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Original Articles

Sex-habit and Sexually Transmitted Infection (STIs) Among The Drug Abusers Undergoing Detoxification

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Abstract

Drug abuse is increasing alarmingly with time among the young-adults in Bangladesh. The objective of the study was to investigate sex-habit and STIs of the drug abusers. A total of 1076 drug abusers undergoing detoxification voluntarily at the Central Drug Addiction Treatment Centre (CTC), Tejgaon, Dhaka were investigated from September 2010 to August 2011. They were selected consecutively on the basis of defined selection criteria. Research instrument was an interviewer questionnaire and blood specimen. Results showed that 82.1% (n=883) were heterosexual and 16.2% (n=174) had no sex. The majority of them (55.3%, n=595) had enjoyed sex with multiple partners. They enjoyed sex with commercial sex sellers (11.1%, n=119) but majority of them (34.2%, n=368) had sex with all categories including spouse. Results also showed that majority of them had unethical sex, of which 24.9%(n=268) had experience about extramarital sex and 30.4%(n=327) premarital sex respectively. Around 55.0%(n=594) of them did not use condom during sex and 21.9%(n=236) used it occasionally. The 14.5%(n=156) of them had sign-symptoms of gonorrhea and syphilis, of which 1.8%(n=19) had genital ulcer, 3.7%(n=40) genital discharge and 9.0%(n=97) had both ulcer and discharge respectively. In laboratory analysis, 16.3%(n=175) had STIs positive results, of which 9.9%(n=107) were RPR reactive, 1.8%(n=19) URS reactive and 4.6%(n=49) both RPR and URS reactive respectively. In drug habit, results also showed that 82.6% (n=889) of them had been using heroin and the rests used cannabis (8.6%, n=93), phensedyl (5.4%, n=58) and injections (3.3%, n=25) respectively. Forty two percent (n=455) of them had been abusing it for 1-5 years, 31.4% (n=338) for 6-10 years and 26.3%(n=283) for 11-20 years. Most of them (91.1%, n=980) used multiple illicit drugs and their ultimate choice of drug was heroin (77.3%, n=832). About 22.6%(n=243) addicts abused injection drugs in their lifetime. Altering behaviors, especially their drug habit and sexual lifestyle are still the only applicable ways to stop this human catastrophe.

Keywords: *Drug Abuse, STI, Sex habit, Detoxification*

Introduction

Drug abuse is a personal as well as a societal crisis all over the world; no nation is immune to its fatal consequences. It destroys innumerable individual lives and undermines societies.[1] Bangladesh is in the middle of the world's illicit drugs producing zones: "Golden Triangle, Golden Crescent and Golden Wadge.[2]" Because of its unique position, in recent times drug abuse is increasing and invaded every fabric of the societal life both in rural and urban community in Bangladesh.[3-4] It is anticipated that about 4.6 million adolescents and youths have been using illicit drugs in Bangladesh and the number is increasing with time[5]. Consequence of illicit drug use might be triggering street and family violence, social instability, family breakdown, antisocial activities, crime etc.[6-7] It wipes out the gains made by development.Socio-cultural-family profile of the drug abusers is highly vulnerable for drug addiction in Bangladesh[8]. Moreover, injection drug users are the topmost high-risk individuals for HIV infection and transmission in this country. In addition, their sex-habit and STIs are also highly susceptible to make a road for HIV/AIDS and other sexual diseases like hepatitis among the general population.[5,9] Illicit drug use for a long time particularly opiates or other morphine derivatives and cannabis may induce neuropsychiatric troubles such as sleep disturbance, sexual dysfunctions, and disturbed behaviors etc.[10] Family and social participation, behavioral therapies and medical management jointly can tailor the individual need of illicit drugs, learn to control their crisis and be trained to maintain their normal and productive life in family or work place.[11] Scientific information about drug & sex-habit and STIs can play very important role for effective behavioral therapies and medical management of the drug abusers. In addition, it can contribute essential basics for developing an effectual preventive policy against drug abuse, drug trafficking and HIV/AIDS spread.

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A very little amount of information about drug abuse may be found from government (Department of Narcotic Control) or private organizations. But there are a very few studies, even not a single scientific study particularly on sex-habit and STIs has, so far known, been carried out in Bangladesh. However, it is essential to address sex-habit and STIs scientifically and immediately, because once their assessment data has been collected, a national strategy for effective management can be established which may contribute to the improvement of the quality of life of the drug abusers. Therefore, the aim of this work and in continuation of research in this filled was to find out sex-habit and STIs of the drug abusers who underwent detoxification.

Materials and Methods

The research participants were illicit drug users. Their drug dependency were diagnosed following the criteria described in DSM-IV^{TR}. A total of 1076 drug abusers were investigated from September 2010 to August 2011. They sought detoxification treatment voluntarily at the Central Drug Addiction Treatment Centre (CTC), Tejgaon, Dhaka (only the government hospital in Bangladesh that provides detoxification facilities solely for male drug addicts). They were selected consecutively on the basis of defined criteria. The drug abusers, who had period of addiction less than two years, age below 18 years and had been suffering from co-morbid primary mental disorders were not included in this study. In addition, re-registration within the study period was also excluded. Research instrument was an interviewer questionnaire and blood specimen. A questionnaire was developed and pre-tested among the admitted drug abusers, who were excluded from the study population. It was designed to include general information, drug habit and sex-habits. Drug habit included present drug, other drugs in lifetime, starting drug, choice of drugs, period of addiction, if injection drugs, detailed information were included in the questionnaire. Sex-habit included sexuality, number of sex-partners in lifetime, category of sex-partners, use of condom and sign-symptoms of sexual diseases.

In outpatient department, at the time of registration, nominated trained personnel other than hospital employee briefed the objectives, benefits, risks and burdens of the study to the drug abusers and their close relatives if necessary. Only positive respondents were recruited as research participants. A written informed consent was taken from each of the participants. The Resident Psychiatrist (RP) working at CTC interviewed the research participants face to face following the questionnaire in a separate room to maintain their privacy and confidentiality. In addition, legal guardians were also interviewed if necessary. Finally, venous blood was collected. This study did not involve any societal, mental or physical risk or injury to the drug abusers. Prior to conduct the study, institutional permission was taken from the director of the CTC. Ethical aspect of the was maintained strictly and the procedures followed for this study were in accordance with the CIOMS guidelines as updated in 2002.[12]

Blood Analysis

A venous blood sample (3ml) was collected from each of the selected drug abuser following aseptic procedures. Blood was kept undisturbed for at least 60min and then centrifuged at 3000rpm for 10min. Serum thus extracted was used for Rapid Plasma Reagin (RPR) and Ultra Rapid Strip (URS) test, in addition to clinical examination, for diagnosis of STIs. The RPR is a carbon agglutination nonspecific qualitative test for STIs and URS is specific test for syphilis. Commercial kits, Fortress/Omega Diagnostic limited, UK and Excel, TUV, USA were used for PRP and URS tests respectively. The URS test was carried out only for selective cases where PRP test was positive and/or clinical features were indicative.

Statistical Analysis

A software package of SPSS (version 12.0: SPSS Inc., Chicago, IL, USA) was used to analyze the data. Descriptive statistics was used for all variables. Values were expressed as percentage and mean. Chi-square (χ^2) tests were used to find association between STI and sex-habit among the drug abusers.

Results

The sex-habit and STIs of the drug abusers was summarized in the Table 1. Results showed that 82.1% (n=883) were heterosexual and 16.2% (n=174) had no sexual experience in lifetime. A few of them were bisexual (0.9%, n=10) and homosexual (0.8%, n=9) respectively. The majority of the drug abusers (55.3%, n=595) had enjoyed sex with multiple partners. In polygamous sex-habit, they enjoyed sex with commercial sex sellers (11.1%, n=119) and with resident or hotel based sex sellers (9.1%, n=98), and a few (0.9%, n=10) with street sex sellers. But majority of them (34.2%, n=368) had sex with all categories of the sex sellers including spouse. A significant part of the married drug abusers (28.5%, n=307) had sex with their spouse (wife, an official sex partner) only. Results also showed that majority of the drug addicts had unethical sex; of them 30.4%(n=327) had premarital sex and rest (24.9%, n=268) had extramarital sex. Around 55.0%(n=594) of them did not use condom during sex in their entire sexual life; 21.9%(n=236) used condom occasionally and only 6.7%(n=72) used condom regularly. In STIs investigation, 14.5%(n=156) of them had sign-symptoms of gonorrhea and syphilis, of which 1.8%(n=19) had genital ulcer, 3.7%(n=40) genital discharge and 9.0%(n=97) had both ulcer and discharge respectively. In laboratory analysis, 16.3%(n=175) had STIs positive results, of which 9.9%(n=107) were RPR reactive, 1.8%(n=19) URS reactive and 4.6% (n=49) both RPR and URS reactive respectively.

Table-I

Sex-habit and STIs among the drug abusers (n=1076)

Parameter	Number	Percentage
Sexuality		
Hetero-sex	883	82.1
Homo-sex	9	0.8
Bi-sex	10	0.9
No-Sex	174	16.2
Sex partners in lifetime		
1 –5	675	62.7
6 –10	101	9.4
11 – 15	46	4.3
16 – 300	80	7.4
No-Sex	174	16.2
Category of sex partners		
Wife/spouse (W)	307	28.5
Hotel/resident sex workers (H)	98	9.1
Commercial sex workers (C)	119	11.1
Street sex workers (S)	10	0.9
All catagory[1]	368	34.2
No-Sex	174	16.2
Legality of Sex		
Marital Sex	307	28.5
Extra marital Sex	268	24.9
Premarital Sex	327	30.4
No-Sex	174	16.2
Condom use		
No condom	594	55.2
Occasional use	236	21.9
Regular use	72	6.7
No-Sex	174	16.2
Sign/Symptoms of STIs		
Genital ulcer (U)	19	1.8
Genital discharge (D)	40	3.7
Mixed(DU)	97	9.0
No sign/symptom	746	69.3
No-Sex	174	16.2
Laboratory test for STIs		
RPR Reactive	107	9.9
URS Reactive	19	1.8
Both Reactive	49	4.6
Not Reactive	727	67.5
No-Sex	174	16.2

1. WC=120, WH=57, WHCS=40, HCS=37, CS=34, HC=27, WCS=24, WHC=13, WS=12, HS=2, WHS=2

Note:

Hetero-sex:	Sex with opposite gender only.
Homo-sex:	Sex with same gender only.
	Bi-sex: Sex with both genders.
Wife:	The woman with which a man has legal (according to law and religious rules) sexual and social relationship.
Resident sex workers:	Resident or hotel based sex sellers.
Commercial sex workers:	Brothel based sex sellers.
Street sex workers:	Floating (having no identity) sex sellers.
Marital sex:	Sex with spouse only.
Extra-marital sex:	Sex with other than spouse (friends, sex sellers).
Premarital sex:	Unmarried individuals having sex with friends or sex sellers.

Table-II

Drug habit of the abusers (n=1076)

Parameter	Number	Percentage
Starting drugs		
Cannabis (C)	802	74.5
Phensedyl (P)	101	9.4
Heroin (H)	82	7.6
Alcohol (A)	69	6.4
Tablets (T)	18	1.7
Injections (I)	4	0.4
Present drug		
Heroin	889	82.6
Cannabis	93	8.6
Phensedyl	58	5.4
Injections	25	3.3
Tablets	11	1.1
Period of addiction in year		
1 – 5y	455	42.3
6 –10y	338	31.4
11 –20y	283	26.3
Choice of drug		
Heroin	832	77.3
Phensedyl	104	9.7
Cannabis	91	8.5
Injections	22	2.0
Tablets	16	1.5
Alcohol	11	1.0
Drug abuse in lifetime[1]		
Single drug	96	8.9
Two drugs	295	27.4
Three drugs	210	19.5
Four drugs	211	19.6
Five drugs	167	15.5
Six drugs	97	9.1
Injection drug abuse in lifetime		
Buprenorphine (B)	58	5.4
Pethedine (P)	24	2.3
Diazepam (D)	11	1.0
Mixed[2]	150	13.9
No injections	833	77.4
Period of injection (n=243)		
Less than 1 month	96	(39.5) 8.9
1 – 6 m	91	(37.4) 8.5
7 – 12 m	29	(11.9) 2.7
13 –72 m	27	(11.2) 2.5
Needle sharing (n=243)		
Occasional sharing	96	(39.5) 8.9
Regular sharing	5	(2.1) 0.5
No sharing	142	(58.4) 13.2

1. Single drug: H=66, P=6, C=22, I=1, T=1
   Two drugs: HC=218, HP=16, CP=14, HA=13, HI=8, AC=7, TC=6, IC=5, TH=4, PT=3, IP=1
   Three drugs: HAC=51, HPC=42, HIC=36, HTC=23, PCA=13, TCA=10, TCP=8, HIP=7, HPA=6, HTA=5, HPT=3, HTI=1, HAT=1, PCI=1, PTA=1, CIT=1, CIA=1
   Four drugs: HACP=82, HATC=47, HPTC=18, PCTA=18, HPAT=11, HPTC=9, HCAI=8, HPIT=5, HCIT=5, HPIA=2, HITA=2, PCIT=2, PCIA=1, TCIA=1
   Five drugs: HPCTA=121, HPCAI=25, HCITA=15, HPCIT=5, HPITA=1
   Six drugs: HPCITA=97
2. Injections: BDA_1=108, BD=12, BA_1=12, DA_1=6, PDA_1=5, BP=3, PD=3, BPD=1 (A_1=Promethazine/antihistamine)

Table-III

Association of STIs with sex-habit of the drug abusers (n=902)

Parameters	Sign-symptoms of sexually transmitted infections (n=156)			No Sign-Symptom (n=746)	Comment
	Genital ulcer %(n)	Genital discharge %(n)	Mixed %(n)	%(n)	
Number of sex partners					
1 – 5	0.55(5)	5.76(52)	2.00(18)	32.48(293)	
6 – 20	1.11(10)	2.88(26)	2.22(20)	13.30(120)	$\chi^2 = 93.58$
21 – 300	0.44(4)	1.22(11)	1.11(10)	2.88(26)	d.f.= 6 $P < 0.001$
Only spouse	nil	nil	nil	34.05(307)	
Category of sex partners					
Commercial	0.33(3)	1.88(17)	0.78(7)	10.20(92)	
Resident/hotel	0.22(2)	1.33(12)	0.22(2)	9.09(82)	$\chi^2 = 113.07$
	1.55(14)	6.65(60)	4.33(39)	29.37(265)	d.f.= 9 $P < 0.001$
Mixed	nil	nil	nil	34.05(307)	
Only Spouse					
Condom use					
No condom	1.11(10)	3.99(36)	2.43(22)	58.4(526)	$c^2 = 96.63$
Occasional use	1.00(9)	5.88(53)	2.88(26)	16.41(148)	d.f.= 6
Regular use	nil	nil	nil	7.98(72)	$P < 0.001$

The drug habit of the abusers was summarized in the Table 2. Of the 1076 drug abusers, 82.6% (n=889) had been using heroin as a regular drug and rests were cannabis (8.6%, n=93), phensedyl (5.4%, n=58), injections (3.3%, n=25) and tablets (1.1%, n=11) respectively. Forty two percent (n=455) of them had been abusing it for 1-5 years, 31.4%(n=338) for 6-10 years and 26.3%(n=283) for 11-20 years. Most of the drug abusers (91.1%, n=980) used multiple illicit drugs in their lifetime. Of them, 27.5%(n=295) used two drugs, 19.5%(n=210) three drugs, 19.6%(n=211) four drugs, 15.5%(n=167) five drugs and 9.1%(n=97) used six drugs. Only 8.9% (n=96) addicts used single drug. The starting drug for majority of the addicts (74.5%, n=802) was cannabis followed by phensedyl (9.4%, n=101), heroin (7.6%, n=82), alcohol (6.4%, n=69), tablets (1.7%, n=18) and injections (0.4%, n=4) respectively. Their ultimate choice of drug was heroin (77.3%, n=832). A significant number of the drug abusers choose phensedyl (9.7%, n=104), cannabis (8.5%, n=91) and injections (2.0%, n=22) but a few of them had choice tablets (1.5%, n=16) and alcohol (1.1%, n=11) respectively. A significant number of them (22.6%, n=243) abused injection drugs in their lifetime, of which 8.7% (n=93) used single injection drug that was buprenorphine (5.4, n=58) or pethedine (2.3%, n=24) or diazepam (1.0%, n=11) and the rest (13.9%, n=150) used mixed drugs (mixture of buprenorphine or pethedine, promethazine and diazepam). Majority of them used injections for several times to one month and a significant number of them shared needle.

Association between STIs and sex-habits was summarized in the Table-III. The STIs were found to be significantly (P<0.01) associated with sex-habits such as quality of sex partners, number of sex partners and use of condom. Commercial, resident, hotel or mixed category of sex partners, multiple sex partners and unsafe sex practices were also significantly associated with the STIs.

Discussion

Heroin (diacetylmorphine) is a highly euphoriant which produces a peculiar orgiastic sensation and is preferred by the addicts.[13] In this study, it had been found that most of the drug abusers started addiction with cannabis followed by phensedyl, heroin and alcohol, but they ultimately ended up with the heroin. Because of low price, easy availability and locally promoted, the beginners used cannabis as a first choice to start addiction and then became familiar with other addictive substances. Evidence of cannabis use as a starting substance had also been reported all over the world.[14] It had been found that most of the studied drug abusers were currently using heroin regularly. Bangladesh is not heroin producing country but its unique positioning in the midst of the international drug trafficking zones; it is being used as trans-shipment route for transporting illicit drugs to Europe and the Americas[15]. Leakage, during transport, makes drugs easy available in local unseen markets. In addition, drug addict's choice heroin may be due to its highest euphoric characteristics compared to other abused substances.[16]

Multiple drug use for a long period (more than 5 years) was highly prevalent among the drug abusers. However, a short duration of abuse (less than 5 years) was also found in significant number of the drug abusers. Similar evidence was also reported by others.[4,17-18] It has been found that insufficient and inefficient treatment and rehabilitation facilities, social infernos and economic shortcoming may be important contributing factors for these characteristics. Results also showed that prevalence of injection drug use and needle sharing was lower than that of earlier study conducted in 2000[4]. It may be due to needle exchange programs and/or awareness activities against drug abuse among the drug addicts. But still IDUs are the high-risk people for HIV infection and transmission and other infectious agents like hepatitis viruses, etc.

Drug abusers were found to have multiple sex partners of commercial, residential, hotel and street categories. Only a few of them had sex with spouse (official sex partner). Most of them did not use any protective device during sex, which consequently spreads sexual infections.[4.19] With a very few exceptions, majority of the drug abusers were found to be heterosexual. Insignificant homosexuality or bi-sexuality may be due to conservative social tradition and religious impact. Extra-marital sex and pre-marital sex were found to be highly prevalent among the drug abusers. In Bangladesh, it is estimated that 100 thousands sex sellers in urban communities. Because of low price and easy availability, extra-marital and pre-marital sex is widespread among the young adults.[20] In this study, a striking finding was that 16.2% of the drug abusers had no sexual experience in their lifetime and 28.5% had sex with their spouse only. It may be due to strong religious belief and influence of family and social norms and values. There was a significant association ($P<0.001$) between sex-habit and STIs. Sexual characteristics of the drug abusers are consistent with the other studies.[4,7,21]

Unprotected heterosexual sex accounts for most of the HIV infection and transmission in developing countries.[11,19] In Southeast Asia, HIV/AIDS epidemic is dominated by India, followed by Thailand, Nepal and Myanmar.[22] Inter-country trafficking and tourism in between Bangladesh, India, Thailand, Nepal and Myanmar is extremely high which can easily spread the HIV infection among the peoples of these countries. In Bangladesh, HIV-seroprevalence is still at an embryonic stage but its geographical location, trafficking and tourism leads Bangladesh at high-risk which can flare up as an epidemic[23-24]. Because of multiple sex partners, unprotected sex practices, use of immunosuppressive illicit drugs and sharing of needles, drug abusers are the topmost high-risk individuals for HIV infection and transmission in Bangladesh.[4,15-17,25-31]

In conclusion, the sexual life of the drug abusers is in a vulnerable stage, most of them are polygamous having unprotected sex practice, which is high-risk for HIV/AIIDS. Most of them use multiple illicit drugs for a long period and choice best for heroin. Injection drug use is increasing with time. Altering behaviors, especially their drug habit and sexual lifestyle are still the only applicable way to stop this human catastrophe.

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Conflict of Interest : None

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