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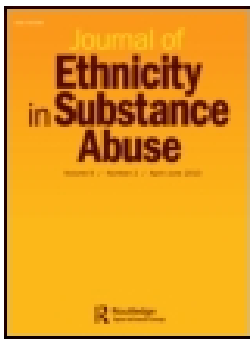


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## Legal and social consequences of substance use: Results from a nationwide study in Bangladesh

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### ABSTRACT

Substance use is a major public health concern and its consequences can destroy someone's life. This study aimed to explore the legal and social consequences of substance use in Bangladesh. We conducted a nationwide descriptive cross-sectional study among relapse cases of substance use from January to December 2018. We visited 138 drug rehabilitation centers countrywide and were able to recruit 939 relapse cases, from where 28 cases were excluded due to incomplete data. Finally, data from 911 cases were analyzed. The majority (89.3%) of the study participants were 19-45 years old. Most commonly used drugs were amphetamine (76.1%), cannabis (75.0%), alcohol (54.3%), cough sirup (54.2%), heroin (47.0%) and sleeping pills (21.6%). Almost half (49.5%) of the substance users were arrested for drug use and among arrested cases, 52.1% were sent to jail. About 75% of the substance users experienced a lack of family interaction, 70% experienced destroyed family relationships, and 71.4% faced social stigma. Our study also found 60% of the participants were bullied, 50% were deprived or unwilling to have social interactions. Moreover, 13.8% of the participants left home, while 8% got divorced. Our data represented the significant impact of substance use on the legal aspect and social life of individuals. However, with a multi-dimensional treatment, rehabilitation, and social intervention approach, it is not impossible to overcome. Therefore, we believe it is imperative to focus on social awareness and to create a robust platform for health promotion and improve quality of life.

### KEYWORDS

Consequences; substance use; relapse; Bangladesh

## Introduction

Substance use is one of the major public health concerns since the ancient period and it contributes to 4% of total Disability Adjusted Life Years (DALY) globally. Global Burden of Disease (GBD) reported 34.3%, 52.1%,

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and 73.4% increment in alcohol, drug, and opioid use from 1990 to 2010 respectively (Griswold et al., 2018). Though people often use substances for recreational purposes, international drug control treaties prohibited the non-medical use of such substances (Degenhardt & Hall, 2012; Rehm et al., 2017). Although there are legal prohibitions in place, various challenges remain in worldwide enforcement of these laws that could indirectly lead to an increase of drug use in the future (Hellowell, 1995). Even though Bangladesh does not produce drugs, it is highly vulnerable to drug use due to its geographical location. Bangladesh is located between two international narcotic producing zones known as Golden Triangle (Myanmar, Thailand, and Laos), and the Golden Crescent (Pakistan, Iran, and Afghanistan) on its south-east and north-west corner respectively (Nessa et al., 2008). In Bangladesh, an estimated number of drug users are more than a million who spend over BDT 70 million every day on illicit drug use (Shariful Islam et al., 2015). Our recent study found family unrest (29.5%), peer pressure (27.4%), to reduce depression (24.8%), and craving for drugs (24.3%) were the most frequent reasons for relapse after taking treatment (Nabi et al., 2020).

The consequences of substance use might be very serious. Depression, anxiety, and insomnia are the most frequent mental health consequences of substance uses (Morris et al., 2018). It also threatens the social and personal life, loss of interest in work, lacking of responsibility toward family, unable to focus, which may impair family relations, increase libido or misbehavior, violence or social nuisance, and boosting up criminal offenses are a few of the universal issues that follow drug addiction. It may also cause economic burden, family instability, effects on developing fetuses, and children. Parents of substance users often feel helpless, guilty, frustrated angry, or depressed (Daley, 2013). A recent study conducted among the students of 49 medical colleges in the USA found consequences of alcohol and drug use were not limited to interpersonal altercations, serious suicidal ideation, cognitive deficits, compromised academic performance, and driving under the influence of substances. Forty percent of them reported being unaware of their medical institution's substance-use policies. Thus, the study suggested a lack of familiarity regarding school substance-use policies.

Many organizational reports have been published on substance use but still lack of scientific research articles on the consequences of substance use, particularly in Bangladesh. In such a context, this study was aimed at identifying the legal and social consequences of substance use in Bangladesh through a nationwide study. The broader objective lies in assisting policymakers, families and the society to be more responsive in the prevention of substance use and its relapse.

## Methods

We conducted a nationwide descriptive type of cross-sectional study among relapse cases of substance users from January to December 2018. The sample size was estimated by using a 30.42% prevalence rate (Kassani et al., 2015), 3.0% design error, 96% confidence interval, and adjusting 10.0% non-response. By considering all those parameters, our sample size was 994. Department of Narcotic Control (DNC), the Government of Bangladesh has 171 enlisted drug rehabilitation centers across the whole country. A total of 50 drug rehabilitation centers were randomly selected from that enlisted 171 rehabilitation centers. We recruited relapse drug use cases from those 50 centers. Our initial target was to enroll 20 patients from each center. But we did not find a sufficient number of cases in some selected centers within that 50 centers; in that case, we recruited cases from nearby enlisted centers. Ultimately, we had to visit 138 centers, as many of the selected centers did not have the desired number of cases. But some centers had more than 20 patients and we have randomly selected the cases from those centers. As a result, we could recruit 939 relapse cases for this study. Out of these cases, 28 cases were excluded due to incomplete data. Finally, we could analyze data from 911 cases. The case that has been had at least one relapse reported after getting his/her treatment for drug addiction was defined as a relapse case and was eligible to be recruited in our study. Those who were suffering from any severe psychiatric disorder and who were not able to communicate properly were excluded from this study. Information was collected through a face-to-face interview using a structured questionnaire by trained data collectors. Prior to field visits for data collection, day-long training was provided to all data collectors including individual practice to ensure quality data from the respondents. Trustworthy rapport was ensured with respondents before each data collection process.

The analysis was done using SPSS v 25. Descriptive statistics have been performed and results were expressed by number and percentage. At first, the socio-demographic characteristics have been considered. Then the used drug types, legal consequences, and social consequences have been considered in the analysis.

### ***Ethical approval and consent to participate***

All interviews were performed by maintaining the privacy and confidentiality of the respondents. Permission was obtained before data collection from the owners of each center. Informed written consent was obtained from each respondent before data collection. Ethics approval was obtained

from the Institutional Review Board of North South University before starting the data collection.

## Results

Table 1 described the sociodemographic characteristics of the substance users where male substance users accounted for the vast majority (98.9%). Distribution of study participants was categorized over five age-groups. Most of the cases belonged to 19-30 years (48%) and 31-45 years (41%) age group, and the rest of the age-groups accounted for 11.0% only. The educational status of the participants revealed that only 19.1% of the participants were graduate or post-graduate and only 3% received informal education. A significant percentage (35%) of cases were businessmen, and the second-most (29.7%) group of participants were unemployed. Almost equal distribution of participants was observed in regard to marital status; unmarried and married were 43.8% and 48.4% respectively. About 55% of the respondents belonged to the family with monthly household income of less than 30,000 Bangladeshi Taka (less than 400 USD). Most (96.3%) of the cases of substance use were living with their families.

Various categories of drugs were consumed by substance users. Among those, the most common substances were amphetamine (76%) and cannabis (75%). About half of the participants consumed alcohol and phensedyl (cough medicine) whereas; the heroine and sleeping pill usages were 47% and 21.6%, respectively. On the other hand, the use of substances such as morphine/pethidine, buprenorphine, cocaine, opium, LSD, painkillers varied from 0-10%. (Table 2)

Table 3 depicted the scenario of the legal consequences of substance use. Approximately half (49.5%) of the participants were arrested due to substance use. Those who had a history of being arrested, 43% of them were taken into custody once, while another 41.9% had been to custody about 2-5 times, and 15.1% of participants were sent to custody for more than five times. The primary reasons for being arrested were drug use (54.8%) and drug trafficking (44.3%). Other reasons like drug business, hijacking, and robbery were cumulatively responsible for being arrested which was about 6% of the overall arrests. More than half (52.1%) of the participants went to prison due to substance use.

Tables 4 illustrated the familial loss and social loss the substance users faced due to substance use. 74.8% of the participants experienced a lack of family interaction, 69.9% had destroyed the family relationship, 13.7% substance users left home, and 8% got divorced. Considering social loss, social stigma was most common (71.4%). 59.5% of the participants faced bullying,

**Table 1.** Sociodemographic characteristics of the substance users (n = 911).

Sociodemographic characteristics	Number	Percentage
<b>Gender</b>		
Male	901	98.9
Female	10	1.1
Total	911	100.0
<b>Age, years</b>		
≤18	43	4.7
19-30	437	48.0
31-45	376	41.3
46-55	46	5.0
≥56	9	1.0
Total	911	100.0
<b>Educational status</b>		
Graduate and postgraduate	174	19.1
Higher Secondary Certificate (HSC)	196	21.5
Secondary School Certificate (SSC)	204	22.4
Completed class VIII	170	18.7
Primary education completed	72	7.9
Primary education incomplete	67	7.4
Informal Education/ NGO School/Madrasha	28	3.0
Total	911	100.0
<b>Occupation</b>		
Service	155	17.0
Business	319	35.0
Student	101	11.1
Unemployed	271	29.7
Retired	2	0.2
Farmer	8	0.9
Day Labor	16	1.8
Housewife	3	0.3
Driver	9	1.0
Other (Specify)	27	3.0
Total	911	100.0
<b>Marital status</b>		
Unmarried	399	43.8
Married	441	48.4
Separated	9	1.0
Widow	5	0.5
Divorce	57	6.3
Total	911	100.0
<b>Monthly household income (in BDT)</b>		
≤15,000	169	22.1
15,001-30,000	255	33.3
30,001-50,000	161	21.0
50,001-100,000	114	14.9
>100,000	66	8.6
Missing data	155	17.0
Total	756	100.0
<b>Living status</b>		
With family	877	96.3
Alone	14	1.5
Separate	12	1.3
With friend or far relative	4	0.4
On street/ footpath	1	0.1
Other	3	0.3
Total	911	100.0

while about 50% were having a lack of good relationship/interaction with coworkers/colleagues, 38.2% had a lack of social support, and 12.8% isolated from society.

**Table 2.** Types of drug used by the substances users.

Types of drug	n*	Percentage
Amphetamine	693	76.1
Cannabis	683	75.0
Alcohol	495	54.3
Phensedyl/Cough Medicine	494	54.2
Heroin	428	47.0
Sleeping pills	197	21.6
Morphine/ Pethidine	71	7.8
Buprenorphine	56	6.1
Lupogesick	53	5.8
Glue	34	3.7
Charas	34	3.7
Cocaine	29	3.2
Opium	19	2.1
LSD	10	1.1
Painkillers	07	0.8
Bhang	06	0.7
Antihistamines	03	0.3
Muscle pain	02	0.2
Antidepressants	01	0.1
Others	11	1.2

\* Multiple Responses.

**Table 3.** Legal consequences of substance use.

Being arrested for substance use	Number	Percentage
Yes	442	49.5
No	451	50.5
<b>Total</b>	<b>893</b>	<b>100.0</b>
<b>Times have been arrested?</b>		
1 time	185	43.0
2-5 times	180	41.9
More than 5 times	65	15.1
<b>Total</b>	<b>430</b>	<b>100.0</b>
<b>Reasons of arrest</b>		
*Drug use	242	54.8
*Drug trafficking	196	44.3
*Durg business	12	2.7
*Hajjacking/snacking	9	2.0
*Roberry	2	0.5
*Others	3	0.7
<b>Imprisonment for substance use</b>		
Yes	221	52.1
No	203	47.9
<b>Total</b>	<b>424</b>	<b>100.0</b>

\*Multiple responses.

## Discussion

Our study aimed to highlight the current scenario of substance use and its legal and social consequences in Bangladesh's perspective. The socio-demographical analysis revealed that almost all of the cases were male. This imbalance among gender could be due to a lower rate of care-seeking behavior among females. A recent study mentioned that healthcare services utilization is significantly varied by gender and type of mental health and substance use diagnosis. It also mentioned the significant differences by gender in the utilization of healthcare services for the same psychiatric



**Table 4.** Social consequences of substance use.

Types of familial loss	Number	Percentage
Lack of family interaction	681	74.8
Destroyed family relationship	637	69.9
Left home	125	13.7
Divorce	73	8.0
Others	9	1.0
<b>Types of social loss</b>		
Social stigma	650	71.4
Bullying/insult	542	59.5
Lack of interaction with coworkers	447	49.1
Lack of social support from others	348	38.2
Isolate from the society	117	12.8
Deprive from treatment and other services	15	1.6
Others	11	1.2

\*Multiple responses.

disorders (Brand et al., 2019). In this study, most of the relapse cases were in the younger age group. A recent study conducted in similar settings at the Post Graduate Institute of Medical Education and Research (PGIMER), Chandigarh, India mentioned the majority of the substance users start using substances in early twenties (Subodh et al., 2019). Another large scale nationwide longitudinal study conducted among adolescents and adults in the USA found associations between the age of initiation and initial status and rate of changes in substance involvement (Richmond-Rakerd et al., 2017). Another study conducted in Kathmandu Valley, Nepal found that the age of onset of substance use was significantly associated with psychosocial problems. The mean psychosocial problem scores were higher in early-onset substance users (Poudel & Gautam, 2017). In terms of types of substances, our study corresponds with the report from the global statistics on alcohol, tobacco and illicit drug use: 2017 status report (Peacock et al., 2018).

Substance use has a huge impact on the legal aspect and our study found almost half of the substance users being arrested at some point in their life and many of them experienced imprisonment. A recent study conducted using baseline data from NIDA Clinical Trials Network 0049 (HOPE project) study found more than 86% of the substance users have been arrested at least once in their life (Shiu-Yee et al., 2018). A study conducted in Iran found a significant portion of substance users have the record of being arrested and jailed in the past years (Noohi et al., 2011). Another study conducted in the United States found a significantly positive correlation between marijuana-related consequences and perceived risk of legalization. It also found that adolescents are in the higher levels of perceived risk and increased negative consequences of legalization (Estoup et al., 2016). Another study conducted in Seattle and Denver states of the USA found some indicators of morbidity seem to be increasing subsequent to

legalization, with modest increases in poison center calls in both states (Maxwell & Mendelson, 2016).

Distinct effects of substance use on families are supported by an increasing number of scientific pieces of literature. According to our study, three-fourth of the participants had experienced some form of lack of family interaction and destroyed relationships. Studies suggested families experience tremendous stress, conflicts, even violence due to substance use disorder leading to family instability (Daley, 2013). A recent study conducted in the USA among concurrent alcohol and marijuana (CAM) and simultaneous alcohol and marijuana (SAM) users and found simultaneous users have reported an increased incidence of problems which are related to driving and academic but less in the social problem (Cummings et al., 2019). But the study was conducted in western settings and samples were mainly college attending students. Our study context is different where social issues are still under serious considerations. Our study found about one-fifth of the participants had left home or got divorced due to substance abuse. Serious drinking or drug problems are associated with some characteristics which are harming intimate relationships and can be extremely unpleasant. A study found accidents, fights, broken relationships, drunken driving arrest, and reduced employment were common among substance abusers (Tómasson & Vaglum, 1998), which also support our study findings. Another study found drug use can have negative impacts on health status, quality of life, family relationships, and social networks that accrue with age (Roe et al., 2010).

Substance use is such a stigma that influences the social functioning of the users and hinders society as well. According to this study, almost two-thirds of the participants felt stigmatized by society. More than half of the participants experienced bullying, and half of the participants expressed that they were isolated from society and lacked additional support. A systematic review found negative attitudes of health professionals toward patients with substance use disorders are common and contribute to suboptimal health care (van Boekel et al., 2013). A recent study conducted in India emphasized the need for interventions to reduce the internal perception of stigma and improve the quality of life of individuals with substance use disorders (Sarkar et al., 2019). Strength of our study; this is a nationwide study and large sample size. Also, the sampling technique and procedure made this result as national representative. The major weakness of this study is a cross-sectional design where we could not see any predictive factors.

## Conclusion

Scientific evidence portraying the consequences of substance use was limited in Bangladesh. Our study found several important legal and social

consequences due to substance use. These predicaments form a challenging environment for the member of the family and friends that hinder the recovery or treatment process of the users. Hence reflection on these conditions is necessary for the treatment and prevention of addiction. In light of the findings discussed above, we would like to propose multi-dimensional care to prevent these substance use cases. Furthermore, families and respective communities can support the recovery with the help of existing interventions and treatments and mutual support programs. Finally, we would like to draw the attention of the policymakers to promote awareness of the family members and society to be more supportive and prevent substance use and its relapse.

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### **Declaration of interest statement**

The author(s) declare that there are no conflicts of interest in any steps of this research.

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### **Data availability statement**

The datasets used in the current study are available from the corresponding author on reasonable request.

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