were unmarried while, 44 (2.6%) study participants were divorced (Table 1).

Table 1. Frequency distribution of Socio-Demographic factors of prison inmates.

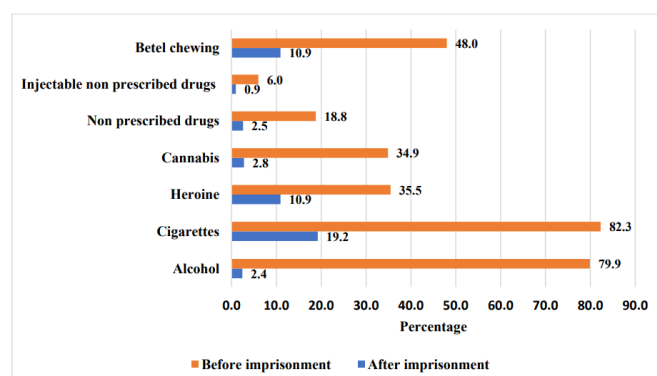
Socio Demographic Factors	Number (1,708)	Percentage (%)
Age		
Below 34 yrs	707	41.4
Above 35 yrs	1,001	48.6
Sex		
Male	1,593	93.2
Female	115	6.8
Education		
No schooling	87	5.1
Schooled up to Grade 11	1,195	69.9
Passed O/L and above	426	25
Ethnicity		
Sinhala	1,443	84.5
Tamil	137	8.0
Moor	118	6.9
Other	10	0.6
Marital status		
Unmarried	543	31.8
Married	1,029	60.2
Living together	19	1.1
Separated	52	3.0
Divorced	44	2.6
Widowed	21	1.2

Source: Own authorship.

More than four fifths (1,373, 80.4%) of prison inmates had ever used a substance while 335 (19.6%) prison inmates had never used a substance. Among ever users of substances 760 (55.3%) were convicted prison inmates.

The most prevalent (81.6%) substance used by prison inmates before imprisonment (82.3%) as well as after imprisonment (19.2%) was cigarettes. Almost four fifth (79.3%) of prison inmates had used alcohol before imprisonment followed by betel (47.6%) and heroine (35.2%). Usage of all the types of substances have declined after imprisonment. More than one tenth (10.8%) of prison inmates had used heroine after imprisonment followed by betel (10.8%) and cannabis (2.7%). Thirteen prison inmates (0.9%) had used injectable non prescribed drugs following imprisonment (Figure 1).

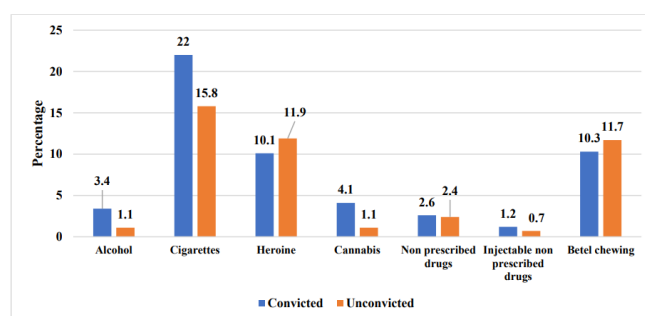
Figure 1. Pattern of substance use among prison inmates before and after imprisonment.



Source: Own authorship.

After imprisonment usage of alcohol (3.4%), cigarettes (22%), cannabis (4.1%), non-prescribed drugs (2.6%) and injectable non prescribed drugs (2.1%) is more prevalent among convicted prison inmates compared to unconvicted prison inmates. Usage of heroine (11.9%) and betel (11.7%) is more prevalent among unconvicted prison inmates compared to convicted prison inmates following imprisonment (Figure 2).

Figure 2. Pattern of substance use following imprisonment among prison inmates by the status of conviction.



Source: Own authorship.

Among convicted study participants frequent usage of alcohol (52.1% to 10.4%), cigarettes (85.8% to 81.5%), heroine (91.5% to 76.6%) and betel chewing (78.6% to 46.1%) before imprisonment had reduced following imprisonment. Same pattern was observed among the un-convicted study participants as well. Frequent usage of cannabis (63.3% and 64.5%), non-prescribed drugs (65.8% and 65%) and injectable non prescribed drugs (66.7% and 66.7%) was almost similar to the before and following imprisonment among convicted study participants. Among un-convicted study participants before imprisonment frequent usage of cannabis (71.7% to 71.4%), non-prescribed drugs (69.5% to 73.3%) and injectable non prescribed drugs (74.2% to 75%) was increased following imprisonment (Table 2).

Table 2. Distribution of prison inmates by frequency of use of substances.

Type of substance	Before imprisonment			After imprisonment		
	Frequent user	In-frequent user	No	Frequent user	In-frequent user	No
Convicted						
Alcohol	52.1	47.9	603	10.4	89.6	26
Cigarettes	85.8	14.2	628	81.5	18.5	167
Heroine	91.5	8.5	259	76.6	23.4	77
Cannabis	63.3	36.7	278	64.5	35.5	31
Non prescribed drugs	65.8	34.2	143	65.0	35.0	20
Injectable non prescribed drugs	66.7	33.3	51	66.7	33.3	9
Betel chewing	78.6	21.4	359	46.1	53.9	78

Un-Convicted						
Alcohol	49.6	50.4	494	22.9	77.1	7
Cigarettes	82.6	17.4	502	72.2	27.8	97
Heroin	83.3	16.7	228	82.2	17.8	73
Cannabis	71.1	28.9	201	71.4	28.6	7
Non prescribed drugs	69.5	30.5	115	73.3	26.7	15
Injectable non prescribed drugs	74.2	25.8	31	75.00	25.0	4
Betel chewing	69.7	30.3	301	37.5	62.5	72

Frequent user- A person who use above substance daily or 2-6 times per week.

Source: Own authorship.

Among study participants 14.9% had newly started substance use after imprisonment. Among the study participants who had newly started substance use after imprisonment, 13.4% were convicted while 16.6% were un-convicted prison inmates (Table 3).

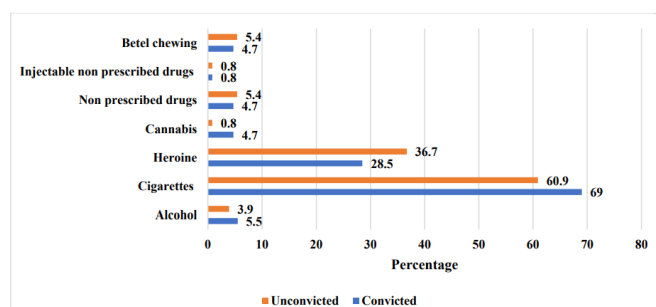
Table 3. Distribution of prison inmates by their type of substance use status.

Substance usage	Convicted		Un-Convicted		Total	
	No	%	No	%	No	%
Newly started after imprisonment	126	13.4	128	16.6	254	14.9
Never used	178	19.0	157	20.4	335	19.6
Only before imprisonment users with before and after imprisonment users	634	67.6	485	63.0	1,119	65.5
Total	938	100.0	770	100.0	1,708	100.0

Source: Own authorship.

Highest usage frequency was reported for cigarettes (69%) followed by heroine (28.5%) among the convicted prison inmates who had started substance usage newly after imprisonment while 60.9% frequency was seen for cigarettes and 36.7% for heroine among un-convicted prison inmates of the same category (Figure 3).

Figure 3. Pattern of substance use among prison inmates who newly started using substances within the prison institution by the status of conviction.



Source: Own authorship.

Discussion

This study was the first to carried out in an island wide manner to cover the prison inmates in Sri Lanka to look into the substance use patterns among them. The prevalence of substance use among prison inmates was

reported to be high. More than four fifth of prison inmates (81.6%) were ever users of substances while almost three fourth (74.1%) were current users of substances. High rates of substance use among prison inmates cannot be solely explained by the lack of security conditions or by the lack of facilities within the prison institutions.

The prevalence of substance use among prison inmates before imprisonment is more pervasive than the general population. This is mostly due to the low socio-economic background of the prison inmates [12]. Studies in various countries have shown that substance use among prison inmates is higher than the general population [3,9].

In a study conducted in Iran, it showed that 75.3% of inmates were using at least one substance following imprisonment [12]. This high prevalence could be due to continuing the substance use or starting the substance use newly to overcome the psychological distress of being imprisoned in an unfavorable environment [6]. In the Iran study alcohol use was 19.3%, cigarette smoking was 69.9% and narcotic substances use was 73.2%. In the current study these values are much less and this could be due to use of different analytical methods in the studies and differences in the prison systems in the two countries.

In a study conducted among prison inmates in three prison institution in Kandy, Sri Lanka showed that alcohol and cigarettes usage during last 12 months to be 84% and 79.5% respectively [11]. These values were similar to the pattern of alcohol and cigarette use among prison inmates before imprisonment in the current study. In the study by Dissabandara et al. [11] the most frequent used drugs were heroin and cannabis. In the current study has showed that the most frequently used drugs among convicted heroin inmates to be heroine and cannabis as well. The study by Khalooei et al. [12] showed that among narcotic substances most prevalent was opium (62%) which was a form of cannabis and prevalence of heroin usage to be 7.2%. In the current study heroin usage is almost similar to the Iran study.

In this study frequent usage of heroine, cannabis, non-prescribed drugs and injectable non prescribed drugs among unconvicted prison inmates was similar to the patterns before imprisonment and after imprisonment. Among convicted prison inmates' frequent usage of all the above substances were reduced following imprisonment compared to before imprisonment. This is mainly due to the different conduct of prison systems for the two different categories.

The unconvicted prison inmates get the permission to meet his/her family members daily and are allowed to receive foods and utensils from the family. These

substances get to their hands during these meet ups but the situation is different for the convicted inmates as they are allowed to see the family member less frequently and does not allow to get things from outside. There are no global, regional or Sri Lankan studies done in these aspects to compare the findings of the current study.

Another important finding of this study was that almost 15% had newly started using substances after imprisonment. They never had used any substance before being imprisoned. This finding maybe due to inmates using substances to overcome the stressful environment with in the prison institution which could lead to psychological distress and the chances are minimum to for them to engage in other recreational activities within prison institutions due to lack of facilities for the recreational activities [6].

The prevalence of usage of beetle as a substance is quite high during imprisonment and among prison inmates who have newly started substances during imprisonment. This may be due to that most of the officers and community does not consider beetle as a substance, which is not be. Loop holes in the prison security system may be the cause for the availability of different types of substances within the prison institutions. There are no global, regional or Sri Lankan studies to compare the above finding of the current study.

Conclusion

The habits of substance use among prison inmates before imprisonment shows a higher value compared to the general population. Significant number of prison inmates had continued their habits substance use even after being imprisoned considering the restricted environment within the prison institutions. Among prison inmates a significant number has started the use of substances for the first time in their life while they were imprisoned. Screening for high-risk prison inmates for substance use during admission to the prison should be considered. Awareness programmes as well as cessation programmes should be carried out for prison inmates and strict implementation of law to stop substances getting into the prison institutions should be carried out.

CRedit

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administration- Malawige Amila Suranga, Janaki Vidanapathirana; **Supervision**- Malawige Amila Suranga; **Writing - original draft**- Malawige Amila Suranga, Janaki Vidanapathirana; **Writing-review & editing**- Malawige Amila Suranga, Janaki Vidanapathirana.

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Ethical Approval

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Informed Consent

It was applicable.

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Data Sharing Statement

No additional data are available.

Conflict of Interest

The authors declare no conflict of interest.

Similarity Check

It was applied by Ithenticate®.

Peer Review Process

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