The Chittagong Univ. J. Sci. 41(1) : 21-38, 2019
DOI: https://doi.org/10.3329/cujs.v41i1.51913

Determinants of Drug Addiction in Slum and Non-slum Areas of Chittagong, Bangladesh

Md. Monirul Islam*, Md. Imam Hussain and Md. Shahidul Islam

Department of Statistics, University of Chittagong, Chittagong-4331, Bangladesh
**Correspondence author: mi.custatistics@gmail.com*

Abstract

This research paper is a modest attempt to examine the prevalence and differentials of drug addiction in slum and non-slum areas of Chittagong, Bangladesh. The study revealed that about 53 per cent of males and 47 per cent of females were drug addicted in slum areas while in non-slum areas, the percentages of the addicted males and females are about 73 and 55 respectively. In both the areas, it was observed that the drug addicted peoples were suffering from dyspepsia, pain in lever, declining sexual ability, hepatitis, vomiting and other diseases. From the multivariate analysis, it was observed that respondent's religion, type of family, number of family members, economic status, occupation, duration of taking drugs, watching TV/LCD, reading newspaper or magazine, habit of smoking, knowledge about drugs, knowledge about the harmful effect of drugs, causes behind taking the drugs and drugs buying spots were found to be positively significant effect on drug addiction in slum areas, while in non-slum areas, respondent's religion, educational qualifications, number of family members, economic status, occupation, knowledge about drugs, watching TV/LCD, reading newspaper or magazine, suffering from diseases due to drugs, knowledge about the harmful effect of drugs, type of drugs, causes behind taking drugs, drugs buying spots and tendency to come back from

drugs were found to be positively significant effect on drug addiction. It was observed that majority of the addicted respondents use cannabis in both the areas compare to other type of drugs.

G cÖÜ evsjv‡`‡ki PÆMÖ‡gi ew¯Í Ges Aew¯Í GjvKvq gv`Kvm‡³i mvaviY NUbv I cv_©K¨mg‡ni cixÿv Ki‡Z cwiwgZ fv‡e ‡Póv Kiv n‡q‡Q| G‡Z †`Lv hvq †h, ew¯ÍGjvKv mg‡ni যথাক্র‡g 53% cyiæl Ges 47% gwnjv gv`Kvm³ A_P Aew¯ÍGjvKvq G nvi n‡”Q cyiæl Ges gwnjv‡`i †ÿ‡Î যথাক্র‡g 73% Ges 55%| Dfq GjvKvq jÿ¨ Kiv †M‡Q †h, gv`Kvm³ ‡jvKRb ARxY©Zv, wjfv‡i e¨_v, †hŠb ÿgZv nªvm, RwÛm, ewg ewg fve Ges Ab¨vb¨ †iv‡M †fv‡M| eû wewfbœ‡kÖwY †`Lv †M‡Q †h, DËi `vZvi ag©cwiev‡ii aib, cwiev‡ii m`m¨ msL¨v, A_©‰bwZK Ae¯'v, †ckv, gv`K †bIqvi mgq, wUwf/GjwmwW †`Lv, msev` cÎ ev g¨vMvwRb cov, agÆcv‡bi Af¨vm, gv`K m¤ú‡K©Ávb, gv`‡Ki ÿwZKi cÖfve m¤ú‡K©Ávb, gv`K †bIqvi KviY mgn Ges gv`K †bIqvi ¯'vb BZ¨vw` ew¯ÍGjvKv mg‡n gv`Km‡³i Dci abvZ¥K Zvrch©c~Y© cÖfve cwijwÿZ n‡q‡Q A_P Aew¯ÍGjvKv mg‡n DËi`vZv‡`i ag©wkÿvMZ †hvM¨Zv, cwiev‡ii m`m¨msL¨v, A_©‰bwZK Ae¯'v, ‡ckv, gv`K m¤ú‡K©Ávb, wUwf/GjwmwW †`Lv, msev`cÎ ev g¨vMvwRb cov, gv`‡Ki Kvi‡Y †iv‡M ‡fvMv, gv`‡Ki ÿwZKi cÖfve m¤ú‡K©Ávb, gv`‡Ki aiY, gv`K †bIqvi KviY, gv`K ‡Kbvi ¯'vb Ges gv`K †_‡K wd‡i Avmvi cÖeYZv BZ¨vw` gv`Km‡³i Dci abvZ¥K Zvrch©c~Y© cÖfve cwijwÿZ n‡q‡Q| jÿ¨ Kiv †M‡Q †h, Ab¨vb¨ gv`‡Ki Zzjbvq AwaKvsk gv`Kvm³ DËi`vZv Dfq GjvKvq fvs (cannabis) e¨envi K‡i|

Keywords: *Drug addiction, logistic regression analysis, Causes of drug addiction, Come back from drug addiction.*

1. Introduction

Drug addiction means taking heroin, opium, cocaine, marjuna, morphine, phensidyl, cannabis, yaba, wine, pathedrine etc. Some of these are taken by smoking or through injection. These drugs are used for intoxicating and stimulating effects. Drug addiction is not only a national problem but also a global problem. In most of the developing countries like Bangladesh, drug addiction creates the multifarious problems.

Drug addiction is increasing day by day in urban, rural, slum, and non-slum areas of Bangladesh [1]. It is directly or indirectly depends on various factors. Generally it depends on age, education, monthly income, professions, place of residence, family type etc. Bangladesh is a developing country. Most of the people of our country are illiterate but 51.8 per cent people are literate [2] and due to illiteracy, people have lack of knowledge of the bad effect of drugs. The illiterate peoples take easily the different type of drugs compare to literate persons.

Crime violence, poverty, unemployment, family confliction, sexual diseases, broken family, corruption, black money, invalid live together, misuses of internet, foreign channels, blue films, frustration, inadequate health care facilities, relationship between addicted friends etc. are the major problems in Bangladesh. Inflection of these complexities, the entire Bangladesh is now being affiliated by the drug abuse related problems. For technological advancement, peoples know the different type of drugs and as well as they captured the using mechanisms of it easily. In Bangladesh, patriotism, honesty, morality, ethical standard and civic sense among the peoples is going down day by day. As a result, the whole society

becomes unhealthy. These are the harmful effect of drugs for entire society and also alarming too.

Most of the people of Bangladesh live in rural areas. Except agricultural work, very little scope is there in the rural area for economic activity for this vast majority of rural area. So, they are coming to the city or town and are looking for a work. On finding no other suitable work, they become rickshaw puller, van driver, day labor etc. Most of them are engaged in theft and hijacking or any other illegal activities. So, professionally they are addicted in different type of drugs.

In our society, drug addiction has grasped the young generation. The drug addicted people are bound to do crime to collect money. It is estimated that there are approximately 4.6 million drug abusers in Bangladesh [3].

Recently, the international drug smugglers often use Bangladesh as a transit of transmission of drug from one country to another [1]. In the above circumstances all concerned must be careful at personal and family levels against the dangerous impact of drug addiction among the youth.

However, it is essential to address to drug addiction predominantly socio-economic and demographic profile scientifically and immediately, because once their assessment data has been collected, a national strategy for effective management and prevention can be established. Such strategy may contribute for the improvement of their quality of life and be used for the prevention of further deterioration of drug addiction.

In this paper, we have tried to know the levels of overall knowledge of drugs and attitude towards drugs. In this study, we tried to identify the effect of socio-

economic and demographic factors on drug addiction, what type of drugs are used, from where these drugs are collected and the causes behind taking drugs, the people of which area are more involved with drug addiction and drug trafficking. This study aimed to find out the tendency of the addicted people to return from this way.

2. Data and Methodology

The data for the present study were collected from selected slum and non-slum areas in Chittagong metropolitan area in Bangladesh during the period January to July, 2015. For data collection, a two-stage cluster sampling design was adopted. At the first stage, a sample of 5 wards (clusters) was randomly selected out of 41 wards (clusters) in Chittagong metropolitan area and from the selected wards, 7 slum areas were chosen randomly out of 21 slum areas. The total numbers of addicted persons in 7 selected slum areas are 4,896 while in non-slum areas of selected 5 wards, total number of addicted persons are 3,729 [7]. In the second stage, out of 4,896 addicted persons, 800 addicted and non-addicted respondents were randomly selected from slum areas and out of 3,729 addicted persons, 700 addicted and non-addicted respondents were randomly selected from the non-slum areas. Finally a sample of mentioned respondents were successfully interviewed in slum and non-slum areas of Chittagong metropolitan area. The field interviewing of the respondents was carried out with the help of five field workers among them two were women. They were all educated and almost all had previous experience of working as an interviewers. The interviewers were further trained and instructed to be very careful to fill up the questionnaire.

Since all selected explanatory variables are categorical, we apply the technique of logistic regression analysis to investigate the factors related to drugs, and also to

identify the significant socio-economic and demographic factors on drug addiction in Chittagong metropolitan area. Besides logistic regression, the respondents were classified by demographic characters and addiction level by using chi-square test.

3. Results and Discussion

Table 1 display the percentage distribution of respondents who have already addicted in different type of drugs in slum and non-slum areas of Chittagong metropolitan area. The results table reveals that in slum areas, 21.2 per cent and 19.9 per cent of male and female respondents who were addicted in cannabis (which is the highest) while in non-slum areas, these figures are 24 per cent and 17 per cent respectively. The results also reveals that about 53 per cent and 47 per cent of the male and female respondents were addicted in different type of drugs in slum areas while in non-slum areas, these figures are about 73 per cent and 55 per cent respectively. The results of the another study it was observed that about 23 per cent and 12 per cent of the male and female respondents were addicted in heroin and wine in rural areas of Bangladesh [5].

Table 2 represents the percentage distribution of drug addicted respondents in both slum and non-slum areas by selected some demographic and socio-economic variables. The first panel of the table indicates that the percentages of the respondents among male, joint type of family, number of family members more than 5, age less than 30 years, suffering from diseases due to drugs and habit of smoking of the respondents were higher than the other categories of the selected demographic variables. The results of the table show that more than 81 and 77 per cent drug addicted respondents are suffering by different types of diseases in slum

and non-slum areas respectively. Most of the respondents (37 per cent and 32.3 per cent) in both areas suffering from dyspepsia. To test the association between drug addiction and selected independent variables, we apply χ^2 test statistic and the value of the χ^2 statistic indicates that there are strong positive association between selected socio-demographic variables and drug addiction.

From the last panel of the table 2 reveals that the percentages of the respondents of non-Muslim, having knowledge about drugs, low economic status, unemployment, not watching TV or LCD, no reading news paper or magazine, knowledge about the harmful effect of drugs in both slum and non-slum areas are higher than the other categories of the selected socio-economic variables and there are strong positive association between drug addiction and them. In India, it was observed that the percentages of the non-Muslim respondents who were addicted in different type of drugs were higher than the Muslims counterparts [4]. The last panel of the table 2 indicates that in slum areas, illiterate respondents were more addicted in drugs (36.1 per cent) than literate respondents while in non-slum areas, higher educated respondents were more addicted in drugs than illiterate respondents. This panel of the table also indicates that about 16 per cent of the respondents in both areas bought different types of drugs in Chittagong old railway station. About 88 and 77 per cent drug addicted respondents are wanted to comeback from this bad habit and lead to a normal life in slum and non-slum areas respectively. It was observed that there are strong positive association between the selected socio-economic variables and drug addiction.

To assess the relative influences of the demographic and socio-economic factors on drug addiction, we undertook a logistic regression analysis. Because, drug addiction was defined by a dichotomous variable (if addicted =1 and not-addicted =0). From the table 2, we observed that there are strong association between the selected independent variables and drug addiction. All the variables under study are significantly associated with drug addiction levels, so to study the impact of these variables we have used all the variables in the logistic regression model. Moreover, all pre-requisite conditions of logistic regression analysis are fulfilled.

Tables 3 and 4 display the logistic regression coefficients, standard errors of regression coefficients and relative odds ratios for the respondents of drug addiction in slum and non-slum areas respectively. From the first panel of the table 3, we observed that respondent's family type, number of family members, and habit of smoking and the second panel of the table, we also observed that respondent's religion, economic status, knowledge about drugs, occupation, duration of taking drugs, watching TV or LCD, reading news paper or magazine, knowledge about the harmful effect of drugs, causes behind taking the drugs, and drugs buying spots have a positive significant effect on drug addiction in slum areas of Chittagong metropolitan area in Bangladesh. The results of the table also indicate that sex of the respondents, types of diseases due to drugs, and tendency to come back from drugs have a negative significant effect on drug addiction.

From the results of the panel 1 of the table 4 show that respondent's number of family members, and suffering from diseases due to drugs have a positive significant effect on drug addiction and the results of the panel 2, we observed that

respondent's religion, educational qualifications, knowledge about drugs, economic status, occupation, watching TV or LCD, reading news paper or magazine, type of drugs, causes behind taking drugs, drugs buying spots and tendency to come back from drugs were found to be positively significant effect on drug addiction in non-slum areas in Chittagong Metropolitan area. The results of the table indicates that only respondent's sex and types of diseases due to drugs have a negatively significant effect on drug addiction in non-slum areas. It is interesting that educational qualifications and type of drugs have no significant effect on drug addiction in slum area while in non-slum areas; these variables have a positively significant effect on drug addiction. The results of the tables 3 and 4 reveal that respondent's age, family type, habit of smoking, and duration of taking drugs have no significant effect on drug addiction. In some developing countries, it was observed that habit of smoking and sex of the respondents have a positive significant effects on drug addiction [6].

4. Conclusions

The preceding results of the study reveal that a vast majority male respondents in both slum and non-slum areas are more addicted in drugs than female respondents. It appears that the percentage of drug addiction in both the areas were found to be lower among those who are watching TV/LCD regularly compared to among those who did not. It is remarkable that in slum areas, the highest percentage of drug addiction due to close contact with friends but in non-slum areas, the highest percentage of drug addiction due to couple conflict. The main factors behind the drug addiction are habit of smoking, unemployed, rickshaw pullers/ day labors, businessmen, and low income. Most of the addicts are suffering from various

harmful and chronic diseases. Among them about 37 per cent and 32 per cent respectively in slum and non-slum areas are suffering from Dyspepsia, about 22 per cent and 19 per cent from pain in liver, and about 18 percent and 17 percent lose their sexual ability. In slum areas, majority of the respondents have taken cannabis and phensidyl where as in non-slum areas, majority of the respondents have taken cannabis, heroin, and phensidyl. The results also indicate that drugs are available in Chittagong old railway station, Akber Shah Mazar, Port connecting road (Hali Shahar), Bohaddar Hat, Firoz shah lane, Madar Bari and other areas.

5. Recommendations and Policy Implications

The following propositions ask for special attention to get rid of drug addiction:

(i) From the study it was observed that majority of the unemployed respondents are more drug addicted so, government should adopt proper steps to overcome unemployment;

(ii) The parents should be more conscious about their responsibility and behavior; they should encourage their children to avoid bad company. In our conjugal life, we should always try to grow sacrificing mentality and cordially try to understand others behavior and attitude;

(iii) Government should strongly handle drug trafficking;

(iv) Drug trafficking is going on and maximum drugs traffickers are living in the slum areas, so, government should take quick attempt to overcome this problem;

(v) Civil society should play effective role by campaigning against drugs. Electronic and print media plays an important role to aware the people from the bad effect of drugs;

(vi) Government and NGOs should take effective programs to ensure proper treatment and rehabilitation of drug abuser;

(vii) Parents should know the friend list of their sons and daughters to control the unwanted habits like drugs;

(viii) Parents should treated as a friend of their sons and daughters from early boyhood;

(ix) Government should take proper initiative to introduce a chapter named dangerous effect of drug addiction in the syllabus at school level.

Table 1. Percentage of respondents addicted to different type of drugs.

Type of drugs	Slum areas		Non-slum areas	
	Male	*Female*	*Male*	*Female*
Heroin	4.0	3.6	11.3	9.6
Phensidyl	10.5	10.1	12.0	10.3
Cannabis	21.2	19.9	24.0	17.0
Wine	7.6	6.2	8.5	6.1
Tablet	5.4	3.0	6.4	5.4
Pethedrine	4.7	4.2	10.5	7.0
Addicted	53.4	47.0	72.7	55.4
Not-addicted	46.6	53.0	27.3	44.6
Grand Total	100.0	100.0	100.0	100.0

Table 2. Percentage distribution of drug addicted respondents in both slum and non- slum areas of Chittagong metropolitan area according to selected variables and their categories.

Serial Nos.	Variables	Categories	Percentage (Slum areas) n=800	Percentage (Non-slum areas) n=700
	Demographic Variables			
1.	Sex of the respondents (SR)	Male Female	53.3 (426) 44.7 (374)	56.8 (398) 43.2 (302)

	χ^2		38.34**	56.08**
2.	Types of Family (TF)	Single	39.2 (314)	43.1(302)
		Joint	60.8 (486)	56.9 (398)
	χ^2		22.47**	17.59***
3.	No. of Family Members (NFM)	1-2	27.4 (219)	25.2 (176)
		3-4	31.0 (248)	31.3 (219)
		5+	41.6 (333)	43.5 (305)
	χ^2		112.90***	91.04***
4.	Age of Respondents (in years) (AR)	<30	32.4 (259)	34.3 (240)
		30-40	28.1 (225)	25.1 (176)
		40-50	21.0 (168)	21.6 (151)
		50+	18.5 (148)	19.0 (133)
	χ^2		88.61**	33.75***
5.	Suffering From Diseases Due to Drugs (SD)	Yes	81.3 (650)	77.1 (540)
		No	18.7 (150)	22.9 (160)
	χ^2		12.57***	19.11****
6.	Types of Diseases Due to Drugs (TDD)	Pain in Liver	21.7 (174)	18.6 (130)
		Hepatitis	12.2 (98)	11.3 (80)
		Dyspepsia	37.0 (296)	32.3 (226)
		Declining Sexual Ability	18.3 (146)	17.0 (119)
		Vomiting	4.3 (34)	8.2 (57)
		Others	6.5 (52)	12.6 (88)
	χ^2		112.98**	131.44****
7.	Habit of Smoking (HS)	Yes	78.2 (626)	81.5 (571)
		No	21.8 (174)	18.5 (129)
	χ^2		17.19***	27.33***
	Socio-economic Variables			
1.	Religion (REL)	Muslim	38.2 (306)	31.6 (221)
		Non-Muslim	61.8 (494)	68.4 (479)
	χ^2		36.21*	25.19**
2.	Educational Qualifications (EQ)	Illiterate	36.1 (288)	15.5 (108)
		Primary	29.7 (238)	17.1 (120)
		Secondary	18.0 (144)	18.4 (129)
		Higher secondary and above	16.2 (130)	49.0 (343)
	χ^2		116.93***	98.52****
3.	Knowledge About Drugs (KAD)	Yes	79.5 (636)	92.4 (647)
		No	20.5 (164)	7.6 (53)
	χ^2		22.87**	18.91**
4.	Economic Status (ES)	Low	38.2 (306)	41.6 (291)
		Medium	33.5 (268)	32.4 (227)
		High	28.3 (226)	26.0 (182)
	χ^2		54.22**	29.67***

Continued Table 2.

Serial Nos.	Variables	Categories	Percentage (Slum areas) n=800	Percentage (Non-slum areas) n=700
	Socio-economic Variables			
5.	Occupation of the Respondents (OR)	Businessman	27.6 (221)	32.7 (229)
		Service Holder	11.3 (90)	22.3 (156)
		Day Labors/ Rickshaw puller	28.1 (225)	-----
		Unemployed	33.0 (264)	45.0 (315)
	χ^2		119.02**	88.51***

6.	Duration of Taking Drugs (DTD)	Not Addict	65.2 (521)	61.4 (430)
		4 Years and Less	24.6 (197)	20.2 (141)
		5 Years and Above	10.2 (82)	18.4 (129)
	χ^2		28.67***	51.56***
7.	Watching T.V./LCD (WT)	Yes	36.4 (291)	28.2 (197)
		No	63.6 (509)	71.8 (503)
	χ^2		12.98**	34.61***
8.	Reading News Paper/ Magazine(R EAD)	Yes	34.0 (272)	31.5 (221)
		No	66.0 (528)	68.5 (479)
	χ^2		33.74***	21.98***
9.	Knowledge About the Harmful Effect of Drugs (KAHD)	Yes	87.5 (700)	91.4 (640)
		No	12.5 (100)	8.6 (60)
	χ^2		10.98**	17.55***
10.	Type of Drugs (TD)	Heroin	16.2 (130)	29.0 (203)
		Phensidyl	22.0 (175)	24.2 (169)
		Cannabis	28.1 (225)	31.6 (221)
		Wine	19.3 (154)	4.0 (28)
		Tablet	6.2 (50)	4.1 (29)
		Pethedrine	8.2 (66)	7.1 (50)
	χ^2		77.14***	109.16***
11.	Causes Behind Taking Drugs (CBTD)	Frustration	5.0 (40)	11.2 (78)
		Close Contact with Friends	32.4 (260)	20.7 (145)
		Inquisitively	12.5 (100)	10.0 (70)
		Conflict between Parents	13.8 (110)	14.0 (98)
		Couple Conflict	27.5 (220)	31.5 (221)
		Failure in Love	8.8 (70)	12.6 (88)
	χ^2		69.77***	103.26****
12.	Drugs Buying Spots (DBS)	Railway Stations (old)	16.3 (130)	7.0 (49)
		Akber Shah Mazar	12.5 (100)	11.2 (78)
		Barma Colony	8.8 (70)	3.7 (26)
		Kasai Para	5.0 (40)	4.6 (32)
		Port connecting Road (Hali Shahar)	12.5 (100)	14.2 (99)
		Madar Bari	10.0 (80)	8.5 (60)
		Debar Par	3.7 (30)	10.1 (71)
		Firoz Shah Lane	5.0(40)	15.8 (111)
		Baklia	7.5 (60)	6.0 (42)
		Bohaddar Hat	11.2 (90)	12.7 (89)
		Others	7.5 (60)	6.2 (43)
	χ^2		79.29**	134.52***
13.	Tendency to Comeback from drugs (TCD)	Yes	87.5 (700)	76.9 (538)
		No	12.5 (100)	23.1 (162)
	χ^2		27.48***	19.67***

Note: *Figures within parentheses indicate number of respondents.*

Table 3. Logistic regression estimates of drug addiction according to the selected demographic and socio-economic variables in slum areas of Chittagong metropolitan city in Bangladesh.

Selected Variables	Regression Coefficients (β)	Standard Errors	Significant Level	Odds Ratios (e^{β})
Demographic variables				
SR a) Male	----	----	----	1.0000
b) Female	-0.0763****	0.0241	0.0117	0.9265
TF a) Single	-----	-----	----	1.0000

b) Joint	0.7112***	0.0125	0.4135	2.0364
NFM a) 1-2	-----	-----	----	1.0000
b) 3-4	0.8135**	0.0024	0.2215	2.2558
c) 5+	0.8446***	0.0051	0.3231	2.3270
AR a) <30	-----	-----	-----	1.0000
b) 30-40	-0.1825	0.1430	0.0025	0.8332
c) 40-50	-0.1940	0.2271	0.0135	0.8237
d) 50+	-0.4132	0.1160	0.0021	0.6615
SD a) Yes	----	-----	----	1.0000
b) No	-0.6913	0.0014	0.0005	0.5009
TDD a) Pain in Liver	----	----	----	1.0000
b) Hepatitis	-0.2493*	0.2346	0.0125	0.7793
c) Dyspepsia	-0.3127***	0.1580	0.0854	0.7315
d) Declining Sexual Ability	-0.4492*	0.2610	0.1760	0.6381
e) Vomiting	-0.5214**	0.1751	0.0257	0.5937
f) Others	-0.6015	0.2213	0.0934	0.5480
HS a) Yes	----	----	----	1.0000
b) No	1.0253**	0.3149	0.2861	2.7879
Socio-economic variables				
REL a) Muslim	-----	----	----	1.0000
b) Non-Muslim	1.07182****	0.0021	0.1830	2.9207
EQ a) Illiterate	----	----	-----	1.0000
b) Primary	0.0564	0.1328	0.1439	0.9820
c) Secondary	1.0273	0.0002	0.1812	2.7935
d) Higher Secondary and Above	1.0695	0.0314	0.2516	2.8920
KAD a) Yes	----	----	----	1.0000
b) No	1.0824***	0.0090	0.0071	2.9518
ES a) Low	------	------	-------	1.0000
b) Medium	0.1132	0.0125	0.0010	0.8930
c) High	1.0914****	0.0218	0.0017	2.9784
OR a) Businessman	----	----	----	1.0000
b) Service holders	0.4132*	0.0318	0.0125	1.5116
c) Day labors/ Rickshaw puller	0.6527**	0.0056	0.0340	2.4368
d) Unemployed	1.1892**	0.0020	0.0045	3.2845
DTD a) Not addict	----	----	-----	1.0000
b) 4 years and less	1.2417***	0.1135	0.1430	3.4615
c) 5 years and above	1.6210****	0.0153	0.2214	5.0581
WT a) Yes	-----	-----	-----	1.0000
b) No	0.8812**	0.0314	0.0120	2.4138

Continued Table 3.

Selected Variables	Regression Coefficients (β)	Standard Errors	Significant Level	Odds Ratios (e^{β})
Socio-economic variables				
READ a) Yes	----	----	----	1.0000
b) No	0.7152***	0.0181	0.1725	2.0446
KAHD a) Yes	----	----	----	1.0000
b) No	0.9854****	0.1450	0.0120	2.6789
TD a) Heroin	----	----	----	1.0000
b) Phensidyl	0.8831	0.0942	0.0097	2.4184
c) Cannabis	0.6412	0.2492	0.1135	1.8988

d) Wine	0.7214	0.1024	0.0152	2.0573
e) Tablet	0.7950	0.0957	0.0019	2.2144
f) Pethedrine	0.9153	0.0142	0.0047	2.4975
CBTD a) Frustration	----	----	----	1.0000
b) Close Contact with Friends	0.9154**	0.1127	0.0194	2.4978
c) Inquisitively	0.9710***	0.0952	0.0052	2.6406
d) Conflict between Parents	0.8215*	0.0472	0.0195	2.2739
e) Couple Conflict	1.5347****	0.0091	0.0047	4.6399
f) Failure in Love	0.7841**	0.0173	0.2170	2.1904
DBS a) Railway Station (old)	----	----	----	1.0000
b) Akber Shah Mazar	1.0025**	0.0013	0.0152	2.7251
c) Barma Colony	1.2298***	0.1014	0.1720	3.4205
d) Kasai Para	1.1971**	0.1007	0.0124	3.3102
e) Port Connecting Road (Hali Shahar)	0.9147*	0.0253	0.0019	2.4960
f) Madar Bari	-0.3362**	0.0011	0.0292	0.7145
g) Debar Par	1.6053****	0.2200	0.0951	4.9794
h) Firoz Shah Lane	1.0025**	0.0317	0.0251	2.7251
i) Baklia	1.1174***	0.1411	0.0273	3.0569
j) Bahoddar Hat	0.8954**	0.2415	0.0146	2.4483
k) Others	0.6615*	0.1520	0.0237	1.9377
TCD a) Yes	----	----	----	1.0000
b) No	-0.7729**	0.0035	0.0123	0.4617

Note: ****=p<0.001, ***=p<0.01, **=p<0.05, *=p<0.10

Table 4. Logistic regression estimates of drug addiction according to the selected socio-economic and demographic variables in non-slum areas of Chittagong metropolitan city in Bangladesh.

Selected variables	Regression coefficients	Standard error	Significant level	Odds ratios
Demographic variables				
SR a) Male	-----	----	----	1.0000
b) Female	-0.2281****	0.1048	0.0241	0.7960
TF a) Single	-----	-----	----	1.0000
b) Joint	0.1371	0.2831	0.1061	1.1469
NFM a) 1-2	-----	-----	-----	1.0000
d) 3-4	0.3485**	0.3250	0.3162	1.4169

e) 5+	1.0269***	0.1186	0.1152	2.7924
AR a) <30	-----	-----	----	1.0000
b) 30-40	0.6539	0.0641	0.2163	0.9845
c) 40-50	0.9852	0.0237	0.1974	0.8036
d) 50+	-0.6438	0.0074	0.9841	0.3467
SD a) Yes	----	----	----	1.0000
b) No	1.3150****	0.0218	0.0025	3.7248
TDD a) Pain in Liver	----	----	----	1.0000
b) Hepatitis	-0.8175**	0.1830	0.0945	0.4415
c) Dyspepsia	-0.6710*	0.1103	0.0742	0.5112
d) Declining Sexual Ability	-0.7175**	0.2140	0.0418	0.4880
e) Vomiting	-0.6188****	0.1080	0.0649	0.5386
f) Others	-0.7819**	0.2019	0.0457	0.4575
HS a) Yes	-----	----	-----	1.0000
b) No	1.5781	0.0015	0.0180	4.8457
Socio-economic Variables				
REL a) Muslim	----	----	-----	1.0000
b) Non-Muslim	0.4357***	0.0215	0.2431	1.5460
EQ a) Illiterate	-----	-----	----	1.0000
b) Primary	1.4240**	0.1029	0.0031	0.1169
c) Secondary	0.3164*	0.0158	0.2283	3.4217
d) Higher Secondary and Above	1.0277**	0.0561	0.3105	2.7946
KAD a) Yes	----	----	-----	1.0000
b) No	1.0053*	0.2982	0.1163	2.7327
ES a) Low	----	----	----	1.0000
b) Medium	1.3125**	0.4135	0.1127	3.7155
c) High	1.0146**	0.2231	0.1893	2.7583
OR a) Businessman	----	-----	-----	1.0000
b) Service holders	0.9251	0.0150	0.0028	2.5221
c) Unemployed	1.4382***	0.1968	0.3321	4.2131
DTD a) Not addict	-----	-----	-----	1.0000
b) 4 years and less	-0.0958-0.0865	0.0120	0.0053	0.9086
c) 5 years and above		0.0964	0.0650	0.8852
WT a) Yes	----	----	----	1.0000
b) No	0.9468**	0.2160	0.1102	2.5774
READ a) Yes	----	-----	----	1.0000
b) No	0.9870**	0.0295	0.2851	2.6832

Continued Table 4.

Selected variables	Regression coefficients	Standard error	Significant level	Odds ratios
Socio-economic Variables				
KAHD a) Yes	----	----	----	1.0000
b) No	1.0025***	0.0073	0.0151	2.7251
TD a) Heroin	----	----	----	1.0000
b) Phensidyl	1.5311**	0.0150	0.0031	4.6233
c) Cannabis	0.7024	0.4315	0.0527	2.0186
d) Wine	1.3952***	0.0047	0.0014	4.0358
e) Tablet	0.5053	0.1200	0.0934	1.6575
f) Pethedine	1.4830***	0.0142	0.0065	4.4061

CBTD	a) Frustration	----	----	----	1.0000
	b) Close Contact with Friends	0.8725*	0.3127	0.2218	2.3929
	c) Inquisitively	1.0012**	0.0041	0.0410	2.7215
	d) Conflict between Parents	1.0019**	0.0069	0.0345	2.7235
	e) Couple Conflict	1.4137***	0.0107	0.0050	4.1111
	f) Failure in Love	1.6148**	0.0039	0.0100	5.0269
DBS	a) Railway Station (old)	----	----	----	1.0000
	b) Akber Shah Mazar	1.4130**	0.0097	0.2307	4.1083
	c) Barma Colony	0.9714*	0.0138	0.0529	2.6416
	d) Kasai Para	1.1531***	0.0068	0.0427	3.1680
	e) Port Connecting Road (Hali Shahar)	1.2272***	0.0120	0.0022	3.4117
	f) Madar Bari	0.9830**	0.2251	0.0359	2.6725
	g) Debar Par	1.5125***	0.0149	0.0240	4.5381
	h) Firoz Shah Lane	1.3371***	0.0042	0.0260	3.8080
	i) Bakalia	0.8122*	0.0250	0.3100	2.2529
	j) Bahoddar Hat	0.7433*	0.0630	0.0941	2.1029
	k) Others	0.9317**	0.0205	0.0842	2.5388
TCD	a) Yes	----	----	----	1.0000
	b) No	1.2371***	0.0017	0.0943	3.4456

Note: ****=p<0.001, ***=p<0.01, **=p<0.05, *p=<0.10

References

[1] Department of Narcotics Control, *Annual Drug Report of Bangladesh*, Ministry of Home Affairs, Government of the People's Republic of Bangladesh, 2013, 13.

[2] Bangladesh Bureau of Statistics (BBS), *Population and Housing Census-2011,* 2014, **2**, 8.

[3] M. Sharma, K.Z. Rahman and R. Kelly: Reducing the demand for drugs and preventing HIV in Bangladesh: A partnership between law enforcement, the community and treatment agencies. Department of Narcotics Control, Dhaka, Bangladesh, 2006, 145.

[4] K. Ford and A.Nag, *Demography* 1980, **18**(1), 88.

[5] M. H. Chowdhury and J. Gupta, *Social Biology,* 1998, **21**, 131.

[6] A. Ahmad and B. Rahman, *The Journal of Family Welfare,* 1984, **XXX**(1),

84.

[7] Drugs Control Department, Divisional Office, Chittagong, Ministry of Home Affairs, Government of the People's Republic of Bangladesh, 2014.

Manuscript received on 20 September, 2018, Revised manuscript received on 20 March, 2019 and accepted on 21 March, 2019
The Chittagong Univ. J. Sc. Vol. 41(1), 2019