RESEARCH ARTICLE

Clinical Perception, Demographic Profile With PC Among Adolescents With Substance Use Disorder

Niaz Mohammad Khan [1*] | , MSI Mullick [2] | Sharmin Hussain [3]

[1]Associate Professor of Psychiatry, National Institute of Mental Health, Dhaka, Bangladesh

[2]Professor of Child and Adolescent Psychiatry, Bangabandhu Sheikh Mujib Medical University, Dhaka

[3]Junior Consultant, Pediatrics, and FCPS Trainee of Pediatric Neurology, National Institute of Neurosciences (NINS), Shere Bangla Nagar, Dhaka, Bangladesh

Abstract

Background: Substance Use Disorder (SUD) in adolescents, is a condition in which the use of one or more substances leads to clinically significant impairment or distress. It is a significant public health problem globally with a higher burden in low and middle-income countries. **Objective:** To find out the clinical perception, demo-graphic profile with pc among adolescents with substance use disorder. **Methods and Materials:** This descriptive and observational study was conducted in the Department of Psychiatry, Bangabandhu Sheikh Mujib Medical University (BSMMU), Dhaka, Bangladesh from March 2016 to September 2018. Participants 75 (seventy five) Psychiatric Comorbidity among Adolescents with Substance Use Disorder patients included in the study. Data collection of Central Drug Addiction Treat-ment Centre (CDC), Tejgaon, Dhaka and AshoktiPunorbashonNibash (APON), Singair, Manikganj, Bangladesh. Adolescents with Substance Use Disorder aged between 11 to 17 years. Only male patients were taken as the sample because the above-mentioned treatment facilities do not provide service for the female adolescents. There are two groups of substance-related disorders: substance use disorders and substance-induced disorders. **Results:** The present study aimed at assessing the presence of comorbid psychiatric disorders among adolescents with Substance Use Disorder (SUD) included a total of 70 adolescents. Over half (60%) of the respondents were <15 years old, and 40% of the respondents were >15 years age. The mean age of the respondents was 13.2 ± 2.1 years, and the range was 11-17 years. More than three-quarters (81.4%) of the respondents were Muslim and 14.2% Hindus. Most of the patients (45.7%) had more than one psychiatric disorder diagnosed. Regarding the specific disorder diagnosed Conduct Disorder was 31.4% and different socio-demographic features were collected like age, education level, family income, religion, family type, and family members and their relationships with the presence of psychiatric disorders was calculated. None showed a significant relationship. Conclusion: Based on the findings of the study, it can be concluded that clinical Perception, demographic profile of adolescents with SUD have a high rate of other comorbid psychiatric disorders. Understanding the relationship in etiological perspective and variables which influences the problem will help to provide intervention services for adolescents affected by SUD. Further epidemiological studies are needed to get a more representative result.

Keywords: Adolescence, Substance Use Disorder, Psychiatric Disor-der, clinical Aspect.

1 | INTRODUCTION

Substance-related disorders are psychiatric disturbances developing during or following substance use, and attributable to it. The drugs that most often produce substance-related disorders include tobacco, alcohol, cannabis, stimulants and other hallucinogens. Numerous other substances, including nitrous oxide, amyl-or butyl-nitrite, or anabolic steroids also may produce these disorders (1). There are substantial geographic variations in drug use prevalence among the adolescents, with higher rates in higher-income countries (although data from lower-income countries often are lacking). A study was done in West Bengal, India, out of 416 students, 52 (12.5%) used or abused any one of the substances irrespective of time and frequency in the lifetime; 26 (15.1%) were among the urban students and 26 (10.7%) were among their rural counterparts. More than two-thirds (73.07%) of the respondents expressed a desire to quit substance use and 57.69% had tried to stop. 'Easy availability' and 'relief from tension' were the most frequent reasons for the continuation of substance use (2). Comorbid mental disorder among adolescents with substance abuse include depression, anxiety, conduct disorder, and attention-deficit/hyperactivity disorder (ADHD) (3). A study conducted by Shantna. K. et al., (4) show that the most prevalent comorbid disorders in substance dependence patients and substance abusers were depressive disorders. They also conclude that the majority of substance dependence patients suffered from comorbid mental disorders. The community-based prevalence study of psychiatric disorder among children of Bangladesh has not yet been studied. According to the analytical predictions, prevalence would be roughly 10-20% among children and adolescents as like as the prevalence findings of the reports of the developing countries. A study of psychiatric outpatient attendance at the Institute of Mental Health and Research in Dhaka, revealed that 8.6% of cases were children or adolescents (5). In a different analysis of psychiatric morbidity among the Institute outpatients, emotional disorder was found to be the largest group with 32.5%, followed by conduct disorder 18.8%; mental retardation comprised 16.2%, psychoses and allied conditions 11.2%, epilepsy with behavioral problems 12.5% and the rest 8.5% comprised of other groups of disorders, according to ICD-9 criteria (6). In a survey among the children in a child guidance clinic at the Bangladesh Institute of Child Health and Dhaka Childrens' Hospital, Rabbani and Quamaruzzaman et al., (7) assessed psychiatric morbidity by using the Rutter Multiaxial diagnostic system. Their findings revealed that conduct disorder was 8.9%, somatoform disorders 7.1%, attention deficit hyperactivity disorder 68%, autism 6%, and other emotional disorder 15.28% of the cases. Specific delays in development were found to be 10%, and mental retardation was 17.8% of the cases. Substance-induced depression occurs during periods of substance use but exceeding the expected effects of intoxication or withdrawal from the substance used. Primary or independent major depression is defined as either predicting substance use entirely or occurring during periods of sustained abstinence (8). Another investigatedadolescent admissions to residential substance abuse programme and reported theprevalence of psychiatric disorders comorbidity in 64% of the 91 adolescents; depression (24%), conduct disorder (CD) (24%) and attention deficit hyperactivity disorder (ADHD–11%) were the most common conditions (9). In one study, alcoholics with independent major depression were found to be more likely to attempt suicide than those with substance-induced depression [8]. In a systematic review made in Bangladesh reports the prevalence of mental disorders in children. Earliest report among urban primary school children revealed 13.4% had some behavioral disorder, with boys being twice more affected than girls (20.4 vs. 9.9%). However, a study among socially disadvantaged (urban slum) children, reported 22.9% had some form of psychiatric disorder with a slightly lower prevalence in boys than girls (20.0% in boys and 25.5% in girls). Another study found 14.6% of children with behavioral problems as reported by the parents in rural Bangladesh (6). Another more recent community-based study reported the prevalence of mental disorder among 18.4% of the children (10). The study was intended to find out the different type of SUD our adolescents are suffering from in two different treatment centers and their magnitude and pattern of comorbid SUD. The expected outcome of

the study is to help in the field of the adolescent SUD and its comorbidity's proper assessment, diagnosis, and formulation of an effective management plan.

2 | MATERIALS AND METHODS

This descriptive and observational study was conducted in the Department of Psychiatry, Bangabandhu Sheikh Mujib Medical University (BSMMU), Dhaka, Bangladesh From March 2016 to September 2018. Participants 75 (seventy five) Psychiatric Comorbidity among Adolescents with Substance Use Disorder patients included in the study. Data collection of Central Drug Addiction Treatment Centre (CDC), Tejgaon, Dhaka and AshoktiPunorbashonNibash (APON), Singair, Manikganj, Bangladesh. Adolescents with Substance Use Disorder aged between 11 to 17 years. Only male patients were taken as the sample because the above-mentioned treatment facilities do not provide service for the female adolescents. There are two groups of substance-related disorders: substance use disorders and substance-induced disorders. The diagnostic criteria are given in Appendix III. Collected data was processed, cleaned and entered into a windows PC. Data were analyzed using statistical software SPSS version 22.0.

3 | RESULTS

The present study aimed at assessing the presence of comorbid psychiatric disorders among adolescents with Substance Use Disorder (SUD) included a total of 70 adolescents. Over half (60%) of the respondents were <15 years old, and 40% of the respondents were >15 years age. The mean age of the respondents was 13.2 ± 2.1 years, and the range was

Corresponding Author: *Niaz Mohammad Khan*
Associate Professor of Psychiatry, National Institute of Mental Health, Dhaka, Bangladesh

11-17 years. More than three-quarters (81.4%) of the respondents were Muslim and 14.2% Hindus. Most of the patients (45.7%) had more than one psychiatric disorder diagnosed. Regarding the specific disorder diagnosed Conduct Disorder was 31.4% and different socio-demographic features were collected like age, education level, family income, religion, family type, and family members and their relationships with the presence of psychiatric disorders was calculated. None showed a significant relationship.Type and frequency of psychiatric disorder diagnosed: Most of the patients (45.7%) had more than one psychiatric disorder diagnosed. Regarding the specific disorder diagnosed Conduct Disorder was 31.4%, ADHD in 21.4%, ODD in 18.5%, MDD in 17.1%, both Specific and Social Phobia in 10%, GAD in 7.1%, OCD in 5.7% (Table: 1-3). The family history of mental illness and Family history of substance use shows no significant relationships. Significant differences were found between the adolescents with and without any history or trouble with law enforcing agency.

Table-1: Demographic features and presence of psychiatric disorders (n=70)

Demographic features	Psychiatric disorder		p-value
	Present (n = 54)	Absent (n = 16)	
Agegroup (yrs.)			
11-13 yrs.	22 (40.7)	11 (68.7)	0.048
14-17 yrs.	32 (59.2)	5(31.2)	
Education			
Illiterate & primary	35 (78.5)	09 (56.2)	0.535
Secondary & other	19 (35.1)	07 (43.7)	
Income (Taka)			
=300000	33(76.7)	10(62.5)	0.920
>30000	21(30.0)	06(37.5)	
Religion			
Islam	46(85.1%)	11(68.7)	0.137
Others	8(14.8)	5(31.2)	
Type of family			
Nuclear	42(77.7)	14(87.5)	0.288
Joint	14(25.9)	2(12.5)	
Family size			
Small (3-4 members)	18(33.3)	6(37.5)	0.757
Large (>4 members)	36(66.6)	10(62.5)	
*Data were analyzed using χ^2 Test. figures in the parentheses denote the corresponding percentage.			

Table-2: Other pertinent information and presence of psychiatric disorders (n=70)

Pertinent information about respondents	Psychiatric disorder		p-value
	Present (n = 54)	Absent (n = 16)	
The family history of mental illness			
Present	15(27.7)		0.456
Absent	39(72.2)	10(62.5)	
The family history of substance use			
Present	15(27.7)	4((25.0)	0.952
Absent	39(72.2)	10(62.5)	
Any history of trouble with police /conflict with law enforcing agency			
Present	28(22.8)	6(11.1)	
Absent	19(24.1)	17(11.8)	0.008

*Data were analyzed using χ^2 Test. figures in the parentheses denote the corresponding percentage.

Table-3: Pattern of psychiatric disorder diagnosed (n=54)

Psychiatric disorder	Frequency	Percentage
Separation Anxiety Disorder	2	2.8
Specific Phobia	7	10.0
Social Phobia	7	10.0
Panic Disorder	5	7.1
Post-Traumatic Stress Disorder	2	2.8
Obsessive Compulsive Disorder	4	5.7
Generalized Anxiety Disorder	5	7.1
Depressive Disorder	12	17.1
Attention-Deficit/Hyperactivity Disorder	15	21.4
Conduct Disorder	22	31.4
ODD	13	18.5

More than one disorder is considered in one individual.

4 | DISCUSSION

The present study aimed to determine the pattern of comorbid psychiatric disorders among the admitted adolescents of two institutions namely Central Drug Addiction Treatment Center (CDC), Tejgaon, Dhaka, and the AshoktiPunorbashonNibash (APON) in Singair, Manikganj, Bangladesh. The authority of the two institutions was helpful regarding the data collection. Over half (60%) of the respondents were <15 years old, and 40% of the respondents were >15 years age. The mean age of the respondents was 13.2 ± 2.1 years with a range of 11-17 years. Only male patients were taken as the sample because the above-mentioned treatment facilities do not provide service for the female adolescents. More than three-quarters (81.4%) of the respondents were Muslim, and nearly 60% had a monthly family income of less than taka 30000, Around 66% of the respondents had in the primary level of education, and 15.7% had secondary, and 12.8% were illiterate, and 5.7% had non-formal education. Regarding the type of family,

80% were from a joint family with 20% having 5 – 6 family members. Regarding the pattern of SUD among the adolescents most common was the Tobacco Use Disorder (51.4%), followed by Cannabis Use Disorder (47.1%), Sedative, Hypnotic, or Anxiolytic Use Disorder (22.8%), Amphetamine-type substance (20.0%), Inhalant Use Disorder (17.1%), Opioid Use Disorder (15.7%), Alcohol Use Disorder (12.8%), >1 Substance Use Disorder (87.1%). There were no cases of Hallucinogen Use Disorder. Data from the Monitoring the Future (MTF) study in the US, a national school-based survey, show that adolescent substance use is relatively common by the end of the high school years. Cannabis was the most frequently used illegal drug, with 31.5% of 12th graders reporting some lifetime use [11] . Alcohol and tobacco are even more common, with 73% of today's students have consumed alcohol by the end of high school and 45% of high school seniors reporting drinking in the past month [12] . Forty-seven percent of high school seniors report some experience with cigarette smoking, and 22% were current smokers in 2006 [13] . The use of different drugs is highly interrelated in both epidemiological and clinical samples of adolescents [14] . A study was done among the street children in Mumbai, India shows the prevalence of Substance Use Disorder is around 90%. Nicotine was the most frequent substance of abuse, used by 104 (63.8%) adolescent street children. Seventy-eight (48%) adolescents were using inhalants. Sixty (37%) were using alcohol, and 42 (26%) were using sedatives and stimulants. Thirty-one (19%) were found to be using cannabis and opioids [14] . According to the analytical predictions, prevalence would be roughly 10-20% among children and adolescents as like as the prevalence findings of the reports of the developing countries. A study of psychiatric outpatient attendance at the Institute of Mental Health and Research in Dhaka, revealed that 8.6% of cases were children or adolescents [10] . In a different analysis of psychiatric morbidity among the Institute outpatients, emotional disorder was found to be the largest group with 32.5%, followed by conduct disorder 18.8%; mental retardation comprised 16.2%, psychoses and allied conditions 11.2%, epilepsy with behavioral problems 12.5% and the rest 8.5% comprised of other

groups of disorders, according to ICD-9 criteria (6) . A multicentric exploratory study to assess the prevalence of psychiatric disorders among 5-10-year-olds in rural, urban and slum areas in Bangladesh by Mullick and Goodman found the overall prevalence is 15.2% [6]. Rabbani et al., (7) shows the prevalence of mental disorders among children adolescents aged 5-17 years is 18.4%. So it is evident that the burden of the comorbid psychiatric disorder is found very high among adolescents with SUD. Most common disorder found was Conduct Disorder (CD) 31.4%, Attention-Deficit/Hyperactivity Disorder (ADHD) 21.4%, Oppositional Defiant Disorder (ODD) 18.5%, Major Depressive Disorder (MDD) 17.1%, Social Phobia 10%, Specific Phobia 10%, Panic Disorder 7.1%, Generalized Anxiety Disorder (GAD) 7.1%, Obsessive Compulsive Disorder (OCD) 5.7%, Post Traumatic Stress Disorder (PTSD), and Separation Anxiety Disorder 2.8%. Methods for the Epidemiology of Child and Adolescent Mental Disorders (MECA) Study found 29.8% for anxiety disorders, 7.9% for mood disorders, 18.7% for disruptive behaviors. The study also showed that among adolescents with current SUD, 76.0% (70.0% of females, 80.0 % of males) also had anxiety, mood, or disruptive behavior disorder compared with 24.5% of adolescents without current SUD, (15) described several possible relationships between adolescent substance abuse and affective disorders, conduct disorder and antisocial personality, anxiety disorders, attention-deficit hyperactivity disorder, schizophrenia and psychotic symptoms, and eating disorders. Another investigated adolescent admissions to residential substance abuse program and reported the prevalence of psychiatric disorders comorbidity in 64% of the 91 adolescents; depression (24%), conduct disorder (CD) (24%) and attention deficit hyperactivity disorder (ADHD − 11%) were the most common conditions [9]. Further, literature review estimate rates of psychiatric comorbidity among adolescents receiving treatments for substance abuse at 50–90% (16) . The high levels of psychiatric comorbidity among adolescents with SUD suggest dual diagnosis is 'the rule rather than the exception' (17) . Adolescents with SUD have higher rates of both mood disorders and CD (16)], attention deficit hyperactivity disorder, CD and substance use often co-exist and are associated with

poorer treatment outcomes, (9) those with CD are more likely to have an earlier onset of substance use (17) , timely intervention of co-occurring psychiatric and SUDs is associated with better engagement with treatment (18) .

5 | CONCLUSIONS

Based on the findings of the study, it can be concluded that clinical Perception, demographic profile of adolescents with SUD have a high rate of other comorbid psychiatric disorders. Understanding the relationship in etiological perspective and variables which influences the problem will help to provide intervention services for adolescents affected by SUD. Further epidemiological studies are needed to get a more representative result.

REFERENCES

1. Thapar A, Taylor E, Snowling M, Scott S, Leckman J, Pine D. Rutter's child and adolescent psychiatry. Malden, MA: Wiley-Blackwell; 2015.

2. Pal R, Dasgupta A, Tsering D. Substance use among adolescent high school students in India: A survey of knowledge, attitude, and opinion. Journal of Pharmacy And Bioallied Sciences. 2010;2(2):137–137. Available from: https://dx.doi.org/10.4103/0975-7406.67005. doi:10.4103/0975-7406.67005.

3. Griswold KS, Aronoff H, Kernan JB, Kahn LS. Adolescent substance use and abuse: recognition and management. Am Fam Physician. 2008;77(3):331–336.

4. Shantna K, Chaudhury S, Verma AN, Singh AR. Comorbid psychiatric disorders in substance dependence patients: A control study. Industrial Psychiatry Journal. 2009;18(2):84–84. Available from: https://dx.doi.org/10.4103/0972-6748.62265. doi:10.4103/0972-6748.62265.

5. Mullick MSI, Khanam M, Islam H. Psychiatric morbidity of outpatient children in Institute of Mental Health and Research. Bang J Psychiatry. 1995;7:4–8.

6. Mullick MSI, Khanam M, Islam H. Psychiatric morbidity of outpatient children in Institute of Mental Health and Research. Bang J Psychiatry. 1995;7:4–8.

7. Rabbani MG, Alam MF, Ahmed HU, Sarker M, Chowdhury WA, Zaman MM. Prevalence of mental disorders, mental retardation, epilepsy and substance abuse in children. Bang J Psychiatr. 2009;23:13–54.

8. Davis L, Uezato A, Newell JM, Frazier E. Major depression and comorbid substance use disorders. Current Opinion in Psychiatry. 2008;21(1):14–18. Available from: https://dx.doi.org/10.1097/yco.0b013e3282f32408. doi:10.1097/yco.0b013e3282f32408.

9. Wise BK, Cuffe SP, Fischer T. Dual diagnosis and successful participation of adolescents in substance abuse treatment. Journal of Substance Abuse Treatment. 2001;21(3):161–165. Available from: https://dx.doi.org/10.1016/s0740-5472(01)00193-3. doi:10.1016/s0740-5472(01)00193-3.

10. Griswold KS, Aronoff H, Kernan JB, Kahn LS. Adolescent substance use and abuse: recognition and management. Am Fam Physician. 2008;77(3):331–336.

11. Johnston L, Malley P, Bachman J. Monitoring the Future: National survey results on drug use. Bethesda, MD: National Institute on Drug Abuse; 1975.

12. Johnston LD, Malley PM, Bachman JG, &schulenberg JE. Monitoring the Future national results on adolescent drug use: Overview of key findings. Bethesda, MD: National Institute on Drug Abuse; 2006.

13. Johnston LD, Malley PM, Bachman JG, &schulenberg JE. Monitoring the Future national results on adolescent drug use: Overview of key findings. Bethesda, MD: National Institute on Drug Abuse; 2006.

14. Gaidhane AM, Zahiruddin QS, Waghmare L, Shanbhag S, Zodpey S, Joharapurkar SR. Substance abuse among street children in Mumbai. Vulnerable Children and Youth Studies. 2008;3(1):42–51. Available from: https://dx.doi.org/10.1080/17450120701843166. doi:10.1080/17450120701843166.

15. Kandel D, Johnson J, Bird H, Weissman M, Goodman S, Lahey B, et al.; 1999.

16. Solhkhah R. The intoxicated child. Child and Adolescent Psychiatric Clinics of North America. 2003;12(4):693–722. Available from: https://dx.doi.org/10.1016/s1056-4993(03)00068-3. doi:10.1016/s1056-4993(03)00068-3.

17. Deas D, Brown ES. Adolescent Substance Abuse and Psychiatric Comorbidities. The Journal of Clinical Psychiatry. 2006;67(07):e02–e02. Available from: https://dx.doi.org/10.4088/jcp.0706e02. doi:10.4088/jcp.0706e02.

18. Chi FW, Sterling S, Weisner C. Adolescents with Co-Occurring Substance Use and Mental Conditions in a Private Managed Care Health Plan: Prevalence, Patient Characteristics, and Treatment Initiation and Engagement. American Journal on Addictions. 2006;15(s1):67–79. Available from: https://dx.doi.org/10.1080/10550490601006022. doi:10.1080/10550490601006022.