Drugs of Abuse in Bangladesh: Knowledge and Perception of Students from Private Universities

A dissertation submitted to the Department of Pharmacy, East West University in partial fulfillment of the requirement for the Degree of Bachelor of Pharmacy

Supervisor

Abdullah Al Maruf
Senior Lecturer
Department of Pharmacy
East West University

Submitted by

Mohammad Ghias Uddin
ID # 2006-3-70-019

Date of Submission: 22th December, 2010

This thesis paper is dedicated to my beloved parents and my supervisor Abdullah Al Maruf.

Declaration by the Research Scholar

This is to certify that the thesis entitled **"Drugs of Abuse in Bangladesh: Knowledge and Perception of Students from Private Universities"**, submitted by me to the Department of Pharmacy, East West University for the requirement of award of the degree of Bachelor of Pharmacy (Honors) is a bonafide record of research work carried out by me under the supervision of **Abdullah Al Maruf**, Senior Lecturer, Dept. of Pharmacy, East West University. The contents of this thesis, in full or in parts, have not been submitted to any other Institute or University for the award of any degree or diploma.

Dhaka-1212

Date:

Signature of Research Scholar

Mohammad Ghias Uddin
22.12.10

(Mohammad Ghias Uddin)

Thesis Certificate

This is to certify that the thesis entitled **"Drugs of Abuse in Bangladesh: Knowledge and Perception of Students from Private Universities",** submitted by "Mohammad Ghias Uddin" to the Department of Pharmacy, East West University for the requirement of award of the degree of Bachelor of Pharmacy (Honors) embodies original work carried out by him under my direct supervision. The contents of this thesis, in full or in parts, have not been submitted to any other Institute or University for the award of any degree or diploma.

Dhaka-1212
Date: 12/07/2010

(Abdullah Al Maruf)
Principle Supervisor
Senior Lecturer
Department of Pharmacy

I, as the Responsible Academic Chairperson, endorse the above statements:

31.01.2011

(Dr. Sufia Islam)
Chairperson & Associate Professor
Department of Pharmacy
East West University
Date:

Acknowledgements

First, all praise and glory are due to Allah for all bounties granted to me and with Allah's guidance and help this achievement became possible.

I wish to express my deepest gratitude to my reverend supervisor Abdullah Al Maruf, Senior Lecturer, Department of Pharmacy, East West University for his mastermind direction, dexterous management, adept analysis, keen interest, optimistic counseling and incessant backup.

I put forward my most sincere regards and profound gratitude to, Associate Professor & Chairperson Dr. Sufia Islam, Department of Pharmacy, East West University.

My special thanks go to Dr. Shamsun Nahar Khan for her inspiration and great advice in my study.

Many thanks go to my friends and all volunteers for their extended cooperation for my study.

Cordial thanks are also to my parents, relatives and to all my well wishers for their wholehearted inspiration throughout the period of the research work.

Finally I would like to convey my heartiest gratefulness to all of my faculty members of East West University.

Abstract

Drug abuse is an alarming problem in the world. Drug abuse directly influences the economic and social aspects of a country. The objectives of this study are to know the knowledge and perception about drugs of abuse from students of private universities in Dhaka city. Private University students were chosen due to fact that they represent part of the youth of Bangladesh. Data were collected from the students by a questionnaire structure form. Questionnaire form consisted mainly two points, knowledge about drugs of abuse and perception about drugs abuse. The numbers of total participants were 344 students. The samples consisted of both undergraduate (83%) and graduate (17%) students. Most of the participants were male (82%). Again most of the participants were Muslim (89%). About 23% of the participants were using drugs of abuse. Among them 81% are male and 19% are female. Almost all students (95%) have knowledge about drug of abuse including its harmful effect. About 90% students think that drugs of abuse are very common in Bangladesh. The results show that most of the drug abusers use cough syrup (65%), ganja (60%), alcohol (50%), yaba (31%), and tranquilizers (29%). Most of the students (93%) think that drug abuse should be controlled in Bangladesh. Despite some limitations, this study gives a gross idea about the level of knowledge and perception towards drugs of abuse from students from private universities. The government of Bangladesh should make some initiative to increase the knowledge of drugs of abuse otherwise they will turn into potential user of drugs of abuse.

Contents

LIST OF TABLES

LIST OF FIGURES

1. INTRODUCTION

1.1 Drugs of abuse

Drugs abuse refers to a maladaptive pattern of use of a substance that is not considered dependent. The term "drugs abuse" does not exclude dependency, but is otherwise used in a similar manner in nonmedical contexts. The terms have a huge range of definitions related to taking a psychoactive drug or performance enhancing drug for a non-therapeutic or non-medical effect. All of these definitions imply a negative judgment of the drug use in question. Some of the drugs most often associated with this term include alcohol, amphetamines, barbiturates, benzodiazepines, cocaine, methaqualone, and opioids. Use of these drugs may lead to criminal penalty in addition to possible physical, social, and psychological harm, both strongly depending on local jurisdiction. Other definitions of drug abuse fall into four main categories: public health definitions, mass communication and vernacular usage, medical definitions, and political and criminal justice definitions. [1]

1.2 Drugs addiction

Addiction is a chronic, often relapsing brain disease that causes compulsive drug seeking and use despite harmful consequences to the individual who is addicted and to those around them. Drugs addiction is a brain disease because the abuse of drugs leads to changes in the structure and function of the brain. Although it is true that for most people the initial decision to take drugs is voluntary, over time the changes in the brain caused by repeated drugs abuse can affect a person's self control and ability to make sound decisions, and at the same time send intense impulses to take drugs. [2]

It is because of these changes in the brain that it is so challenging for a person who is addicted to stop abusing drugs. Fortunately, there are treatments that help people to counteract addiction's powerful disruptive effects and regain control. Research shows that combining addiction treatment medications, if available, with behavioral therapy is the best way to ensure success for most patients. Treatment approaches that are tailored to each patient's drugs abuse patterns and any co-occurring medical, psychiatric, and social problems can lead to sustained recovery and a life without drugs abuse. [2]

1.3 Common social signs and symptoms of drug abuse

- Drugs abusers are neglecting their responsibilities at school, work, or home (e.g. flunking classes, skipping work, neglecting your children) because of their drug use.
- Drugs abusers are using drugs under dangerous conditions or taking risks while high, such as driving while on drugs, using dirty needles, or having unprotected sex.
- Drugs abusers drug use is getting their into legal trouble, such as arrests for disorderly conduct, driving under the influence, or stealing to support a drug habit.
- Drugs abusers drug use is causing problems in their relationships, such as fights with your partner or family members, an unhappy boss, or the loss of old friends. [3]

1.4 Common social signs and symptoms of drug addiction

- Drugs abusers have built up a drug tolerance, that's why need to use more of the drug to experience the same effects you used to with smaller amounts.
- Drugs abusers take drugs to avoid or relieve withdrawal symptoms. If they go too long without drugs, you experience symptoms such as nausea, restlessness, insomnia, depression, sweating, shaking, and anxiety.
- Drugs abusers have lost control over your drug use. They often do drugs or use more than you planned, even though you told yourself you wouldn't. They may want to stop using, but you feel powerless.
- Drugs abusers life revolves around drug use. They spend a lot of time using and thinking about drugs, figuring out how to get them, and recovering from the drug's effects.
- Drugs abusers have abandoned activities you used to enjoy, such as hobbies, sports, and socializing, because of their drugs use. [3]

1.5 History of drugs of abuse

Few drugs have been illicit from the moment of their discovery or synthesis. Generally drugs have been defined as illegal only as evidence for problems resulting from their use appeared. Many drugs now illegal have enjoyed a period of legal popularity with the upper and middle classes. As their legal status changed, so did their clientele. Those drugs now valued for their ability to create illicit pleasures have previously been used to relieve physical pain, as

cough medicines, as cures for diarrhea, as sleeping potions, as health-giving, as means of improving daily work performance, and even as cures for dependence on other drugs. [4]

After World War I, in the United States the Harrison Act marked a major attempt to make psychoactive drugs illegal. With this effort there came a reduction in their prescription by physicians and a decline in their use by the middle class. Use became concentrated in various outsider groups; such as musicians and minority groups. Since World War II, drug use has become much more widespread. It spread first within the segregated black ghettoes of the United States and from there to urban middle-class college students. From them it spread to their younger siblings, and to working-class youths and rural populations. Over the course of the last 30 years, the tendency has been for larger and larger groups to become involved and for age of initiation to decline. [4]

In many parts of the world where the older patterns of use by middleclass and rural populations were less forcibly suppressed by legal sanctions, this new pattern of use by urban youths has been superimposed on the traditional pattern. In South America, for instance, urban high school and college students are using marijuana just as children in Europe and America do, but at the same time the coca chewing in the Bolivian highlands continues, with little communication between the two drug cultures. [4]

With the spread of illicit drug use to middle-class youths, there has occurred an enormous increase in drug research, most of it focusing only on this newer postwar pattern. As a result, our ability to describe the natural history of drug abuse is in general only an ability to describe the present historical phase. While this limitation must make us wonder about the generalizability of our conclusions, we are fortunate in having available a number of large, well-executed studies that provide documentation of the current drug abuse phenomena that is probably more complete than that available for any other topic of current psychiatric interest. [4]

1.6 Common Drugs of Abuse

Table 1.6: Some common drug of abuse [5]

Substances: Category and Name	Examples of Commercial and Street Names	How Administered	Intoxication Effects/Potential Health Consequences
Tobacco			
Nicotine	Found in cigarettes, cigars, bidis, and smokeless tobacco (snuff, spit tobacco, chew)	Not scheduled/smoked, snorted, chewed	Increased blood pressure, and heart rate/chronic lung disease; cardiovascular disease; stroke; cancers of the mouth, pharynx, larynx, esophagus, stomach, pancreas, cervix, kidney, bladder, and acute myeloid leukemia; adverse pregnancy outcomes; addiction
Alcohol			
Alcohol (ethyl alcohol)	Found in liquor, beer, and wine	Not scheduled/swallowed	In low doses, euphoria, mild stimulation, relaxation, lowered inhibitions; in higher doses, drowsiness, slurred speech, nausea, emotional volatility, loss of coordination, visual distortions, impaired memory, sexual dysfunction, loss of consciousness /increased risk of injuries, violence, fetal damage; depression; neurologic deficits; hypertension; liver and heart disease.
Cannabinoids			
Hashish	Boom, gangster, hash, hash oil, hemp	swallowed, smoked	Euphoria; relaxation; slowed reaction time; distorted sensory perception; impaired balance and coordination; increased heart rate and appetite; impaired learning, memory; anxiety; panic attacks; psychosis/cough, frequent respiratory infections; possible mental health decline; addiction
Marijuana	Blunt, dope, ganja, grass, herb, joint, bud, Mary Jane, pot, reefer, green, trees, smoke, sinsemilla	swallowed, smoked	

Opioids			
Heroin	Diacetylmorphine: smack, horse, brown sugar, dope, H, junk, skag, skunk, white horse, China white; cheese	injected, smoked, snorted	Euphoria; drowsiness; impaired coordination; dizziness; confusion; nausea; sedation; feeling of heaviness in the body; slowed or arrested breathing/constipation; endocarditis; hepatitis; HIV; addiction; fatal overdose
Opium	Laudanum, paregoric: big O, black stuff, block, gum, hop	swallowed, smoked	
Stimulants			
Cocaine	Cocaine hydrochloride: blow, bump, C, candy, Charlie, coke, crack, flake, rock, snow, toot	snorted, smoked, injected	Increased heart rate, blood pressure, body temperature, metabolism; feelings of exhilaration; increased energy, mental alertness; tremors; reduced appetite; irritability; anxiety; panic; paranoia; violent behavior; psychosis/weight loss, insomnia; cardiac or cardiovascular complications; stroke; seizures; addiction Also, for cocaine nasal damage from snorting Also, for methamphetamine severe dental problems
Amphetamine	Biphetamine, Dexedrine: bennies, black beauties, crosses, hearts, LA turnaround, speed, truck drivers, uppers	swallowed, snorted, smoked, injected	
Methampheta mine	Desoxyn: meth, ice, crank, chalk, crystal, fire, glass, go fast, speed	swallowed, snorted, smoked, injected	
Club Drugs			
MDMA (methylenedi oxy-methampheta mine)	Ecstasy, Adam, clarity, Eve, lover's speed, peace, uppers	swallowed, snorted, injected	MDMA: mild hallucinogenic effects; increased tactile sensitivity; empathic feelings; lowered inhibition; anxiety; chills; sweating; teeth clenching; muscle cramping/sleep disturbances;

Flunitrazepam	Rohypnol: forget-me pill, Mexican Valium, R2, roach, Roche, roofies, roofinol	swallowed, snorted	depression; impaired memory; hyperthermia; addiction Flunitrazepam: sedation; muscle relaxation; confusion; memory loss; dizziness; impaired coordination/addiction GHB: drowsiness; nausea; headache; disorientation; loss of coordination; memory loss/unconsciousness; seizures;
GHB	Gamma-hydroxybutyrate: G, Georgia home boy, grievous bodily harm, liquid ecstasy, soap, scoop, goop, liquid X	swallowed	
Dissociative Drugs			
Ketamine	Ketalar SV: cat Valium, K, Special K, vitamin K	III/injected, snorted, smoked	Feelings of being separate from one's body and environment; impaired motor function/anxiety; tremors; numbness; memory loss; nausea. Also, for ketamine analgesia; impaired memory; delirium; respiratory depression and arrest; death Also, for PCP and analogs analgesia; psychosis; aggression; violence; slurred speech; loss of coordination; hallucinations Also, for DXM euphoria; slurred speech; confusion; dizziness; distorted visual perceptions
PCP and analogs	Phencyclidine: angel dust, boat, hog, love boat, peace pill	I, II/swallowed, smoked, injected	
Salvia divinorum	Salvia, Shepherdess's Herb, Maria Pastora, magic mint, Sally-D	I/chewed, swallowed, smoked	
Dextromethorphan (DXM)	Found in some cough and cold medications: Robotripping, Robo, Triple C	Not scheduled/swallowed	

Hallucinogens			
LSD	Lysergic acid diethylamide: acid, blotter, cubes, microdot yellow sunshine, blue heaven	swallowed, absorbed through mouth tissues	Altered states of perception and feeling; hallucinations; nausea Also, LSD and mescaline: increased body temperature, heart rate, blood pressure; loss of appetite; sweating; sleeplessness; numbness, dizziness, weakness, tremors; impulsive behavior; rapid shifts in emotion Also, for LSD: Flashbacks, Hallucinogen Persisting Perception Disorder Also for psilocybin: nervousness; paranoia; panic
Mescaline	Buttons, cactus, mesc, peyote	swallowed, smoked	
Psilocybin	Magic mushrooms, purple passion, shrooms, little smoke	swallowed	

1.7 Prescription drugs abuse

Prescription drugs abuse is just as dangerous as street drugs use. When used appropriately, prescription drugs can have beneficial effects medically or psychologically. Prescription drugs in the opiate family, such as Vicodin (hydrocodone) and Oxycontin, are often prescribed for chronic pain or recovery from surgery. Benzodiazapines, such as Valium or Xanax, are prescribed to treat anxiety. The problem arises when these drugs begin to be used 'off label'. Furthermore, prescription drugs provide an easy access point to other family members susceptible to abuse. [6]

1.8 How drugs abuse affects our brain?

Drugs are chemicals that tap into the brain's communication system and disrupt the way nerve cells normally send, receive, and process information. There are at least two ways that drugs are able to do this: (1) by imitating the brain's natural chemical messengers, and/or (2) by overstimulating the "reward circuit" of the brain. Some drugs, such as marijuana and heroin, have a similar structure to chemical messengers, called neurotransmitters, which are naturally

produced by the brain. Because of this similarity, these drugs are able to "fool" the brain's receptors and activate nerve cells to send abnormal messages. [2]

Other drugs, such as cocaine or methamphetamine, can cause the nerve cells to release abnormally large amounts of natural neurotransmitters, or prevent the normal recycling of these brain chemicals, which is needed to shut off the signal between neurons. This disruption produces a greatly amplified message that ultimately disrupts normal communication patterns. Nearly all drugs, directly or indirectly, target the brain's reward system by flooding the circuit with dopamine. Dopamine is a neurotransmitter present in regions of the brain that control movement, emotion, motivation, and feelings of pleasure. The overstimulation of this system, which normally responds to natural behaviors that are linked to survival, produces euphoric effects in response to the drugs. This reaction sets in motion a pattern that "teaches" people to repeat the behavior of abusing drugs. [2]

As a person continues to abuse drugs, the brain adapts to the overwhelming surges in dopamine by producing less dopamine or by reducing the number of dopamine receptors in the reward circuit. As a result, dopamine's impact on the reward circuit is lessened, reducing the abuser's ability to enjoy the drugs and the things that previously brought pleasure. This decrease compels those addicted to drugs to keep abusing drugs in order to attempt to bring their dopamine function back to normal. And, they may now require larger amounts of the drug than they first did to achieve the dopamine high an effect known as tolerance. [2]

Long-term abuse causes changes in other brain chemical systems and circuits as well. Glutamate is a neurotransmitter that influences the reward circuit and the ability to learn. When the optimal concentration of glutamate is altered by drug abuse, the brain attempts to compensate, which can impair cognitive function. Drugs of abuse facilitate no conscious learning, which leads the user to experience uncontrollable cravings when they see a place or person they associate with the drug experience, even when the drug itself is not available. Brain imaging studies of drug-addicted individuals show changes in areas of the brain that are critical to judgment, decision making, learning and memory, and behavior control. Together, these changes can drive an abuser to seek out and take drugs compulsively despite adverse consequences in other words, to become addicted to drugs. [2]

1.3 Risk factors

1.3.1 Genetic/Inherited

We are all a product of our parents. If your parents have addiction struggles, chances are you are more susceptible to addiction. That's why drugs abuse is more common in some families than in others. If your parents smoke, chances are good you will smoke. If your parents used alcohol, you'll probably follow and use that drug in much the same way. If your father was an alcoholic, you have a predisposition to abusing that drug. Drug abuse causes one generation to pass it on to the next. [7]

1.3.2 Personality

Aside from the inherited factors, some people have a personality that is more likely to become drug dependent.

- People are curious, so that alone can lead a person to try a drug. We experiment and see what happens.
- We are looking to relax and have pleasure.
- We all want to feel good, and we're by nature impatient. Drugs give us an instant gratification that other things do not, so for that moment or hour of for whatever timeframe, we feel good.
- We want what we want.
- Someone diagnosed with depression, attention deficit disorder, or hyperactivity.
- Maybe there has been some stress, or anxiety in their life. Whatever the case, these are contributing factors.

Even some common personality characteristics, such as aggression, may be a factor. Children who do not have confidence, healthy self-esteem may be prone to turning to drugs to fill the void. Drugs abuse causes negative changes in personality that can lead to an even more destructive behavior. [7]

1.9.3 Peer pressure

We are all wired to have relationships, and sometimes those relationships cause us to give in to something we otherwise would avoid in order to maintain the relationship. Peer pressure is huge and nowhere is this greater than during our teenaged years. Kids want to be cool. It begins as a social action, to take the drugs to be a part of the group, to be accepted. It's not just teenagers, as peer pressure takes so many different forms. There is social etiquette, for example, to take a drink during a party. "I'm a social drinker." How many times have you heard that? Some people actually believe that drug abuse causes you to be accepted and part of the 'popular' group. [7]

1.9.4 Easy access

If you want to get drugs, you won't have to look far because they are everywhere. High school students can tell you this. Drug abuse causes people to sell drugs to the most vulnerable population, children. It's not just the stereotypical poor sections of the inner city that serve as the hotbed for drugs. Drugs are found in suburban shopping malls, rural schools, well-to-do private school, on the job in factories, offices and remote job sites. [7]

1.9.5 Race, Ethnicity

We include this heading because we want to stress that there is no data to support any claim that one race of people or any particular cultural group is more prone to drug abuse than another. Drugs abuse is a human problem and crosses all boundaries. Drug abuse causes do not include race. [7]

1.9.6 Loneliness, Depression

We want to feel good physically and emotionally. Sometimes drugs are the substitution for a healthy life experience. The person in pain and they want to numb the pain. The drugs numb the pain and for a moment they don't feel as poorly. The person needs to escape the pain of the life experience, and for a short while, the drug takes and feel "better." [7]

1.9.7 Anxiety

Sometimes people need some help coping with life. Everyday life becomes a struggle and simple things become too much to handle. Drugs are used to deal with it. In the case of addiction, we are not talking about the use of medication, under the care and observation of a doctor. People who have been clinically diagnosed with anxiety can lead a very good life. We're talking here about people who just need to escape. Their drug of choice facilitates that escape. [7]

1.10. World situation with regard to emerging trends in drugs abuse

In 1997, a total of 80 countries out of the 192 to which annual reports questionnaires had been sent provided information on drug abuse. For reasons of brevity only the emerging trends by drug type are reported here. Cannabis is the drug for which most countries reported an increase in 1997. Out of 63 countries that provided such information, 42 reported an increase in the abuse of cannabis as compared with 1996. In another 14 the situation was stable and only 7 reported a decrease in abuse. The areas with a significant number of countries reporting an increase are Eastern Europe (9), Africa (8), Western Europe (7) and east and south-east Asia (6). Only 4 countries reported on the "ecstasy" group, but there were increases in the general category of amphetamine type drugs, for which 30 countries (mainly from south-east Asia and eastern and western Europe) out of 45 reported an increase in abuse. Another 8 countries indicated that they had registered an increase in amphetamine abuse and 11 countries an increase for methamphetamine. Cocaine abuse was reported to be increasing in 25 countries (6 in eastern Europe, 4 in Africa, 5 in western Europe, 4 in South America, 3 in Central America, 2 in the Caribbean and 1 in North America), but it remained stable in 17 others. Heroin abuse decreased in 11 countries out of 42, but another 25 registered some increase, while 6 reported stabilization in abuse compared with 1996. Increases were registered in Eastern Europe, Western Europe, Africa and the Near and Middle East. The abuse of volatile solvents is apparently increasing in Eastern Europe (five countries), but it is decreasing in Southeast Asia (five countries) and remaining generally stable in Western Europe (five countries). [8]

Youth and drugs abuse

Information about the extent of drugs abuse among young people in the world is sporadic and the few data available do not permit the drawing of systematic comparisons between them. Surveys are usually carried out in different years, often using different sampling and data collection methods. The most common information on drugs abuse among young people often relates to specific populations, namely, students. Such information, though valuable for the identification of trends and attitudes, does not cover the extent of drug abuse among those who have left school or among drop-outs and truants. Household surveys also have their limitations since youth may be reluctant to admit using drugs in the presence of their families. [8]

In addition to the above, there are considerable problems with respect to the age ranges to be considered. The data presented in the present report refer to the age range 15-24 years, but other age ranges will be also taken into consideration. This is because the drug abuse problem in many instances affects people younger than 15 and also because the information available from studies and research carried out at the national level is presented in age ranges that are not always comparable. Additionally, the gender factor is not always considered in the collection of data on drug abuse among young people. Lastly, the classification of drugs varies from country to country and from survey to survey. In some countries, barbiturates and amphetamines are classified under the same generic title of "tablets". In others, cocaine does not include "crack". Notwithstanding the above problems, data from various types of studies have been collected and are presented in a number of figures to give an idea of the drugs abuse situation among youth. [8]

In some countries, the reported prevalence may appear high in comparison with other countries. It is advisable to check the age range considered, since one or two years of difference may influence the prevalence significantly. A low age range (14-17, for example) is likely to register a lower prevalence rate as compared with a higher age range (20-24, for example). In addition, household surveys tend to report a lower prevalence than school surveys. School surveys usually promote anonymity and are thus more likely to produce more reliable answers. [8]

1.1.2 Drug abuse situation among youth

1.1.2.1 A vulnerable population

One of the worst aspects of the drug problem is that it affects primarily those who are most vulnerable, such as youth. The transition from adolescence to young adulthood is a crucial period in which experimentation with illicit drugs in many cases begins. Drugs may have strong appeal to young people who are beginning their struggle for independence as they search for identity. Because of their innate curiosity and thirst for new experiences, peer pressures, their resistance to authority, sometimes low self-esteem and problems in establishing positive interpersonal relationships, young people are particularly susceptible to the allure of drugs. However, youth around the world do not all have the same reasons for abusing drugs. [8]

Drugs abuse continues to emerge as a strategy to cope with problems of unemployment, neglect, violence and sexual abuse. Marginalized youth are particularly susceptible to the enticement of drugs. Furthermore, the number of marginalized young people is increasing, in particular in the urban areas of developing countries where street life and all its aspects, including drug abuse and drug trafficking, is becoming the norm for a growing number of young people. Data from various studies confirm that drug abuse is high among young people living in vulnerable situations. Populations such as street children, working children, refugee and displaced children, children and youth in institutional care, child soldiers and sexually exploited children are particularly at risk of abusing drugs mainly for functional reasons. [8]

At the same time, there is considerable abuse of drugs among socially integrated young people, in particular in the industrialized world. There are also indications that experimentation with drugs and initiation into drug abuse are taking place at an earlier age than previously. The growing popularity of drugs such as amphetamine-type stimulants (ATS) in western Europe, North America, in some countries of eastern Europe, south-east Asia and Africa is of particular concern. Amphetamine and "ecstasy", in particular, are drugs closely associated with the "rave" or dance scene, a scene that is attractive to young people. Despite their potential harm, those drugs paradoxically enjoy a more benign image thanplant-based stimulants. [8]

I.12.2 Increased availability of drugs

While the nature and extent of drug abuse vary from region to region and from country to country, very large numbers of young people are being exposed to a variety of drugs. Cheap and easily available substances such as solvents and cannabis are widely used throughout the world. ATS, including "ecstasy", are also widely abused. Easy availability and low prices have contributed to the popularity of coca paste and "crack" in some parts of South America. [8]

Abuse of heroin seems to remain the province of only a small minority of young people, but the availability of heroin of high purity, thus the possibility of inhaling or smoking it, seems to have contributed to an increase in heroin abuse among teenagers and young adults in the United States during the 1990s. In the European Union the abuse of heroin remains relatively stable (up to 2 per cent among younger groups), but there are reports of increases in some Member States and several countries report heroin smoking by new groups of young people, both from socially integrated populations and from minority groups. [8]

Since the advent of human immunodeficiency virus/acquired immunodeficiency syndrome (HIV/AIDS), injecting drugs has come to be considered unsafe and ingestion, smoking, sniffing or snorting "safe" practices. Increasing opiate abuse, in particular among youth, has been reported by countries of central Asia, where injection of poppy straw brew ("kompot") has been reported. In Brazil, the incidence rate of AIDS is increasing among young people and injecting drug use is a major cause of infection among them (36 per cent of cases). [8]

I.12.3. Cultural trends and normalization of drug abuse

High prevalence figures for cannabis among youth in some parts of the world suggest an acceptance of the place of cannabis in the lives and experiences of a significant number of young people. The growing popularity of drugs such as amphetamine, "ecstasy", methamphetamine and other ATS in Europe, North America and certain countries in east and south-east Asia is of particular concern. [8]

In many countries, a significant minority of young people experiment with illicit drugs during a phase of rebellion or as part of the search for identity and independence then give them up spontaneously when a particular stage of maturity has been reached, without any apparent

damage being done. However, since young people are less able to evaluate the dangers and to judge the likely consequences of their behaviour, the "coping mechanisms" or problem-solving resources of the individual become crucial. When such coping skills are not developed, for whatever reason, the individual is likely to be more vulnerable to drug abuse. [8]

Whatever the specific reasons for the use of their drugs of choice may be and they vary greatly the emerging trends in global drug abuse among young people should be seen against the backdrop of an environment where, in many countries, young people are increasingly being confronted with rapid social and technological change and a more competitive society, where the drive to succeed is high and personal self-fulfillment is emphasized. Additionally, a weakening of traditional values and family ties and increased needs for higher levels of stimulation are being experienced. [8]

There are also indications that young people are increasingly being exposed to a popular youth culture and mass media messages that are more tolerant towards the use of certain illicit drugs. This creates the wrong impression that the recreational use of those drugs is acceptable and glamorous and may even be beneficial in the pursuit of material success and the satisfaction of personal needs. The mass media are a major source of such messages and they play a powerful role in shaping young people's responses to social stimuli in the environment. A stronger prevention and treatment focus in many countries on so-called "hard" drugs such as heroin and cocaine may, albeit unintentionally, also be creating the impression of a greater tolerance towards and social acceptability of the "recreational" use of other drugs, with correspondingly less social stigma. [8]

Drugs abuse in Bangladesh

Drugs abuse has been a rising social and economic problem in Bangladesh. The number of drugs addicts in Bangladesh is estimated to be about two million, of which more than half live in the capital city Dhaka. Of concern to the public health professionals and social scientists is the spread of this epidemic among adolescents. This is the period of life for exploration and experimentation the means by which 'adolescents learn who they are and what they want to do with their lives', and trying out new things and making first-time choices. These make adolescents vulnerable to experiment drugs, which is marketed through a wide retail network in the cities. Drug abuse in young people has dire consequences such as unnatural death in the form of homicide or suicide, premature morbidity from STDs, needle-borne infections and noxious agents etc., and accidental injuries. High socioeconomic status, lack of academic achievement, disenfran-chisement from mainstream activities, 'boredom', peer acceptance, marginalized status, disabling family environment, and personal characteristics (such as high curiosity, tolerance for risk, lack of self-esteem, the need to look older, etc.) are implicated for abuse of drugs by adolescents. Family influences in the form of parental use and opinions about tobacco, alcohol and drugs have a profound effect on adolescent drug abuse behaviour. The situation is compounded by the rapidly changing social and sexual mores leading to wide permissiveness in society in the last few decades. [9]

Another aspect of the problem is the rapid spread of tobacco smoking among teenagers in Bangladesh, especially males. Smoking in peer networks and schools as well as family environment helps in initiating and continuing smoking. This is alarming, because tobacco is considered to be a "gateway drug", the use of which may lead to alcohol, marijuana, and other drug abuse and high-risk behaviours in the long term. [9]

In public health practice, the saying goes: prevention is better than cure. It would be much more cost-effective and socially beneficial if the epidemic of substance/ drug abuse in Bangladesh could be managed by preventive interventions specifically targeted at the adolescents, based on their knowledge base and mindset. However, very little information is available on this issue in Bangladesh. To bridge this knowledge gap, BRAC, a national NGO, and the Central Treatment Centre for Drug Addicts (CTC), Government of Bangladesh, initiated

a joint study to explore the knowledge, attitudes and perceptions of the school going adolescents on substance/drug abuse. World Health Organization (WHO) funded the study, and it was expected that the insight gained from it would help them in designing a preventive campaign for school-age adolescents. [9]

1.13.1 Policy and legislation

The government of Bangladesh recognizes drugs abuse as one of the most serious problems and is firmly committed to supporting international, regional and bilateral efforts aimed at its prevention and control. The national drug enforcement policy is embedded in the Narcotics Control Act 1990. The government took measures to amend the Narcotics Control Act 1990 in line with UN Conventions. The major features of drug abuse prevention and control in this legislation are: (i) Establishment of the National Narcotics Control Board (NNCB) with the task of drug abuse prevention and control, and to encourage foreign and domestic participation in drug control activities; (ii) Compulsory treatment of drug addiction; (iii) Establishment of drug treatment centers; (iv) Obligation of organizations and individuals to supply information on drug abuse; (v) Restrictions and control on prescription of certain drugs which lead to addiction if abused; (vi) Control of production, distribution, prescription, sale and use of sedative, hypnotic and tranquillizer drugs; (vii) Classification of scheduling of drugs according to control measures and intensity of harmful effects; (viii) Different types of punishment for different drug offences according to the severity of their nature and quantity of drugs involved; (ix) Financial investigation of drug crimes; (x) Freezing and forfeiture of assets of drug traffickers; and (xi) Establishment of drug testing laboratory to speed up the trial of drug cases. [10]

1.13.2 Plans and programmes

With financial and technical support from the United Nations Drug Control Programme (UNDCP) the government of Bangladesh undertook a Five Year Master Plan for drug abuse control in Bangladesh. The plan is divided into three sectors - Law Enforcement and Legal Assistance, Preventive Education and Information, and Treatment and Rehabilitation. The implementation of this Master Plan started in 1994. Its major components are: constancy and technical assistance regarding programme development, policy formulation, updating laws and

regulations; training (overseas and domestic) of personnel of government and non-government organizations; workshops; supply of transport, logistics and equipment; community intervention programmes; and social awareness campaigns. [10]

1.13.3 Organization

The government believes that the fight against drug is a multi-disciplinary task, and it must be accomplished by individuals and organizations from all concerned fields. The organizations entrusted with drug prevention activities in Bangladesh are the Department of Narcotics Control (DNC), Police, Customs, BDR and Coast Guard. The ministries of health and family planning, education, information, social welfare, and youth and sports are also involved in various aspects of drug abuse prevention. DNC is primarily responsible for administration and enforcement of national laws to control psychoactive drugs. Its total manpower is 1,274. It has 34 major offices throughout the country, which includes the headquarter at DHAKA zonal offices at divisional headquarters, 25 regional offices at major district headquarters and zonal intelligence offices. DNC headquarters has four major branches of administration and an intelligence wing. A director supervises each of the four branches of administration. [10]

1.13.4 International cooperation

Bangladesh inherited the partnership in the Single Convention on Narcotic Drugs 1961. It became a signatory to the Convention on Psychotropic Substances 1971 and the UN Convention against Illicit Traffic in Narcotic Drugs and Psychotropic substances 1988, and signed the SAARC Convention on Narcotic Drugs and Psychotropic substances in 1990. Bangladesh celebrates international day against drug abuse and its illicit trafficking on 26 June nationwide each year through a variety of programmes. Bangladesh entered into a bilateral agreement on technical assistance with the USA in 1993 for drug abuse prevention and control, and received communication equipment. The country has been provided with training facilities by DAP of the Colombo plan Bureau, SAARC, UNESCO, ILO and ESCAP. Bangladesh has hosted a number of SAARC workshops, seminars and symposium during the last few years. DNC has a close contact with the regional office of DEA based in New Delhi. Exchange of information with USA, UK, France, and India is being done through their Drug Liaison Officers posted at Dhaka.

The country sends information regularly to the INCB at Vienna and the SDOMD at Colombo. It has also entered into a bilateral agreement with Myanmar for suppression of illicit traffic on drugs. It signed a Memorandum of Understanding with Iran for drug abuse prevention and control. Another bilateral agreement for prevention and control of drug abuse with India is under active consideration by our government. [10]

1.13.5 Training

Training programmes for all classes of DNC officials on various aspects of drug abuse prevention continue both at home and abroad. The overseas training programmes are mainly sponsored by the Colombo Plan Bureau, SAARC, UNDCP, JICA, USLA, DEA and INM of USA, France and the British Government. Domestic training programmes are mainly sponsored and conducted by DNC itself. All officers from the rank of additional directors down to the rank of inspectors were provided with a number of basic and specialized training courses on various aspects of drug abuse prevention and control, covering the whole range of both demand and supply reduction activities. A core trainer group has also been developed within DNC. UNDCP's Drug Control Project in Bangladesh is also providing extensive training on both demand and supply reduction for DNC and other law enforcement agencies. Special workshops on law enforcement and legal assistance for orientation of judges, magistrates, and prosecutors are being conducted by DNC and UNDCP throughout the country. [10]

1.13.6 Methods of prevention and control

Methods of prevention and control cover a considerable area of both supply and demand reduction. The major supply reduction activities in Bangladesh are: Licensing, Monitoring and Inspection, Intelligence and Enforcement, Crop Eradication and Destruction of Drugs, Investigation, and Prosecution and Sanctions. [10]

1.13.6.1 Licensing

Licensing is used in Bangladesh to control the production, processing, export, import, transport, distribution or sale, use or consumption of alcohol, spirit, alcohol-containing products, and certain narcotic drugs used for medical purposes. The total number of different kinds of

licenses under the control of DNC is 3,765. Licensing is an effective method to control and limit drug-supply facilities, their outlets, locations, types, numbers and activity-hours. [10]

1.13.6.2 Monitoring and inspection

Monitoring and inspection of the supply system of drugs is done by DNC through its field offices. Liquor shops are inspected once a month and others once a quarter. Officials above the rank of inspector can inspect any license whenever desired. [10]

1.13.6.3 Intelligence and enforcement

DNC directly hits the pipeline of drug supply through its intelligence and enforcement activities. Police, customs authorities, and Bangladesh Rifles are also directly doing this job. DNC carries out its enforcement activities through its 103 circle offices located throughout the country. Each circle has a six-member staff, which includes one inspector, one sub-inspector, one assistant sub-inspector and three sepoys. In spite of its shortage of manpower, scarcity of necessary equipment and training, DNC detects about 3,000 cases of drug abuse each year and recovers huge quantities of different kinds of illicit drugs. During the period between 1993 and 2000, law enforcing agencies arrested 16,792 persons and seized 80 kg of heroin, 10.13 tons of cannabis, 210,766 bottles of phensydyl (codeine), 7.5 kg of cocaine, 21,388 ampules of Buprenorphine injection, 44 kg of charash, (THC), 22,388 ampules of pethidine injection, 86,465 litres of ID liquors, and 30, 850 litres of rectified spirit. [10]

1.13.6.4 Crop eradication, crop substitution and destruction of drugs

Bangladesh produces no narcotics drugs; it has no crop eradication or crop substitution programmes. However, it seizes and destroys the small amount of cannabis plants cultivated illegally in remote rural areas. Number of cannabis plants eradicated during the last seven years is about 348,000. [10]

1.13.6.5 Investigation

DNC and the police are empowered to investigate drug cases in Bangladesh. Officers above the rank of inspectors are authorized to conduct investigations. [10]

1.13.6 Prosecution and sanction

DNC and the police carry out prosecution of drug cases in courts. Police has inspectors in each magistrate court in Bangladesh. DNC has 12 prosecutors and 37 assistant prosecutors at 25 regional headquarters. Drug cases are tried in general courts, which are over-burdened because of thousands of pending cases. [10]

1.13.7 Demand reduction

The government of Bangladesh believes that drug abuse prevention programmes will not succeed unless they consists both of supply and demand reduction programmes. Therefore, the government prefers to conduct various demand reduction activities. The activities so far practiced in Bangladesh are: prevention, education, price control and taxation, control and restriction on advertisement of drugs, treatments and rehabilitation. [10]

A major role in demand reduction activities in Bangladesh may be played by the ministries of information, education, social-welfare, health, youth and sports, and local government. The drug control activities carried out through various methods of demand reduction in Bangladesh are as follows:

1.13.7.1 Prevention

DNC and its field offices have programmes for public awareness campaigns against drug abuse throughout the country, including organization of rallies, seminars, and discussion meetings. DNC headquarter publishes Narcotics Control Bulletins and Special Drug Control Souvenirs regularly. DNC has made an 18-minute short film on the consequences of drug abuse. A 60-second TV spot against drug abuse has also been made. DNC is also considering a programme for training of imams of Mosques for preaching anti-drug messages. DNC publishes posters, stickers, booklets and brochures on the harmful effects of drug abuse. A series of information booklets on various drugs have also been published under the Master Plan. [10]

DNC and UNDCP Project office undertook a massive community action programme for drug abuse prevention throughout the country involving non-government organization with

financial assistance from UNDCP. DNC field officers conduct public meetings and seminars on various aspects of drug abuse problems. They show cinema slides containing drug awareness messages in local cinema halls. The Youth Development Directorate also takes up these sorts of programmes for prevention and public awareness campaigns. Moreover, they hold discussions and debates occasionally. NGOs and social organizations occasionally take prevention programmes on drug abuse. [10]

The Strategic Plan for Drug Demand Reduction in Bangladesh, prepared under the Master Plan for Drug Abuse Control in Bangladesh by the Department of Narcotics Control and UNDCP, mentions as many as 19 specific strategies. The Master Plan suggests restructuring of DNC to better coordinate drug demand reduction activities. It proposes to establish community coordination committees, develop and disseminate a core package of prevention materials, organize training for community and religious leaders and NGOs, establish a trained cadre of counselors to deliver preventive counseling at appropriate locations, develop adequate youth recreation facilities and programmes, and initiate a wide range of employment training programmes. The Plan also suggests to develop motivation/incentives programmes for private sector and business associations, involve law enforcement officials in preventive education in the community, develop a media policy and make amendments to the advertising policy through development of the concept of counter-advertising. The Master Plan gives special emphasis on placement of health warnings on labels/packaging of all tobacco, tobacco products and medicines, establishment of parents forum and organization of training of parents, infusion of preventive education into the formal and non formal education systems, establishment of a totally drug-free environment in schools, provision of training for educationists, and development and delivery of work place drug prevention programmes. [10]

The five-year strategic plan lays down specific strategies in the treatment and rehabilitation. Major strategies outlined in the Master Plan are: completion of a community-based needs assessment; development of a client monitoring system; dissemination of inter-agency information; improvement of sources of existing information on drugs; provision for research; monitoring and evaluation; training of personnel; coordination of treatment and rehabilitation services; provision of social integration and aftercare services; and development and delivery of community-based and target-oriented programmes. Other strategies are

utilization of existing programmes and networks, development of a treatment and rehabilitation model, introduction of appropriate harm reduction models, delivery of work place and outreach programmes, and emphasis on HIV/AIDS. [10]

1.13.7.2 Education

The government introduced drug education in regular school curricula. DNC prevention teams of Regional Narcotics Control offices visit educational institutions regularly and provide classroom lectures on the harmful effects of drug abuse. [10]

1.13.7.3 Price control and taxation

Almost all narcotic drugs and psychotropic substances except a very few for medicinal purposes are restricted in Bangladesh. A taxation system to control and minimize the use of drugs in the country is only applicable on alcohol. A very high rate of duty is imposed on any kinds of alcohol and spirit to keep those beyond the reach of ordinary people. The government controls the import of raw materials and precursor chemicals used in the manufacture of any narcotic drugs and psychotropic substances. [10]

1.13.7.4 Control and restriction on advertising for drugs

The government does not allow any advertisement for drugs in radio and television, though this restriction is not applicable to tobacco products. [10]

1.13.7.5 Treatment and detoxification

The Narcotics Control Act 1990 provides provisions for treatment of drug addicts and establishment of drug treatment centers by the government. The expenditure of drug addiction treatment is generally borne by the government. This law also provides provisions for declaring jail hospitals as drug treatment centers. Since 1990, DNC has its own drug treatment centre at Tejgaon in Dhaka. Three other drug treatment centers have been established in Khulna, Rajshahi and Chittagong. There are also a number of private clinics and hospitals to treat drug addicts. The law made it obligatory for physicians and family heads to supply information on drug addiction to law enforcement agencies. [10]

2. LITARATURE REVIEW

A growing number of publication and empirical research have documented on drugs abusing on youth. The understanding of the relationship between drugs abuse and young generation is currently at the heart of social research. Most of the time researchers are doing work some specific drugs of abuse. It has been observed that much of substance use among youths take place in schools.

2.1 Drug abuse among students of Ambrose Alli University, Ekpoma, Nigeria

This study examined the types of drugs students in Ambrose Alli University abuse. The participants were 414 university students drawn from four faculties of Ambrose Alli University. The instrument used in this study was a modification of the student's drug use questionnaire published by the World Health Organisation. The analyses yielded the following results: students in the University abuse drugs such as alcohol, kolanut, tobacco, marijuana, librium, valium, dexamphetamine, mandrax, Chinese capsule and cocaine; students use drugs mostly once a week; students use drugs to feel good, to keep awake, to sleep, or to enhance sex. Based on these findings, the study recommended among others the need to organize awareness programmes in our campuses to educate students that drugs can alter brain circuitry, which will affect their learning; and the university authorities to put in place severe disciplinary measures to stem the tide of drug abuse. [11]

2.2 Substance use among secondary school students in an urban setting in Nigeria: prevalence and associated factors

Substance use continues to be major risk behaviour among youth, with consequent physical and /or mental health complications. The current study aimed to establish the prevalence and associated factors of substance use among selected secondary school students in Lagos. This was a cross-sectional and descriptive study among selected secondary school students in Lagos. Permission was obtained from appropriate school authorities; as well as consent from each participant. The WHO Students' Drug Use Questionnaire which had been previously validated in the country was used to obtain the drug use information from the subjects. Analysis of the data was conducted using Epi-info version 5. A total of 402 students were studied - of whom 43.5% (n=175) were males and 56.5% (n=227) females. The mean age was 15.9 years. 83.1% (n=334) lived with their parents, 7.6% (n=31) with their relatives and 7.2% (n=29) with friends. The

commonest substances used by the subjects were caffeine (kolanut and coffee), mild analgesics (paracetamol and aspirin) and the antimalarials, most especially chloroquine with lifetime use prevalence rates of 85.7%, 73.8% and 65.7% respectively. Generally, the prevalence rates for lifetime use of the substances varied from 3.8% (n=14) for Heroin and Cocaine to 85.7% (n=344) for psychostimulants; and for current use varying from 2% (n=8)to 56.5% (n= 213). For the so called "gateway drugs": alcohol and tobacco, their lifetime use prevalence rates were 9.2% (n=34) and 5.2% (n=19) while the lifetime use prevalence rate for cannabis was 4.4% (n=16). In terms of gender, the prevalence rates for males were generally higher than for their female counterparts except for antibiotics, analgesics, heroin and cocaine. Reasons for using substances included relief from stress, 43.5% (n=175), self medication to treat illness, 23.8% (n=96), and to stay awake at night to study, 14.9% (n=60). Substance use was found to be prevalent among students in this study involving over-the-counter and socially acceptable substances as well as the abuse of illicit substances. It is advocated that there is a need to review existing health educational programmes. [12]

2.3 Factors affecting illicit and licit drug use among adolescents and young adults in Greece

A cross-sectional survey on psychosocial issues, drug use, alcohol and health was carried out in Greece, with a nationwide probability sample of 2448 respondents aged 12-17 and 18-24. Factors potentially associated with illicit and unprescribed licit drug use were tested by logistic regression analysis. Several predictors were revealed. Sex and age were related to a higher lifetime use of illicit drugs, the male young adults reported a higher lifetime use of illicit drugs than the females. Positive attitudes toward hashish use, systematic smoking and use of drugs by close friends were more closely related to illicit than to unprescribed licit drug use. In addition "low self-esteem, family members using tobacco and alcohol" and "problematic drinking" were found only to predict illicit drug use. Other variables, "family members using drugs with or without a doctor's prescription", "being dissatisfied with social life" and "suffering from anxiety, depression and depersonalization symptoms" were found to be significantly associated with I licit but unprescribed drug use. [13]

2.4 Prevalence of Illicit Use and Abuse of Prescription Stimulants, Alcohol, and Other Drugs among College Students

The objective of this study is to examine associations between age at initiation of prescription stimulants and illicit use and abuse of prescription stimulants, alcohol, and other drugs among college students in the United States. It was a web-based survey of college students. The sample were collected from a large (full-time undergraduate population > 20,000) university. A Web-based survey was sent to a random sample of 5389 undergraduate college students plus an additional 1530 undergraduate college students of various ethnicbackgrounds over a 2-month period. Alcohol abuse was assessed by including a modified version of the Cut Down, Annoyance, Guilt, Eye-opener (CAGE) instrument. Drug use–related problems were assessed with a slightly modified version of the Drug Abuse Screening Test, short form (DAST-10). The final sample consisted of 4580 undergraduate students (66% response rate). For the analyses, five subgroups were created based on age at initiation of prescription stimulant use: no prescription stimulant use, grades kindergarten (K)–4, grades 5–8, grades 9–12, and college. Undergraduate students to whom stimulants were prescribed in grades K–4 reported similar rates of alcohol and other drug use compared with that of the group that had no prescription stimulant use. For example, students who started prescription stimulants in grades K–4 were no more likely to report coingestion of alcohol and illicit prescription stimulants (odds ratio [OR] 1.4, 95% confidence interval [CI] 0.2–11.5, NS] than the group that had no prescription stimulant use. However, undergraduate students whose prescription stimulant use began in college had significantly higher rates of alcohol and other drug use. For example, students who started a prescription stimulant in college were almost 4 times as likely (OR 3.7, 95% CI 1.9–7.1, $p < 0.001$) to report at least three positive indicators of drug abuse on the DAST-10 compared with the group that had no prescription stimulant use. In concordance with results of previous research, these results indicate that initiation of prescription stimulants during childhood is not associated with increased future use of alcohol and other drugs. [14]

2.5 Drug use related problems among nonmedical users of prescription stimulants: A web-based survey of college students from a Midwestern university

This college-based study compared nonmedical users of prescription stimulants to other types of drug users regarding drug use related problems. A Web survey was self-administered in

2005 by a probability sample of 3639 full-time undergraduate students (68% response rate) at a large public Midwestern 4-year university in the United States. The survey consisted of measures to assess substance use and misuse, including a modified version of the Drug Abuse Screening Test (DAST-10). Nonmedical users of prescription stimulants were more likely than other drug users to report polydrug use. Nonmedical users of prescription stimulants had over four times greater odds than other drug users to experience three or more DAST-10 items in the past 12 months (AOR = 4.61, 95% CI = 3.28–6.48). Among nonmedical users of prescription stimulants, those who used prescription stimulants via intranasal and other non-oral routes of administration had greater odds than oral only users to experience three or more DAST-10 items in the past 12 months. The findings of the present study suggest that the majority of nonmedical users of prescription stimulants are polydrug users and should be screened for potential drug abuse or dependence, especially those who report non-oral routes of administration. [15]

2.6 Nonmedical prescription stimulant use among college students: why we need to do something and what we need to do?

This article summarizes recent research findings on nonmedical use of prescription stimulants and outlines a multi-pronged strategic approach for responding to this unique problem among college students. Students, health professionals, parents, the pharmaceutical industry, and institutions of higher education all play roles in this response. Moreover, the academic community should view the translation of research findings as an important responsibility that can help dispel the myths often perpetuated in the media. The nonmedical use of prescription stimulants is a complex behavior and should be viewed in the larger context of alcohol and drug involvement among young adults. Strategies to reduce nonmedical use of prescription stimulants might have direct application to the abuse of other prescription drugs, including opiates. [16]

2.7 Increased alcohol consumption, nonmedical prescription drug use, and illicit drug use are associated with energy drink consumption among college students

This longitudinal study examined the prevalence and correlates of energy drink use among college students, and investigated its possible prospective associations with subsequent drug use, including nonmedical prescription drug use. Participants were 1,060 undergraduates from a large, public university who completed three annual interviews, beginning in their first

year of college. Use of energy drinks, other caffeinated products, tobacco, alcohol, and other illicit and prescription drugs were assessed, as well as demographic and personality characteristics. Annual weighted prevalence of energy drink use was 22.6%(wt) and 36.5%(wt) in the second and third year of college, respectively. Compared to energy drink non-users, energy drink users had heavier alcohol consumption patterns, and were more likely to have used other drugs, both concurrently and in the preceding assessment. Regression analyses revealed that Year 2 energy drink use was significantly associated with Year 3 nonmedical use of prescription stimulants and prescription analgesics, but not with other Year 3 drug use, holding constant demographics, prior drug use, and other factors.A substantial and rapidly-growing proportion of college students use energy drinks. Energy drink users tend to have greater involvement in alcohol and other drug use and higher levels of sensation-seeking, relative to non-users of energy drinks. Prospectively, energy drink use has a unique relationship with nonmedical use of prescription stimulants and analgesics. More research is needed regarding the health risks associated with energy drink use in young adults, including their possible role in the development of substance use problems. [17]

2.8 Analysis of opium use by students of medical sciences

The aim of the study is to investigate the prevalence of opium use in university students. A survey with a representative sample of 2519 (1126 men and 1393 women) university students and opium use disorders assessed by means of DSM-IV criteria (Diagnostic Statistical Manual-IV Axis I during the year 2003). Mean age of the sample was 23.8 year and SD was 3Æ9. Of the students, 110 (4.4%) admitted using of opium once or more during their lives (9.1% of men and 0.6%of women; $P < 0.01$). Fifty (2%) were occasional opium user (4.2%of men and 0.2% of women; $P < 0.01$). Nineteen (0.8%) were current opium user (1.4% of men and 0.2% of women; P ¼ 0.001). Mean age of opium users was higher than the remainder. Opium use was significantly related to gender (P ¼ 0.001), and life stress (P ¼ 0.04). These findings can be considered for preventive and therapeutic programmes, because early intervention during the formative university years may present an opportunity to reduce the risk of long-term problems, to decrease social and individual harm and also to promote public health of society. [18]

3. RATIONALE OF THE STUDY

The study has several objectives:

1) To check the level of knowledge about drugs of abuse from students of some private universities in Dhaka city.

2) To check perception about drugs of abuse from students of some private universities in Dhaka city.

3) To compare the socioeconomic and demographic data between drug abuser and non drug abuser.

4. METHODOLOGY

4.1 Study sample

The sample was derived from students who were recruited different private universities in Dhaka city. At present there are 56 private universities in Bangladesh. Most of them are situated in Dhaka city. Samples were randomly selected from 9 private universities in Dhaka city. The numbers of total participants were 344 students.

4.2 Procedure

Data were collected from the students by a questionnaire form. The questionnaire form was prepared by studying different papers and reading newspaper articles related to the issue. The survey focused on student both graduate and undergraduate students. So the survey was focusing generally young of the nation. Universities were randomly selected from all private universities in Dhaka city. After explaining the purpose of the study to the volunteers, the researcher interviewed all the volunteers by a questionnaire form. The questionnaire form consisted of three parts.

4.3 Measurement

4.3.1 Socio demographic and economic characteristics

- Age
- Nationality
- Sex
- Height
- Weight
- Marital status
- Religion
- Location of the residence
- Education level

- Gross family income
- Father's occupation
- Mother's occupation
- Father's education level
- Mother's education level
- Present living situation
- Life satisfaction
- Hope for the future
- Having stress
- Family problem

4.3.2 Knowledge

- General idea about drugs of abuse
- Information source about drug of abuse
- Knowledge about dependency of a prescription drug
- Information source about dependency of a prescription drug
- Involvement with drugs of abuse

4.3.4 Perception

- Idea about the condition of drug of abuse in Bangladesh,
- Possible reason for drug of abuse is common in Bangladesh
- Necessity to control drugs of abuse in Bangladesh

- Possibility to remove drugs of abuse from Bangladesh
- Possible way for removing drug of abuse from Bangladesh

Data analysis

After collecting all data, data were analyzed with Microsoft office excel. Then we analyze the all data by following different strategies based on our target of study. We compare data between drug abuser and non abusers by independent sample t-test, we compared different values.

Study period

Overall study period was eight month. To complete the study in time, a work schedule was prepared depending on different task of the study. The first few months were spent on board meeting for selection of topic, literature review and development of the protocol. Subsequent months were spent on official correspondence, data collection, data analysis, report writing.

Questionnaire form

Questionnaire form has mainly two parts:

1) Volunteer Consent Form

2) Survey Questionnaires.

Volunteer Consent Form

I, the undersigned, authorize the research student to consider me as a ***volunteer*** for his/her research work. I understand that I can change my mind at any time to withdraw myself as ***volunteer*** during this research work.

Volunteer consent to study treatment

Please tick as appropriote

1. Have you complete idea about the type, ultimate goal and methodology of the research?
   yes/no
2. Are you aware that you don't have to face any physical, mental and social risk for this?
   yes/no
3. Have you got any idea about the outcome of this experiment? yes/no
4. Have you decided intentionally to participate in this experiment? yes/no
5. Do you think this experiment violate your human rights? yes/no
6. Are you sure that all the information regarding you will be kept confidentially?
   yes/no
7. No remuneration will be provided for this experiment, are you aware of this?
   yes/no

After reading the above mentioned points, I am expressing my consent to participate in this experiment as a ***volunteer.***

Volunteer signature: _____

Date: _____

Survey Questionnaires

Drugs of Abuse in Bangladesh: Knowledge and Perception of Students from Private Universities

(Please write and tick as appropriate, multiple answers is possible)

Date		**Location** (Name of the university)	

1. Identification

1.1 I.D code							

1.2 Name	

1.3 **Date of Birth**(dd/mm/yy)				**1.4 Age** (yr)	

1.5 **Nationality**		**1.6 Sex**	male	female

1.7 **Height** (meters)		**1.8 Weight** (kg)	

1.9 **Marital status**	a) married	b) single	c) Divorced	d) others (specify)

1.10 Religion	a)Muslim	b)Hindu	c)Buddhist	d)Christian	e)others (specify)

2. Location of the Residence

a) Urban areas	b) Semi Urban areas	c) Semi-rural areas	d) Rural areas

3. Personal History

3.1 Education level			
a) Graduate		Semester Number	
b) Undergraduate		Semester Number	

3.2 Gross Family Income			
a) Less than Taka 10,000		e) Taka 70,000- Taka 90,000	
b) Taka 10,000- Taka 30,000		f) Taka 90,000- Taka 1,10,000	
c) Taka 30,000- Taka 50,000		g) Taka 1,10,000- Taka 1,30,000	
d) Taka 50,000- Taka 70,000		h) Taka 1,30,000 above	

3.3 Father's Occupation		4.4 Mother's Occupation	
a) Business		a) Business	
b) Private Service		b) Private Service	
c) Gov. Service		c) Gov. Service	
d) Unemployed/Pensioner		d) Unemployed/ Pensioner	
e) Stay abroad		e) Doctor	
f) Politician		f)House wife	
g) Others.....		g) Others.....	

3.5 Father's Education level		3.6 Mother's Education Level		3.7 At present with whom are you living?	
a) Illiterate		a)Illiterate			
b) Can read only		b)Can read only		a)Parents	
c) Can write a letter		c)Can write a letter		b)Father	
d) SSC or equivalent		d)SSC or equivalent		c)Mother	
e) HSC or equivalent		e)HSC or equivalent		d)wife/ husband	
f) Graduate or higher		f)Graduate or higher		e) alone	
g) Others.....		g)Others.....		f) others.....	

3.8 Your Life satisfaction	Excellent	Fair	No	Missing

3.9 Your hope for the future	Excellent	Good	Moderate	Disappointed	Missing

3.10 Having stress	High	Low	No	Missing

3.11 Do you have any Family problem?	yes	No

3.12 If your answer is yes then, what is the reason for that?			
a) parents divorce	b) constant fighting	c) Step mother/father	d) others (specify) .....

4. Knowledge

4.1 Do you have any idea about drug of abuse?	yes	No

4.2 What do you know about drug of abuse?					
a) Abuse of drug is the use of illicit drugs, or the abuse of prescription or over-the-counter drugs		b) It often carry a high risk of addiction		c) abuse of drug leads to changes in the structure and function of the brain	
d) repeated abuse of drug can affect a person's self control and ability to make sound decisions		e) challenging for a person who is addicted to stop abusing drugs		f) abuse of drug causes and is caused by many problems including, Crime, Unhappiness, Divorce, Major illness, Even death	

4.3 How you came to know about drug of abuse?				
a) friends	b) media	c) parents	d) relatives	e) Others

4.4 Do you have any idea about dependency of a prescription drug?	yes	No

4.5 How you came to know about dependency of a prescription drug?						
a) friends	b) media	c) pharmacist	d) relatives	e) doctors	f)dispensary	g)others .....

4.6 Do you take any drug of abuse?	yes	no

4.8 What kind of drugs do you take for abuse?

4.8.1 Licit drug				4.8.2 Illicit drug			
a) Barbiturates		f) Codeine		a) Ganja		f) Opium	
b) Anticholinergics		g) Tranquilizers		b) Heroin		g) Yaba	
c) Amphetamines		h) Hypnotics		c) Alcohol		h) Cannabis	
d) Antidepressants		i) Cough Syrups		d) Marijuana		i) Cocaine	
e) Pain relievers		j) Pethidine		e) Phensidyl		j) Bhang/Chorosh	
k) Others:.....				k) Others:.....			

6. Perception

6.1 Do you think drug of abuse is common in Bangladesh?	yes	no

6.2 If your answer is yes then, what is responsible for that?			
a) lack of Gov. law enforcement		c) lack of honesty	
b) lack of knowledge		d) Others.....	

6.3 Do you think drug abuse should be controlled in Bangladesh?	yes	no

6.4 Do you think, it is possible to remove drug abuse from Bangladesh?	yes	no

6.5 If your answer is yes then, how it can be possible?			
a) by increasing knowledge		c) by increasing honesty	
b) by enforcing Gov. law		d) Others	

Comments

******Thank you for your participation******

5. RESULTS

5.1 Social Demographic Data

5.1.1 University name

Table 5.1.1: Distribution of the volunteers by their University

University name	Address	Total	%
East West University(EWU)	43 Mohakhali C/A,Dhaka - 1212 Bangladesh, Tel: +880-2-8811381,	133	38.6
North South University(NSU)	Plot 15, Block BBashundhara,Dhaka 1229, Bangladesh, PABX:8852000, Fax: 8852016	18	5.2
Brac University	66Mohakhali,Dhaka1212,BangladeshPh: +88 (02) 8824051-4(PABX)	23	6.6
Stamford University	744, Satmosjid Road, Dhanmondi Dhaka-1209, Bangladesh Tel : 8153168-69, 8156122-23, 8155834	18	5.2
South East University(SEU)	House# 64, Road# 18, Block # B, Banani, Dhaka. Phone: 880-2 8860456,880-2-88600454	32	9.3
World University(WU)	House # 3/A, Road # 4, Dhanmondi, Dhaka 1205, Bangladesh. Tel: +880-2-9611410; +880-2-9611411	25	7.2
American International University of Bangladesh(AIUB)	House # 58/B, Road # 21 Kemal Ataturk Avenue Banani, Dhaka Phone:8820865,9890804,9894641	41	11.9
Ahsanullah University of Science & Technology (AUST)	141 & 142, Love Road, Tejgaon Industrial Area, Dhaka-1208, Tel 8854698, 9860777	26	7.5
ASA University (ASA)	Shyamoli, Dhaka, Bangladesh	25	7.2

5.1.2 Sex

Table 5.1.2: Distribution of the volunteers by their sex

Sex	Total	%
Male	282	82.2
Female	61	17.7

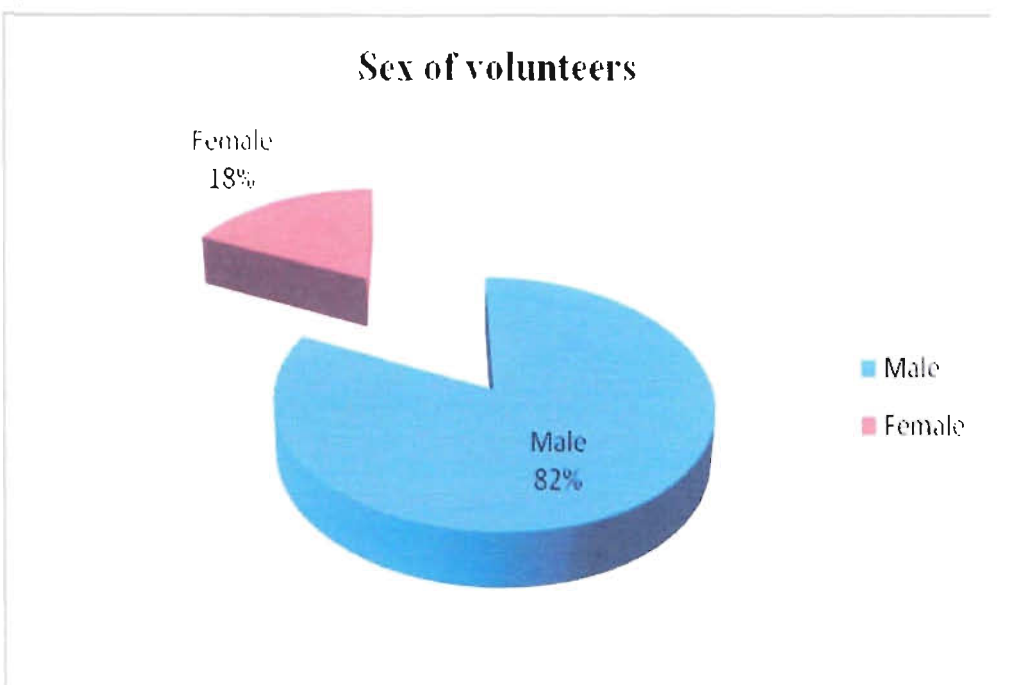


Figure 5.1.2: Distribution of the volunteers by their sex

5.1.3 Marital Status

Table 5.1.3: Distribution of the volunteers by their Marital Status

Marital Status	Total	%
Married	21	6.10
Single	314	91.27
Others	9	2.61

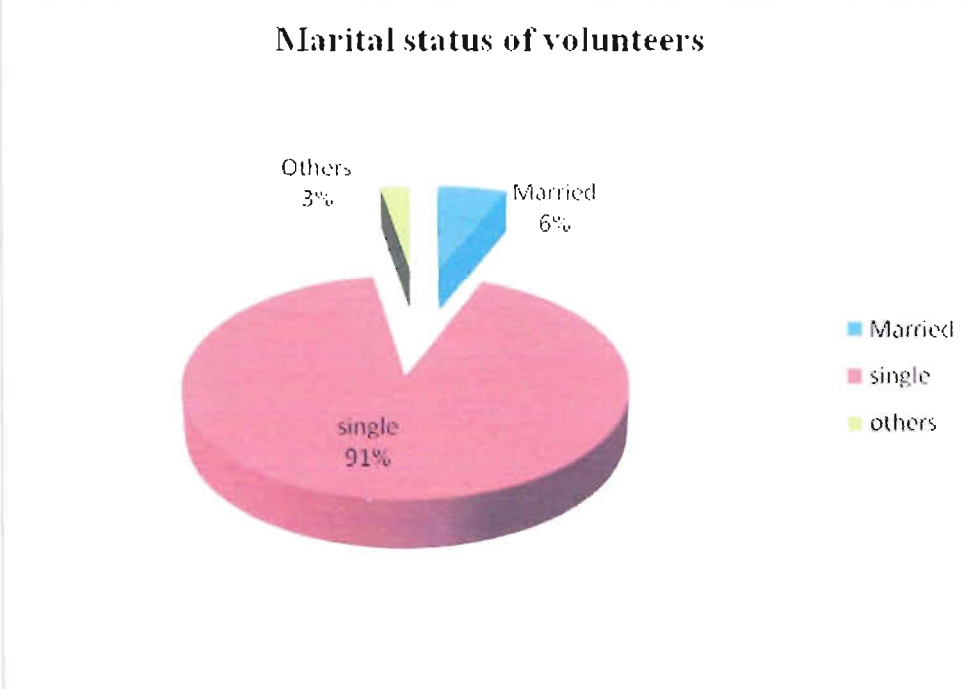


Figure 5.1.3: Distribution of the volunteers by their Marital Status

5.1.4 Religion

Table 5.1.4: Distribution of the respondents by their religion

Religion	Total	%
Muslim	304	88.62
Hindu	36	10.49
Buddhist	1	0.29
Christian	2	0.58

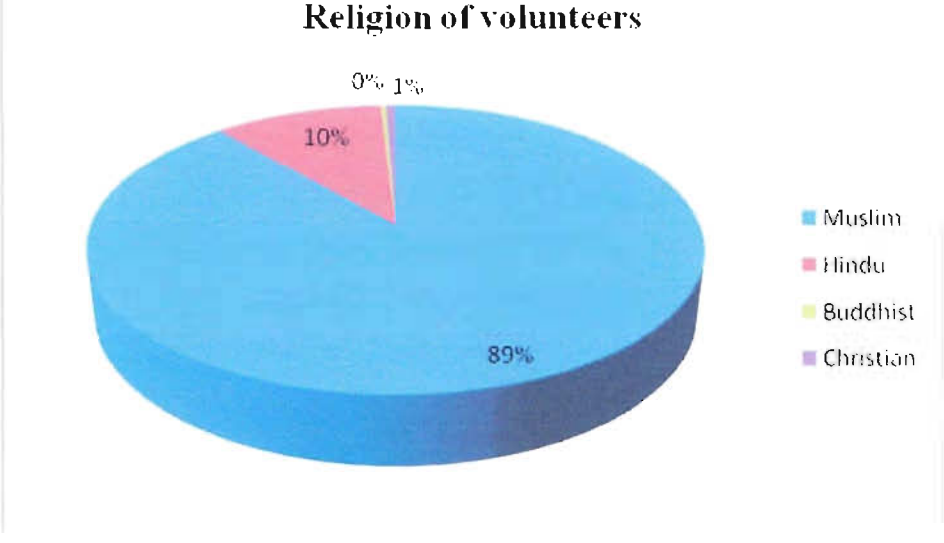


Figure 5.1.4: Distribution of the respondents by their Religion

5.1.5 Age

Table 5.1.5: Distribution of the volunteers by their age range

Age range	Total	%
18-19	20	5.86
20-21	57	16.71
22-23	172	50.43
24-25	83	24.34
26-27	5	1.46
28-29	1	0.29
30-31	3	0.87

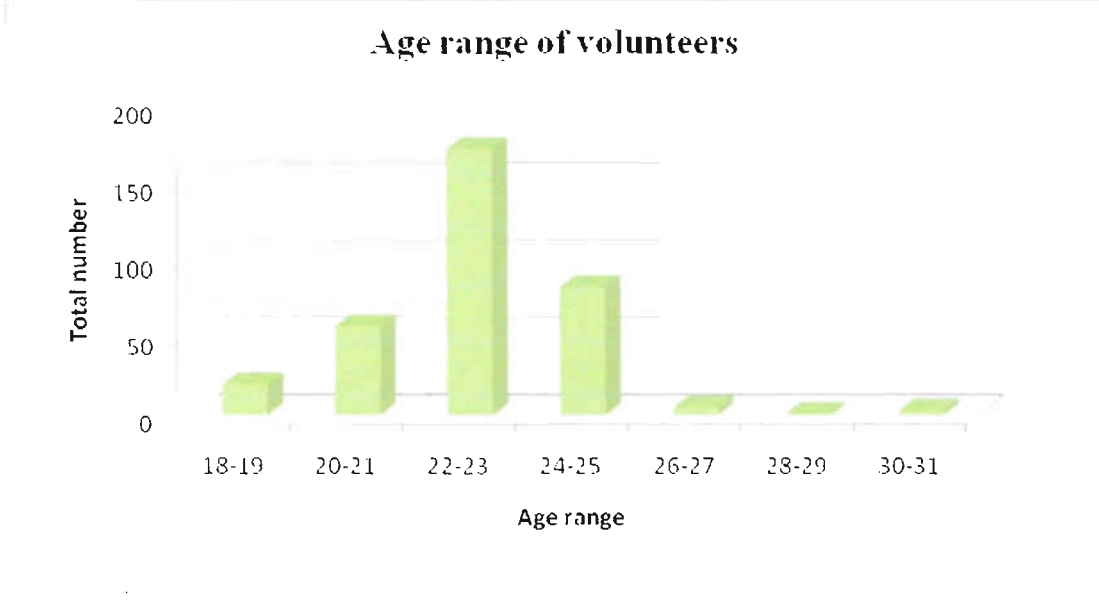


Figure 5.1.5: Distribution of the volunteers by their age range

5.1.6 BMI

Table 5.1.6: Distribution of the volunteers by their BMI

BMI	Total	%
Underweight	28	8.25
Normal weight	261	76.99
Overweight	34	10.029
Obesity	16	4.71

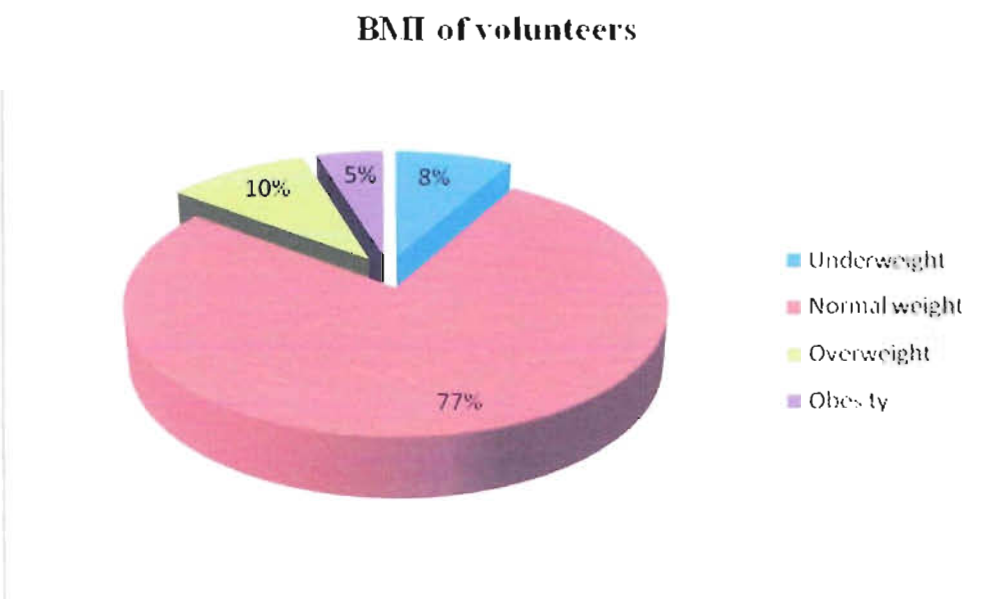


Figure 5.1.6: Distribution of the volunteers by their BMI

5.1.7 Education level

Table 5.1.7: Distribution of the volunteers by their Education level

Education level	Total	%
Graduate	58	16.86
Undergraduate	286	83.13

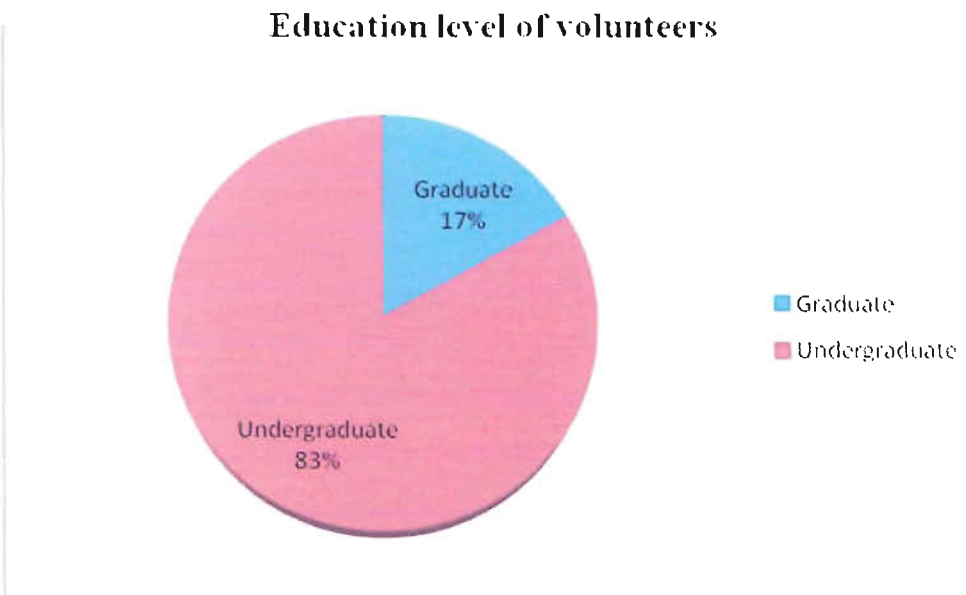


Figure 5.1.7: Distribution of the volunteers by their Education level

5.1.8 Location of the Residence

Table 5.1.8: Distribution of the volunteers by their Location of the Residence

Location of the Residence	Total	%
Urban areas	216	62.97
Semi Urban areas	110	32.06
Semi-rural areas	5	1.45
Rural areas	12	3.49

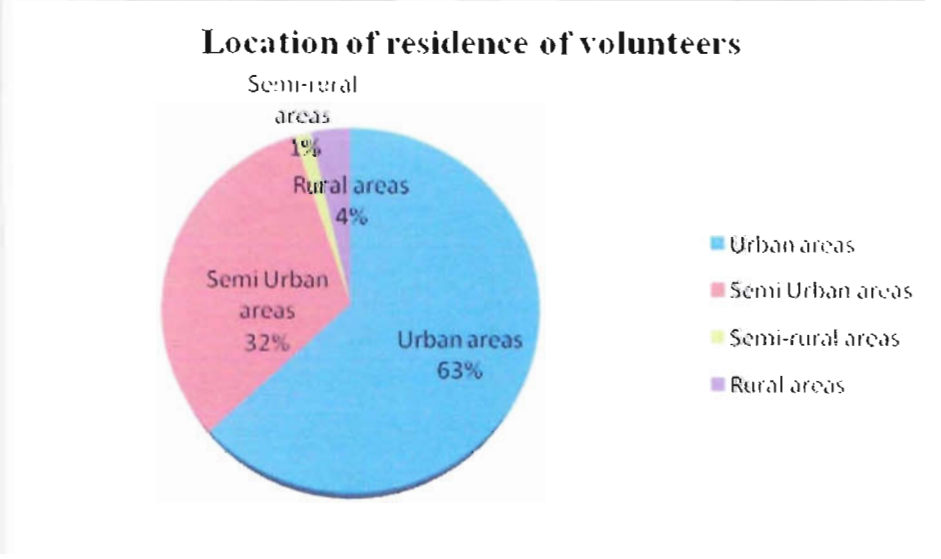


Figure 5.1.8: Distribution of the volunteers by their Location of the residence

5.1.9 Gross family income

Table 5.1.9: Distribution of the volunteers by their gross family income

Gross Family Income	Total	%
Less than Taka 10,000	8	2.35
Taka 10,000- Taka 30,000	21	6.17
Taka 30,000- Taka 50,000	148	43.52
Taka 50,000- Taka 70,000	43	12.64
Taka 70,000- Taka 90,000	27	7.94
Taka 90,000- Taka 1,10,000	22	6.47
Taka 1,10,000- Taka 1,30,000	15	4.41
Taka 1,30,000 above	56	16.47

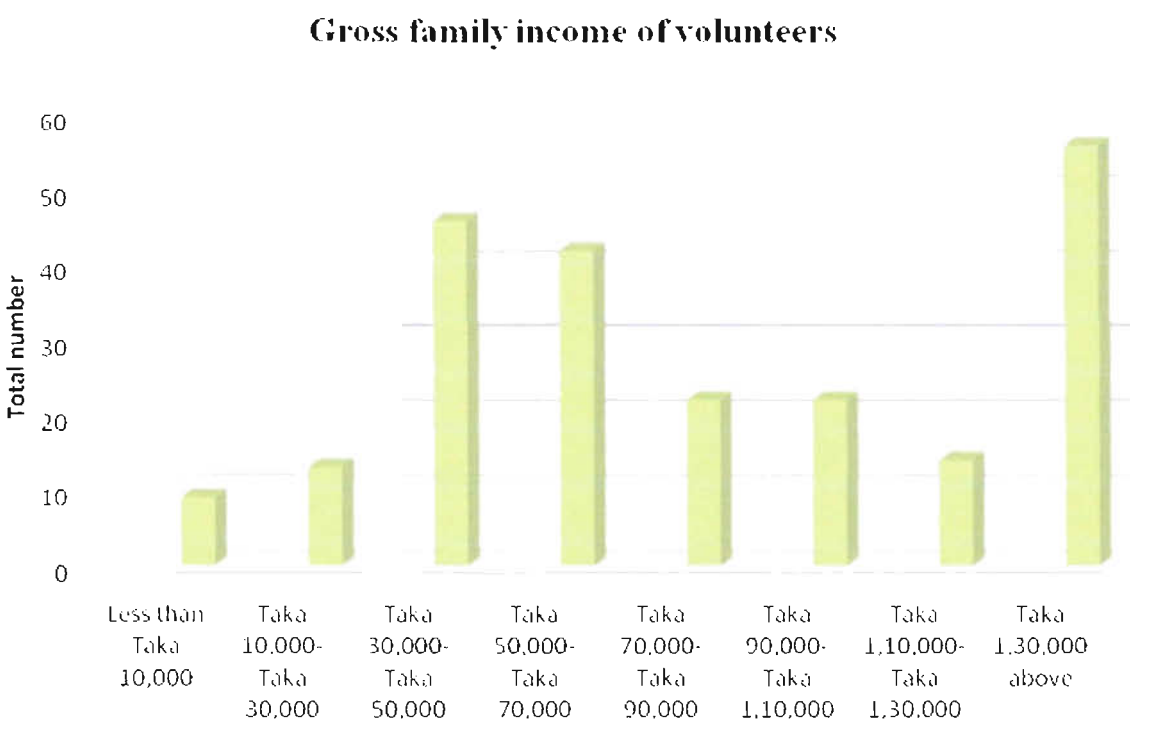


Figure 5.1.9: Distribution of the volunteers by their gross family income

5.1.10 Father's occupation

Table 5.1.10: Distribution of the volunteers by their father's occupation

Father's Occupation	Total	%
Business	144	42.35
Private Service	83	24.41
Gov. Service	71	20.88
Unemployed/Pensioner	2	0.58
Stay abroad	21	6.17
Politician	10	2.94
Others	9	2.64

Figure 5.1.10: Distribution of the volunteers by their father's occupation

5.1.11 Mother's occupation

Table 5.1.11: Distribution of the volunteers by their mother's occupation

Mother's Occupation	Total	%
Business	6	1.76
Private Service	6	1.76
Gov. Service	34	10
Housewife	284	83.52
Doctor	8	2.35
Others	4	1.17

Figure 5.1.11: Distribution of the volunteers by their mother's occupation

5.1.12 Father's education level

Table 5.1.12: Distribution of the volunteers by their father's education level

Father's Education level	Total	%
Illiterate	1	0.29
Can read only	2	0.58
Can write a letter	6	1.75
SSC or equivalent	59	17.25
HSC or equivalent	71	20.76
Graduate or higher	200	58.47
Others	3	0.87

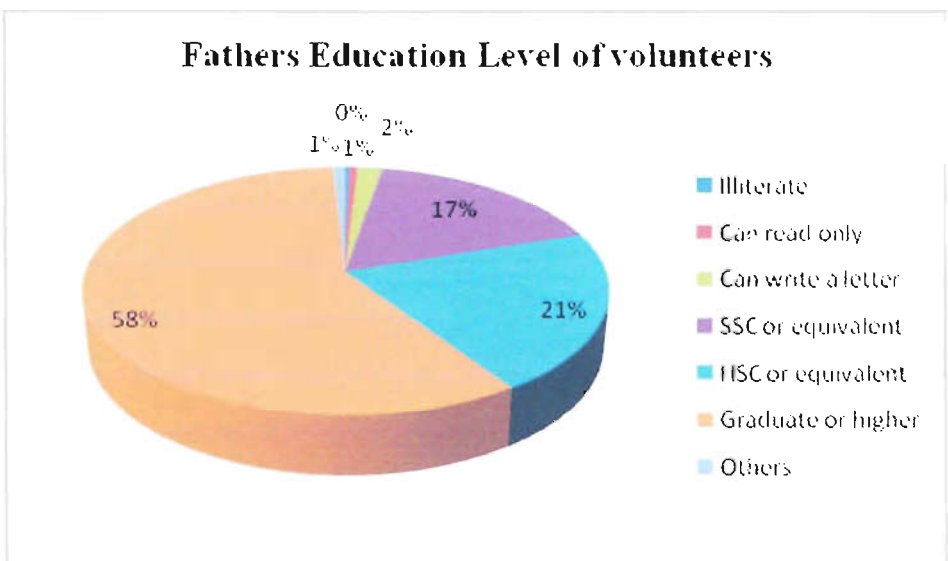


Figure 5.1.12: Distribution of the volunteers by their father's education level

5.1.13 Mother's education level

Table 5.1.13: Distribution of the volunteers by their mother's education level

Mother's Education level	Total	%
Illiterate	2	0.59
Can read only	42	12.42
Can write a letter	7	2.07
SSC or equivalent	111	32.84
HSC or equivalent	113	33.43
Graduate or higher	61	18.04
Others	2	0.59

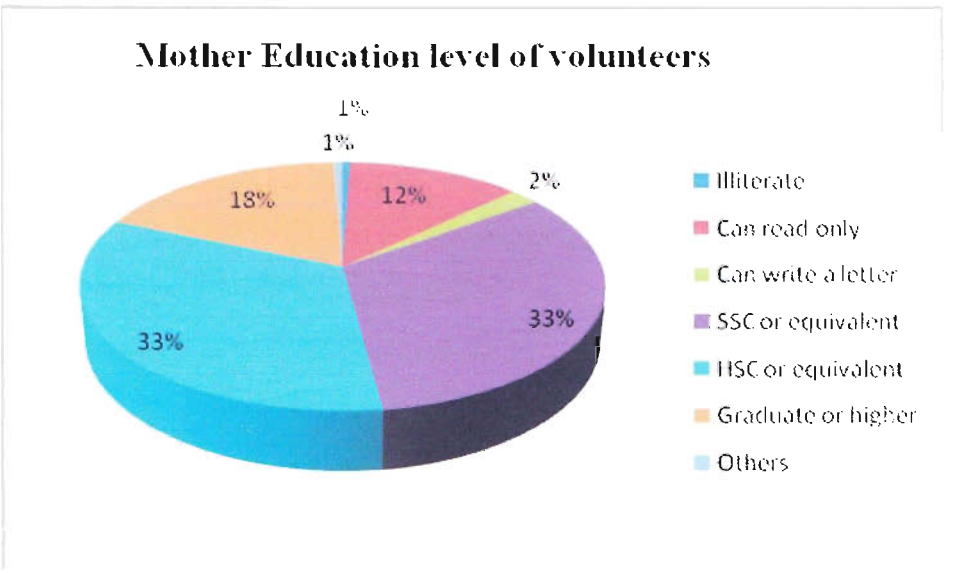


Figure 5.1.13: Distribution of the volunteers by their mother's education level

5.1.14 Present living situation

Table 5.1.14: Distribution of the volunteers by their present living situation

Present living situation	Total	%
Parents	166	53.03
Father	2	0.63
Mother	14	4.47
Wife/ Husband	4	1.27
Alone	124	39.61
Others	3	0.95

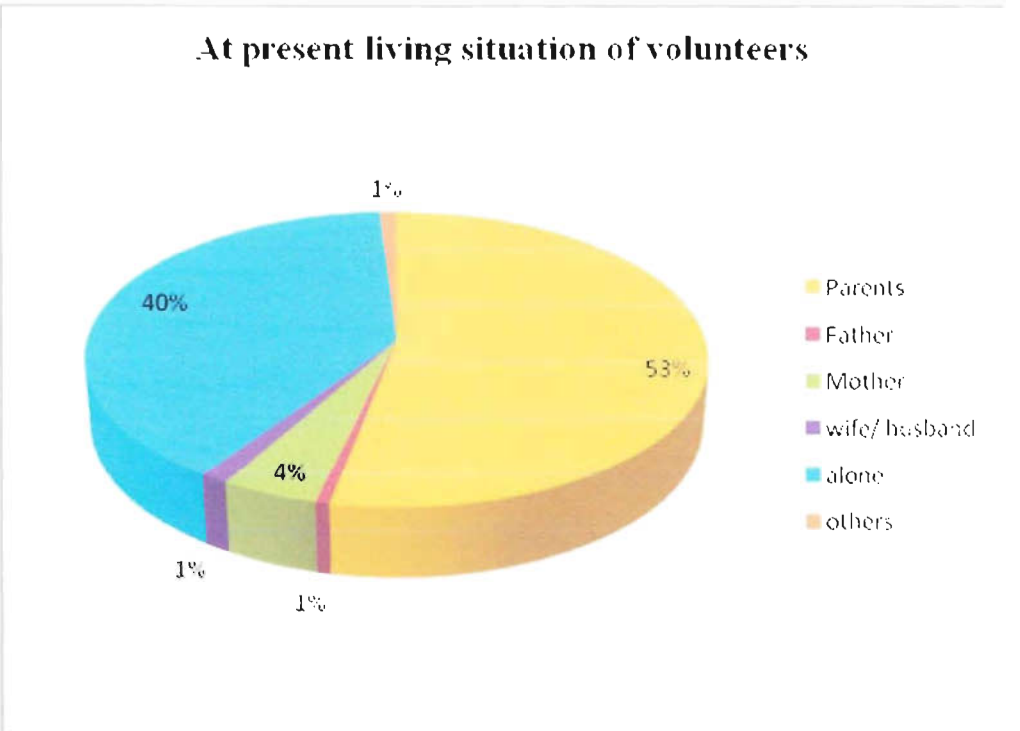


Figure 5.1.14: Distribution of the volunteers by their present living situation

5.1.15 Life satisfaction

Table 5.1.15: Distribution of the volunteers by their life satisfaction

Life satisfaction	Total	%
Excellent	70	20.34
Fair	236	68.60
No	14	4.06
Missing	24	6.97

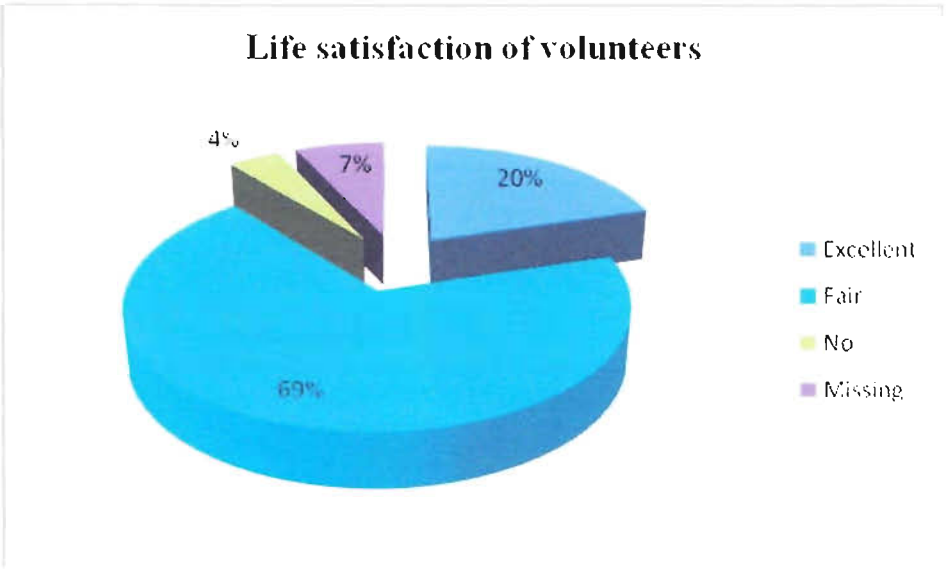


Figure 5.1.15: Distribution of the volunteers by their life satisfaction

5.1.16 Hope for the future

Table 5.1.16: Distribution of the volunteers by their hope for the future

Hope for the future	Total	%
Excellent	149	43.82
Good	143	42.05
Moderate	12	3.52
Disappointed	9	2.64
Missing	27	7.94

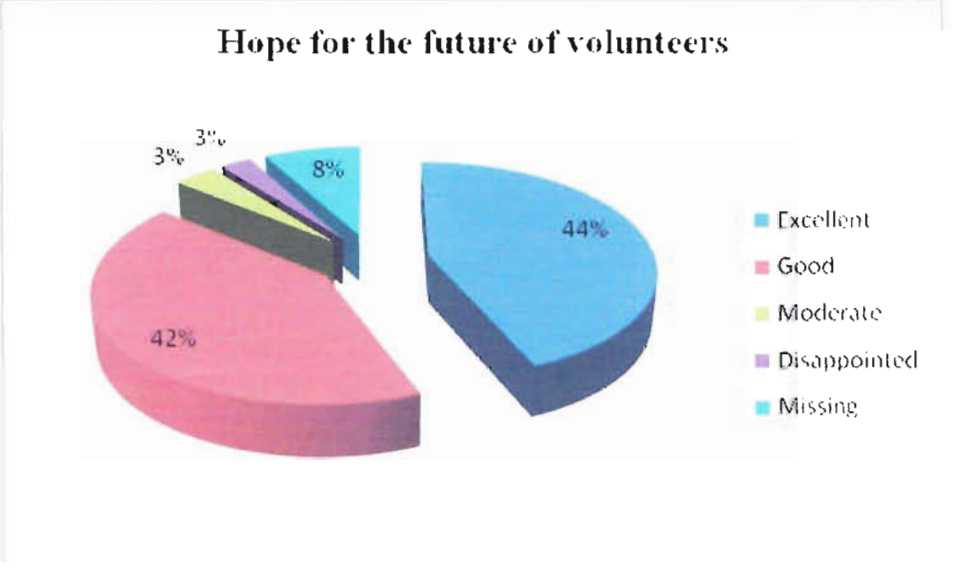


Figure 5.1.16: Distribution of the volunteers by their hope for the future

5.1.17 Having Stress

Table 5.1.17: Distribution of the volunteers by their having stress

Having stress	Total	%
High	98	28.65
Low	118	34.50
No	116	33.91
Missing	10	2.92

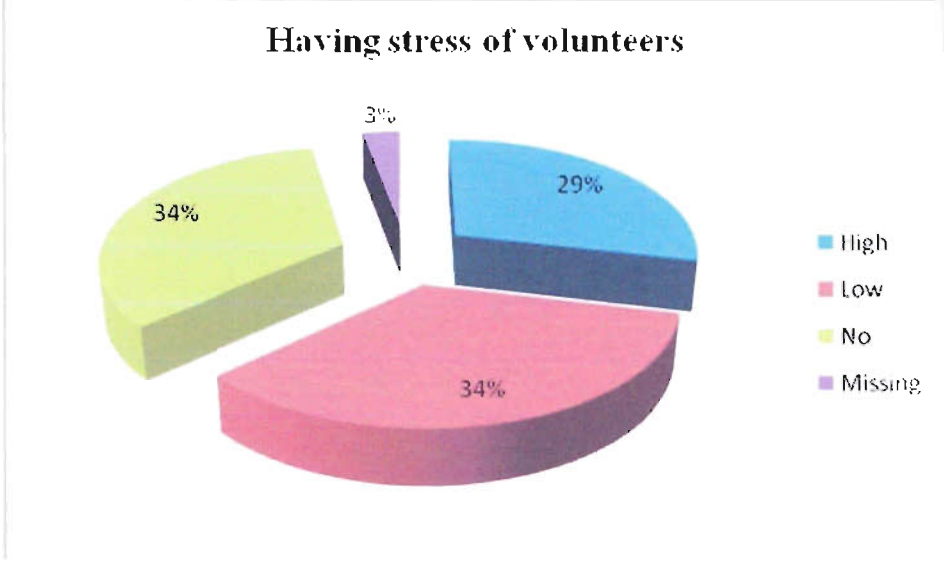
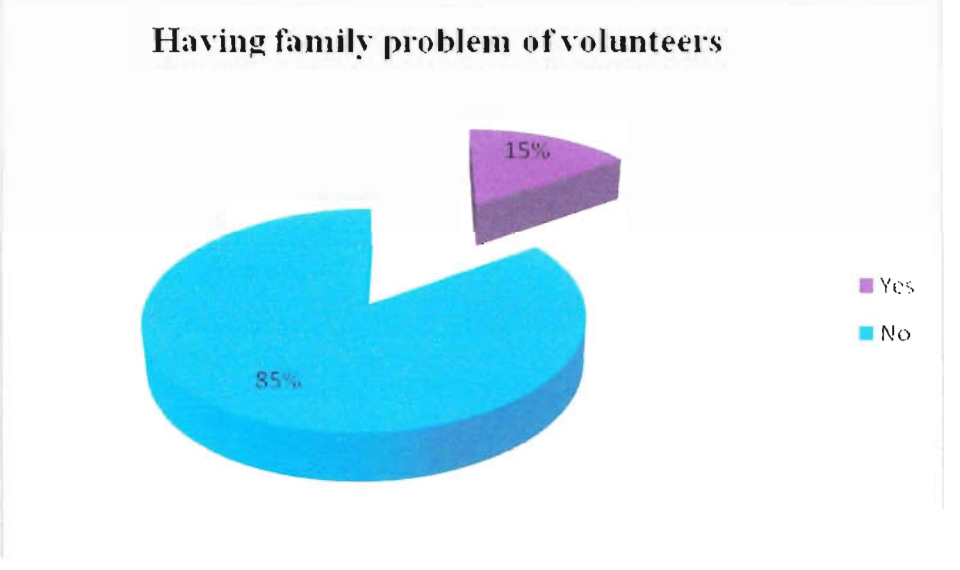


Figure 5.1.17: Distribution of the volunteers by their having stress

5.1.18 Family problem

Table 5.1.18: Distribution of the volunteers by their having family problem

Having Family problem	Total	%
Yes	52	15.2
No	290	84.79



Graph 5.1.18: Distribution of the volunteers by their having family problem

5.1.19 Reason for family problem

Table 5.1.19: Distribution of the volunteers by their reason for having family problem

Reason	Total	%
Parents divorce	1	2.12
Constant fighting	3	6.38
Step mother/father	3	6.38
Absence of father	1	2.12
Land dispute	3	6.38
Others	37	78.72

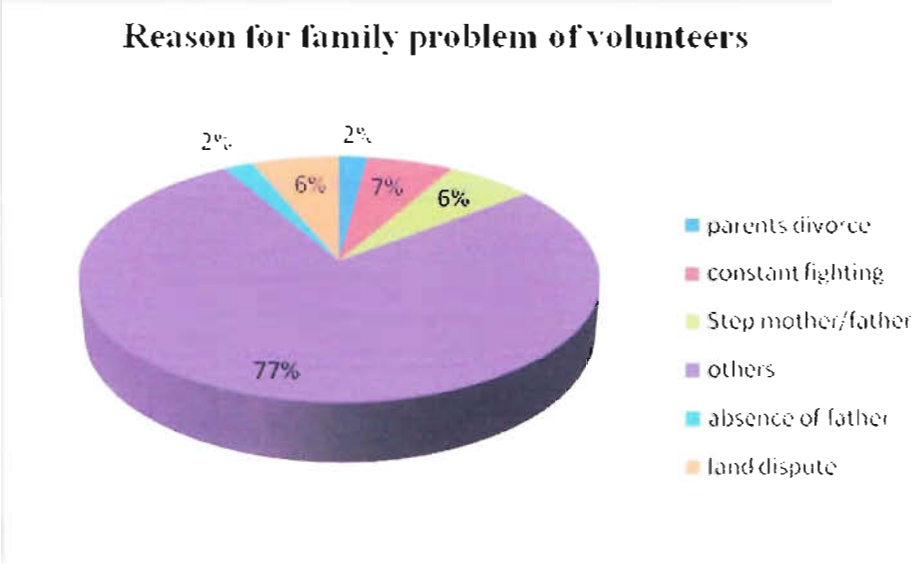


Figure 5.1.19: Distribution of the volunteers by their reason for having family proble

5.2 Knowledge about drug of abuse

5.2.1 General idea about drugs of abuse

Table 5.2.1: Distribution of the volunteers by their general idea about drugs of abuse

Have any idea about drug of abuse	Total	%
Yes	328	95.34
No	16	4.65

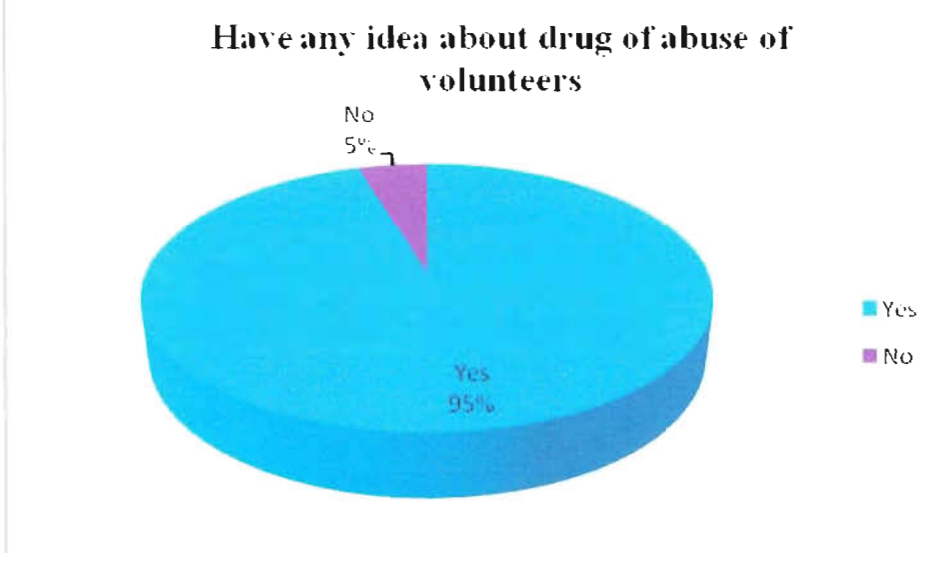


Figure 5.2.1: Distribution of the volunteers by their general idea about drug of abuse

5.2.2 Information source about drug of abuse

Table 5.2.2: Distribution of the volunteers by their information source about drug of abuse

Source	Total	%
Friends	50	19.76
Parents	32	12.64
Others	36	14.22
Media	126	49.8
Relatives	5	1.97
Study	6	2.37
Multiple answer	80	31.62

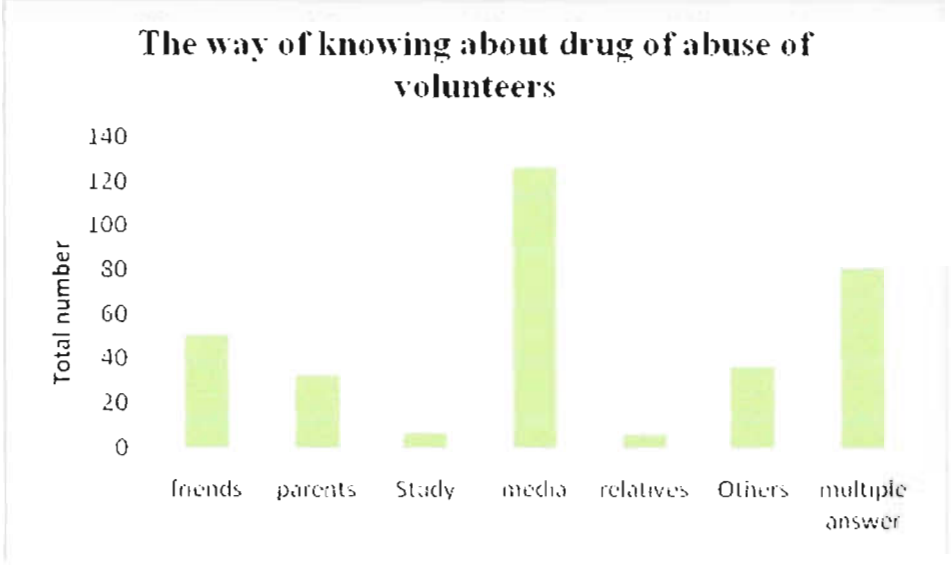


Figure 5.2.2: Distribution of the volunteers by their source about drug of abuse

5.2.3 Knowledge about dependency of a prescription drug

Table 5.2.3: Distribution of the volunteers by their knowledge about dependency of a prescription drug

Idea about dependency of a prescription drug	Total	%
Yes	284	82.79
No	59	17.2

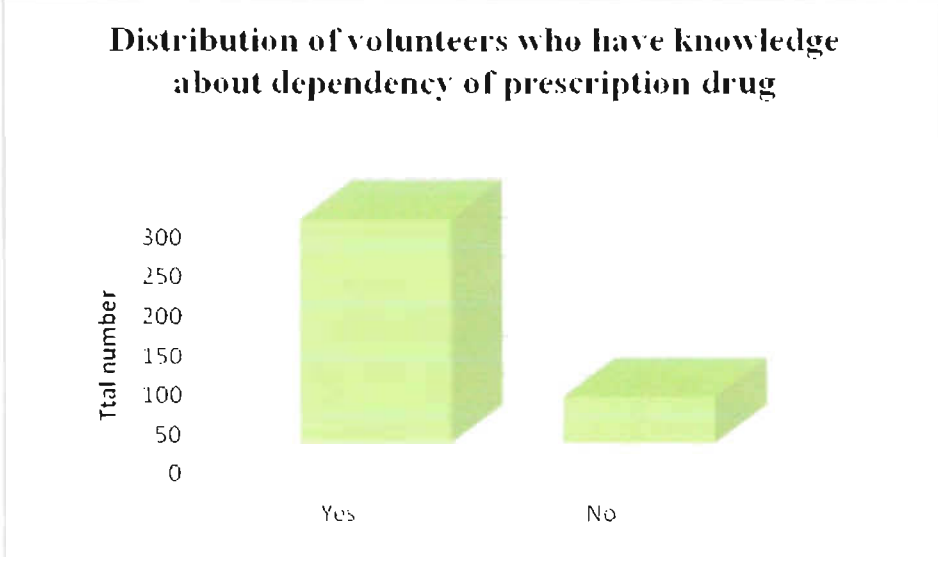


Figure 5.2.3: Distribution of the volunteers by their knowledge about dependency of a prescription drug

5.2.4 Information source about dependency of a prescription drug

Table 5.2.4: Distribution of the volunteers by their information source about dependency of a prescription drug

Source	Total	%
Friends	58	19.93
Relatives	5	1.71
Media	58	19.93
Doctors	66	22.68
Study	36	12.37
Pharmacist	46	15.8
Dispensary	6	2.06
Multiple answer	3	1.03
Others	13	4.46

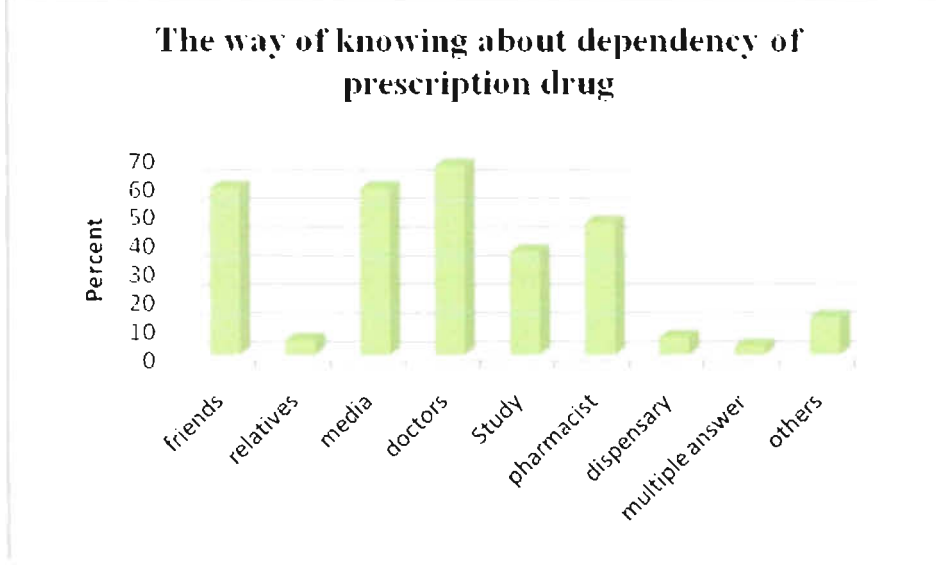


Figure 5.2.4: Distribution of the volunteers by their information source about dependency of a prescription drug

5.2.5 Involvement with drugs of abuse

Table 5.2.5.1: Distribution of the volunteers those who involved with drug of abuse

Involvement with drug of abuse	Total	%
Yes	80	23.46
No	264	77.41

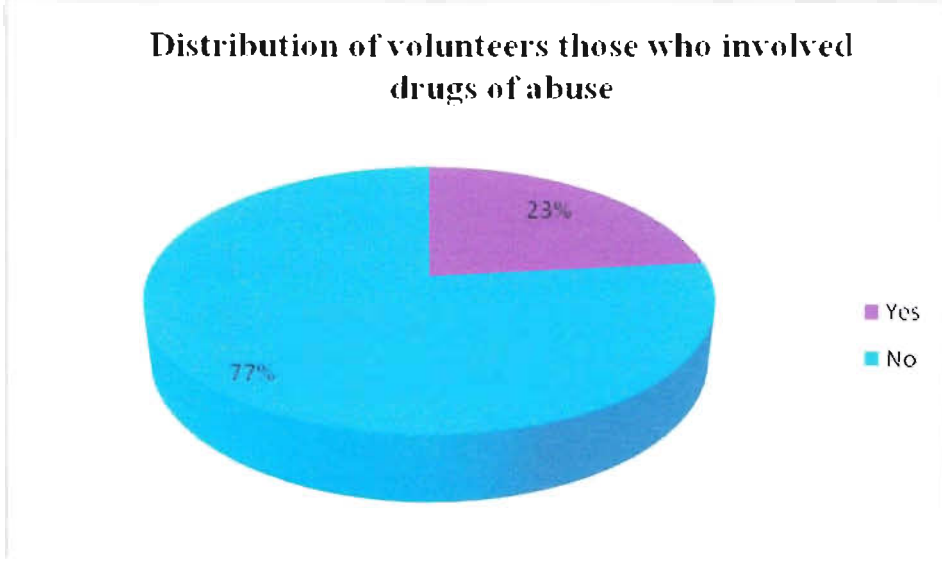


Figure 5.2.5.1: Distribution of the volunteers those who involved with drug of abuse

Table 5.2.5.2: Distribution of the volunteers with different drugs of abuse

Drugs name Drugs name	Total Number	%
Cough Syrups	52	65
Ganja	48	60
Alcohol	40	50
Tranquilizers	23	28.75
Yaba	25	31.25
Bhang/Chorosh	10	12.5
Pain relievers	2	2.5
Codeine	9	11.25
Amphetamines	8	10
Marijuana	2	2.5
Phensidyl	13	16.25
Pethidine	4	5
Cannabis	3	3.75
Antidepressants	4	5
Opium	3	3.75
Heroin	8	10
Hypnotics	2	2.5
Cocaine	5	6.25

5.3 Perception about drugs of abuse

5.3.1 Idea about the condition of drug of abuse in Bangladesh

Table 5.3.1: Distribution of the volunteers those who think drug of abuse is common in Bangladesh

Drug of abuse is common in Bangladesh	Total	%
Yes	307	89.50
No	36	10.49

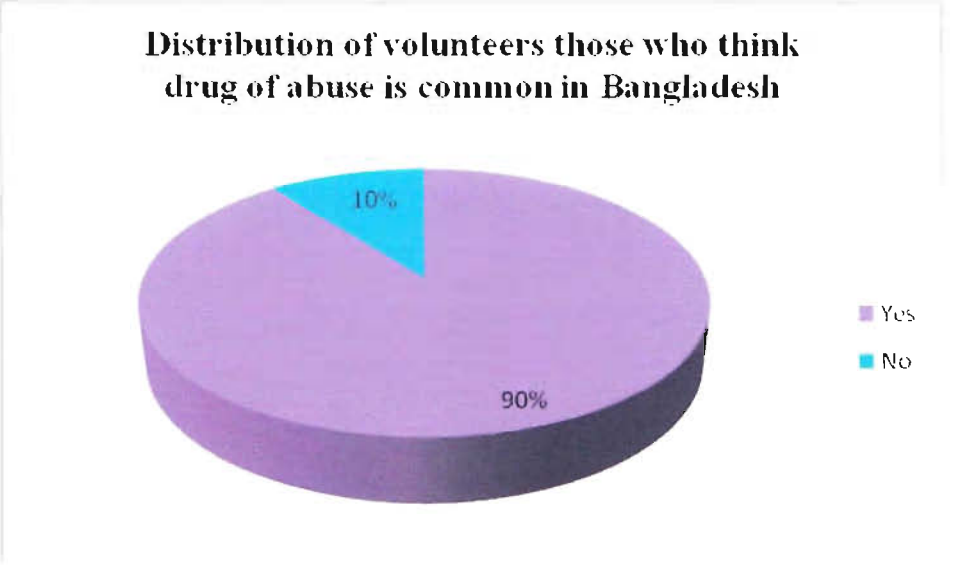


Figure 5.3.1: Distribution of the volunteers those who think drug of abuse is common in Bangladesh

5.3.2 Possible reason for drugs of abuse is common in Bangladesh

Table 5.3.2: Distribution of the possible reason for drug of abuse is common in Bangladesh

Reason	Total	%
Lack of Gov. law enforcement	42	13.04
Lack of knowledge	61	18.94
Lack of honesty	83	25.77
Lack of practice of religion	49	15.21
Multiple answer	82	25.46
Others	5	1.55

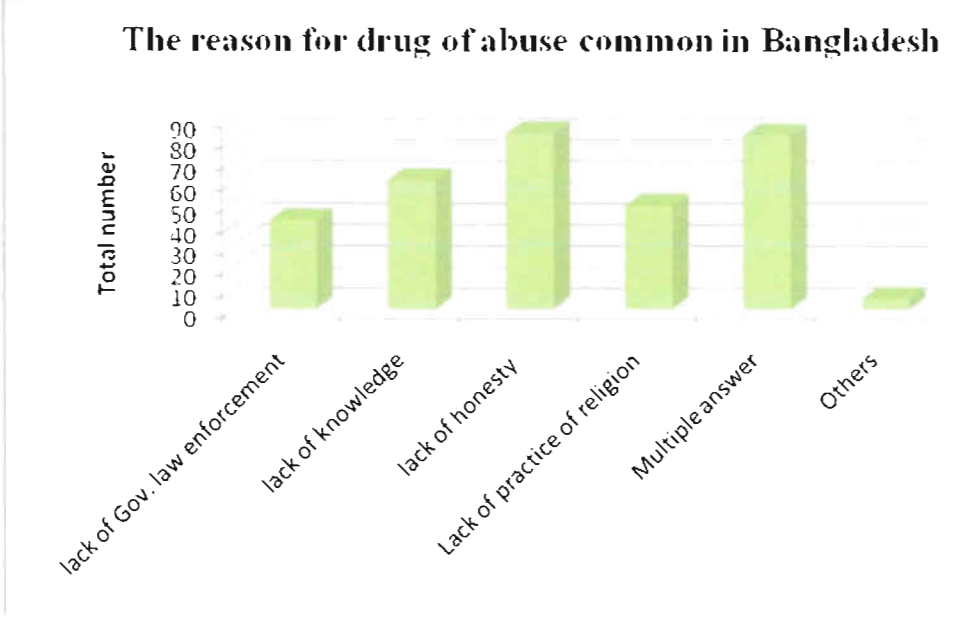


Figure 5.3.2: Distribution of the possible reason for drug of abuse is common in Bangladesh

5.3.3 Necessity to control drugs of abuse in Bangladesh

Table 5.3.3: Distribution of the volunteers those who think drug of abuse should be controlled in Bangladesh

Drug abuse should be controlled in Bangladesh	Total	%
Yes	320	93.29
No	23	6.7

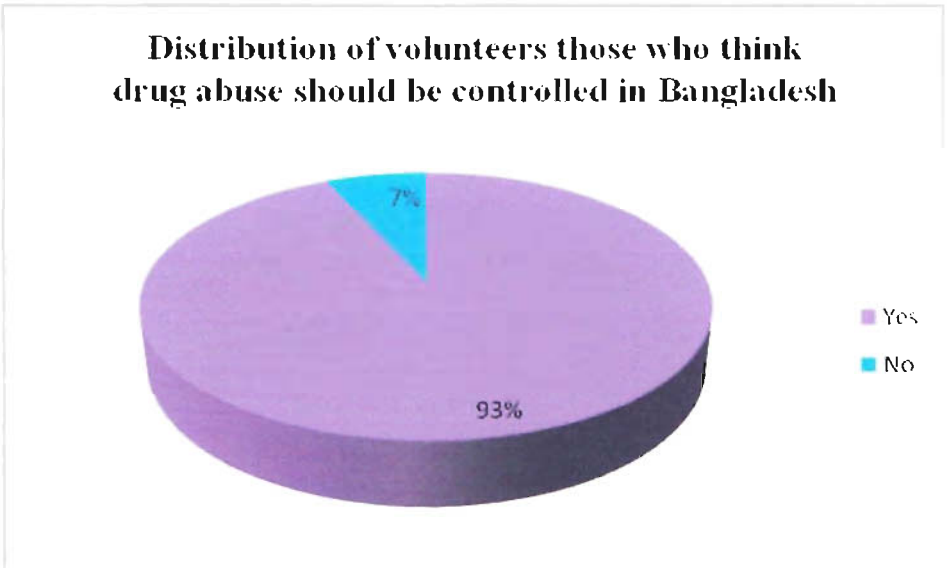


Figure 5.3.3: Distribution of the volunteers those who think drug of abuse should be controlled in Bangladesh

5.3.4 Possibility to remove drugs of abuse from Bangladesh

Table 5.3.4: Distribution of the volunteers those who think drug of abuse is possible to remove from Bangladesh

Possibility to remove drug abuse from Bangladesh	Total	%
Yes	223	65.39
No	118	34.60

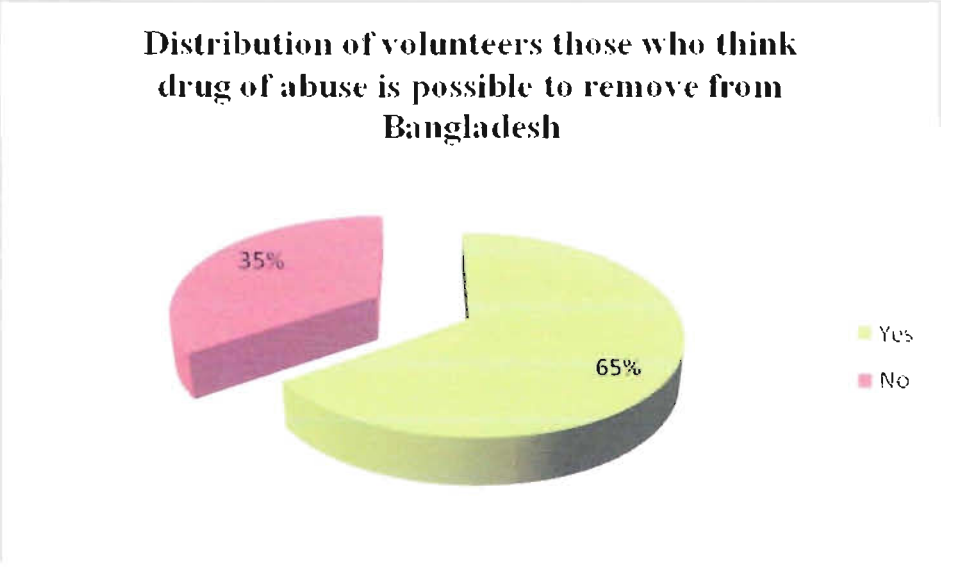


Figure 5.3.4: Distribution of the volunteers those who think drug of abuse is possible to remove from Bangladesh

5.3.5 Possible way for removing drug of abuse from Bangladesh

5.3.5: Distribution of the possible way for removing drug of abuse from Bangladesh

Possible way	Total	%
By increasing knowledge	73	30.93
By enforcing Gov. law	38	16.1
By increasing honesty	29	12.28
Properly practice of religion	27	11.44
Multiple answer	60	25.42
Others	9	3.81

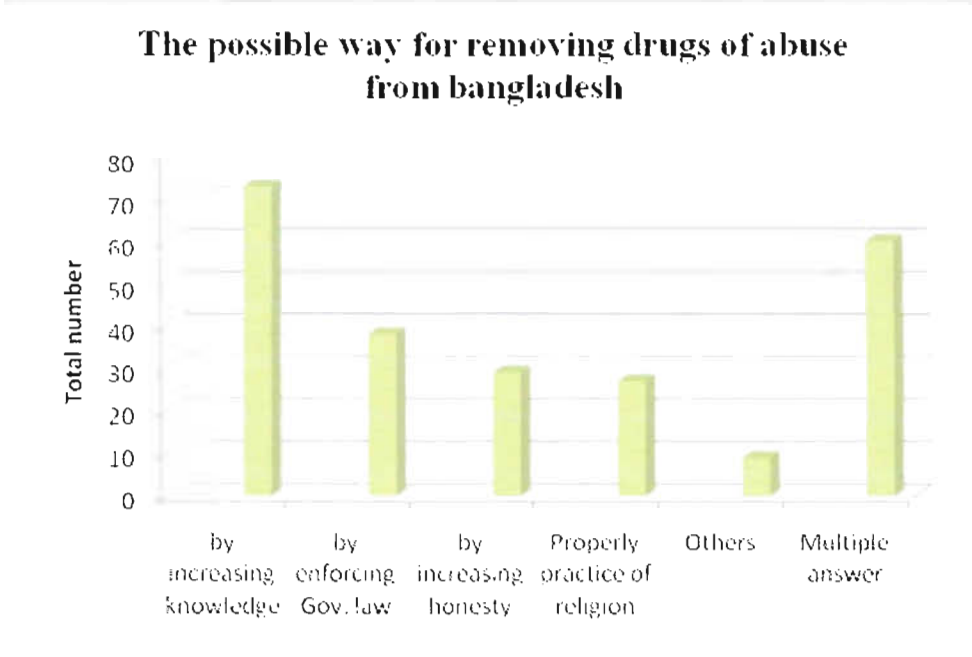


Figure 5.3.5: Distribution of the possible way for removing drug of abuse from Bangladesh

5.4 Data comparison between different categories of volunteers

Table 5.4.1: Socio demographic Characteristics of different categories of volunteers

Characteristics	All respondents (%)	Nondrug abuser (%)	Drugs abuser (%)
1)Sex			
• Male	82.21	82.50	81.25
• Female	17.79	17.49	18.75
2) Marital status			
• Married	6.10	4.92	10
• Single	91.27	92.42	87.5
• Others	2.61	2.65	11.25
3)Religion			
• Muslim	88.62	89.35	86.25
• Hindu	10.49	10.26	10.22
• Buddhist	0.29	-	1.13
• Christian	0.58	0.38	1.25
• Others	-	-	-
4) Location of the Residence			
• Urban areas	62.97	52.76	43.75
• Semi Urban areas	32.06	21.86	43.75
• Semi-rural areas	1.35	0.29	5
• Rural areas	3.49	2.04	6.25
5) Education level			
•Graduate	16.86	15.15	5.23
•Undergraduate	83.13	84.84	18.02
6) Gross Family Income			
• Less than Taka 10,000	2.35	1.53	-
• Taka 10,000- Taka 30,000	6.17	6.13	3.92
• Taka 30,000- Taka 50,000	43.52	45.21	19.60
• Taka 50,000- Taka 70,000	12.64	13.02	17.64
• Taka 70,000- Taka 90,000	7.94	8.81	7.84
• Taka 90,000- Taka 1,10,000	6.47	4.98	17.64
• Taka 1,10,000- Taka 1,30,000	4.41	4.59	5.88
• Taka 1,30,000 above	16.47	15.70	27.45

7) Father's Occupation			
• Business	42.35	41.82	
• Private Service	24.41	23.95	4.25
• Gov. Service	20.88	20.15	25
• Unemployed/Pensioner	0.58	0.38	22.5
• Stay abroad	6.17	7.22	1.25
• Politician	2.94	3.04	2.5
• Others	2.64	3.42	2.5
			3.75
8) Mother's Occupation			
• Business	1.76	1.13	3.65
• Private Service	1.76	1.89	1.21
• Gov. Service	10	8.71	13.41
• Unemployed/Pensioner	-	-	-
• housewife	83.52	84.84	73.17
• Doctor	2.35	1.89	3.65
• Others	1.17	1.51	4.87
9) Father's Education level			
• Illiterate	0.29	0.38	-
• Can read only	0.58	0.38	1.25
• Can write a letter	1.75	1.15	3.75
• SSC or equivalent	17.25	18.46	13.75
• HSC or equivalent	20.76	20	23.75
• Graduate or higher	58.49	60.38	53.75
• Others	0.87	-	3.75
10) Mother's Education level			
• Illiterate	0.59	0.38	1.26
• Can read only	12.42	12.35	12.65
• Can write a letter	2.07	1.93	2.53
• SSC or equivalent	32.84	32.43	34.17
• HSC or equivalent	33.43	35.13	27.84
• Graduate or higher	18.04	17.76	18.98
• Others	0.59	-	2.53
11) Present situation of living			
• Parents	53.03	57.26	40
• Father	0.63	-	2.5
• Mother	4.47	4.70	3.75
• wife/ husband	1.27	1.70	5
• alone	39.61	35.89	50
• others	0.95	0.42	2.5
12) Life satisfaction			
• Excellent	20.34	15.98	32.5

• Fair	68.60	56.10	25
• No	4.06	1.16	33.75
• Missing	6.97	3.48	8.75
13) Hope for the future			
• Excellent	43.82	33.52	44.30
• Good	42.05	35.29	29.11
• Moderate	3.52	2.05	6.32
• Disappointed	2.64	1.47	5.06
• Missing	7.94	4.41	15.18
14) Having Stress			
• High	28.65	27.48	32.5
• Low	34.50	37.40	25
• No	33.91	33.96	33.75
• Missing	2.92	1.14	8.75
15) Family problem			
• Yes	15.20	19.84	30
• No	84.79	89.31	70

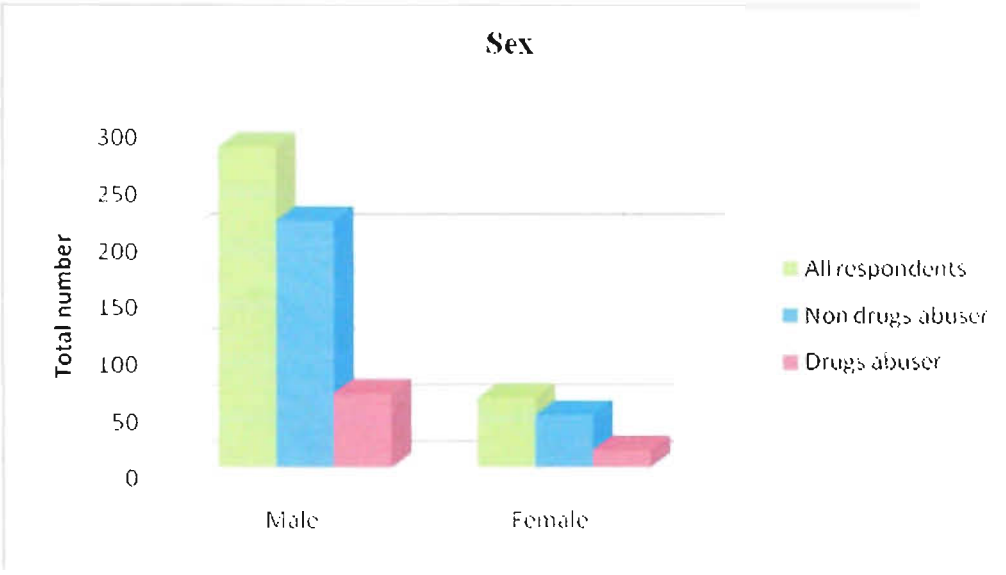


Figure 5.4.1: Comparison about Sex between different categories of volunteers

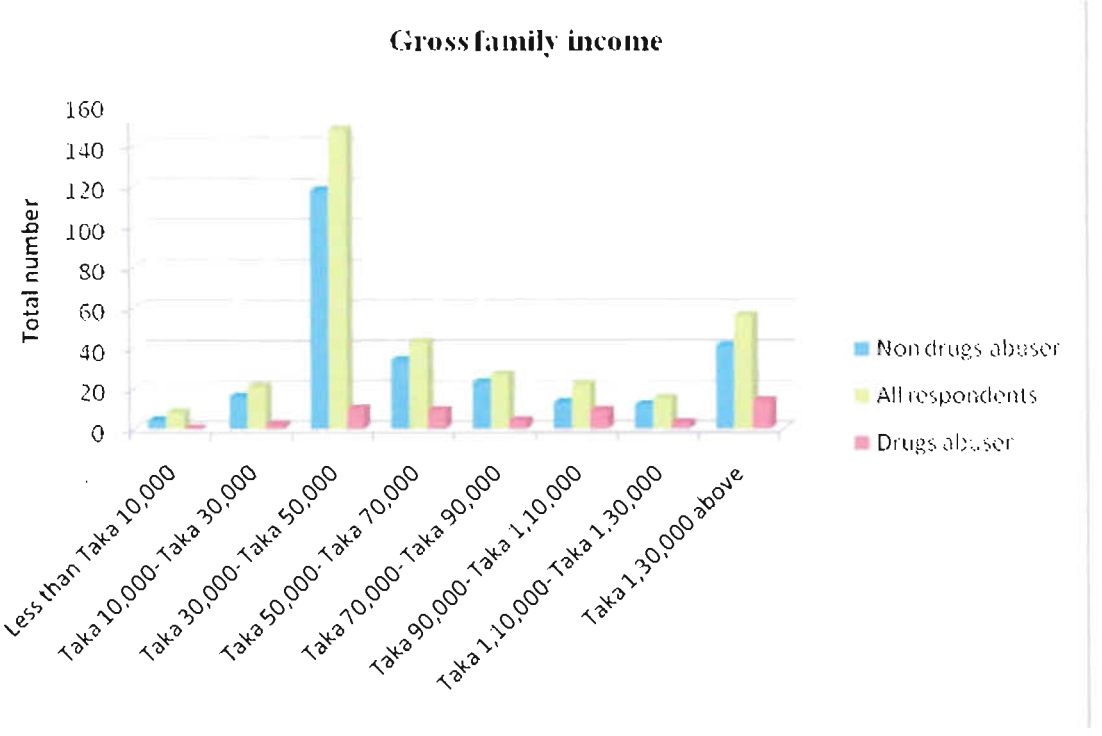


Figure 5.4.2: Comparison about gross family income between different categories of volunteers

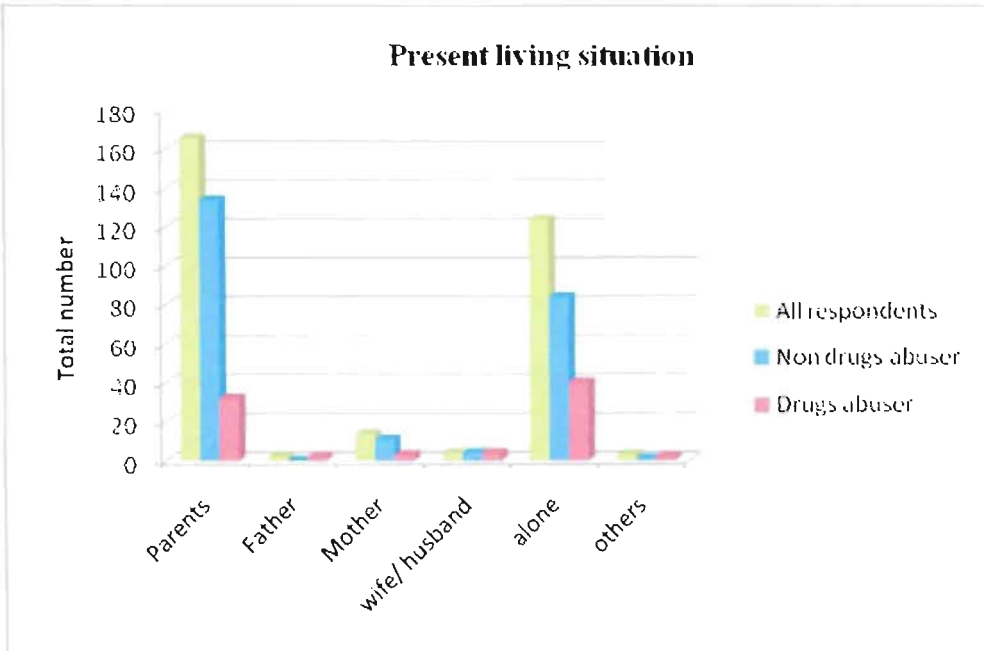


Figure 5.4.3: Comparison about current living situation between different categories of volunteers

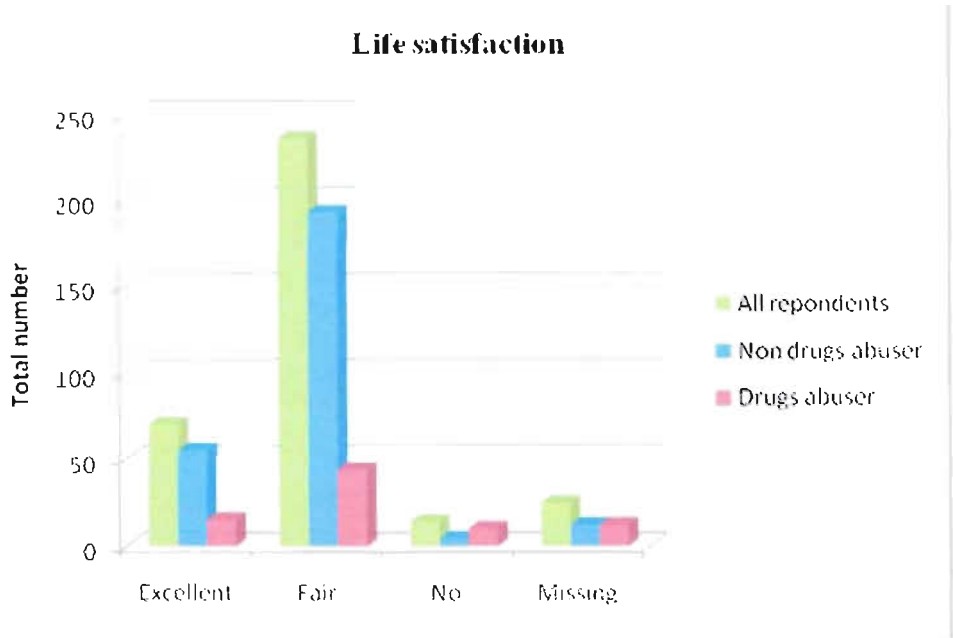


Figure 5.4.4: Comparison life satisfaction between different categories of volunteers

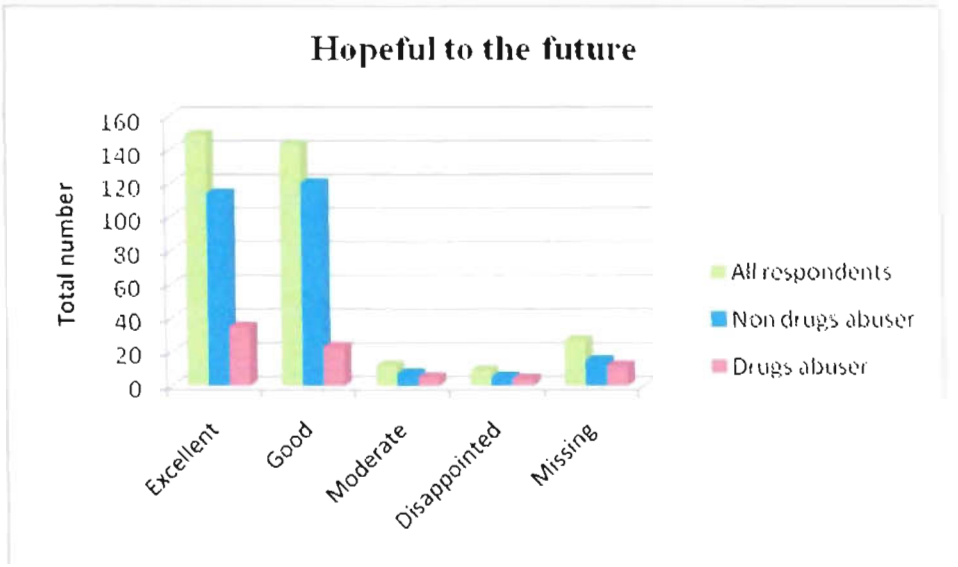


Figure 5.4.5: Comparison hope for the future between different categories of volunteers

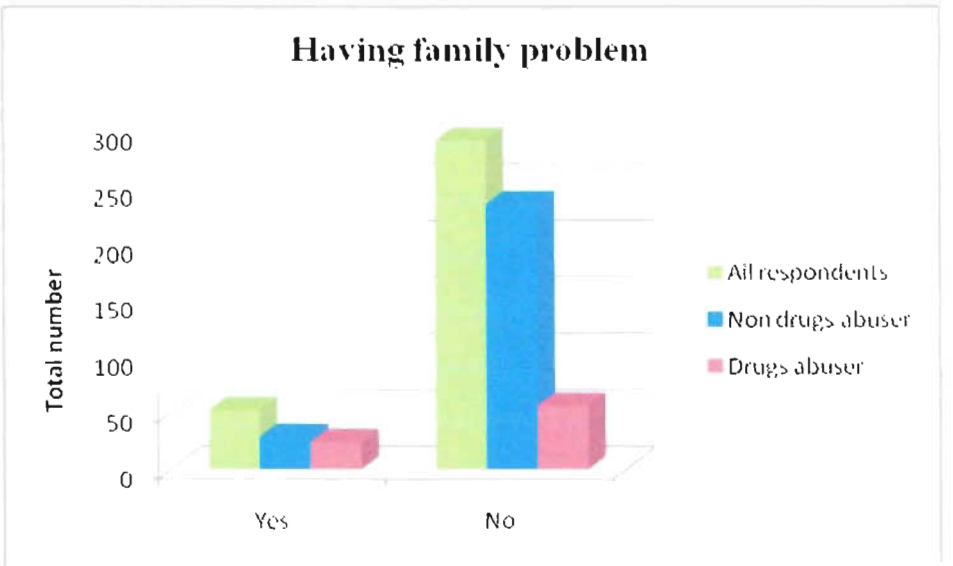


Figure 5.4.6: Comparison having family problem between different categories of volunteers

6. DISCUSSIONS

Drug abuse is a growing serious public health problem that affects almost every community and family in the world. The problem exists in many families regardless of income level, educational background or culture. As people experience a more complicated lifestyle, the number of sufferers is increasing. Now-a-days Drug abuse in young generation became a very sensitive issue. In context of Bangladesh it is very important.

The total participants in my survey are 345. Among them 82% are male and 18% are female. About 23% participants involved with drug of abuse. Among them 81% are male and 19% are female. That means both male and female are involved with drug of abuse at the same rate. Among total participants 89% are Muslim, 10 % are Hindu, and 1% is others. In case of drug abuser 86% are Muslim, 10% Hindu, and 4% are others. So it is clear that all religion peoples are involved with drug of use.

Among total participants 62% students are living urban areas, 32% are semi urban, 6% are rural and semi rural areas. In case of drug abuser both urban and semi urban are 43% and 14% are rural and semirural areas. So people in anywhere involved with drug of abuse. Gross family income plays an important role for drug of abuse. In case of students whose parents has high income, has high possibility for drug abuse. Among drug abuser 27% of students have high gross family income (more than 130000 taka per month). It is the top percentage among the total range of gross family income.

About 53% total students are living with their family, 40% of total students are living alone. But in case of drug abuser 50% students are living alone and 40% students are living with family. That mean when students are living alone then it creates a huge opportunity for drug of abuse and that's why those students are engaged with drug of abuse.

In case of total participants 4% students has no life satisfaction and 7% students are missing life satisfaction. But in case of drug abuser 13% students has no life satisfaction and 15% students are missing life satisfaction. So life satisfaction plays a big role for drug of abuse. Most of the participants has excellent (44%) and good(42) hope for the future. Some of the participants has moderate (3%), disappointed (3%), missing (8%) but in case of drug abuser this percentage increased like moderate (6%), disappointed (5%), missing (15%). So hopeful for the future also influence the students for drug of abuse.

Family problem influence the dug of abuse very much. Among total participants 15% students has family problem but in case of drug abuser 305 students has family problem. Family problem may be parents divorce, constant fighting, Step mother/father, absence of father, land dispute. Most of the students hide about exact reason for family problem.

Almost all students (95%) have knowledge about drug of abuse including its harmful effect. About 50% students came to know about drug of abuse by media and other source are friends (20%), parents (13%). But our parents should take more responsibility for providing knowledge about drug of abuse to their family members.

Most of the students (83%) have idea about dependency of a prescription drug. In case of drug abuser it is 86%. Most of the students came to know about that from doctor (23%), media (20%), friends(20%), pharmacist(16%). In case of drug abuser it is doctor (20%), media (13%), friends(18%), pharmacist(20%).

The results show that most of the drug abusers use cough syrup (65%), ganja (60%), alcohol (50%), yaba (31%), and tranquilizers (29%). Even they use phensidyl (16%), pethidine (5%), heroin (10%) and many other drugs. Drug abusers use cough syrup because it is easy to find, affordable, and perfectly legal. But taking mass quantities of cough syrup can cause hallucinations, loss of motor control, and sensations. Other possible side effects are confusion, impaired judgment, blurred vision, dizziness, paranoia, excessive sweating, slurred speech, nausea, vomiting, abdominal pain, irregular heartbeat, high blood pressure, headache, lethargy, numbness of fingers and toes, facial redness, dry and itchy skin, loss of consciousness, seizures, brain damage, and even death. [19]

About 90% students think that drug of abuse is very common in Bangladesh. In case of drug abuser it is 96%. There are many reasons behind this problem. About 26% students think that due to lack of honesty it happens. Other reasons are lack of Gov. Law enforcement (13%), lack of knowledge (19%), and lack of practice of religion (15%). In case of drug abuser it is lack of honesty (59%), lack of Gov. Law enforcement (11%), lack of knowledge (18%), and lack of practice of religion (15%). So it is clear those drug abusers are not aware about their religion. So the practice religion influence to the drug of abuse.

It is the high time to control the drug of abuse because drug abuse is a growing problem in Bangladesh. Most of the students (93%) think that drug abuse should be controlled in Bangladesh. But it is a big question that it is possible in Bangladesh? About 65% students think that it is possible in Bangladesh. In case of drug abuser it is 61%. Another question comes here that, how it can possible? About 30% students think that by increasing knowledge about drug of abuse, it is possible to control drug of abuse. Other possible ways are by enforcing Gov. Law (16%), by increasing honesty (12%), properly practice of religion (11%). But about 30% students think that it is not possible by a single way. That's why they give multiple ways for solution this problem.

7. RECOMMENDATIONS

As described above, overall drug use among youth in many countries is high. In addition, there is some tendency towards presenting some drugs as less harmful than they actually are. However, where consistent and sustained preventive interventions have been undertaken, positive results are gradually emerging. But it is necessary to invest sufficient resources, to be prepared to wait for some time to elapse before results become visible and to use tested and validated principles and approaches in the design and implementation of prevention strategies and programmes.

No single approach or strategy has proven to be consistently effective in reducing drug abuse among young people. The evaluation of various programmes does not allow the identification of a recipe to be followed in all countries and contexts. There are too many factors influencing drug abuse and it is difficult to isolate them from one another. However, there is some consensus among experts, practitioners and youth themselves on what kinds of factors need to be taken into consideration when designing prevention programmes for youth.

7.1 Multiple approaches

No single programme or approach can make the difference. Drug abuse is caused by a complex series of factors and to address such abuse effectively it is necessary to use a wide range of interventions. Each individual programme should be part of a broader approach and interventions should be designed to complement one another. Effective drug abuse prevention programmes rarely use one prevention strategy exclusively. In general, the lessons learned and the experience of several decades of drug abuse prevention suggests that three general elements should be included in prevention programmes:

- Addressing the values, perceptions, expectations and beliefs that young people associate with drugs and drug abuse.
- Developing life skills and social competencies to increase the capacity to make informed and healthy choices.
- Creating an environment where children and young people have the possibility to be involved in healthy activities and where substance abuse is not promoted by peers, family, the media and other influential actors in the community.

Programmes involving a multiple approach typically contain a range of prevention approaches and strategies that may include one or more of the following:

- Enhancement of protective factors and an attempt towards reversing or reducing known risk factors.
- Information on all forms of abuse of substances, including alcohol, inhalants and tobacco, as well as factual information about drugs, drug abuse etc..
- Life-skills training, including training in resistance skills and development of social and personal skills and social competence including also exercises to increase self-perception and confidence.
- Interactive teaching methods that involve young people in the drug education programmes.
- Alternatives to drug abuse, such as sports, dance, theatre and spiritual and cultural enhancement.
- Family development, including parent training and advocacy.
- Peer education and peer group counseling.
- Advertisements and media messages on substance abuse prevention that are not based on scare tactics, but that focus on positive alternatives to drug abuse. [8]

7.2 Drug prevention education at an early age

Recent information on drug abuse among children and youth suggests the need to begin substance abuse preventive education early in life and to continue such education with developmentally appropriate interventions. The age of first experience with drugs has been falling in many regions of the world. Delaying drug use might be useful even if entirely preventing the abuse of drugs may be difficult to achieve. Therefore, it seems important for the success of prevention programmes that drug abuse preventive education should start in primary school. There is growing evidence that preventive education needs to be delivered at a time when it is more likely to influence attitudes and behaviour:

Obviously, drug education entails not only information and knowledge about drugs, but also developing skills to identify feelings and be able to communicate those feelings to others. Success with such a strategy, as well as with other strategies, depends also on targeting all forms

of drug abuse, including alcohol and tobacco. Drug education needs to continue into secondary school and be sustained over a long period of time to be effective, because the impacts of the education, if not sustained, can fade quickly over time. [8]

7.3 Participation and peer approaches

Young people are in many situations considered to be a target population and a problem, instead of also being a resource in the prevention of drug abuse. Raising the awareness of young people by providing them with essential, accurate and credible information is the first step to mobilize their interest. Their active participation can make a difference in drug abuse prevention. Furthermore, it is essential that their voices are heard in the attempt to raise awareness among policy makers and the public at large and that suggestions from young people on actions to be undertaken are seriously considered. Youth should be involved in all stages of the development of prevention programmes.Peer education is a relatively new innovation in the teaching methodology and in the prevention of drug abuse. Peer-based interventions should be planned carefully. It is important to target the intervention and to ensure that peer educators are carefully selected. Being young does not qualify one to be an effective peer educator. [8]

7.4 Life skills

A review of evaluations of primary and secondary school experiences in various countries suggests that prevention approaches based on life skills are the most effective approaches. Life skills are considered to be abilities for adaptive and positive behaviour that enable individuals to deal effectively with the demands and challenges of everyday life. Education in life skills applied to drug abuse prevention is supposed to facilitate the practice and reinforcement of psychosocial skills, thereby contributing to the promotion of personal and social development and the prevention of health and social problems, especially as related to drug abuse. Life skills that are important to promote the health and well-being of children and young people include: self-awareness, empathy, communication skills, interpersonal skills, decision-making skills, problem-solving skills, creative thinking, critical thinking, coping with emotions and coping with stress. In drug abuse prevention, that means imparting skills in drug resistance and critical thinking, social competence and the communication skills needed to explain and reinforce personal anti-drug commitments. [8]

7.5 Parents and community involvement

Prevention programmes should be integrated into the institutions and organizations that are closest to children and young people and also to their families. The family and the community at large should be involved in order to reinforce the information that is communicated to young people in the context of prevention activities. Projects should seek to involve parents and communities, since the programmes involving parents in school drug education appear to be more effective. Parental involvement can be a route to and one aspect of wider community reinforcement of the drug education effort. [8]

7.6 Targeted approaches

Not all young people are the same and they are not all equally vulnerable. Strategies should therefore be carefully tailored to clearly defined target groups. Programmes should be age- and gender-specific, developmentally appropriate and culturally sensitive. That means that counselling and treatment services should be child and youth friendly. Government agencies, non-governmental organizations and youth workers should be flexible enough to reach young people where they are and engage them in a constructive dialogue about their choices and options with respect to substance abuse. That means bringing drug abuse prevention to the streets, into the discos, to rave parties and wherever else it is necessary to go in order to convey effective prevention messages. [8]

7.8 Long-term and intensive investments

Finally, substance abuse behaviours usually change very slowly. Prevention programmes therefore need to be sustained over a long period of time to be effective. Several studies have monitored the attitudes of young people towards drugs, the perception of risk and harm associated with specific drugs and patterns of abuse. The perception of drugs by a child or a young person changes considerably over time. Various circumstances can positively or negatively influence the chances of success of prevention programmes that may appear to have been successful in some instances. Drug abuse prevention is a continuing process that needs to be reinforced at different stages in the development of children and adolescents, in particular at critical points of transition in life. [8]

8. LIMITATIONS & CONCLUSION

8.1 Limitations

Several limitations noted during the research work. The first limitation is this study was not able to pick up sample randomly. This study just collected data from some group of students. The second limitation is most of the students felt shy to give the accurate answer. Some of students gave bias data. Another limitation is small sample size. So the result may not represent the whole situation of private university in Dhaka. However, it certainly gives a gross idea about the level of knowledge and perception on drugs of abuse.

8.2 Conclusion

Despite the above limitations, this study gives a gross idea about drug of abuse of private university students in Dhaka city. This study was able to find out, what is the Knowledge of the students about drug of abuse, what is the perception of the students about drug of abuse. By this study information were provided about drug of abuse to the students. At the present time drug abuse is very growing serious problem in Bangladesh. Due to drug abuse crime is rapidly increasing. If the government of Bangladesh does not take proper steps for controlling it, it may occur serious damage in our young generation as well as in our society. The people of Bangladesh also should help to the government for controlling it. Religious value also plays an important role for controlling it.

9. REFERENCES

1. Substance abuse From Wikipedia, the free encyclopedia. [homepage on the Internet]. 2008 [cited 2010 Sep 10]. Available from: http://en.wikipedia.org/wiki/Drug_abuse

2. Drug Abuse and Addiction symptoms, signs, treatments, cause and prevention. [homepage on the Internet]. 1996-2010 [cited 2010 Sep 17]. Available from: http://www.medicinenet.com/drug_abuse/article.htm

3. Drug Abuse and Addiction Signs, Symptoms, and Help for Drug Problems and Substance Abuse. [homepage on the Internet]. 2001-2010 [cited 2010 Sep17]. Available from: http://helpguide.org/mental/drug_substance_abuse_addiction_signs_effects_treatment.htm

4. The Natural History of Drug Abuse. [homepage on the Internet]. 2001-2010 [cited 2010 Sep 17]. Available from: http://www.addictioninfo.org/articles/592/1/The-Natural-History-of-Drug-Abuse/Page1.html

5. Commonly Abused Drugs Chart,Drugs of Abuse and Related topic-NIDA. [homepage on the Internet]. No date [cited 2010 Oct 12]. Available from: http://www.drugabuse.gov/DrugPages/DrugsofAbuse.html

6. Common Drugs of Abuse. [homepage on the Internet]. 2001-2010 [cited 2010 Oct 12]. Available from: http://helpguide.org/mental/pdf/Common%20Drugs%20of%20Abuse-1.pdf

7. Causes of Drug Addiction [homepage on the Internet]. No date [cited 2010 Sep 13]. Available from: . http://www.drug-addiction-support.org/Causes-of-Drug-Addiction.html

8. Economic and Social Council. [homepage on the Internet]. 11 January 1999 [cited 2010 Oct 10]. Available from: http://www.unodc.org/pdf/document_1999-01-11_2.pdf

9. Ahmed SM, Rana AM, Chowdhury HM. Economic and Social Council. Substance and Drug Abuse: Knowledge, Attitude and Perception of Schoolgoing Adolescents in Bangladesh [homepage on the Internet]. 11 January 1999 [cited 2010 Oct 5].;6(2) Available from:

http://www.searo.who.int/en/Section1243/Section1310/Section1343/Section1344/Section1356_5328.htm

10. BANGLAPEDIA: Drug Abuse. [homepage on the Internet]. 2006 [cited 2010 Nov 12]. Available from: http://www.banglapedia.org/httpdocs/HT/D_0286.HTM

11. Aluede O. Okoza J, Fajoju S. European Journal of Social Sciences. Drug Abuse Among Students of Ambrose Alli University, Ekpoma, Nigeria [homepage on the Internet]. 2009 [cited 2010 Aug 17].;10(11) Available from: http://www.eurojournals.com/ejss_10_1_09.pdf

12. Oshodi OY, Aina OF, Onajole AT. Substance use among secondary school students in an urban setting in Nigeria: prevalence and associated factors [homepage on the Internet]. 2010 [cited 2010 J Jun 11].;Available from: http://www.wfad.se/latest-news/1-articles/219-substance-use-among-secondary-school-students-in-an-urban-setting-in-nigeria-prevalence-and-associated-factors

13. Madianos MG, Gefou-madianou D, Richardson D. Factors affecting illicit and licit drug use among adolescents and young adults in Greece [homepage on the Internet]. 1995 [cited 2010 J Apr 8].;Available from: PubMed U.S. National Library of Medicine National Institutes of Health, Web site: http://www.ncbi.nlm.nih.gov/pubmed/7625208

14. Kristy B, Kaloyanides D, Sean E. Prevalence of Illicit Use and Abuse of Prescription Stimulants, Alcohol, and Other Drugs Among College Students: Relationship with Age at Initiation of Prescription Stimulants [homepage on the Internet]. 2007 [cited 2010 J Apr 8].;27(5) Available from: National Center for Biotechnology Information, U.S. National Library of Medicine, Web site: http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2377411/

15. Mccabe SE, Teter CJ. Drug use related problems among nonmedical users of prescription stimulants: a web-based survey of college students from a Midwestern university. [homepage on the Internet]. 2007 [cited 2010 J May 18].;91(1) Available from: PubMed U.S. National Library of Medicine National Institutes of Health, Web site: http://www.ncbi.nlm.nih.gov/pubmed/17624690

16. Arria AM, Dupont RL. Nonmedical prescription stimulant use among college students: why we need to do something and what we need to do [homepage on the Internet]. 2010 [cited 2010 J Apr 8].;29(4) Available from: PubMed U.S. National Library of Medicine National Institutes of Health. Web site: http://www.ncbi.nlm.nih.gov/pubmed/ 20924877

17. Arria AM, Caldeira KM, Kasperski SJ. Increased alcohol consumption, nonmedical prescription drug use, and illicit drug use are associated with energy drink consumption among college students [homepage on the Internet]. 2010 [cited 2010 May 4].;4(2) Available from: PubMed U.S. National Library of Medicine National Institutes of Health, Web site: http://www.ncbi.nlm.nih.gov/pubmed/ 20729975

18. Ahmadi J, Fallahzadeh H, Salimi A. Analysis of opium use by students of medical sciences [homepage on the Internet]. 2006 [cited 2010 May 12].;15(4) Available from: PubMed U.S. National Library of Medicine National Institutes of Health, Web site: http://www.ncbi.nlm.nih.gov/pubmed/16553750

19. Cough and Cold medicine Abuse. [homepage on the Internet]. 1995-2010 [cited 2010 Nov 10]. Available from: http://kidshealth.org/parent/h1n1_center/h1n1_center_treatment/cough_cold_medicine_abuse.html#