

Injecting Drug Users Awareness on HIV/AIDS in Two Rehabilitation Centers of Dhaka City

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Abstract— A descriptive cross-sectional study was designed to assess awareness on HIV/AIDS among the Injecting Drug Users (IDUs) in two Rehabilitation Centers of Dhaka city. The study reveals that drug addiction occurred at the age ranging from 20 to 40 years and above. Out of all the study samples of size (n=100) male and female ratio was 63:37. The study showed that IDU was highest (38%) among the illiterate. Of the study samples 12% could sign, read, and write only, 19% had primary, 17% had secondary, 9% had higher secondary and 5% had graduation or higher level of education. Drug addiction continued for 1-3 years, 4-6 years, 7-9 years, 10-12 years, and more than 12 years among 9%, 45%, 23%, 18%, and 5% IDUs respectively. Age groups of starting the drug use was <15 years, 15-18 years, 19 years or more for 10%, 55% and 35% of study samples respectively. The way of getting in drug use/addiction was mostly due to friends' incitement being 42%, emotional- 25%, self curiosity- 10%, and environmental influence-10%. Among the IDUs 75% knew about transmission of HIV/AIDS through shared needles but 22% were ignorant about it. About the symptoms of AIDS 35% did not know anything at all but 15% respondents knew about chronic cough, 14% knew about weight loss, and 22% knew about fever. The study further reveals that the IDUs had mixed knowledge on prevention of HIV/AIDS. Nutrition status through BMI revealed that 18% of IDUs were severely malnourished, 32% were moderately malnourished and 26% were mildly malnourished and only 4% were overweight. Of them only 20% had normal nutritional status. These data warrant creation of awareness about adverse effects of unrestricted injected drug use (IDU) which might spread HIV/AIDS and any other blood borne diseases consequently paralyzing our society structure in the days to come.

Index Terms— Awareness, Injecting Drug Users, Nutritional Status, HIV/AIDS, BMI

1 INTRODUCTION

AIDS stands for acquired immune deficiency syndrome and is caused by the human immunodeficiency virus (HIV), which spreads through blood, semen, vaginal secretions and breast milk. The most common method of transmission is unprotected sexual intercourse with an HIV-positive partner. Other routes include transfusions of HIV infected blood or blood products, tissue or organ transplants, use of contaminated needles and syringes (or other skin-piercing equipment), and mother-to-child transmission during pregnancy, birth or breastfeeding [1].

HIV is extremely fragile and cannot survive long outside 'the body's fluids or tissue, and it cannot penetrate unbroken skin. Therefore, HIV is not transmitted by casual physical contact like kissing, holding hands, sneezing or coughing, sharing toilets, using the same utensils, or consuming food and beverages handled by HIV/AIDS patients. It does not spread by mosquito or bites of other insects and can be killed with bleach, strong detergents, and hot water [2].

Like other developing countries, drug addiction has been

increasing in Bangladesh in both urban and rural communities [3-4]. Crime, violence, poverty, sexual disease, inadequate health care facilities etc. are increasing day by day; and with them drug addiction has been spreading quickly. Most of the drug addicts are young adults. Moreover, they are socially as well as religiously neglected. This has led to a state of degeneration [5-6].

HIV/AIDS has also been spreading all over the world now in an alarming speed and many of them have already died. The factors responsible for spreading HIV/AIDS in the country are as follows:

- a. Lack of knowledge on HIV/AIDS.
- b. Social norms and taboos that create obstacle to make the issue of HIV/AIDS open to all specially to young generation.
- c. High prevalence of HIV infection in the neighboring countries.
- d. Increased population movements both internal and external,
- e. Increased number of sex workers (street! floating, brothel, hotel based) and high prevalence of STD.
- f. Lower rate of condom use — the sex workers have the lowest consistent condom use in Asia which is 2-4% only [7].

Bangladesh is being used as a transshipment point for the international drug markets. It is surrounded by Golden Triangle and the Golden Crescent. Despite a focus on its fatal consequences worldwide, until recently research on

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illicit drug use has received little attention in Bangladesh. [8]

Drug users are much more susceptible to HIV infection than some other vulnerable groups e.g. prostitutes, men who have sex with men (MSM) and hijras (transgender) due to biological and behavioral reasons. Women's rates of new infection now surpass men's, especially, in countries where women live in poverty level and have relatively low status. In sub-Saharan Africa, there were 12 to 13 infected women for every 10 infected men in 2001[9]. In some African countries, infection rates are five times higher among young girls than among young men [10]. Most infections in young women are a result of unprotected sex and reflect a power imbalance that limits women's ability to negotiate or control sexual interactions, especially with older men. In addition, HIV infected semen typically contains a higher viral concentration than do vaginal secretions [11].

During unprotected vaginal intercourse, a woman's risk of becoming infected is up to four times higher than that of a man. The vagina's greater area of susceptible tissue (compared with the male urethra) and micro trauma during intercourse make women more physiologically vulnerable and drug addiction induces immune-nutritional deficiency [12].

Use of illicit drugs produces multiple nutrient deficiencies and malnutrition which is the most common cause of immunodeficiency [13-14].

HIV infection is a devastating global problem. More than 40 million people worldwide are now affected with HIV infection of which 90% are in the developing countries including South and Southeast Asia [15].

Because of their prevalent immune nutritional deficiencies and behavioral risk factors drug addicted persons are at the highest risk of HIV infection [16]. It has been documented that the largest number of AIDS occurs in the developed countries due to intravenous drug users (IDUs). Non IDUs are also at increased risk for HIV infection due to unprotected sexual activity with HIV infected partners. There is such report on the drug addicts in Bangladesh [17]. The sexual life of addicts is in a vulnerable state where risky sex behavior is common. Most of the addicts usually have unprotected sex with multiple partners, which ultimately results in their suffering from sexually transmitted diseases and even from HIV infection [18]. So one of the aims of the study is to assess the awareness of the intravenous drug addicted people about HIV/AIDS and to suggest measures to decrease the risk of HIV/AIDS.

2 STUDY DESIGN

A descriptive type of cross-sectional study has been conducted to explore the awareness on HIV/AIDS among

IDUs.

2.1 Study Site

A few drug addict treatment and rehabilitation centers in Dhaka city like Madokashokti Niramoya Kendro at Mohakhali and Mukto Akash Bangla at Mohammadpur run by two NGOs were taken as study site.

2.2 Study Duration

The study was conducted between 1 June 2011 and 30 October 2011.

2.3 Inclusion Criteria

Injecting drug users willing to participate in the study.

2.4 Exclusion Criteria

IDUs unwilling to participate or psychologically handicapped.

2.5 Tools and Techniques

A pre-tested, modified and corrected questionnaire was used to collect the required information.

2.6 Data Collection Method

Face to face interview with the respondents.

2.6 Data Processing & Analysis

Data were checked, cleaned and edited properly before analysis. The study was based on primary data and filled directly with the help of respondents. The data were sorted and analyzed by using the software SPSS12.0 for subsequent representation through tables and graphs.

3 RESULTS

Age and Sex of the Injecting Drug Users: The age of the injecting drug users were grouped and their distribution is presented in the following Table 1.

TABLE 1
Distribution of the respondents by age (n=100)

Age (year)	Frequency	Percentage
<20	3	3
20-25	8	8
26-30	32	32
31-35	25	25
36-40	22	22
> 40	10	10
Total	100	100

Table 1 shows that of all the respondents, 32% belonged to 26-30 years age group, 25% to 31-35 years age group, 22% to 36-40 years and 10% to above 40 years age group. Of the rest 8% belonged to 20-25 years and only 3% to below 20 years age group. Mean age of respondents was 32.60 ± 8.016 years.

TABLE 2

Distribution of the respondents by sex (n=100)

Sex	Frequency	Percentage
Male	63	63.0
Female	37	37.0
Total	100	100

Table 2 shows that about two-third (63%) of the respondents was male while rest were female.

Education Level of the Injecting Drug Users: The education level of the injecting drug users was also collected and presented in the Figure 1.

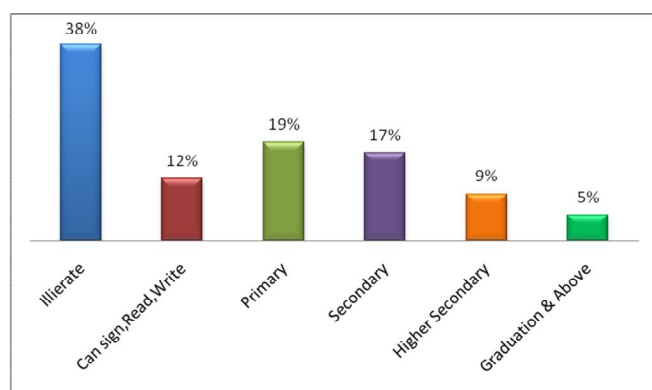


Fig. 1 Distribution of the respondents by educational qualification (n=100).

It shows that 17% of the respondents had secondary, 19% had primary level of education and 12% could sign and write. Again 38% were illiterate where as only 5% respondents had minimum graduation degree.

Nutritional Status of the Injecting Drug Users

The nutritional status of the respondents was assessed using body mass index (BMI). The BMI is measured as the weight in kg divided by height in meter square.

TABLE 3

Distribution of the Respondents by Nutritional Status (n=100)

BMI	Nutritional Status	Frequency (%)
<16.0	CED3 (severe)	18 (18.0)
16.00-16.99	CED2 (moderate)	32 (32.0)
17.00-18.49	CED1(mild)	26 (26.0)
18.50-24.99	Normal	20 (20.0)
25.00-29.99	Overweight	4 (4.0)
Total	-	100 (100)

Table 3 indicates that that 76% IDUs had been suffering from varying degrees of Chronic Energy Deficiency (CED), of which 18%, 32% and 26% were in CED3, CED2 and CED1 respectively. However, only 20% of the IDUs had normal nutritional status and 4% were overweight.

Means of Addiction of the Injecting Drug Users: The injecting drug users have stated different ways of their addiction to drugs.

TABLE 4

Distribution of the respondents by means of getting addiction (n=100)

Ways of addiction	Frequency	Percentage
Self curiosity	10	10.0
Intentional	1	1.0
Friends incitement	42	42.0
Environmental	10	10.0
Carelessness of the family	1	1.0
Emotional	25	25.0
Buying drugs	6	6.0
Others	5	5.0
Total	100	100.0

Table 4 shows that 42% of the respondents were addicted due to their friends' incitement and 10% stepped into the problem while they tried to meet their self curiosity. One percent was addicted either intentionally or due to the carelessness of their family members. The surrounding environment allured additional 10% and emotion caught about 25% of the respondents. The last 6% were addicted during buying drugs.

Age of First Drug Addiction and Duration of Addiction:

The following Tables 5 and 6 state the distribution of ages of first taking of drugs and duration of addiction of the injecting drug users respectively.

TABLE 5

Distribution of the respondents by age of first taking the drug (n=100)

Age of taking drug (years)	Frequency	Percentage
<15	10	10.0
15-18	55	55.0
19 & above	35	35.0
Total	100	100.0

Table 5 reveals that 55% of the respondents were of 15-18 years age, 10% below 15 years and 35% respondents were of the age 19 years and above.

Table 6 shows that 45% of the respondents had 4-6 yrs duration of addiction to drugs, 9% had 1-3 yrs, 23% had 7-9 years and 18% of the respondents had 10-12 yrs duration.

TABLE 6

Distribution of the respondents by duration of addiction (n=100)

Duration of addiction (years)	Frequency	Percentage
1-3	9	9.0
4-6	45	45.0
7-9	23	23.0
10-12	18	18.0
>12	5	5.0
Total	100	100.0

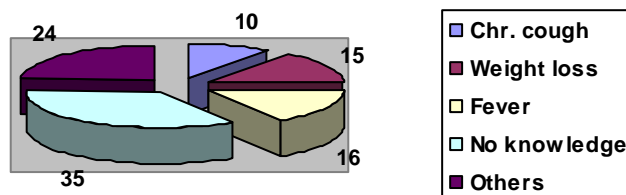


Fig. 2 Distribution of the respondents by their knowledge on symptoms of HIV/AIDS (n=100).

Knowledge of the Injecting Drug Users about HIV/AIDS, Their Transmission, Symptoms and Prevention: The knowledge on HIV/AIDS, how it is transmitted, what are the symptoms and how it can be prevented were asked to the respondents. The response has been analyzed and presented in Tables 7 and 8, Figure 2 and Table 9 respectively.

TABLE 7

Distribution of the respondents by their knowledge about HIV/AIDS (n=100)

Knowledge on HIV/AIDS	Frequency	Percentage
Yes	91	91.0
No	9	9.0
Total	100	100.0

Table 7 depicts that 91% of the respondents knew about HIV/AIDS and only 9% did not know anything about it.

TABLE 8

Distribution of the respondents by their knowledge on transmission of HIV/AIDS through needle sharing (n=100)

Knowledge on transmission of HIV/AIDS through needle sharing	Frequency	Percentage
Yes	78	78.0
No	22	22.0
Total	100	100.0

Table 8 shows that 78% of the respondents had knowledge on transmission of HIV/AIDS through needle sharing and the rest were ignorant about it.

Of the respondents 10%, 15%, and 16% had knowledge respectively on chronic cough, weight loss and fever but 35% had no knowledge on HIV/AIDS symptoms. While 24% of the respondents had knowledge on other miscellaneous HIV/AIDS symptoms.

TABLE 9

Distribution of the respondents by the knowledge of prevention of HIV / AIDS (n=100)

Knowledge on prevention	Frequency	Percentage
Don't mix with HIV Positive	3	3.0
Avoid reused needle / syringe	15	15.0
Proper use of condom and needle/syringe	55	55.0
More than one reasons	21	21.0
Others	6	6.0
Total	100	100.0

Knowledge on the prevention of HIV/AIDS (Table 9) of the respondents was assessed, only 3% had knowledge to avoid sex with HIV/AIDS affected persons, and 15% had knowledge to avoid used needle/syringe. Majority of the respondents (55%) had knowledge to prevent the disease by properly using condoms and needles/syringe, while 21% respondents believed in more than one reason for effective prevention.

4 DISCUSSION

HIV/AIDS is a curse of modern civilization. Due to its very nature the globe has already lost millions of lives and additional millions are in the pipeline for the fatal destination. Despite all precautions and efforts to create awareness against this slow but deadly disease, desired objective to control or cure the disease has not yet come up. This study was conducted only in two drug addict centers in Dhaka city to observe the awareness on HIV/AIDS among IDUs. Of the important variables, socio-demographic, nutritional status, duration of addiction, knowledge on symptoms, mode of spread of drug habits and its prevention was considered in addition to some other supporting variables.

It has been observed that about one third (32%) of the respondents were in the 26 to 30 years age group followed by 25% and 22% of the age groups 31-35 years and 36-40 years (Table-1). When compared to educational status of the IDUs, 38% were found illiterate, 19% had primary education, 17% had secondary education, and 9% had higher secondary education. But 12% of IDUs could read, write and sign; and only 5% of the IDUs were graduate (Fig 1).

At this stage it seems worth to compare the trend of spread of AIDS problem in Bangladesh with that of other countries. In a study in a Psychiatric Hospital, Bahrain, Arabian Gulf in 1994, it was found that 8.1% cases were associated with college level education compared with 25.4% with secondary level of education and 26.2% with primary or lower level of education ($p= 0.01$) [19]. In a separate study in Scotland in 2000-2001, it was found that about 23.5% IDUs died who were younger than 25 years and about 33.5% died who were older than 34 years [20]. The majority of those diagnosed with HIV infection due to IDU were in the 25 to 29 yrs age group, followed by those aged 30 to 34 yrs. Lowest number of diagnoses occurred in IDUs aged over 50 [21]. In the present study death was not considered but age group came in as a prime factor for IDUs. Finding of the study has some similarity with the IDUs age but not exactly the same. It could be due to limited sample size and limited non-randomized, purposive study sampling in two selected centers only.

Females who are injecting drug users are still quite less (37%)(Table-2). This aspect shows a variation from other countries. Female IDUs in Tirana had smaller network sizes compared to that for the male IDUs, unlike in St. Petersburg where female IDUs had larger network sizes than male IDUs. Recruitment patterns in each country also differed by demographic categories. The lower number of female IDUs in Bangladesh is justified due to the strong religious values and socio-cultural background of the country [22].

Present study reveals that the nutritional status of the significant percentage of addicted IDUs is very poor. They had been suffering from varying degrees of Chronic Energy Deficiency (CED), of which 18%, 32% and 26% were in CED3, CED2 and CED1 respectively. However, only 20% of the addicts had normal nutritional status (Table-3). A study in Hood Center for Children and Families, Dartmouth Medical School in Lebanon showed that IDUs with or without HIV infection was physiologically devastating. IDUs had more physical and mental illnesses and were often poorly nourished, partly as a result of housing and food insecurity and hunger. High rates of food insecurity and hunger were playing a role in dietary inadequacy and poor overall diet quality, while HIV-

infected individuals with or without IDUs might have altered nutrient needs [23].

In the present study, 42% percent of the addicts were found to start taking drugs out of self curiosity or on a friend's incitement, 25% were addicted emotionally, whereas 6% were addicted during buying drugs for others. About 10% got addicted due to their surrounding reasons. Frustration, family instability, surrounding environment, etc also contributed to addiction. About 55% first took the drugs when they were at the age of 15-18 years whereas 10% took even before 15 years. But 35% respondents took it at the age of 19 years and above. It is notable that 45% of the respondents got addicted for duration of 4-6 years whereas only 9% had addiction for 1-3 years. But 23% had addiction for 7- 9 years and 18% had it for long 10-12 years (Table 5 and 6).

The majority of overseas survey revealed that IDUs passed on information to their peers. The average age of initiation was 18.5 years. It showed that about half of the samples e.g., 50.3% were early initiators, 43% of the sample was HCV negative, 24% HCV positive and 33% did not know their HCV status. Almost half the sample e.g., 46% reported having reused someone else's injecting equipment of some kind in the past 6 months. About 56% percent of the samples had been injecting for over 24 months, and frequency of injecting was on an average once a day. Severity of dependency, as reported by participants, was not particularly high. Just over half (52%) had injected opioids rather than stimulants most frequently in the past 6 months [24].

The findings are not exactly similar to our findings in many aspects which may be due to the socio-cultural and economic differences. Also lack of social security, proper medicare services and hunger might have contributed to these differences.

The knowledge of respondents who heard and did not hear about HIV/AIDS (Table -7) is 91% and 9% respectively. It was found that 59% of married women and 73% of currently married men heard of AIDS in Indonesian study. The level of knowledge among married women gradually increased from 38% in 1994 to 51% in 1997 and to the current level of 59 percent [25]. The increased knowledge of respondents about HIV/AIDS is likely due to the effective launching of anti-AID program in Bangladesh.

Of all the respondents 78% knew about spread of the disease through needle sharing but 22% did not know it (Table-8). This study was conducted in the urban setting; and WHO data from 1994 to 2007 in different countries show the urban drug users know more about this than the rural users [26]. But such a comparison in the present study could not be sorted out.

The present study further reveals that more than half of the respondents (55%) believed in proper use of condom

that could prevent the spread the infection. But 21% believed that more than one causes are involved for prevention and 15% believed in avoiding reused needles.

In countries with generalized HIV epidemics, such as Cameroon, Central African Republic more than 80 per cent of young women aged 15 to 24 do not have sufficient knowledge about HIV. In Ukraine, although 99 per cent of girls had heard of AIDS, only 9 per cent could name three ways to avoid infection [27]. So this knowledge level varies from country to country as IDUs rate also varies.

Thailand's efforts to de-stigmatize condoms and its targeted condom promotion for sex workers and their clients dramatically reduced HIV infections in these populations and helped reduce the spread of the epidemic to the general population. Increased condom use is believed to be a contributing factor in the decline in HIV prevalence reported in Zimbabwe between 2003 and 2005. The male latex condom is the single, most efficient, available technology to reduce the sexual transmission of HIV and other sexually transmitted infections [28]. This finding supports the opinion of selected IDUs in the study area.

5 CONCLUSION

It is well understood that majority of the injecting drug users (IDUs) are of the age between 26-40 yrs (79%), a vital age for a healthy and economically productive life. Of them majority are male (63%). With better education number of addicts is significantly low. Their nutritional status is also affected to a verifying degree. It observed with concerned that friends' incitement is the major contributing factor to get involved in drug use. Though emotional factors are coming in as the second most important factor but others are not so important. The majority of the addicts (91%) are aware of AIDS and most of them know some of the symptoms of the deadly disease and its mode of transmission through needle sharing. Respondents are also aware of means of prevention particularly proper use of condom as the main tool.

Recommendations

- a. Proper education and counseling of the people to be done from school level to vulnerable community by combined efforts of the Government and NGOs.
- b. Before the havoc of AIDs affect the nation badly the drug trafficking routes to be well guarded by the law enforcing agencies to stop the easy availability of the drug.
- c. Addicts' treatment and rehabilitation centers are to be well organized in a way so that along with recovery, they get better knowledge on grave consequences of IDU, good knowledge and motivation, and never fall back the nightmare of addiction.

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