

Drug Addiction Pattern and Knowledge on HIV/AIDS Among Male Addicted Undergoing Rehabilitation

*MM Haque¹, MR Bhuiyan², MR Amin³, K Islam⁴, MS Islam⁵

¹*Md Monoarul Haque, Fellow, Dept of Community Nutrition, Faculty of Public Health, Bangladesh University of Health Sciences (BUHS)*

²*Md Rijwan Bhuiyan, MPhil in Public Health, Dept of Health Education & Health Promotion, Bangladesh University of Health Sciences (BUHS)*

³*Md Ruhul Amin, Assistant Professor, SAIC, Dhaka*

⁴*Khaleda Islam, Professor, Institute of Nutrition & Food Science, University of Dhaka*

⁵*Md Shahinoor Islam, MPhil in Public Health, Bangladesh University of Health Sciences (BUHS)*

*Corresponding Author

ABSTRACT

Background: The purpose of this study was to assess drug addiction pattern and knowledge on HIV/AIDS among male addicted undergoing rehabilitation.

Methodology: A cross sectional descriptive study was conducted among purposively selected 100 drug addicts in a selected hospital. Pretested semistructured questionnaire was used to collect data by face to face interview.

Result: Mean age of respondents was 34.02+ 7.12 years. Result showed that about 39.8% of the respondents were addicted due to their friends incitement. More than half (61%) of the drug addicts were taken both Heroin and Injection (narcotics). About 82% of the respondents were never sold blood and 18% were sold their blood due to addiction. More than half (58%) of the respondents were taken sex with residential & commercial sex workers and 27% were taken sex only with their wives. Only 15% had no sexual activity. And more than half (57%) of the respondents did not use condom and 36% were used condom occasionally during their sexual activity. Only 7% used condom regularly. Besides study found that more than 97% of the respondents had knowledge on HIV/AIDS. Only 3% never heard about HIV/AIDS. Result found that 81.4% of the respondents had knowledge on the severity of HIV/AIDS disease and 18.6% did not know. About 89.7% of the respondents said that they had knowledge on transmission of HIV/AIDS through needle sharing and 10.3% did not know. Majority of the respondents 75% had knowledge to prevent HIV/AIDS more than one reason whereas 15.2% showed other reasons.

Conclusion: Further large scale study should be conducted and the study result should not be generisable.

Key Words: Drug habit, Knowledge on HIV/AIDS

Introduction

Though Bangladesh is not a drug producing country, but due to its geographical location in between the golden and crescent triangle and passing of the crescent ways through it here the problem of drug abuse has got epidemic form that destroys the productive forces creating special imbalances through narco-terrorism and handicaps the development process¹. Consequently it has now turned into a wide drug market for the drug traders having national, regional and international roots and during last one and half decades it has flooded over the countries through a compact network of distributive channel^{1,2}. This flood appeared so abruptly that the traditional values and inherent social security system even could have any time and scope to develop any preventive measure^{3,4}. Drug addiction is now prevalent everywhere

in Bangladesh; in the house, streets, in the workplace, parks, slums, markets and even in educational institutions both in rural and urban areas. Although there is no precise figure of the drug dependant people, but is estimated around 4.0 million people mostly youths are dependant to some form of drugs, and increased trend among all kinds of people is alarming⁵. Virtually all segments of society are severely affected by this problem. Near about 25 lakh people are drug addicted and among them about 22 thousands are addicted in Dhaka city. In Bangladesh about 80 percent of the drug addicts are adolescents and young men of 15 to 30 years of age⁶. Drug addiction induces immunonutritional deficiency⁹. Use of illicit drugs produces multiple nutrient deficiencies or malnutrition^{9,10}, which is the

most common cause of immunodeficiency¹¹⁻¹⁴. Immunocompetence is a sensitive and functional determinant of nutritional status because it is altered even before the onset of clinical symptoms of malnutrition⁹. Illicit drugs are themselves immunosuppressive¹⁵⁻²⁰. Use of these drugs undermines appetite²¹, affects food habits, leading drug addicts to crave 'empty-energy', potentially nutrient-deficient foods²², and causes micronutrient deficiency¹⁰. Thus, the use of illicit drugs produces immunonutritional deficiencies, and influences susceptibility to infectious agents, including HIV infection¹⁰. In addition drug addicts' behavioural risk factors such as needle-sharing, unprotected sex, sex with multiple partners, etc.^{10,23,24} ranks them at the highest risk of HIV infection^{10,25}. Basically drug addicts have very limited knowledge about HIV/AIDS infection which will prone them to a vulnerable stage. The purpose of this study to evaluate the drug intake pattern and their knowledge about HIV/AIDS infection.

Methodology

Study design: This was a cross sectional study

Study population and area: This study was carried out among male drug addicts who were admitted for detoxification and rehabilitation therapy, counseling and motivation at Dhaka ahsania Mission (DAM).

Study sample and sampling method: For the purpose of this study, 100 drug addicts were selected purposively from Dhaka Ahsania Mission (DAM).

Study Period: This study was conducted from March 2006 to December 2006

Tools: A semi structured questionnaire was used to conduct this study. Questionnaire includes socio-demographic conditions, drug intake pattern and knowledge about HIV/AIDS.

Data collection methods: Data was collected by face to face interview from the respondents.

Data analysis: The data were analyzed using SPSS/PC (version 12). The raw data recorded in questionnaire was code first. The coded data were entered in to computer in SPSS program. Finally all required analysis was done by simple cross-tabulation.

Result

The table 1 showed distribution of the respondents by age. 30% were in the 26-30 years age group. About 10% were found in the age group of 20-26 years. 23% were in the age group of 31-35 and 21% were found in 36-40. The overwhelming more than 50% of the respondents were married and 44% of them unmarried. Table showed that 35% of the respondents had passed secondary classes

while 19% were completed primary education. Almost 21% respondents were found to sign, read and write only. 17% were illiterate whereas only 8% respondents had graduation degree and higher secondary certificate examination. 36% of the respondents had small business. 14% respondents were Rickshaw puller and driver. Whereas only were day laborer. 19% respondents were found to have job whereas 6% were jobless. 10% respondents were found to picking paper and remaining 10% were involved in other function. Study shows 07% respondents had no income. 36% of the respondents were found in 41,00-8,000/- income group and 28% had income within 4,000/-. In case of duration of staying in DAM shows that 61.6% of the respondents were shown to stay on 1-7 days. 14.1% were shown to stay form 8-14 days and 22.2 were shown to stay more 1 month. Table shows that 31% of the respondents got admitted at DAM from care Bd. Whereas 30% got admitted from those who took Whereas 30% got admitted from those who took treatment from DAM. 17% were admitted from their surrounding community person and 9% admitted from other sources.

Table 1: Socio-economic characteristics of the respondents (n=100)

Age	Items	Frequency	Percentage (%)	Mean ± SD
Age	20-25	10	10.0	34.02+ 7.12
	26-30	30	30.0	
	31-35	23	23.0	
	36-40	21	21.0	
	41 & above	16	16.0	
Marital status	Married	56	56.0	
	Unmarried	44	44.0	
Educational level	Illiterate	17	17.0	
	Can sign, read, write	21	21.0	
	Primary	19	19.0	
	Secondary	35	35.0	
	11 Graduate	08	8.0	
Occupation	Rickshaw Puller and Driver	14	14	
	Day labor	05	5.0	
	Small business	36	36.0	
	Service	19	19.0	
	Jobless	06	6.0	
	Paper picking	10	10.0	
	Others	10	10.0	
Monthly income	No income	07	7.0	
	Up to 4,000	28	28.0	
	4,000-8,000	36	36.0	
	8,000-12,000	18	18.0	
	> 12,000	11	11.0	
Staying in the Ahasania mission Hospital (days)	1-7 days	61	61.0	
	8-14 days	14	14.0	
	22-28 days	2	2.0	
	29 and above days	23	23.0	
Person who helped in taking Rehabilitation	Staff of AMH	13	13.0	
	Care of BD	31	31.0	
	Community person	17	17.0	
	Who took treatment for DAM	30	30.0	
	Others	9	9.0	

Table 2 showed that about 39.8% of the respondents were addicted due to their friends incitement and

2% were addicted due to self curiosity. 1% were addicted intentionally and carelessness of their family member. 8.2 % were addicted due to their surrounding environment. 24.5 % were addicted during buying drugs for other. 9% were addicted due to more than one reason whereas 10.2 were for other reasons. In case of age when they first took drug. 58.4 % of the respondents were found in the 13-18 years age group whereas 12.4% were in the 8-12 years age group. 29% respondents were found in the 19 and above year's age group. About 38.4% of the respondents were addicted from 5-8 years whereas 21.2% were from 1-4 years. 20.2% were addicted from 9-12 years and 15.2% were from 13-16 years. 5.1% were addicted from more than 17 years. More than half (61%) of the drug addicts were taken both Heroin and Injection. 21% were taken only Heroin and 18% were taken injection. About 85% of the respondents were taken drug 1-3 times. 13% were taken drug 4-6 times whereas only 2% were taken drug more than 7 times. More than half (64%) of the respondents were expend on drug almost 200 taka daily. 22% were expend on drug 201-400 taka. 11% were expending on drug 401-600 taka daily. The result obtained in this study showed that per capita per day expenditure on drug is 231.7 taka. And by assuming 25 lacs drug addicted people in Bangladesh then total annual expenditure on drug is 21078,7500000- (Twenty one thousand seventy eight crore and seventy five lacks) taka. Table 2 also showed that the nature of using drug by the respondents. 26% of the respondents were shown to share dose but not syringe and 17% did not share does /syringe. 21% were showed to share syringe and 16% of the respondent were shown to share are both dose and syringe. 17% were respondents found to share syringe in the past but not now and get from CARE. About 82% of the respondents were never sold blood and 18% were sold their blood due to addiction. More than half (58%) of the respondents were taken sex with residential & commercial sex workers and 27% were taken sex only with their wives. Only 15% had no sexual activity. And more than half (57%) of the respondents did not use condom and 36% were used condom occasionally during their sexual activity. Only 7% used condom regularly.

Table 2: Distribution of the respondents about drug intake habits before coming DAM (n=100)

Items	Frequency	Percentage
Way of becoming addicted		
Self curiosity	2	2.0
Friend incitement	39	39.0
Intentionally	1	1.0
Carelessness of the family	1	1.0
Environmental	8	8.0
During buying drugs	5	5.0
Emotional	24	24.0
Self curi. & Emotionally	9	9.0
Others	11	11.0
Age in first drug addicted		
Child hood (8-12)	12	12.0
Teen age (13-18)	58	58.0
19 & above	30	30.0
Period of addiction (years)		
1-4	21	21.0
5-8	38	38.0
9-12	20	20.0
13-16	15	15.0
17+	6	6.0
Type of drugs		
Heroin	21	21.0
Injection	18	18.0
Both	61	61.0
Frequency of drug intake (daily)		
1-3 times	85	85.0
4-6 times	13	13.0
7 & above	2	2.0
Total expenditure on drug(Tk)		
Up to 200	64	64.0
201 -400	22	22.0
401 -600	11	11.0
>600	3	3.0
Nature of using drug		
Sometime share dose but not syringe	26	26.0
Don't share dose/syringe	17	17.0
Use syringe 2-3 times by himself	3	3.0
Share syringe	21	21.0
share both	16	16.0
Share syringe in the past but at moment don,t	8	8.0
Get from care	9	9.0
Selling blood		
Yes	18	18.0
No	82	82.0
Status of sex partners		
Wife	27	27.0
Commercial sex worker	31	31.0

Table 3 showed that more than 97% of the respondents have had knowledge on HIV/AIDS. Only 3% never heard about HIV/AIDS. In case of knowledge on sources of HIV/AIDS transmission, shows that 14% of the respondents heard from TV/Radio whereas 13.3% heard from NGOs. 21.4% respondents heard from more than one sources and 9.2% heard from their colleagues. 38.8% respondents heard from other sources. Result found that 81.4% of the respondents had knowledge on the severity of HIV/AIDS disease

and 18.6% did not know. About 89.7% of the respondents said that they had knowledge on transmission of HIV/AIDS through needle sharing and 10.3% did not know. In case of knowledge about the symptoms of HIV/AIDS, study shows that 4.3% of the respondents had knowledge on chronic coughing whereas 7.4% had knowledge on weight loss. 4.3% had knowledge on fever and 27.7% had no idea on symptom of AIDS. 56.4% respondents had knowledge's on others. About 88.0% of the respondents had knowledge on HIV/AIDS transmission by sexual contact with HIV/AIDS attacked person and 12% did not know. And about 1.1% respondents had knowledge to avoid sex with HIV/AIDS affected person. 4.3% were showed to use condom during sexual activities. 3.3% had knowledge to avoid used syringe. Majority of the respondents 75% had knowledge to prevent HIV/AIDS more than one reason whereas 15.2% showed other reasons.

Table 3: Distribution of the respondents about Knowledge on HIV/AIDS (n=100)

Heard the term: HIV/AIDS	Items	Frequency	Percentage
Heard the term: HIV/AIDS	Yes	96	97.0
	No	3	3.0
Source of information about HIV/AIDS	Colleagues	9	9.2
	TV/Radio	14	14.3
	Read Books	3	3.1
	NGOs	13	13.3
	Mors than one so urces	21	21.4
	Others	38	38.8
Knowledge about the severity of HIV/AIDS	Yes	79	81.4
	No	18	18.6
Knowledge of transmission of HIV/AIDS by needle sharing	Yes	81	89.7
	No	10	10.0
Knowledge of transmission of HIV/AIDS by sexual contact	Yes	81	88.0
	No	11	12.0
Knowledge about symptom on AIDS attacks	Chronic coughing	4	4.3
	Weight loss	7	7.4
	Fever	4	4.3
	Don't know	26	27.7
	Others	53	56.4
Knowledge on prevention of HIV/AIDS	HIV+	1	1.1
	Use condom	4	4.3
	Syringe	3	3.3
	Condom and Syringe	26	28.3
	HIV. Condom and Syringe	18	19.6
	More than one reasons	26	28.3
Others	14	15.2	

Discussion

The study findings show that more than one third (39.8%) respondents become addicted from peer pressure. Which is most common cause of drug addiction? Several studies found that peer influences have been found to be among the strongest predictors of drug use during adolescence²⁶. About more than half of the respondents (58.4%) started or experienced in drug during their teen age (13-18 years). In developing countries studies found that almost 80% drug addicted become addict in drug during teen age 6. In case of taking different forms of drugs, almost majority of the respondents (61%) took drug in both Heroin and Injection. In case of sharing dose, about 26% respondents share their dose to the partners and 21% share syringe to their partners. Study found that about one third (31%) respondents did sex with commercial sex workers. And more than half (57%) respondents did not use condom during sexual activities. The study findings are almost similar to the other findings done in Bangladesh²⁷⁻³⁰.

Majority (97%) of the respondents have heard the term HIV/AIDS disease where 81.4% also have knowledge about the severity of this disease. Almost majority (89.7%) respondents have knowledge how to transmit HIV/AIDS and almost half have knowledge about how to prevent this disease. One study conducted in alcohol Egypt on drug abusers and found good knowledge about HIV/AIDS³¹.

Conclusion

The study provided some part of information about knowledge on HIV/AIDS among drug addicts. Further large scale study should be conducted and the study result should not be generisable.

Conflict of interest : None.

References

1. Kamal, M, 2006, Drug Abuse in Bangladesh: Responses of Public and Non Public Governance, Available from: http://www.napsipag.org/pdf/MASUDA_KAMAL.pdf
2. Ahmad Aka Firwz, Implication of Drugs in the Workplace in Bangladesh, Role of Employers, Employees & Unions. Paper presented of the Seminar on mobilizing workplaces to Prevent Drug Abuse in Asia, 18-21 December 2001, Bangkok, Thailand.
3. SAARC Forum (1995): The Role of NGO's in Drug Demand Reduction: Report of the meeting held at Dhaka, Bangladesh, April 1995.
4. Ahmed S.K. 2001, Community intervention team : an approach to drug abuse risk, livelihoods and Communities in Asia, Presented at 12th, International Harm Reduction Conference, 1-5 March 2001, New Delhi, India.

5. Ahsania mission, Drug Addiction Treatment & Rehabilitation Centre, Available from: http://www.amic.org.bd/index.php?option=com_content&view=article&id=58&Itemid=56
6. Shazzad MN, Abdal SJ, Majumder MSM, et al. Drug Addiction in Bangladesh and its Effect, *Medicine today*. 2013. November 02;25:84-89
7. Finnegan LP (1998) Perinatal Morbidity and Mortality in Substance Using Families: Effects and Intervention Strategies, pp. 1-21. Rockville, MD: NIDA, NIH, US Department of Health and Human Services.
8. Johnson A & Gerstein DR. Initiation of use of alcohol, cocaine, and other substances in US birth cohorts since 1919. *American Journal of Public Health* 1998;88: 27-33.
9. Varela P, Marcos A, Santacruz I, et al. Human immunodeficiency virus infection and nutritional status in female drug addicts undergoing detoxification: anthropometric and immunologic assessments. *American Journal of Clinical Nutrition* 1997; 66, 504S-508S.
10. Islam SN, Hossain KJ & Ahsan M. Original communication: Serum vitamin E, C and A status of the drug addicts undergoing detoxification: influence of drug habit, sexual practice and life style factors. *European Journal of Clinical Nutrition* 2001; 55, 1022-1027.
11. Beisel WR. Nutrition in paediatric HIV infection: setting the research agenda Nutrition and immune function: Overview. *Journal of Nutrition* 1996; 126, Suppl., 2611S-2615S.
12. Chandra RK. Nutrition and the immune system: an introduction. *American Journal of Clinical Nutrition* 1997; 66, 460S-463S.
13. Chandra RK (2001) Introduction and state of the art and science of nutrition and immunology (abstract). In *The 17th International Congress of Nutrition, 27-31 August 2001, Vienna, Austria*, p. 288 [I Elmadfa and J Konig, editors]. New York and London: Medical and Science Publishers.
14. Hegde HR, Woodman RC & Sankarn K. Nutrients as modulators of energy in AIDS. *Journal of the Association of Physicians of India* 1999; 47: 318-325.
15. Brown SM, Stimmel BT & Taub RN. Immunologic dysfunction in heroin addicts. *Archives of Internal Medicine* 1974; 134: 1001-1006.
16. Rouveix B. Opiates and immune function: consequence on infectious disease with special reference to AIDS. *Therapie* 1992; 47: 503-512.
17. Courssons-Reed ME, Dykstra LA & Lystle DT. Pavlovian conditioning of morphine induced alterations of immune status. *Brain Behavior Immunology* 1994; 8: 204-217.
18. Carr DJJ & Serou M. Exogenous and endogenous opioids as biological response modifiers. *Immunopharmacology* 1995; 31: 59-71.
19. Thomas PT, Bhargana HN & House RV. Immunomodulatory effects of in vitro exposure to morphine and its metabolites. *Pharmacology* 1995; 50: 51-62.
20. Miyagi AU, Chuang T, Lam KM, et al. Opioids suppress chemokine-mediated migration of monkey neutrophils and monocytes - an instant response. *Immunopharmacology* 2000;47: 53-62.
21. Vasko ME (1992) Drug abuse and dependence. In *Goth's Medical Pharmacology*, 13th ed. pp. 336-353 [WO Clerk, DE Brater and AR Johnson, editors]. St. Louis, USA: Mosby Year Book.
22. Mohs ME, Watson RR & Leonard-Green T. Nutritional effects of marijuana, heroin, cocaine and nicotine. *Journal of the American Dietetic Association* 1990; 90: 1261-1267.
23. Bluthenthal R, Kral A, Gee L, et al. The effect of syringe exchange use on high risk IDUs: a cohort study. *AIDS* 14, 605-611.
24. Booth R, Kwiatkowski C, Chitwood D. Sex-related HIV risk behaviors: differential risk among IDUs, crack smokers, and IDUs who smoke crack. *Drug and Alcohol Dependence* 2000; 58: 219-226.
25. Choi KH, Xiwen Z, Shuquan Q, et al. HIV risk among patients attending sexually transmitted diseases clinic in China. *AIDS and Behavior* 2000; 4: 111-119.
26. Lamsal, p, 2008, Peer pressure leading cause of drug addiction, Available from: http://www.gorkhapatra.org.np/detail.php?article_id=31825&cat_id=4
27. Islam RN, Noor-E-Tabassum, Shamsuzzaman AM, et al. A Case Study of Drug Abuse, *Dinajpur Med Col J* 2013 Jan; 6(1), Available from: http://www.dinajmc.org/journal/djmcj_v6_i1_pdf/24_djmcj_case_120_rifat_drug_abuse.pdf
28. Akhter, J, 2012, Prevalence of Substance Abuse among Female Residential Students of Dhaka University, *ASA University Review*, Vol. 6 No. 1, January-June, 2012, Available from: <http://www.asaub.edu.bd/data/asaubreview/v6n1s19.pdf>
29. Alam, SA, April 22, 2012, Understanding Drug Abuse and Addiction in Bangladesh: A bird's eye view, Available from: <http://profahsanul.blogspot.com/2012/04/understanding-drug-abuse-and-addiction.html>
30. Shazzad MN, Abdal SJ, Majumder MSM, Sohel JUA, Ali SMM, Ahmed S, 2013, Drug Addiction in Bangladesh and its Effect, *Medicine today*, Volume 25 Number 02, Available from: <http://www.banglajol.info/index.php/ME TODAY/article/view/17927/12545>
31. Salama II, Kotb NK, Hemeda SA, et al. HIV/AIDS knowledge and attitudes among alcohol and drug abusers in Egypt, *J Egypt Public Health Assoc.* 1998;73(5-6): 479-500, Available from: <http://www.ncbi.nlm.nih.gov/pubmed/17217020>
32. UNICEF, HIV and AIDS in Bangladesh, Available from: [http://www.unicef.org/bangladesh/HIV_AIDS\(1\).pdf](http://www.unicef.org/bangladesh/HIV_AIDS(1).pdf)