

Original Article

Co-Morbidities and Family History Among Methamphetamine Users

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Abstract

The abuse of methamphetamine, locally known as Yaba locally, has increased in Bangladesh recently. The study was designed to determine the proportion of co-morbidities, in terms of physical, psychiatric and other substances, and family history of substance use and other psychiatric disorders among methamphetamine abusers in Bangladesh. This was a cross-sectional study. Data were collected from the available medical documents of a private hospital dedicated for the management of substance abusers in Dhaka, Bangladesh. Information of the individuals admitted in the hospital during 1 January, 2014 to 31 December, 2015 due to substance related disorders having history of using methamphetamine within one month of hospitalization were enrolled in the study. Completed data of 115 individuals were taken and data analysis was performed using Statistical Package for Social Sciences (SPSS) version 24. Most (91.3%) of the respondents were male. Mean age of the respondents was 24.6 (± 5.8) years. Half of the respondents (50.4%) belonged to the age group 21-30 years. Most (89.6%) of them resided in urban area and was Muslim (94.8%). Majority (52.2%) was unmarried. Regarding education status, majority (34.8%) completed graduation. About one-third (33.9%) were currently unemployed. All the methamphetamine users had used other substances. Among the other co-morbid substances, nicotine was the substance used by

most (94.8%) respondents, followed by cannabinoids (56.5%) and opiates (38.3%). Among the respondents about one-third (33.9%) had current physical co-morbidities. Co-morbid psychiatric disorders were present among 29.6% of the respondents. Among the respondents, more than one-fourth (27.8%) had family history of substance use, 20.9% had family history of other psychiatric illnesses. All the methamphetamine users had used other substances. A substantial proportion of methamphetamine users had physical and other psychiatric comorbidities and family history of substance and other psychiatric disorders. This essential issue should be considered in the management strategy of methamphetamine use.

Keywords: Bangladesh, co-morbidity, family history, methamphetamine, substance, yaba

INTRODUCTION

Substance use disorders have become a major public health problem in Bangladesh. Curiosity about substances, peer pressure, seeking enjoyment and availability of drugs are among the important causes of substance dependence in Bangladesh. Frequent use of drugs causes educational dropout, unemployment, financial crisis, family disharmony, marital discord and many other social disadvantages. Substance abusers became an additional burden to the family and society.

There are much variations in the estimate of substance abusers in the studies conducted in Bangladesh due to the difference of study place and data collection technique. While national survey on mental health revealed that 0.63% of the adult population (18 years and above) in Bangladesh had been suffering from substance related and addictive disorders, study conducted in outpatient department of National Institute of Mental Health (NIMH), Dhaka revealed that 7.66% of the respondents were suffering from substance related disorder. A study among patients attending general practice showed that 2.88% were suffering from substance use disorders while study conducted in a private clinic in Dhaka city showed that 29.6% of the patients were suffering from substance related disorders.

Though studies conducted in the ending years of last century reported opiates group as the primary drug of substance, recent studies indicate that methamphetamine use has been increased in Bangladesh. The reports by print and electronic media showing the recent trend of substance use, drug trafficking and

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seizure of substances by law enforcement agencies in Bangladesh also support the notion. Locally methamphetamine is used in the name of “Yaba” which is a mixture of methamphetamine and caffeine. There has been an increase in seizure of Yaba and other methamphetamine-containing substances since 2008, with more than 1.3 million pills seized in 2011 and 20.1 million pills seized in 2015.

There is only one government drug de-addiction centre with facilities for inpatient treatment in Dhaka, the capital city of Bangladesh. Some substance abusers of the city can get inpatient treatment from National Institute of Mental Health. Other health-care facilities for management of substance abuse belong to private sector. Patients of these private hospitals can be reliable source of the information regarding the current pattern of substance abuse, variation in the availability of these substances and alteration in profile of the substance abusers, so as to enable the formulation of management strategies. With this view, the present study was designed to assess the socio-demographic profile and co-morbidities related to the use of methamphetamine among individuals admitted in a private hospital dedicated for the substance abusers in Dhaka.

MATERIALS AND METHODS

This was a cross-sectional study. Data were collected from the available medical documents of a private hospital for the management of substance use. The hospital was situated in Dhaka, the capital city of Bangladesh. It was dedicated for the management of individuals with substance use for about 20 years. Both outpatient and inpatient services were available there. There was a team of psychiatrists, clinical psychologists, peer counsellor and physicians in that hospital. With the permission of the authority of the hospital, data of all the individuals admitted in the hospital during 1 January, 2014 to 31 December, 2015 due to substance related disorders were checked by the researchers. Information of the individuals who had history of using substances containing methamphetamine within one month of hospitalization were enrolled in the study. Total 205 individuals with substance related disorders were admitted in the hospital during that period. Of them, 130 (63.4%) had history of methamphetamine abuse. Information of the admitted individuals were taken from the individuals and their legal guardians and diagnoses were confirmed by the consultant psychiatrists of the hospital. Information were written in the medical documents by the on-duty physicians of the hospital. There were lack of information and incompleteness in some documents. Completed data of 115 individuals were taken and data analysis was performed using Statistical Package for Social Sciences (SPSS) version 24. All the ethical issues were addressed and confidentiality was maintained throughout the study.

RESULTS

Table I shows the most (91.3%) of the respondents were male. Mean age of the respondents was 24.6 (±5.8) years. The youngest respondent was of 16 years, the oldest 55 years. Half of the respondents (50.4%) belonged to the age group 21-30 years, followed by 31-40 years’ group (26.2%). Most (89.6%) of them resided in urban area and was Muslim (94.8%). Regarding education status, majority (34.8%) completed graduation. About one third (33.9%) were currently unemployed. More than half (52.2%) were unmarried.

Table I: Socio-demographic characteristics of the respondents (n=115)

Socio-demographic characteristics	Frequency	Percentage
Gender		
Male	105	91.3
Female	10	8.7
Age (in years)		
≤ 20	20	17.4
21-30	58	50.4
31-40	30	26.2
41-50	5	4.3
> 50	2	1.7
Residence		
Urban	103	89.6
Semi-urban	12	10.4
Religion		
Islam	109	94.8
Hinduism	4	3.5
Others	2	1.7
Education		
Primary	7	6.1
Secondary	18	15.6
Higher Secondary	39	33.9
Graduation	40	34.8
Post-graduation	11	9.6
Current occupation		
Unemployed	39	33.9
Student	20	17.4
Home-maker	5	4.3
Businessman	32	27.9
Service-holder	9	7.8
Others	10	8.7
Marital status		
Unmarried	60	52.2
Married	36	31.3
Widow/Widower	2	1.7
Separated	6	5.2
Divorced	11	9.6

Table II shows the all the amphetamine users had used other substances. Among the other substances, nicotine was the substance used by most (94.8%) respondents, followed by cannabinoids (56.5%) and opiates (38.3%).

Table II: Use of other substances among methamphetamine users (n = 115)

Substances	Frequency*	Percentage
Nicotine	109	94.8
Cannabinoids	65	56.5
Opiates	44	38.3
Alcohol	33	28.7
Benzodiazepines	17	14.8
Others	10	8.7

* Multiple responses

Table III Shows the majority (42.6%) of the respondents started to take methamphetamine between 16-20 years of age

Table III: Age of starting methamphetamine use (n = 115)

Age of starting (in years)	Frequency	Percentage
≤15	19	16.5
16-20	49	42.6
21-25	32	27.8
26-30	11	9.6
>30	4	3.5

Table IV shows the Among the respondents 33.9% had some kinds of acute or chronic physical co-morbidities, of which urinary tract infection, bronchial asthma and dyslipidemia were common

Table IV: Physical co-morbidities among the respondents (n=115)

Physical co-morbidities	Frequency	Percentage
Absent	76	66.1
Present	39	33.9
Types of physical problems*		
Urinary tract infection	9	7.8
Bronchial asthma	8	6.9
Dyslipidemia	8	6.9
Dermatological problems	7	6.1
Dental problems	7	6.1
Neurological problems	5	4.3
Diabetes mellitus	5	4.3
Hypertension	5	4.3
Gynaecological problems	3	2.6
Hypothyroidism	3	2.6
Others	3	2.6

*multiple response

Table V shows the co-morbid psychiatric disorders were present among 29.6% of the respondents, of which personality disorders was the commonest

Table V: Psychiatric (other than substance related disorders) co-morbidities among the respondents (n= 115)

Psychiatric co-morbidities		
Absent	81	70.4
Present	34	29.6
Types of psychiatric problems*		
Personality disorders	20	17.4
Anxiety disorders	9	7.8
Depressive disorders	7	6.1
Bipolar and related disorders	5	4.3
Obsessive compulsive and related disorders	5	4.3
Schizophrenia spectrum and other psychotic disorders	4	3.5
Others	5	4.3

*multiple response

Table VI shows that 69.6% of the respondents were admitted to the hospital against their will.

Table VI: Type of current admission (n = 115)

Type of admission	Frequency	Percentage
Voluntary	35	30.4
Involuntary	80	69.6

Table VII shows that 33.9% respondents had no previous history of admission it was the first hospitalization for the treatment of substance use. Others (66.1%) had previous history of hospitalized treatment.

Table VII: History of previous admission (n= 115)

Previous Admission	Frequency	Percentage
No previous admission	39	33.9
1-2 times	35	30.4
3-4 times	18	15.7
5-6 times	13	11.3
>6 times	10	8.7

Table VIII Shows the family history substance use among respondents 27.8% had family history of substance use other than nicotine and caffeine, 20.9% had family history of other psychiatric illnesses.

Table VIII: Family history of substance use and other psychiatric illnesses (n = 115)

Family history	Frequency	Percentage
Family history of substance use (other than nicotine and caffeine)		
Absent	83	72.2
Present	32	27.8
Family history of other psychiatric illnesses		
Absent	91	79.1
Present	24	20.9

DISCUSSION

The completed data of 115 subjects with methamphetamine use revealed that most (91.3%) of them were male. The earlier studies conducted in Dhaka city in the last decade of the last century also found the male predominance in this regard^{7,8} but comparing to many of those studies rate of female users are higher in the current study. In a more recent study conducted in a private drug de-addiction centre reported 9.5% female among the inpatients with substance use disorder.¹ In another recent study found that 8.4% of hospitalized opiate abusers were female.⁹ It may be assumed that more females are abusing substances than two-three decades ago. The findings may also be due to the fact that the study was conducted among the hospitalized substance abusers.

Mean age of the subjects was 24.6 (± 5.8) years. The youngest was of 16 years, the oldest 55 years. Half of the subjects (50.4%) belonged to the age group 21-30 years, followed by 31-40 years' group (26.2%). The previous studies conducted among the substance abusers in Bangladesh and India also found more abusers in a relatively younger age group.^{1,8}

Most (89.6%) of the subjects resided in urban area. As the study place was in the capital city, majority were expected to be from urban background. Regarding religion, most (94.8%) of the respondents were Muslim as Bangladesh is a Muslim-dominant country with 90.4% Muslim people.

More than half (52.2%) of the subjects were unmarried. It may be because more than two-thirds (67.8%) of the respondents were below 30 years of age. Among the subjects, 9.6% was divorced and 5.2% was separated but it was not conclusive whether separations or divorces were reasons or consequences of methamphetamine use. Regarding educational status, majority (34.8%) completed graduation. Alam et al. (1999) found that majority (58.5%) of his study sample belonged to secondary and higher secondary level.⁸ In current study, the education status may be a reflection of the higher socioeconomic status of the sample, which was also the fact of other recent studies in private de-addiction clinic.^{1,9} Nevertheless, about one-fifth (21.7%) of the respondents was below higher secondary level. It was not also conclusive whether the dropout is a consequence of the methamphetamine use.

One-third (33.9%) of the subjects were currently unemployed. The unemployment rate is lower than the findings of the study by Alam et al. (1999) and Hossain et al. (2005).⁸ In our study, businessmen were found in a significant proportion (27.9%) which corresponds to the other studies conducted in private clinics.^{1,9}

All the methamphetamine users also used other substances. It may indicate that methamphetamine users were interested in experimenting more types of substances or there was easy availability. In our study, among the other co-morbid substances, nicotine was used by most (94.8%) individuals. The rate was more than double of the finding by Alam et al. (1999) and slightly lower than the finding of other study among opiate abusers.⁹ All the substance abusers were found to have abused tobacco in a study by Hossain et al. (2005). Cannabinoids (56.5%) and opiates (38.3%) were the other common co-morbid substances in our study. In a study among hospitalized substance abusers, the most common substance group was opiates followed by cannabinoids.¹

Regarding the age of onset of methamphetamine use, 16-20 years was the starting age group for majority (42.6%), followed by 21-25 years age group (27.8%). The similar age group was found as the age of onset for majority of the respondents of the other studies regarding substance abuse in Bangladesh.¹ In an Iranian study, age of onset of methamphetamine use was 20.3 ± 3.3 years. A considerable proportion (16.5%) of our subjects started to use methamphetamine before or at the age of 15 years.

Individuals with substance use disorders are known to have a high prevalence of co-morbid medical and psychiatric

conditions that often complicate clinical care. Chronic methamphetamine use results in a variety of medical consequences, including cardiovascular disease, pulmonary problems, neurological problems, and dental disease. In our study, about one-third (33.9%) of the subjects had current physical co-morbidities, of which urinary tract infection, bronchial asthma and dyslipidemia were common.

Psychiatric symptoms have been well-documented in methamphetamine abusers. Anxiety, depression, insomnia, and psychosis are among the most commonly reported symptoms. In our study, more than one-fourth (29.6%) of the respondents had co-morbid psychiatric conditions. Personality disorders was the commonest diagnosis, followed by anxiety disorders and depressive disorders. An American study revealed that a significant proportion of methamphetamine abusers had co-morbid primary psychotic, mood and anxiety disorders. In a Bangladeshi study among male patients with major depressive disorder, 8.3% of the respondents had lifetime history of methamphetamine abuse. In another study among substance abuser male juvenile offenders in Bangladesh, 77.4% had psychiatric disorders. In case of female juvenile offenders, 10% of the respondents with psychiatric disorder had history of substance abuse. In current study, physical and psychiatric disorders were confirmed from the medical and related documents of the hospitalized patients who were assessed by the consultant psychiatrist for psychiatric problems and concerned medical specialist for the physical problems.

More than two-thirds (69.6%) of the respondents were admitted to the hospital against their will. It may indicate that methamphetamine users were not motivated to take treatment. For about one third (33.9%) respondents, it was the first hospitalization for the treatment of substance use. Others (66.1%) had previous history of hospitalized treatment. It reconfirms the relapsing nature of substance related disorders and is consistent with the findings of Hossain et al. (2005) where 63.6% of the respondents were treated for 2-5 times.

Genetic factors are strongly implicated in substance use disorders. Substance use in general is largely dependent on availability and social environment but the genes contribute to the propensity to develop harmful use and dependence. In current study, among the respondents, more than one-fourth (27.8%) had family history of substance use other than nicotine and caffeine, 20.9% had family history of other psychiatric illnesses. Similar findings were revealed in a study among opiate abusers.⁹

The study was conducted in a selected urban private hospital dedicated for the substance users. So, the study population is not representative of the whole community. Data of all the admitted individuals with methamphetamine related disorders during a specified period were included, no sampling was done. As most of the information was collected from the medical and related documents, there was no scope to check for the reliability of all the information.

CONCLUSIONS

This study provides information about sociodemography, co-morbidities and family history of substance and other psychiatric illnesses related to methamphetamine use. All were poly-substance users with a number of respondents with cannabinoids use. A significant proportion of methamphetamine users had physical and psychiatric co-morbidities. Family history of substance and other psychiatric illnesses was present in a considerable proportion of the subjects. The study findings would help in management and prevention strategy of methamphetamine use in Bangladesh.

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