

**The Knowledge of STIs including HIV/AIDS and Its Contraction
and Prevention among Students of Selected Universities in Dhaka,
Bangladesh**

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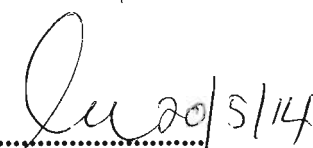
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DECLARATION

I declare that this thesis entitled “The Knowledge of STIs including HIV/AIDS and Its Contraction and Prevention among Students of Selected Universities in Dhaka, Bangladesh” is my own work and all sources that I have used or quoted have been indicated and acknowledged by means of complete references. Any mistakes or inaccuracy is my own.

Signature.....*D. tanvir*

Date.....*18 May, 2014*

(Dewan Tanvir Ahmed)

DEDICATION

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This thesis is dedicated to my parents, Begum Shamsunnahar Qurashi and Dewan Zahir Uddin Chowdhury

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ABSTRACT

The present thesis explores the knowledge of STIs including HIV/AIDS and its contraction and prevention among students of selected private and public universities in Dhaka, Bangladesh. The study is based on a survey of 320 students. Result suggests that 98% students heard about AIDS, among them 94% students mentioned about contraction and prevention of AIDS. Seventy five percent of students reported hearing about STIs, among them 64% mentioned at least one possible cause of STIs, 42% mentioned at least one sign and symptom of STIs, 24% mentioned at least one complication of STIs, but few students knew STIs testing place in town. Most students reported that STIs is curable, and one third reported that STIs is preventable. Sixty nine percent of male and only 17% female students reported to have STIs symptom present among them during last one year. However, female students mentioned more frequently to have been seeking advice from health professionals such as doctor, nurse in a clinic or hospital (35%) followed by friends and relatives (30%) and male students sought advice from friends and family (25%) followed by health professionals such as doctor, nurse in a clinic or hospital (13%). The findings of the study suggest that university students have knowledge on AIDS and STIs, but knowledge on its contraction and prevention is comparatively poor.

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ACRONYMS

ACPR	Associates for Community and Population Research
AIDS	Acquired Immune Deficiency Syndrome
BBS	Bangladesh Bureau of Statistics
BDHS	Bangladesh Demographic and Health Survey
CAH	Child and Adolescent Health
ETG	Expanded Theme Group
GOB	Government of the People's Republic of Bangladesh
HAPP	HIV/AIDS Prevention Project
HATI	HIV/AIDS Targeted Intervention
HIV	Human Immunodeficiency Virus
ICDDR,B	International Centre for Diarrhoeal Disease Research, Bangladesh
ICPD	International Conference on Population Development
ICT	Information and Communication Technology
NAC	National AIDS Committee
NGO	Non Government Organization
RTI	Reproductive Tract Infection
STD	Sexually Transmitted Disease
STIs	Sexually Transmitted Infections
UN	United Nation
UNAIDS	United Nations Programme on HIV/AIDS
UNFPA	United Nations Population Fund
UNICEF	United Nations International Children and Education Fund
WHO	World Health Organization

Chapter 1

Introduction

1.1 Introduction

Sexual and reproductive health problem is a major concern particularly to youth population [1]. It is estimated that each year 449 million new cases of curable sexually transmitted infections (STIs) occur around the world with the highest rate among young population aged 20-24 [2]. Sexually transmitted diseases (STDs), also known as sexually transmitted infections (STIs), are those infections that pass on from person to person through sexual contact [3]. The common STIs symptoms are genital itching, urethral discharge, genital ulcer, vaginal discharge, lower abdominal pain and pain during sexual intercourse and some sexually transmitted infections exist without any symptom. The causes of STIs are bacteria, virus and parasites [4]. UNFPA web portal suggests that every year more than three fourths of the 5 million new cases of HIV infection are sexually transmitted and untreated STIs that can increase the risk of HIV infection up to 10 times [5]. Lack of diagnosis and treatment of STIs at an early stage can make serious complications like infertility, fetal wastage, ectopic pregnancy, genital cancer and premature foetal death [6]. A large portion of adolescents (both married and unmarried) do not have information on sexuality, contraception or STIs and HIV/AIDS [7].

According to UNAIDS, 4.8 million people of Asia were living with HIV/AIDS in 2012. It is estimated that half of all new cases of HIV infection occur among people under the age of 25 years and most Asian countries show HIV prevalence rate less than 1% [8]. It is also noticed that the youth are vulnerable and more prone to HIV infection because of risky behavior, poverty and gender discrimination and inadequate knowledge and lack of information on reproductive health [9].

In Bangladesh, the overall prevalence of HIV is less than 1%. It is estimated that without any intervention the prevalence in the general adult population could be increased by 8% in 2025 [8]. The proper knowledge of STIs and HIV/AIDS among the population of Bangladesh is limited due to inadequate access of voluntary counseling. The national survey shows that approximately 25% of male and 21% of female in adult populations are aware of the symptoms of STIs and less than 5% of male and female youth fully understand the risks associated with STIs and HIV infection [10]. Youth (15-24years) comprises almost one-sixth of the total population of Bangladesh who are vulnerable group for potential HIV and sexually transmitted infections (STIs). Behavioral Sentinel Surveillance identified the young as a high risk group because of low levels of risk perception, high rates of risk behavior and low condom use tendency [11]. Moreover, adolescents need to be aware of reproductive health information and services but these are not addressed by parents, schools or the existing health care systems [12].

Studies show when young people have information about sexuality, they are more likely to make responsible decisions including delaying sexual contact and engage in responsible behaviors [13]. University students are an important component of the youth of a country; they are expected to be more conscious of social, economic and health issues than other groups of the population in view of their higher education and exposure to electronic and print media.

Very few studies were conducted to assess young peoples' level of knowledge about STIs and HIV/AIDS. Although some studies have been conducted on adult male and female, university students were not exclusively targeted. This study will particularly fill this gap by observing this group of population. Understanding young people's knowledge regarding STIs could provide an important basis for the development of interventions to promote early health care seeking behavior and protective practice for STIs and avoid its complications. The main objective of the study is to assess the knowledge of university students on STI including AIDS and its contraction and prevention.

1.2 Rationale of the Study

University students are the future leaders of our nation. Many parties are trying to promote students' success such as family, mentors, students' professional affairs and students themselves.

It is very important for university students, who will be our future leader, to have knowledge on our societal, economical, political, and educational and health issues to enable them to make appropriate policies and programmes on these issues when they are called upon to take on these responsibilities. Unless the university students have strong theoretical and practical knowledge on specific burning issue such as this, they will be unable to guide the nation to meet the contemporary challenges of the nation in the field of STIs including HIV/AIDS. Thus the present study will shed light on the preparedness of the university students, our future leaders to effectively handle and take appropriate strategic interventions measures for STIs including HIV/AIDS.

1.3 Objectives of the Study

The main objective of the study is to understand the knowledge and risk perception of selected university students on STIs and HIV/AIDS and its contraction and prevention. This study will try in particular to answer the following research questions:

Research Question 1: How much are the university students aware about STIs including HIV/AIDS?

Research Question 2: What is the risk perception of university students on STIs including HIV/AIDS?

These questions will be answered by ascertaining the knowledge level and perception of university students on sexually transmitted infections including HIV/AIDS.

1.4 Hypothesis of the Study

1. **Students of private universities have higher knowledge than public university students about STIs and HIV/AIDS.**

According to University Grants Commission of Bangladesh web portal, there are 34 public (government funded but functions as self-governed) and 77 private (owned by private sector) universities, mostly concentrated in Dhaka, the capital city of Bangladesh. In universities, students get facilities to explore new knowledge and technology about society and all concerning issues of life. Both private and public university students have to achieve their degree by proving themselves loyal, responsible and able to cope with a new culture. However, students who scored high in higher secondary examination take admission at public universities because of subsidized education cost compared to that of private universities. There are also some cultural variations among students in public universities, but private university students basically come from well of families. Private university administration ensures contemporary education system, technology and highly skilled teaching professionals. This is expected that private university students are well aware about personal health and hygiene including STIs and HIV/AIDS because of economical background and institutional facilities from universities. Moreover, private university students have more access to information data base and other facilities compared to that of public university. They can easily communicate with each other freely and become comfortable with a new culture. Thus it is expected that students of private universities have higher knowledge than public university students about STIs and HIV/AIDS.

2. **Male students are likely to be more aware of STIs including HIV/AIDS than female students.**

Religion and culture always shape the beliefs and practices of our daily life. Research findings prove that Bangladeshi women have a distinct feature which is called "Culture of Silence" in health care. Due to strong dominance of patriarchy, women are suppressed by their male partner in our society. In many cases women are not aware about their life and rights. This culture has come down from generation to generations in our society. Now-a-days women are getting educated and working in various job sectors but still they are not open to acquiring new knowledge and are not aware of many things , especially about personal hygiene and sexual health. This is still an unfolded area in our education system. Female students do not have enough connection with the external world compared to male students. Our tradition and culture supports male students to be exposed to the knowledge of reproductive health more than female students. Thus my second hypothesis is male students are likely to be more aware of STIs including HIV/AIDS than female students.

3. The higher the level of education, the higher the knowledge about STIs including HIV/AIDS.

Education provides knowledge of awareness. Final year students are more aware about it due to their level of education, print and electronic media exposure and social network activities than that of first year students. The knowledge regarding societal burning issues including STIs and HIV/AIDS, its mode of transmission and prevention is expected to be higher among the final year students compared to the freshers. Moreover, the students of higher level are more aware about STIs and HIV/AIDS because of their age, education and their access to data base. So their knowledge of awareness is enriched. Thus it can be stated that the higher the level of education, the higher the knowledge about STIs including HIV/AIDS.

4. Students from urban areas might be more knowledgeable on STIs and HIV/AIDS than students from rural areas.

Bangladesh is a developing country consisting of 155 million people [14]. The urban people are educated and get all kinds of facilities compared to the people of rural areas. It is assumed that urban people are conscious about their personal health and hygiene. People have easier access to health care facilities if they face any health problem. So, students from urban areas are more aware about the STIs rather than student from rural areas. Hence the fourth hypothesis of the present thesis is students from urban areas might be more knowledgeable on STIs and HIV/AIDS than students from rural areas.

5. The risk perception on STI and HIV/AIDS among students who live with other students is likely to be higher compared to students who live with families.

Modernization and urbanization have strong impact on daily life, although most of the families in our society strictly maintain religious and cultural practice. However, students who live outside family are less bound to obey family rules and have higher level of societal exposure, which make them more conscious about every upcoming issue. Because these students lived with other students who have more scope for discussion with one another compared to the students who lived with family. Based on this assumption the fifth hypothesis of the thesis is the risk perception on STI and HIV/AIDS among students who live with other students is likely to be higher compared to students who live with families.

1.5 Expected Outcomes of the Study

In this study I have tried to understand the knowledge level of university students regarding STIs and HIV/AIDS and their health perception associated with this. The students in this study are selected from two public and two private universities located in Dhaka, the capital city. The knowledge of students on STIs and HIV/AIDS and its contraction and prevention are expected to vary by public/private, male/female, rural/urban and junior/senior level of students.

1.6 Limitations of the Study

There are several limitations of this thesis, such are:

- **Small sample size:** The study is based on small sample of students from four universities of Dhaka. However this is only a representative of a small group, the finding of the present study cannot be taken as a generalized or total community of university students from Dhaka at large.
- **Descriptive analysis:** Data was analyzed by only bivariate relationship between independent and dependent variables. The effect of other interviewing variables which could influence dependent or independent variables was not taken into consideration. Therefore, the vast relationship between independent and dependent variable could not be asserted.

Despite these limitations, the thesis will shed light on the level of knowledge and perception of students on STIs including HIV/AIDS and its mode of transmission and prevention.

Chapter 2

Review of Literature

This chapter will review literature on the concept of sexually transmitted infections (STIs), its mode of transmission, sign and symptoms, complications, prevention and treatment of STIs. It will also elaborate the concept of HIV/AIDS and describe the knowledge pattern of STIs and HIV/AIDS in the global, regional and Bangladesh in various groups of population.

2.1 HIV and AIDS

The origin of Human Immunodeficiency Virus (HIV) is a non-human primate simian virus, probably passed from chimpanzees to human via bush hunters. HIV develops a number of mechanisms to escape immune control and has thereby prevented effective control of the epidemic. The Acquired Immune Deficiency Syndrome (AIDS) was first recognized in 1981. HIV is present in blood, semen and other body fluids such as breast milk and saliva. Exposure to infected fluid leads to a risk of contracting infection, which is dependent on the integrity of exposed site, the type and volume of body fluid, and the viral load. HIV can enter either as free virus or within cells. The modes of contamination are sexual (man to man, heterosexual and oral) and parenteral (blood or blood product recipients, injection drug user and those experiencing occupation injury). The transmission risk after exposure is over 90% for blood or blood products, 15-40% for vertical route, 0.5-1.0% for injection drug use, 0.2-0.5% for genital mucous membrane spread. For prevention of HIV, access to HIV testing needs to be widened and strategies are required to protect the HIV non-infected person (e.g. promoting consistent condom use, improved STIs management, circumcision), for effective prevention of mother-to-child transmission and for scaling up of antiretroviral drug access [15].

2.2 Definition of Sexually Transmitted Infections

Sexually transmitted infections (STIs) are a group of contagious conditions whose principle mode of transmission is by intimate sexual activity involving the moist mucous membranes of the penis, vulva, vagina, cervix, anus, rectum, mouth and pharynx, along with their adjacent skin surfaces. The most relevant STIs syndromes are urethral discharge, genital ulcer, vaginal discharge and lower abdominal pain [16].

2.3 Types of Sexually Transmitted Infection

The term STIs includes 4 types of infection which affects the reproductive tract:

- Infections of the female reproductive tract which are not transmitted sexually, but are the result of an overgrowth of organisms normally present in the vagina (e.g., bacterial vaginosis and yeast infections).
- Infections which are transmitted sexually to areas beyond the reproductive tract, such as syphilis and HIV infection.
- Infections of the female reproductive tract due to complications of reproductive events or procedures performed on the reproductive tract (e.g., childbirth, miscarriage or abortion, insertion of an IUD and gynaecological or obstetric surgery).
- Individuals may have symptoms, but they do not identify them as an infection. Many women lack information about normal vaginal discharge. Some women may have had an infection for so long that they have come to think their symptoms are normal [17].

2.4 Complications of Sexually Transmitted Infection

The consequences of untreated STIs can be devastating to the health of men, women and their children. These conditions can lead to infertility, chronic ill health, sexual dysfunction, disseminated disease and death. In women, it can also lead to chronic pelvic pain and pregnancy complications such as ectopic pregnancy. Any untreated STI in a pregnant woman can affect the unborn or newly born child. Problems include low birth weight, premature delivery and neonatal infection. Both gonococcal and Chlamydia infection can be transmitted directly into the neonate's eye and cause blindness [17].

2.5 Prevention of Sexually Transmitted Infection

Prevention by case finding and changing behavior are the most important strategies for the control of STIs, including HIV infection. This can be mainly executed through appropriate education. The spread of STIs is influenced by several factors, including sexual behavior and attitudes, and the availability of facilities for diagnosis and treatment at early stage. It is important that these factors be borne in mind so that effective programmes aimed at preventing the spread of STIs can be designed and implemented. SRH/family planning programmes are well placed to disseminate information on the risks and complications of STIs and to promote low-risk behaviour. The use of condoms should be encouraged, not only for the prevention of pregnancy but also for the prevention of STIs [16].

2.6 Global, Regional and Bangladesh Pattern of Knowledge on STIs and HIV/AIDS

UNAIDS fact sheet (2012) revealed that, in low and middle income countries, only 24% of young women and 36% of young men responded correctly about HIV/AIDS, its transmission and prevention which suggest that its knowledge among the young is poor [18].

According to The World's Youth Data Sheet (2006), only a small minority of young people worldwide have comprehensive knowledge of HIV/AIDS. The Population Reference Bureau data (2006) revealed that among women aged 15 to 24, only 1% in Indonesia, 3% in the Philippines, 25% in Viet Nam, 32% in Mongolia and 37% in Cambodia could correctly identify two ways to avoid being infected with HIV and common myths about the virus. Young women in general have less knowledge than young men [19]. Across East and South-East Asia, most young people admit that their knowledge of sexuality and reproductive health is low because neither their parents nor their schools educate them on these subjects. Some schools do have reproductive health education, although taught as extracurricular subjects. Even these are contested in conservative societies [9]. Similar patterns of knowledge, attitudes and behavior regarding adolescent reproductive and sexual health, pregnancy, contraception and prevention of STIs and HIV infections are seen across East and South-East Asia. [9].

In Bangladesh, The National AIDS Committee (NAC) was created in 1985 to provide policy direction and promote multi-sector effort and it confirmed the first case of HIV/AIDS in 1989. In 1997, Government of Bangladesh developed and approved a comprehensive policy on HIV/AIDS and STD related issue to provide necessary guidance and supports. NGOs were involved in large extent and contributed significantly to deal with the epidemic by setting up AIDS/STI network that seeks to improve coordination among them and enhance their contribution. To strengthen support and coordinate among all national initiatives the UN theme group facilitated a forum named Expanded Theme Group (ETG) on HIV/AIDS that brings together different stakeholder [20]. UNICEF played important role to maintain low prevalence of HIV/AIDS in Bangladesh by launching HIV/AIDS prevention project (HAPP) from 2004 to 2007 and the HIV/AIDS Targeted Interventions (HATI) project from January 2008, and then it was handed over to government in 2009. In 2008, UNICEF and other NGO partners involved 3000 adolescent peer leaders for informing on HIV/AIDS and its prevention through Adolescent Empowerment project, *Kishori Abhijan project*. For impact assessment of project UNICEF developed a manual for teacher training and a teachers' guide was developed under the Life-Skills Based Education Pilot Project, 50 teacher trainers received training; project orientation has been delivered to 50 national and field office level staff and principals to ensure effective monitoring and evaluation; and 3450 secondary school teachers have been trained [21].

Bangladesh conducted a nationally representative Demographic and Health Survey in 1999-2000. The study revealed 50% of male aged 15-59 years and 31% of females of aged 15-49 years heard of AIDS [22]. BDHS 2004' provided comprehensive information of HIV/AIDS and STIs, its mode of contraction and prevention. Data revealed an increased knowledge of HIV/AIDS, from 51% in 1999-2000 to 78% in 2004 among currently married men aged 15-54. Eighty eight percent of male and 70% of female aged 15-24 reported to have heard of HIV/AIDS. According to BDHS 2004, 22% of men and 6% of women were reported to have heard of STIs. The study also revealed that in aged group 15-24 years have very limited knowledge, only 6%, considered the prevention of AIDS as new challenge [23].

The BDHS 2007 was the fifth survey of its kind conducted in Bangladesh. This study also revealed a consistent increase of knowledge regarding HIV/AIDS particularly among the aged group 15-24, the proportion of ever heard of AIDS is 91% of men compared to 78% of women. Among married women, knowledge has increased from 19% in 1996-97 to 31% in 1999-2000, and then it almost doubled to 60% in 2004 which steeped up to 67% in 2007. Among currently married men, knowledge has grown from 33% in the BDHS 1996-97 to 87% in the BDHS 2007. Message on HIV/AIDS broadcast through various electronic and printed media was considered to be the contributing factor of this increase in AIDS knowledge. The same survey revealed male respondent of age 15-24 were more conscious about the knowledge of prevention of AIDS compared to female respondents of the same age group. Using condom for prevention of AIDS was reported by 74% of male respondents compared to 40% of female students. The other response such as, limiting sexual intercourse to one uninfected partner, abstaining from sexual intercourse as prevention of AIDS were also substantially highly responded by male respondents [24]. The BDHS 2011 revealed that male respondents of age group 15-24 are more conscious than female respondents of the same age group. The same is true about the HIV preventive measures. These latest finding also suggest that knowledge, awareness and attitude on HIV/AIDS among young people has been increased gradually but more among the male respondents [14].

A Baseline survey named 'Prevention of HIV/AIDS among Young People in Bangladesh' was conducted in 2002 collaborated between National AIDS/STD programme and Save the Children-USA among adolescents aged 13-19. This study found relatively higher proportion of respondents has knowledge on HIV/AIDS but poor proportion of respondents has knowledge on its preventions. Only one fourth of respondents had correct knowledge of at least two routes of HIV/AIDS transmission. More than half of the boys and three fourths of girls have never heard about STIs. The prevalence of reported STIs symptoms was found high among the youths [10].

A cross sectional study was conducted on adolescents to explore their knowledge and awareness about HIV/AIDS and factors affecting them. The study found that adolescents have higher knowledge on HIV/AIDS but poor knowledge on its mode of transmission and prevention. The multivariate analysis of the same study revealed that adolescent age, years of schooling and knowledge on STDs appeared to be important predictors of the awareness about AIDS [25].

A survey conducted among staff of ICDDR,B revealed that all except 4, heard of AIDS. Main sources of information were radio and television, newspapers and magazines, posters and leaflets, and friends. About 94% of the respondents believed that HIV might spread in Bangladesh. But only 61.6% know about the causative agent for AIDS. More than 96% had knowledge that HIV could be detected through blood test. The knowledge of this privileged group seems to be high [26].

An academic research conducted on knowledge attitude and practice on reproductive health and rights of urban and rural women by Shahin Akhter found that the respondents have acquaintance about RTI and AIDS, cause and how to prevent these diseases. Eighty two percent of urban and 88% of rural women have no clear idea about STD/RTIs. But this study also revealed that the knowledge on contraction and prevention of STD/RTIs among urban and rural people are very poor. But, a higher percentage of respondents have heard the term HIV/AIDS [27].

A study was conducted on mothers' knowledge about the reproductive health needs of their adolescent girls. Among the mothers, 64% of them did not want to provide information on reproductive health to their daughters. Seventy two percent of the mothers had average knowledge about puberty. Forty seven percent had average knowledge regarding adolescent reproductive health problems and 77% had average knowledge about safe motherhood. Regarding the complication of unsafe abortion, 73% had average knowledge and 70% had average knowledge about consequence of early pregnancy. Fifty seven percent of mothers had good knowledge about Sexually Transmitted Diseases. Sixty one percent had good knowledge regarding the high risk behavior of the adolescents [28].

Discussion from the above, we can come to conclusion that, a lot of studies were conducted concerning the knowledge on AIDS and STIs. But specifically, no study on university student's knowledge has been conducted. These studies have asked questions at national level to males and females from rural and urban backgrounds which revealed diverse findings. However, there is still a vacuum in the area of the knowledge of university students. It has not yet been exposed how much prepared our future leaders are. This study will add a new dimension in the existing knowledge with a different perspective and findings.

Chapter 3

Research Methodology

3.1 Study Design

This study was conducted based on quantitative research design. A cross sectional survey was conducted in 4 (four) predetermined universities. A well-designed, structured self-administered questionnaire was used for data collection. The respondent ratio between male and female was 1:1. University ratio of private and public was 1:1. From each university campus 80 students were selected to serve the purpose of the study.

3.2 Study Area

Two public and two private universities have been selected from Dhaka for sampling. The public universities were Dhaka University, Jogonnath University, while private universities are East West University, and United International University.

3.3 Sample Size and Sampling Technique

The sample size was 320 (160 males and 160 females). Predetermined sampling was selected from Dhaka, Jogonnath, East West, United International University campuses. The student identification card was the main criterion to include valid students in the study.

3.4 Collection and Management of Data

During February and March, 2013 eight data enumerators were used for data collection from university students on social-demographic characteristics, including, knowledge of HIV/AIDS and STIs (ability to identify tracer AIDS/STIs, to describe some symptoms associated with AIDS/STDs and to describe means of its transmission and prevention) and what were his/her sources of information on AIDS/STIs from each university campus. Similarly, students were asked whether she/he felt vulnerable to STIs. Data was entered and processed using SPSS (version 17) software.

3.5 Ethical Considerations

Students were informed about the purpose and objectives of the study in the front page of the self-administered questionnaire. All though the study, students were assured of confidentiality for their volunteered information.

3.6 Data Analysis

Data were coded and analyzed by Statistical Package for Social Sciences (SPSS). Differences on knowledge of STIs among various groups categorized by university, gender, education level, educational background, place of living were analyzed.

3.7 Report Writing

After classifying, tabulating, processing and analyzing all the collected data, I have tried to answer the research questions and hypothesis in my thesis.

Chapter 4

Results of the Analysis

4.1 Demographic Characteristics among Private and Public University Students of Dhaka

Table 4.1 shows a distribution of demographic characteristics among private and public university students. A total of 320 students were interviewed of which 160 were males and 160 were females comprising of both freshers and final year students. It is found that 98% students of private university are more than 22 years of age compared to 78% of public university. There is no difference in marital status of the students of two types of university. Eighty seven percent of private university students are unmarried while 89% of public university students have similar marital status. Seventy six percent of private and 64% of public university students were Muslims. Consequently, students of others religious faith were fewer among private universities (24%) compared to public universities (36%). There is an important difference in previous educational background of private and public university students. It is found that relatively high proportion of private university students (91%) have completed

Table 4.1: Distribution of the Demographic Characteristics among Students of Dhaka by Private and Public University

Socio-Economic Background	Private University		Public University		Total	
	Number	Percent	Number	Percent	Number	Percent
Academic Year						
Freshers	70	43.7	90	56.2	160	50.0
Final fourth year	90	56.3	70	43.8	160	50.0
Age						
18-20	3	1.8	35	21.9	38	11.9
20-22	67	41.9	55	34.4	122	38.1
22+	90	56.3	70	43.7	160	50.0
Marital Status						
Never married	139	86.9	142	88.8	281	87.8
Married	21	13.1	18	11.2	39	12.2
Religion						
Muslim	121	75.6	102	63.8	223	69.7
Non-Muslim	39	24.4	58	36.2	97	30.3
Completed HSC from						
Rural area	14	8.7	55	34.4	69	21.6
Urban area	146	91.3	105	65.6	251	78.4
Live with						
Family	127	79.4	61	38.1	188	58.8
Other students	33	20.6	99	61.9	132	41.2
Total	160	100.0	160	100.0	320	100.0

HSC from urban area in contrast with public university students (66%). There is also substantial difference in living pattern of students. More private university students (79%) were living with families compared to public university students (38%).

4.2 Communication and Media Exposure among Private and Public University Students of Dhaka

Table 4.2 shows communication and media exposure of the students. Data shows that there is a slight difference among private and public university students about reading regular newspaper (56% of private and 61% of public) but a similar trend in regular internet browsing (42% for both private and public university) as their source of knowledge. There was comparatively high proportion of private university students (47%) reported to have regularly watching television compared to public university students (38%). However, regular practice of listening to radio is almost twice as much higher among public university (29%) students compared to private university (16%).

Table 4.2: Distribution of the Communication and Media Exposure among Students of Dhaka by Private and Public University

Communication and Media Exposure	Private University		Public University		Total	
	Number	Percent	Number	Percent	Number	Percent
Reading Newspaper						
Not even once in a week	6	3.8	6	3.8	12	3.8
Two-five times in a week	64	40.0	57	35.6	121	37.8
Weekly basis	90	56.2	97	60.6	187	58.4
Browsing Internet						
Not even once in a week	1	0.6	20	12.5	21	6.6
Two-five times in a week	91	56.9	73	45.6	164	51.2
Weekly basis	68	42.5	67	41.9	135	42.2
Watching Television						
Not even once in a week	7	4.4	25	15.6	32	10.0
Two-five times in a week	77	48.1	74	46.3	151	47.2
Weekly basis	76	47.5	61	38.1	137	42.8
Listening to Radio						
Not even once in a week	34	21.3	34	21.2	68	21.2
Two-five times in a week	101	63.1	80	50.0	181	56.6
Weekly basis	25	15.6	46	28.8	71	22.2
Total	160	100.0	160	100.0	320	100.0

4.3 Knowledge on AIDS among Students of Dhaka by Private and Public University

Table 4.3 shows that high proportion (98%) of students reported to have heard AIDS, and 94% of them had knowledge of contraction and prevention of AIDS. The students reported almost equally that sex with prostitute (38%) and sex with drug user (37%) as the contraction means of AIDS. The preventive means of AIDS, i.e., use of condom (57%) is the most frequently mentioned method of prevention by the students. The other preventive measures such as safe blood transfusion (37%), limiting sex with one trusted partner (36%), and using sterilized needle/syringe (30%) were also frequently mentioned by the students. Students' less frequently cited method of prevention is by avoiding sex with homosexual and abstaining from sex (see appendix A3). Students have also misconception on contraction and prevention of AIDS. Thirty percent mentioned sharing razor/blades as contraction of AIDS, followed by limiting sex in marriage (17%) as method of prevention. However, when questions were asked about treatment, only 18% of students reported the correct treatment of AIDS, i.e., antiretroviral therapy but 74% mentioned AIDS cannot be treated and 8% mentioned the incorrect way, i.e., using antibiotics for the treatment of AIDS.

In this Table a comparative analysis is made of the knowledge on HIV/AIDS of private and public university students. Table 4.3 reveals that a slightly high proportion of public university students have heard of HIV/AIDS compared to private university students (99% vs. 96%). However, a slightly higher proportion of private university students (98%) know the means of contraction and prevention of AIDS than those of public university students (90%). In contrast to this finding, public university students are much more aware of the correct means of contraction and preventive measure than private university students. However, they also have higher misconception compared to private university students. For example, students of private and public university mentioned having sex with prostitute (32% in private, 45% in public), having sex with drug user (27% in private, 47% in public), safe blood transfusion (31% in private, 43% in public), limiting sex with one trusted partner (30% in private, 41% in public), using sterilized needle/syringe (23% in private, 38% in public) as correct means of contraction and prevention of AIDS. Similarly misconception of contraction and prevention of AIDS, i.e., sharing razors/blades (23% in private 36% in public), limiting sex in marriage (15% in private, 19% in public) also high among the public university students. Finally, among the preventive measures mentioned to avoid getting AIDS, using condom was more frequently mentioned by both public and private university students, although slightly more frequent (60%) by the former than the later (55%). Almost the same percentage of students from both universities believed that treatment of HIV/AIDS is not possible, those who believe that treatment is possible, 20% of private and 16.5% of public university students mentioned correct treatment of AIDS i.e., antiretroviral therapy.

Table 4.3: Distribution of Knowledge on AIDS among Students of Dhaka by Private and Public University

Knowledge of HIV/AIDS	Private University		Public University		Total	
	Number (N=160)	Percent	Number (N=160)	Percent	Number (N=320)	Percent
Heard about AIDS						
Yes	154	96.3	158	98.8	312	97.5
No	6	3.7	2	1.2	8	2.5
Contraction and prevention of AIDS	154	-	158	-	312	-
Know	151	98.1	143	90.5	294	94.2
Don't know	3	1.9	15	9.5	18	5.8
Knowledge on contraction and prevention of AIDS*	151	-	143	-	294	-
Having sex with prostitute	48	31.8	64	44.7	112	38.1
Having sex with drug user	41	27.1	67	46.8	108	36.7
Using condom	90	59.6	79	55.2	169	57.5
Safe blood transfusion	46	30.5	62	43.3	108	36.7
Limiting sex with one trusted partner	45	29.8	61	42.6	106	36.0
Using sterilized needle/syringe	35	23.2	55	38.5	90	30.6
Misconception on contraction and prevention of AIDS*						
Sharing razors/blades	35	23.2	52	36.4	87	29.6
Limiting sex in marriage	23	15.2	27	18.9	50	17.0
Treatment of AIDS	154	-	158	-	312	-
Antiretroviral therapy	31	20.1	26	16.5	57	18.3
Antibiotics	8	5.2	16	10.1	24	7.7
Not possible	115	74.7	116	73.4	231	74.0

*multiple response

4.4 Knowledge on STIs among Private and Public University Students of Dhaka

Table 4.4 shows frequency and percentage distribution of students' knowledge on STIs. It shows that 75% of students reported to have heard about other STIs, apart from AIDS. Sixty six percent of students mentioned at least one possible cause of STIs. Causative organism of STIs such as bacteria (30%), virus (27%) and fungus (27%) were mentioned by students. There were also questions included in the survey about influential factor which is not direct cause of STIs. As influencing factors such as blood transfusion (17%), bad hygienic practice (16%), being unfaithful (11%) were less frequently mentioned by students, in contrast, where enhancing factors such as, sex during menopause (23%) and having sex soon after delivery (21%) were mentioned more as cause of STIs by the students.

In term of the symptom of disease, 42% of students mentioned at least one sign-symptom of STIs. Most frequently mentioned sign-symptom was lower abdominal pain (17%) followed by blood in urine (14%), foul smelling discharge (12%) and genital sores or ulcer (12%). Students also less frequently mentioned other signs and symptoms of STIs (see appendix A4). These findings suggest that the knowledge of sign-symptoms of STIs was poor among the university students.

In terms of the complications of STIs, a more or less similar level of knowledge is apparent. Only one fourth of total respondent reported to have knowledge of at least one complication of STIs if not treated, which suggests 75% of student were not conscious about the complications. Among those who have reported to have knowledge of complication of STIs, 10% students mentioned infertility, a similar percentage of students mentioned stillbirth (10%), ectopic pregnancy (10%) and cervical cancer (10%) but only 6.2% mentioned premature birth as complication of STIs. In term of testing place, 88% of students are not aware about STIs testing place in the town. However, 95% of students know that STIs is curable but relatively lower percentage (34%) of students know that STIs is preventable too.

Table 4.4 also shows the difference between private and public university students in regard to knowledge on STIs. Data reported a higher proportion (87%) of public university students reported to have heard about STIs compared to that (64%) of private university students. However, contrary to students of private university, the public university were reported to have proportionately less (55% compared to 79%) awareness of at least one possible way of prevention of STIs.

In addition, private university students have three times higher responses on the causative organism of STIs than public university students. Awareness on influential factors of STIs was also high among private university students compared to public university students (see appendix A6). This path holds for almost all indicators of knowledge on STIs. For example, 69% of private university students knew at least one sign and symptom of STIs compared to only 23% of public university students. Knowledge of complications is also two times higher among private university students. Students of private university (18%) also have higher knowledge on STIs testing place in town compared to public university students (8%). However, knowledge that STIs are curable is similar among private and public university students but knowledge that STIs is preventable is substantially high (36%) among private than public university students (17%).

Table 4.4: Distribution of Knowledge on STIs among Students of Dhaka by Private and Public University

STIs knowledge	Private University		Public University		Total	
	Number (N=160)	Percent	Number (N=160)	Percent	Number (N=320)	Percent
Heard about other STIs						
Yes	102	63.8	139	86.9	241	75.3
No	58	36.2	21	13.1	79	24.7
Causes of STIs*	102	-	139	-	241	-
At least one possible cause	81	79.4	77	55.4	158	65.6
Causative organism						
Bacteria	49	48.0	23	16.5	72	29.9
Virus	45	44.1	21	15.1	66	27.4
Fungus	45	44.1	21	15.1	66	27.4
Influencing factors						
Having sex during menstruation	29	28.5	27	19.4	42	17.4
Having sex soon after delivery	26	25.5	26	18.7	39	16.2
Blood transfusion	25	24.5	14	10.0	28	11.6
Bad hygiene practice	23	22.5	19	13.7	56	23.2
Being unfaithful	15	14.7	13	9.3	52	21.6
Signs and symptoms of STIs*						
At least one sign and symptom	70	68.6	32	23.0	102	42.3
Lower abdominal pain	31	30.4	11	7.9	42	17.4
Foul smelling discharge	26	25.5	3	2.1	28	11.6
Genital sores/ulcers	23	22.5	5	3.6	29	12.0
Blood in urine	21	20.6	14	10.1	35	14.5
Swelling of genital area	14	13.7	7	5.0	21	8.7
Complication of STIs symptoms*						
Knows at least one complication	36	35.3	23	16.5	59	24.4
Still birth/miscarriage	20	19.6	3	2.1	23	9.5
Infertility	17	16.7	6	4.3	25	10.4
Ectopic pregnancy	17	16.7	8	5.7	23	9.5
Cervical cancer	16	15.9	7	5.0	23	9.5
Premature birth	13	12.7	2	1.4	15	6.2
STIs testing place in the town	18	17.6	11	7.9	29	12.0
STI is curable	95	93.1	135	97.1	230	95.4
STI is preventable	57	55.9	24	17.2	81	33.6

*multiple response

4.5: Knowledge of AIDS among University Students of Dhaka by Male and Female

This section examines the knowledge on AIDS between male and female students. Table 4.5 shows an equal (98%) percentage of male and female students reported to have heard of AIDS. Likewise, the difference of knowledge between male and female students on the means of contraction and prevention of AIDS is negligible (93% of female and 95% of male students). Contraction of AIDS, such as, having sex with prostitute (36% of female, 40% of male) is slightly high among male students.

The preventive measure i.e., using condoms was most frequently mentioned by both male and female students (56% compared 59%). Knowledge on other prevention method is comparatively a little high among male students. Similarly misconception on contraction and prevention of AIDS is also relatively high among male students compared to female students, for example 33% of male students mentioned sharing razor/blades as prevention of AIDS compared to 26% of female students (Table A5 in appendix). High proportion of female (77%) and male (71%) students opined that AIDS cannot be treated, however, female and male students less frequently mentioned incorrect treatment of AIDS that is antibiotic. Despite these findings there were no substantial difference between male and female, but considering all indicator of AIDS knowledge male students are more aware about this.

Table 4.5: Distribution of the Knowledge on AIDS among University Students of Dhaka by Male and Female

HIV/AIDS knowledge	Male		Female	
	Number (N=160)	Percent	Number (N=160)	Percent
Heard about AIDS				
Yes	157	98.1	155	97.9
No	3	1.9	5	3.1
Contraction and prevention of AIDS	157	-	155	-
Know	150	95.5	144	92.9
Don't know	7	4.5	11	7.1
Knowledge on contraction and prevention of AIDS*	150	-	144	-
Having sex with prostitute	60	40.0	52	36.1
Having sex with drug user	57	38.0	51	35.4
Using condom	84	56.0	85	59.0
Safe blood transfusion	55	36.7	53	36.8
Limit sex with one trusted partner	59	39.3	47	32.6
Using sterilized needle/syringe	45	30.0	45	31.2
Misconception on contraction and prevention of AIDS*				
Sharing razors/blades	50	33.3	37	25.7
Limiting sex in marriage	25	16.7	22	15.3
Treatment of AIDS	157	-	155	-
Antiretroviral therapy	35	22.3	22	14.2
Antibiotics	11	7.0	13	8.4
Not possible	111	70.7	120	77.4

*multiple response

4.6: Knowledge on STIs among Male and Female University Students of Dhaka

Table 4.6 shows comparison between male and female students' knowledge on STIs, apart from AIDS. Data shows a slightly higher proportion of male students (78%) have heard of STIs compared to female students (73%). There is no substantial difference of knowledge on causes of STIs among them. However, a different scenario appeared in the sign-symptoms and complications of STIs. Higher proportion of male students is aware of all the signs and symptoms and complications of STIs than female students. But, there was no substantial difference of the knowledge on STIs testing place in town, or that the STIs is curable and preventable among male and female students.

Table 4.6: Distribution of Knowledge on STIs among University Students of Dhaka by Male and Female

Knowledge of STIs	Male		Female	
	Number (N=160)	Percent	Number (N=160)	Percent
Heard about other STIs				
Yes	125	78.1	116	72.5
No	35	21.9	44	27.5
Causes of STIs*				
At least one possible cause	83	66.4	75	64.6
Causative organism				
Bacteria	37	29.6	35	30.2
Virus	31	24.8	35	30.2
Fungus	31	24.8	25	21.5
Influencing factors				
Having sex during menstruation	29	23.2	37	31.9
Having sex soon after delivery	28	22.4	24	20.7
Blood transfusion	26	20.8	16	13.8
Bad hygiene practice	20	16.0	19	16.4
Being unfaithful	17	13.6	11	9.5
Signs and symptoms of STIs*				
At least one signs and symptom	59	47.2	43	37.1
Lower abdominal pain	25	20.0	17	14.6
Foul smelling discharge	21	16.8	8	6.9
Genital sores/ulcers	22	17.6	6	5.2
Blood in urine	13	10.4	22	19.0
Swelling of genital area	8	6.4	2	1.7
Complication of STIs symptoms*				
Knows at least one complication	36	28.8	23	19.8
Still birth/ miscarriage	16	12.8	9	7.7
Infertility	14	11.2	9	7.7
Ectopic pregnancy	13	10.4	10	8.6
Cervical cancer	12	9.6	11	9.5
Premature birth	8	6.4	7	6.0
STIs testing place in the town	12	9.6	17	14.6
STI is curable	116	92.8	114	98.3
STI is preventable	43	34.4	38	32.7

*multiple response

4.7: Knowledge on AIDS among First Year and Final Fourth Year University Students of Dhaka

Table 4.7 shows percentage distribution of AIDS knowledge among first year and final year students. Comparative analysis between two groups of students shows that Ninety nine percent of final year students heard about AIDS compared to 96% of first year students. A little higher percent of the final year students were reported to have knowledge of means of contraction and prevention of AIDS. The knowledge of the contraction and prevention between first and final year students were the same. But a slightly higher proportion of first year students have misconception about contraction and prevention than final year students. (see appendix Table A7). A high percentage of both group of students have knowledge that AIDS cannot be treated. There is no difference about AIDS treatment knowledge between first and final year students. But incorrect treatment i.e., antibiotic is less frequently mentioned by final year students. In fact, there is little difference between first and final year students about AIDS knowledge but considering knowledge indicator of AIDS it can be said that in general, a slightly higher percentage of final year students have knowledge on AIDS.

Table 4.7: Distribution of Knowledge on AIDS among University Students of Dhaka by First Year and Final Fourth Year

Knowledge of HIV/AIDS	First Year		Final Fourth Year	
	Number (N=160)	Percent	Number (N=160)	Percent
Heard about AIDS				
Yes	153	95.6	159	99.4
No	7	4.4	1	0.6
Contraction and prevention of AIDS	153	-	159	-
Know	142	92.8	152	95.6
Don't know	11	7.2	7	4.4
Knowledge on contraction and prevention of AIDS*	142	-	152	-
Having sex with prostitute	52	36.6	60	39.5
Having sex with drug user	53	37.3	55	36.2
Using condom	83	58.5	86	56.6
Safe blood transfusion	57	40.1	51	33.5
Limiting sex with one trusted partner	52	36.6	54	35.5
Using sterilized needle/syringe	48	33.8	42	27.6
Misconception on contraction and prevention of AIDS*				
Sharing razors/blades	43	30.3	44	28.9
Limiting sex in marriage	29	20.4	21	13.8
Treatment of AIDS	153	-	159	-
Antiretroviral therapy	28	18.3	29	18.2
Antibiotics	15	9.8	9	5.6
Not possible	110	71.9	121	76.1

*multiple response

4.8: Knowledge on STIs among First Year and Final Fourth Year University Students of Dhaka

Table 4.8 revealed that final year students are slightly more reported to have heard of STIs compared to first year students. But reverse is true in case of the knowledge of at least one cause of STIs. Moreover, there is a clear difference of knowledge in the causes of STIs between first and final year students. Causative organism and influencing factors of STIs were more frequently mentioned by first year students compared to that of final year students. However sign and symptoms and complications knowledge of STIs was mentioned more by the final year students. There is no substantial difference between knowledge on STIs testing place in town, knowledge that STIs is curable and preventable among first and final year students. Considering all factors it can be stated that first year students have little much higher awareness about causes of STIs while sign and symptom was mentioned more by final year students. (see appendix A8)

Table 4.8: Distribution of the Knowledge on STIs among the University Students of Dhaka by First Year and Final Fourth Year

STIs knowledge	First Year		Final Fourth Year	
	Number (N=160)	Percent	Number (N=160)	Percent
Heard about other STIs				
Yes	117	73.1	124	77.5
No	43	26.9	36	22.5
Causes of STIs*				
At least one possible cause	44	37.6	39	31.5
Causative organism				
Bacteria	35	29.9	21	16.9
Virus	30	25.6	42	33.9
Fungus	27	23.1	25	20.2
Influencing factors				
Having sex during menstruation	25	21.4	41	33.1
Having sex soon after delivery	24	20.5	42	33.9
Blood transfusion	24	20.5	18	14.5
Bad hygiene practice	20	17.1	19	15.3
Being unfaithful	14	12.0	14	11.3
Signs and symptoms of STIs*				
At least one signs and symptom	43	36.7	59	47.6
Lower abdominal pain	22	18.8	20	16.1
Foul smelling discharge	16	13.7	13	10.5
Genital sores/ulcers	15	12.8	13	10.5
Blood in urine	14	12.0	21	16.9
Swelling of genital area	9	7.7	12	9.7
Complication of STIs symptoms*				
Knows at least one complication	11	9.4	12	9.7
Still birth/ miscarriage	10	8.5	15	12.1
Infertility	9	7.7	14	11.3
Ectopic pregnancy	9	7.7	14	11.3
Cervical cancer	6	5.1	9	7.2
Premature birth	11	9.4	12	9.7
STIs testing place in the town	15	12.8	14	11.3
STI is curable	113	96.6	117	94.3
STI is preventable	39	33.3	42	33.9

*multiple response

4.9: Knowledge on AIDS among Rural and Urban Background University Students of Dhaka

Table 4.9 shows frequency and percentage distribution of knowledge on AIDS of students come from rural and urban areas. Data shows that there is no difference in the knowledge of HIV/AIDS by rural and urban background of the students. However, in general more students from urban background know about means of contraction and prevention of AIDS than students with rural background.

But, when each of the contraction means was separately examined, data shows that contraction knowledge among rural background students is high except prevention measures i.e., use of condom. Misconceptions on AIDS were also more frequently mentioned by students of rural background. Treatment knowledge on AIDS is not different between rural and urban background of students. Despite these finding we figured out that rural background students are more conscious about AIDS.

Table 4.9: Distribution of Knowledge on AIDS among University Students of Dhaka by Urban and Rural Background

HIV/AIDS knowledge	Rural		Urban	
	Number (N=69)	Percent	Number (N=251)	Percent
Heard about AIDS				
Yes	68	98.5	244	97.2
No	1	1.5	7	2.8
Contraction and prevention of AIDS	68	-	244	-
Know	60	88.2	234	95.9
Don't know	8	11.8	10	4.1
Knowledge on contraction and prevention of AIDS*	60	-	234	-
Having sex with prostitute	28	46.7	84	35.9
Having sex with drug user	25	41.7	83	35.5
Using condom	32	53.3	137	58.5
Safe blood transfusion	25	41.7	83	35.5
Limiting sex with one trusted partner	25	41.7	83	35.5
Using sterilized needle/syringe	22	36.7	68	29.0
Misconception on contraction and prevention of AIDS*				
Sharing razors/blades	22	36.7	65	27.8
Limiting sex in marriage	15	25.0	35	14.9
Treatment of AIDS	68	-	244	-
Antiretroviral therapy	14	20.5	43	17.6
Antibiotics	5	7.5	19	7.6
Not possible	49	72.0	182	72.5

*multiple response

4.10: Knowledge on STIs among Rural and Urban Background University Students of Dhaka

STIs data in Table 4.10 shows quite different picture on knowledge among rural and urban background students. More students of rural background (88%) have heard of STIs compared to urban background (72%) students. There is a substantial difference between the knowledge on causes of STIs between rural background (54%) and urban background (70%) students. Causative organism of STIs i.e., bacteria (23% by rural, 21% by urban), virus (20% by rural, 33% by urban), fungus (20% by rural, 16% by urban) comparatively less frequently mentioned by both rural and urban background students, influencing factors of STIs was relatively more mentioned by the urban background students compared to rural background student. For example, 33% of rural background students reported to know at least one sign and symptoms of STIs compared to 45% of urban background students. Similar pattern is also seen about

Table 4.10: Distribution of Knowledge on STIs among University Students of Dhaka by Urban and Rural background

STIs knowledge	Rural		Urban	
	Number (N=69)	Percent	Number (N=251)	Percent
Heard about other STIs				
Yes	61	88.4	180	71.7
No	8	11.6	71	28.3
Causes of STIs*				
At least one possible cause	33	54.1	125	69.4
Causative organism				
Bacteria	14	22.9	38	21.1
Virus	12	19.7	60	33.3
Fungus	12	19.7	30	16.7
Influencing factors				
Having sex during menstruation	11	18.0	55	30.5
Having sex soon after delivery	10	16.4	56	31.1
Blood transfusion	9	14.7	47	26.1
Bad hygiene practice	6	9.8	33	18.3
Being unfaithful	6	9.8	22	12.2
Signs and symptoms of STIs*				
At least one signs and symptom	20	32.8	82	45.5
Lower abdominal pain	8	13.1	34	18.9
Foul smelling discharge	5	8.2	24	13.3
Genital sores/ulcers	3	4.9	25	13.3
Blood in urine	11	18.0	24	13.3
Swelling of genital area	1	1.6	20	11.1
Complication of STIs symptoms*				
Knows at least one complication	14	22.9	45	25.0
Still birth / miscarriage	5	8.2	18	10.0
Infertility	5	8.2	20	11.1
Ectopic pregnancy	4	6.5	19	10.5
Cervical cancer	3	4.9	20	11.1
Premature birth	2	3.2	13	7.2
STIs testing place in the town	6	9.8	23	12.8
STI is curable	60	98.4	170	94.4
STI is preventable	12	19.7	69	38.3

*multiple response

knowledge of complications of STIs among rural and urban background students. Known STIs testing place among rural and urban background students is not much different and knowledge that STIs is curable is little high among rural background students but knowledge of the STIs is preventable is almost double among urban background students.

4.11 Sources of Knowledge of HIV/AIDS and STIs among University Students of Dhaka

Four types of source of information about HIV/AIDS and STIs are explored in the study. Table 4.11 shows, students mentioned print media, that is, newspaper or magazine are the most frequent (61%) source of knowledge about HIV/AIDS, followed by electronic media like television (39%), internet (26%), and radio (19%). Among the community sources, friends and family was more frequently (18%) mentioned and less frequent was government programme worker (14%) as source of HIV/AIDS information. Students less frequently mentioned sources of information for both HIV/AIDS and STIs are placed in the appendix (appendix A11).

For STIs, students mentioned same source of knowledge and in similar proportion except newspaper (61% vs. 48%) and television. Another contrast found in the sources of knowledge of the students is friend/family. Large number of students gets STIs information from friends/family (30%) compared to only 18% students who get information on AIDS from the same source.

Table 4.11: Distribution of the Sources of Knowledge of HIV/AIDS and STI among University Students of Dhaka

Source of information*	HIV/AIDS		STIs	
	Number (N=312)	Percent	Number (N=241)	Percent
Electronic media				
Radio	60	19.2	27	11.2
Television	122	39.1	11	4.6
Internet	80	25.6	65	27.0
Print media				
Newspaper/Magazine	191	61.2	115	47.7
Programme/ Community source				
Health worker	44	14.1	24	10.0
Friend/Family	57	18.3	73	30.3
Total	312	100.0	241	100.0

*multiple response

4.12 Attitude towards AIDS and STIs among University Students of Dhaka

In the study, two questions were asked to know the attitude of the university students toward AIDS. Data shows that seventy one percent of students know that healthy-looking person could have AIDS and 74% of students believed that HIV virus could be transmitted from a mother to child. Seventy five percent of students reported that they have discussed about AIDS. Among the students, most frequently mentioned source of discussion is with friends (60%), followed by relative (11%), sibling (11%) and parent (10%). Among married students, 85% reported to have discussion about way to avoid AIDS with their spouse. Fifty five percent of students reported that they have discussed about HIV/AIDS prevention. Among those, 41% percent mentioned about talking of prevention of getting virus with friends. The students less frequently also mentioned parents (4%), sibling (6%), relative (3%) and doctor (1%) to enhance their consciousness of HIV/AIDS.

To understand the attitude towards AIDS in living pattern, it was found that equal percentage of students (73%) who lived with family and who lived with other students reported that healthy-looking person could have AIDS. HIV virus could be transmitted from a mother to child- this statement was delivered by 73% students who lived with family and 80% students who lived with others. Considering the discussion with others about AIDS it is found that 71% students living with family discussed this topic with others, where, the rate is 87% in the group who lived with other students. Among married students, 88% of students who lived with family reported about talking about ways of getting virus that causes AIDS and 79% of students said the same who lived with other students. Another finding is that, 50% of the students who lived with family and 74% of students who lived with other friends reported a woman's acceptability to ask her husband to using condom if her husband had a STIs.

4.13 STIs Symptom and Treatment Seeking Behavior of University Students of Dhaka

Proportion of male and female students who had STIs symptom during last 1 year has been presented in Figure 4.1 and 4.2 respectively. Figure 4.1 reveals that 69% of the male students reported to have STIs symptom during last one year, while 31% of the students did not experience any symptom. Among students who have reported to have symptoms, 41% of students mostly experienced pain or burning sensation during urination, followed by a discharge from penis (28%) and a sore or ulcer on or near penis (7%).

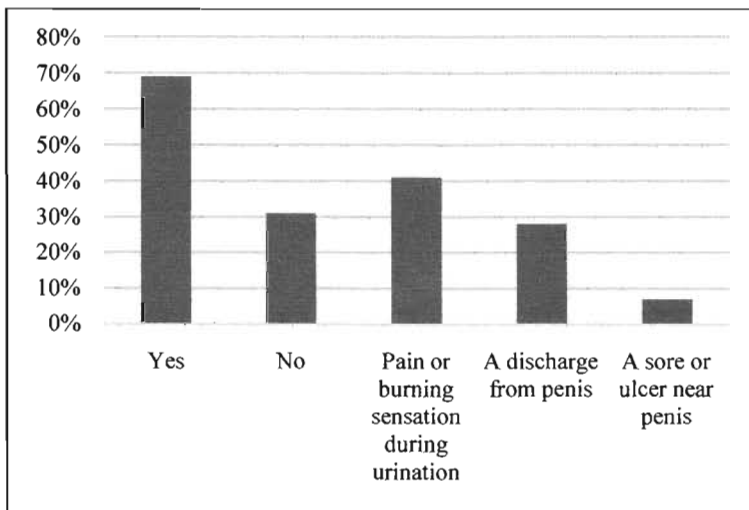


Fig 4.1: STIs symptoms among Male Students

A similar type of question was asked among female students. Figure 4.2 shows that 13% of female students reported to have STIs symptoms during last one year, while 87% of students did not experienced any symptom. Female students were reported to have STIs symptoms such as a foul smelling, genital discharge (13%), a genital sore or ulcer (11%) during last one year.

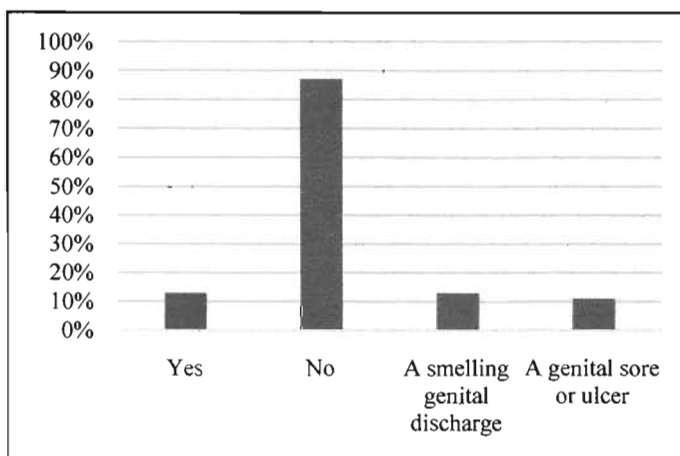


Fig 4.2: STIs symptoms among Female Students

Among the students who had STIs symptoms only 8% of male students reported to having STIs test ever, while 50% of female students having that test. As reasons for not having test, reported response was 'I do not know the place' among male (32%) and female (20%). Twenty four percent of male and 40% of female stated that 'I am embarrassed to go for a test'. However, despite presence of the symptoms 29% percent of male and 50% of female students feel that they are not at risk for STDs.

Figure 4.3 shows treatment seeking behavior of the 69% of male and 13% of female students who had STIs symptom during last one year. Figure demonstrated that seeking advice from a health professional such as doctor; nurse in a clinic or hospital is the most frequently source of seeking advice by female (35%) students, and asked for advice from friends or relative was most frequently mentioned by male (25%) students. Seven percent of male students mentioned that they sought advice or medicine from a traditional healer compared to 10% of female students for their STIs related illness. Students also mentioned sought advice or bought medicines in a shop or pharmacy were mentioned by 11% of male and 5% of female. And 44% of male and 20% of female students did not respond about their STIs symptom seeking practice.

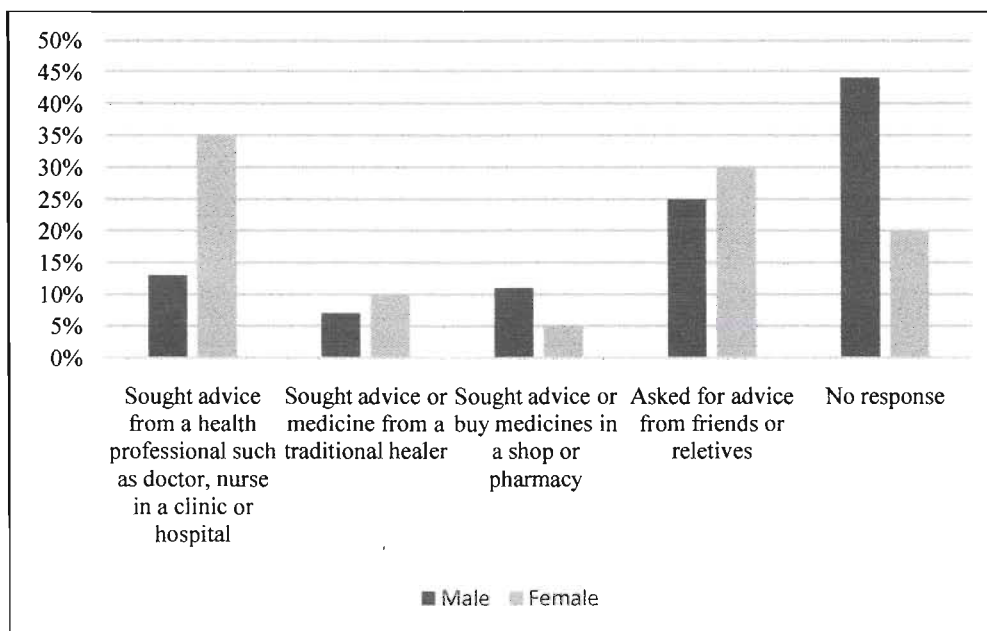


Fig 4.3: Treatment seeking behavior among students who had STIs during last 1 year

Chapter 5

Concluding Remarks

5.1: Conclusion and Discussion

The aim of the thesis is to understand the level of knowledge and risk perception on STIs including HIV/AIDS among university students of Dhaka. The study was conducted through quantitative research. A structured questionnaire was developed to collect data on knowledge, attitude and risk perception on HIV/AIDS and STIs. Students were purposely selected based on gender, education year and private versus public university. The study found that hearing the name and treatment of HIV/AIDS is high but a large number of students failed to identify the correct means of contraction and prevention of AIDS. The knowledge on STIs, its causes, signs and symptoms among the students was very poor.

In terms of the first hypothesis that the students of private universities are likely to have more knowledge than public university does not hold for AIDS but seem true for STIs. Knowledge on STIs, its causes, signs and symptoms, complications are much higher among private university students compared to public university students. Male students are more likely to have knowledge about HIV/AIDS than female students, which was the second hypothesis of the study. In both cases (AIDS/STIs) more male students than female students are aware of the diseases.

According to the third hypothesis of the study, final year students were more likely to have awareness than first year students about STIs including HIV/AIDS. The knowledge of HIV/ AIDS between first and final year students were same but knowledge that of its contraction and prevention is high among the final year students. Similar trends have been also found in case of the knowledge of STIs, its causes, signs and symptoms, and complications. The fourth hypothesis that students of urban background were more likely, to have awareness than students from rural background is partially true. Moreover, rural background students are aware of HIV/AIDS knowledge in contrast, urban background students were more aware about STIs, its causes, signs and symptoms, complications awareness.

The last hypothesis that students who lived with others students have higher risk perception than students who lived with family came out true. The large proportion of students who live with other students discussed about ways to prevent AIDS and correctly identified that AIDS can be transmitted to mother to children and healthy-looking person could have this disease.

The study also revealed that the students have prevalence of STIs, and large proportion of students did not know the place where they can get STIs tests and treatment service.

It can be stated that, the general knowledge of HIV/AIDS and STIs is much higher among university students. This study also revealed that private university students have more knowledge compared to public university students on STIs, its causes, signs and symptoms and complication. Male students are much more aware than female students considering knowledge of AIDS, its contraction and prevention and STIs, its signs and symptoms, complication. First year students are slightly more aware on contraction and prevention of AIDS, but considering all other factors final year students were found to be more knowledgeable on STIs including AIDS. It was partially true that urban background students have more knowledge on STIs including AIDS. Students who live with other students have higher risk perception and positive attitude compared to the students who lived with family.

5.2 Policy Recommendation

Since HIV/AIDS is considered as one of the most devastating disease that has spread all over the world, Bangladesh is no less vulnerable. To prevent this disease, it is much required to make the young generation more aware by formulating appropriate policies and programmes for this target group. On the other side, STIs is also considered as a vulnerable of human health that can make our young generation more anxious. To reduce the risk of these types of disease, people should be more conscious about the causes and consequences of AIDS and STIs. And there is no alternative of increasing the awareness of our youth. For this purpose, effective steps should be taken by private and public organizations. Voluntary council service and STIs testing place should be placed in every town and campaigns carried out. Awareness programmes in educational institutions, social events and village community should be ensured to aware people, especially the youth community. Family, friends and teachers can also make a good contribution to make the young people more conscious.

5.3 Further Research Direction

There are some short comings of this thesis. In this study the primary data has been used on a small scale due to time restriction. Thus the sample size was limited within 320 students. I have selected only 4 universities where the characteristics of the respondents may be more or less same. Present analysis is based on cross sectional data but a time series data may be more valuable to conduct these kind of vulnerability analysis in the future.

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APPENDIX 1

TABLES

Table A1: Distribution of the Demographic Characteristics among Students of Dhaka by Private and Public University

Background information of respondent	Private University		Public University		Total	
	Number	Percent	Number	Percent	Number	Percent
Faculty						
Faculty of Arts	24	15.0	45	28.1	69	21.6
Faculty of Business Studies	26	16.3	38	23.7	64	20.0
Faculty of Science	99	61.9	43	26.9	142	44.4
Faculty of Social Science	11	6.9	34	21.3	45	14.0
Academic Year						
1st year	70	43.8	90	56.3	160	50.0
4th year	90	56.3	70	43.7	160	50.0
Age						
18-20	3	1.9	35	21.9	38	11.9
20-22	67	41.9	55	34.3	122	38.1
22+	90	56.3	70	43.8	160	50.0
Gender						
Male	80	50.0	80	50.0	160	50.0
Female	80	50.0	80	50.0	160	50.0
Marital Status						
Single	139	86.9	142	88.7	281	87.8
Married	19	11.9	15	9.3	34	10.6
Separated	1	1.0	2	1.4	3	1.0
Divorced	1	1.0	1	0.6	2	0.6
Religion						
Islam	121	75.6	102	63.7	223	69.7
Hinduism	30	18.8	49	30.6	79	24.7
Buddhism	2	1.3	5	3.2	7	2.2
Christianity	7	4.4	4	2.5	11	3.4
Completed HSC from						
Rural area	14	8.8	55	34.4	69	21.6
Urban area	146	91.3	105	65.6	251	78.4
Live with						
Parents	119	74.4	53	33.1	172	53.7
Spouse	8	5.0	8	5.0	16	5.0
Other students	33	20.6	96	60.0	129	40.3
Others	0	0.0	3	1.9	3	1.0
Total	160	100.0	160	100.0	320	100.0

Table A2: Distribution of the Communication and Media Exposure among Students of Dhaka by Private and Public University

Communication and Media Exposure	Private University		Public University		Total	
	Number	Percent	Number	Percent	Number	Percent
Reading Newspaper						
Not even once in a week	6	3.8	6	3.8	12	3.8
Two-five times in a week	64	40.0	57	35.6	121	37.8
Weekly basis	90	56.2	97	60.6	187	58.4
Browsing Internet						
Not even once in a week	1	0.6	20	12.5	21	6.6
Two-five times in a week	91	56.9	73	45.6	164	51.2
Weekly basis	68	42.5	67	41.9	135	42.2
Watching Television						
Not even once in a week	7	4.4	25	15.6	32	10.0
Two-five times in a week	77	48.1	74	46.3	151	47.2
Weekly basis	76	47.5	61	38.1	137	42.8
Listening to Radio						
Not even once in a week	34	21.3	34	21.2	68	21.2
Two-five times in a week	101	63.1	80	50.0	181	56.6
Weekly basis	25	15.6	46	28.8	71	22.2
Total	160	100.0	160	100.0	320	100.0

Table A3: Distribution of Knowledge on AIDS among Students of Dhaka by Private and Public University

HIV/AIDS knowledge	Private University		Public University		Total	
	Number	Percent	Number	Percent	Number	Percent
Heard about AIDS						
Yes	154	96.2	158	98.7	312	97.5
No	6	3.7	2	1.3	8	2.5
Total	160	100.0	160	100.0	320	100.0
Contraction and prevention of AIDS						
Know	151	98.0	143	90.5	294	94.2
Don't know	3	1.9	15	9.5	18	5.8
Total	154	100.0	160	100.0	320	100.0
Knowledge on contraction and prevention of AIDS*						
Using condom	90	59.6	79	55.2	169	57.5
Avoiding sex with prostitute	48	31.8	64	44.7	112	38.1
Avoiding sex with persons who have many partners	45	29.8	61	42.6	108	36.7
Avoiding unsafe blood transfusion	46	30.5	62	43.3	108	36.7
Avoiding sex with persons who inject drugs intravenously	41	27.1	67	46.8	106	36.0
Avoiding unsterilized needle/syringe	35	23.2	55	38.5	90	30.6
Avoiding sex with homosexuals	23	15.2	38	26.6	61	20.7
Limiting sex with trusted partners	15	9.9	32	22.4	47	16.0
Abstaining from sex	14	9.3	21	14.7	35	11.9
Misconception on contraction and prevention of AIDS*						
Avoiding sharing razors/blades	35	23.2	52	36.4	87	29.6
Limiting sex in marriage	23	15.2	27	18.9	50	17.0
Avoiding kissing	9	5.9	20	13.9	29	9.9
Seeking protection from traditional healer	9	5.9	8	5.6	17	5.8
Avoiding mosquito bites	6	3.9	5	3.5	11	3.7
Total	151	100.0	143	100.0	294	100.0
Treatment of AIDS						
Antiretroviral therapy	31	20.1	57	18.2	57	18.2
Antibiotics	8	5.2	24	7.7	24	7.7
Not possible	115	74.7	231	74.0	231	74.0
Total	154	100.0	160	100.0	320	100.0

*multiple response

Table A4: Distribution of Knowledge on STIs among Students of Dhaka by Private and Public University

STIs knowledge	Private University		Public University		Total	
	Number	Percent	Number	Percent	Number	Percent
Heard about other STIs						
Yes	102	63.8	139	86.9	241	75.3
No	58	36.2	21	13.1	79	24.7
Total	160	100.0	160	100.0	160	100.0
Causes of STIs*						
At least one possible cause	81	79.4	77	55.4	158	65.6
Causative organism						
Bacteria	49	48.0	23	16.5	72	29.9
Virus	45	44.1	21	15.1	66	27.4
Fungus	45	44.1	21	15.1	66	27.4
Influencing factors						
Having sex during menstruation	29	28.5	27	19.4	42	17.4
Having sex soon after delivery	26	25.5	26	18.7	39	16.2
Blood transfusion	25	24.5	14	10.0	28	11.6
Bad hygiene practice	23	22.5	19	13.7	56	23.2
Being unfaithful	15	14.7	13	9.3	52	21.6
Signs and symptoms of STIs*						
At least one signs and symptom	70	68.6	32	23.0	102	42.3
Lower abdominal pain	31	30.4	11	7.9	42	17.4
Foul smelling discharge	26	25.5	3	2.1	28	11.6
Genital sores/ulcers	23	22.5	5	3.6	29	12.0
Blood in urine	21	20.6	14	10.1	35	14.5
Swelling of genital area	14	13.7	7	5.0	21	8.7
Impotence	4	3.9	2	1.4	6	2.5
Discharge from penis/dripping (only male)	21	20.6	-	-	21	8.7
Burning pain during urination	8	4.9	2	1.4	10	4.1
Swelling of genital area	8	4.9	2	1.4	21	8.7
Genital warts	10	9.8	11	7.9	16	6.6
Loss of weight	12	11.7	4	2.8	8	3.3
No symptoms	4	3.9	4	2.8	19	7.8
Complication of STIs symptoms*						
Knows at least one complication	36	35.3	23	16.5	59	24.4
Still birth / miscarriage	20	19.6	3	2.1	23	9.5
Infertility	17	16.7	6	4.3	25	10.4
Ectopic pregnancy	17	16.7	8	5.7	23	9.5
Cervical cancer	16	15.9	7	5.0	23	9.5
Premature birth	13	12.7	2	1.4	15	6.2
STIs testing place in the town	18	17.6	11	7.9	29	12.0
STI is curable	95	93.1	135	97.1	230	95.4
STI is preventable	57	55.9	24	17.2	81	33.6
Total	102	100.0	139	100.0	241	100.0

*multiple response

Table A5: Distribution of the Knowledge on AIDS among University Students of Dhaka by Male and Female

HIV/AIDS knowledge	Male		Female	
	Number	Percent	Number	Percent
Heard about AIDS				
Yes	157	98.1	155	97.9
No	3	1.9	5	3.1
Total	160	100.0	160	100.0
Contraction and prevention of AIDS				
Know	150	95.5	144	92.9
Don't know	7	4.5	11	7.1
Total	157	100.0	155	100.0
Knowledge on contraction and prevention of AIDS*				
Using condom	84	56.0	85	59.0
Avoiding sex with prostitute	60	40.0	52	36.1
Avoiding sex with persons who have many partners	59	39.3	47	32.6
Avoiding sex with persons who inject drugs intravenously	57	38.0	51	35.4
Avoiding unsafe blood transfusion	55	36.7	53	36.8
Avoiding unsterilized needle/syringe	45	30.0	45	31.2
Avoiding sex with homosexuals	36	24.0	25	17.4
Limiting sex with trusted partners	25	16.7	25	17.4
Abstaining from sex	17	11.3	18	12.5
Misconception on contraction and prevention of AIDS*				
Avoiding sharing razors/blades	50	33.3	37	25.7
Limiting sex at marriage	25	16.7	22	15.3
Avoiding kissing	17	11.3	12	8.3
Seeking protection from traditional healer	12	8.0	5	3.4
Avoiding mosquito bites	7	4.6	4	2.7
Total	150	100.0	144	100.0
Treatment of AIDS				
Antiretroviral therapy	35	22.3	22	14.2
Antibiotics	11	7.0	13	8.4
Not possible	111	70.7	120	77.4
Total	157	100.0	155	100.0

*multiple response

Table A6: Distribution of Knowledge on STIs among University Students of Dhaka by Male and Female

STIs knowledge	Male		Female	
	Number	Percent	Number	Percent
Heard about other STIs				
Yes	125	78.1	116	72.5
No	35	21.9	44	27.5
Total	160	100.0	160	100.0
Causes of STIs*				
At least one possible cause	81	79.4	77	55.4
Causative organism				
Bacteria	37	29.6	35	30.2
Virus	31	24.8	35	30.2
Fungus	31	24.8	25	21.5
Influencing factors				
Having Sex during menstruation	29	23.2	37	31.9
Having sex soon after delivery	28	22.4	24	20.7
Blood transfusion	26	20.8	16	13.8
Bad hygiene practice	20	16.0	19	16.4
Being unfaithful	17	13.6	11	9.5
Signs and symptoms of STIs*				
At least one signs and symptom	59	47.2	43	37.1
Lower abdominal pain	25	20.0	17	14.6
Foul smelling discharge	21	16.8	8	6.9
Genital sores/ulcers	22	17.6	6	5.2
Blood in urine	13	10.4	22	19.0
Swelling in genital area	13	10.4	22	19.0
Impotence	12	9.6	4	3.4
Discharge from penis/dripping (only male)	10	8.0	11	9.5
Burning pain on urination	8	6.4	2	1.7
Swelling of genital area	8	6.4	2	1.7
Genital warts	10	8.0	11	9.5
Loss of weight	12	9.6	4	3.4
No symptoms	4	3.2	4	3.4
Complication of STIs symptoms*				
Knows at least one complication	36	35.3	23	16.5
Still birth / miscarriage	13	10.4	10	8.6
Infertility	17	16.7	6	4.3
Ectopic pregnancy	12	9.6	11	9.5
Cervical cancer	16	15.9	7	5.0
Premature birth	8	6.4	7	6.0
STIs testing place in the town	12	9.6	17	14.6
STI is curable	116	92.8	114	98.3
STI is preventable	43	34.4	38	32.7
Total	125	100.0	116	100.0

*multiple response

Table A7: Distribution of Knowledge on AIDS among University Students of Dhaka by First Year and Final Fourth Year

HIV/AIDS knowledge	First Year		Final Fourth Year	
	Number	Percent	Number	Percent
Heard about AIDS				
Yes	153	95.6	159	99.4
No	7	4.4	1	0.6
Total	160	100.0	160.0	100.0
Contraction and prevention of AIDS				
Know	142	92.8	152	95.6
Don't know	11	7.2	7	4.4
Total	153	100.0	159	100.0
Knowledge on contraction and prevention of AIDS*				
Using condom	83	58.5	86	56.6
Avoiding unsafe blood transfusion	57	40.1	51	33.5
Avoiding sex with prostitute	52	36.6	60	39.5
Avoiding sex with persons who inject drugs intravenously	53	37.3	55	36.2
Avoiding sex with persons who have many partners	52	36.6	54	35.5
Avoiding unsterilized needle/syringe	48	33.8	42	27.6
Avoiding sex with homosexuals	30	21.1	31	20.3
Limiting sex with trusted partners	22	15.5	25	16.4
Abstaining from sex	18	12.6	17	11.1
Misconception on contraction and prevention of AIDS*				
Avoiding sharing razors/blades	43	30.3	44	28.9
Limiting sex at marriage	29	20.4	21	13.8
Avoiding kissing	12	8.4	17	11.1
Seeking protection from traditional healer	8	5.6	9	5.9
Avoiding mosquito bites	4	2.8	7	4.6
Total	142	100.0	152	100.0
Treatment of AIDS				
Antiretroviral therapy	28	18.3	29	18.2
Antibiotics	15	9.8	9	5.6
Not possible	110	71.9	121	76.1
Total	153	100.0	159	100.0

*multiple response

Table A8: Distribution of the Knowledge on STIs among the University Students of Dhaka by First Year and Final Fourth Year

STIs knowledge	First Year		Final Fourth Year	
	Number	Percent	Number	Percent
Apart from (AIDS), heard about other STI that can be transmitted through sexual contact				
Yes	117	73.1	124	77.5
No	43	26.8	36	22.5
Total	160	100.0	160	100.0
Possible cause/s of STI*				
Knows at least one possible cause of STI	44	37.6	39	31.5
Causative organism				
Bacteria	35	29.9	21	16.9
Virus	30	25.6	42	33.9
Fungus	27	23.1	25	20.2
Influencing factors				
Having sex during menstruation	25	21.4	41	33.1
Having sex soon after delivery	24	20.5	42	33.9
Blood transfusion	24	20.5	18	14.5
Bad hygiene practice	20	17.1	19	15.3
Being unfaithful	14	12.0	14	11.3
Signs and symptoms of STI*				
Knows at least one sign and symptoms of STI	43	36.7	59	47.6
Lower abdominal pain	22	18.8	20	16.1
Genital sores/ ulcers	16	13.7	13	10.5
Foul smelling discharge	15	12.8	13	10.5
Blood in urine	14	12.0	21	16.9
Discharge from penis/dripping (only male)	10	8.5	11	8.9
Swelling of genital area	9	7.7	12	9.7
Genital warts	8	6.8	8	6.5
No symptoms	7	5.9	12	9.6
Burning pain on urination	6	5.1	4	3.2
Loss of weight	4	3.4	4	3.2
Impotence	4	3.4	2	1.6
Redness/inflammation in genital area	2	1.7	3	2.4
Complication of STI if untreated*				
Knows at least one complication of STI if untreated	11	9.4	12	9.7
Still birth / miscarriage	10	8.5	15	12.1
Neonatal death infertility	9	7.7	14	11.3
Ectopic pregnancy	9	7.7	14	11.3
Cervical cancer	6	5.1	9	7.2
Premature birth	11	9.4	12	9.7
Know the name of a place in your town where you can test STI	15	12.8	14	11.3
Know that STI is curable	113	96.6	117	94.3
Know that STI is preventable	39	33.3	42	33.9
Total	117	100.0	124	100.0

*multiple response

Table A9: Distribution of Knowledge on AIDS among University Students of Dhaka by Urban and Rural Background

HIV/AIDS knowledge	Rural		Urban	
	Number	Percent	Number	Percent
Heard about AIDS				
Yes	68	98.5	244	97.2
No	1	1.5	7	2.8
Total	69	100.0	251	100
Contraction and prevention of AIDS				
Know	60	88.2	234	95.9
Don't know	8	11.8	10	4.1
Total	68	100.0	244	100.0
Knowledge on contraction and prevention of AIDS*				
Using condom	32	53.3	137	58.5
Avoiding sex with prostitute	28	46.7	84	35.9
Avoiding sex with persons who inject drugs intravenously	25	41.7	83	35.5
Avoiding unsafe blood transfusion	25	41.7	83	35.5
Avoiding unsterilized needle/syringe	22	36.7	68	29.0
Avoiding sex with persons who have many partners	25	41.7	83	35.5
Avoiding sex with homosexuals	15	25.0	46	19.6
Limiting sex with trusted partners	14	23.3	33	14.1
Abstaining from sex	14	23.3	21	8.9
Misconception on contraction and prevention of AIDS*				
Avoiding sharing razors/blades	22	36.7	65	27.8
Limiting sex at marriage	15	25.0	35	14.9
Avoiding kissing	7	11.6	22	9.4
Seeking protection from traditional healer	5	8.3	12	5.1
Avoiding mosquito bites	2	3.3	9	3.8
Total	60	100.0	234	100.0
Treatment of AIDS				
Antiretroviral therapy	14	20.6	43	17.6
Antibiotics	5	7.5	19	7.6
Not possible	49	72.0	182	72.5
Total	68	100.0	244	100.0

*multiple response

Table A10: Distribution of Knowledge on STIs among University Students of Dhaka by Urban and Rural background

STIs knowledge	Rural		Urban	
	Number	Percent	Number	Percent
Apart from (AIDS), heard about other STI infection that can be transmitted through sexual contact				
Yes	61	88.4	180	71.7
No	8	11.6	71	28.3
Total	69	100.0	251	100.0
Possible cause/s of STI*				
Knows at least one possible cause of STI	33	54.1	125	69.4
<i>Causative organism</i>				
Bacteria	14	22.9	38	21.1
Fungus	12	19.7	30	16.7
Virus	12	19.7	60	33.3
<i>Influencing factors</i>				
Having sex soon after deliver	10	16.4	56	31.1
Blood transfusion	9	14.7	47	26.1
Having sex during menstruation	9	14.5	47	26.1
Bad hygiene practice	6	9.8	33	18.3
Being unfaithful	6	9.8	22	12.2
Signs and symptoms of STI*				
Knows at least one sign and symptoms of STI	20	32.8	82	45.5
Blood in urine	11	18.0	24	13.3
Lower abdominal pain	8	13.1	34	18.9
Genital sores/ ulcers	3	4.9	25	13.3
Discharge from penis/dripping (only male)	4	6.5	17	9.4
Foul smelling discharge	5	8.2	24	13.3
No symptoms	3	4.9	16	8.8
Genital warts	2	3.2	14	7.7
Burning pain on urination	2	3.2	8	4.4
Impotence	2	2.9	4	2.2
Swelling of genital area	1	1.6	20	11.1
Loss of weight	1	1.5	7	3.9
Redness/inflammation in genital area	1	1.5	4	2.2
Complication of STI if untreated*				
Knows at least one complication of STI if untreated	14	22.9	45	25.0
Still birth / miscarriage	5	8.2	18	10.0
Neonatal death infertility	5	8.2	20	11.1
Ectopic pregnancy	4	6.5	19	10.5
Cervical cancer	3	4.9	20	11.1
Premature birth	2	3.2	13	7.2
Know the name of a place in your town where you can test STI	6	9.8	23	12.8
Know that STI is curable	60	98.4	170	94.4
Know that STI is preventable	12	19.7	69	38.3
Total	61	100.0	180	100.0

*multiple response

Table A11: Distribution of the Sources of Knowledge of HIV/AIDS and STIs among University Students of Dhaka

Source of information	HIV/AIDS knowledge source		STI knowledge source	
	Number (N=312)	Percent	Number (N=241)	Percent
From which sources of information have you learned most about AIDS/STIs?*				
Radio	60	19.2	27	11.2
Television	122	39.1	45	18.7
Templates/Posters	52	16.7	11	4.6
Mosques/Temple/Church	17	5.4	17	7.1
Community meeting	10	3.2	14	5.8
Workplace	37	11.9	2	0.8
Newspaper/Magazine	191	61.2	115	47.7
Internet	80	25.6	65	27.0
Health worker	44	14.1	24	10.0
School/Teacher	85	27.2	30	12.4
Friend/Family	57	18.3	73	30.3
Bill board/Sign board	48	15.4	41	17.0

*multiple response

APPENDIX 2

QUESTIONNAIRE

University Student Survey – February, 2013

Student Questionnaire

Hello. My name is Dewan Tanvir Ahmed and I am a graduate student of East West University. In partial fulfillment of the requirements for the degree of Masters in Population, Reproductive Health, Gender and Development I am conducting a self-administered questionnaire survey.

Your participation in the survey is completely voluntary. If you don't want to answer any question in the questionnaire, you can. Also you can stop the interview at any time. However, I hope you will participate in the survey since your views are very much important. All of yours answers will be confidential. Please feel free to fill in the following questionnaire.

Interview Date:, February, 2013

1. Background Information

- 1.1 University Name: Dhaka University East West University
 Jagonnath University United International University
- 1.2 Subject:..... 1.3 Academic Year: 1st year 4th year
- 1.4 Age:..... 1.5 Gender: Male Female
- 1.6 Marital Status: Single Married Separated Divorced Widowed
- 1.7 Religion: Islam Sanatan (Hindu) Buddhism Catholic Other Specify).....
- 1.8 From where have you completed your higher secondary education?
 Rural area Urban area
- 1.9 With whom do you live?
 With parents With spouse With other students Other (Specify).....
- 1.10 What is the monthly income (taka) of your family/ guardian?
 < 20000 20000-50000 50000-100000 > 100000
- 1.11 What is the level of education of your father?
 No education Primary incomplete Primary complete Secondary incomplete
 Secondary complete or higher
- 1.12 What is the level of education of your mother?
 No education Primary incomplete Primary complete Secondary incomplete
 Secondary complete or higher
- 1.13 Do you? Read a newspaper or magazine Browse internet Watch television
 Listen radio
- 1.14 How often (once in a week, 2-3 days a week, 4-5 days a week, 6-7 days a week, not even once) do you –
a) Read a newspaper or magazine ----- (b) Browse internet-----
(c) watch television----- (d) listen to radio-----
-

2. Knowledge on HIV/AIDS

2.1 Now I would like to talk about something else. Have you ever heard of an illness called AIDS?

- i) Yes ii) No (Go to q.2.3)

2.2 From which sources of information have you learned most about AIDS?

- | | |
|---------------------------|----------------------------|
| i) Radio | vii) Newspaper/Magazine |
| ii) Television | viii) Internet |
| iii) Templates/Posters | ix) Health worker |
| iv) Mosques/Temple/Church | x) School/Teacher |
| v) Community meeting | xi) Friends/Family |
| vi) Workplace | xii) Bill board/Sign board |
| xiii) Others _____ | (Specify) |

2.3 How often do you read about sex or sexuality related health news in a newspaper or magazine?

- i) Almost every day ii) At least once a week iii) At least once a month
iv) Less than once a month v) Never read

2.4 How often do you browse about sex and sexuality related health bulletin?

- i) Almost every day ii) At least once a week iii) At least once a month
iv) Less than once a month v) Never brows

2.5 How often do you watch about sex and sexuality related health programme in the television?

- i) Almost every day ii) At least once a week iii) At least once a month
iv) Less than once a month v) Never watch

2.6 How often do you listen to sex and sexuality related health programme on the radio?

- i) Almost every day ii) At least once a week iii) At least once a month
iv) Less than once a month v) Never listen

2.7 Have you ever talked anybody about getting the virus that causes AIDS?

- i) Yes ii) No

2.8 If yes, with whom you have discussed?

- i) Parents ii) Siblings iii) Friends iv) Relatives vii) others

2.9 If married, have you ever talked with your spouse about getting the virus that cause STD/AIDS?

- i) Yes ii) No iii) Do not know

2.10 Is there anything a person can do to avoid getting AIDS or the virus that causes AIDS?

- i) Yes ii) No iii) Do not know

2.11 What can a person do?

- | | |
|---|-------------------------------------|
| i) Abstain from sex | ix) Avoid sex with prostitutes |
| ii) Limit sex at marriage | x) Avoid sex with homosexuals |
| iii) Avoid sex with persons who have many partners | xi) Avoid unsafe blood transfusions |
| iv) Avoid sex with persons who inject drugs intravenously | |
| v) Avoid unsterilized needle/syringe | xii) Avoid kissing |
| vi) Avoid mosquito bites | xiii) Avoid sharing razors/ blades |
| vii) Seek protection from traditional healer | xiv) Limit sex with trusted partner |
| viii) Use Condom | xv) Others..... (Specify) |

2.12 Is it possible for a healthy-looking person to have the AIDS virus?

- i) Yes ii) No

2.13 Can the virus that causes AIDS be transmitted from a mother to a child?

- i) Yes ii) No

2.14 Have you ever talked about ways to prevent getting the virus that causes AIDS with anyone?

- i) Yes ii) No

2.15 If yes, with whom?

- | | | | |
|------------|-------------------|--------------|---------------|
| i) Parents | ii) Siblings | iii) Friends | iv) Relatives |
| v) Doctor | vi) Health worker | vii) others | |

2.16 HIV/AIDS can be treated by:

- Antibiotics Antiretroviral therapy Not possible Other(specify).....

3. Knowledge on Sexually Transmitted Infection, treatment and prevention

3.1 (Apart from AIDS), have you heard about (other) infection/disease that can be transmitted through sexual contact? i) Yes ii) No iii) Do not know

3.2 Do you know what is STI? i) Yes ii) No iii) Do not know

3.3 What is the source of your STI knowledge?

- | | |
|-----------------------------|----------------------------|
| i) Radio | vii) Newspaper/Magazine |
| ii) Television | viii) Internet |
| iii) Templates/Posters | ix) Health worker |
| iv) Mosques/ Temple/ Church | x) School/Teacher |
| v) Community meeting | xi) Friends/Family |
| vi) Workplace | xii) Bill board/Sign board |
| xiii) Others.....(Specify) | |

3.4 The possible cause/causes of STIs (can be many)

- | | | | |
|-------------------------|---------------------------------|-------------------------------------|-----------------|
| i) Bacteria | ii) Virus | iii) Fungus | iv) Bad hygiene |
| v) Being unfaithful | vi) Blood transfusion | vii) Having sex soon after delivery | |
| viii) Sex during menses | ix) Other (please specify)..... | x) Don't know | |

3.5 (Only for male students) In a man, what signs and symptoms would lead you to think that he has such a disease?

- | | |
|--|------------------------------------|
| i) Lower abdominal pain | vii) Discharge from penis/dripping |
| ii) Foul smelling discharge | viii) Burning pain on urination |
| iii) Redness/ Inflammation in genital area | ix) Swelling in genital area |
| iv) Genital sores/ Ulcers | x) Genital warts |
| v) Blood in urine | xi) Loss of weight |
| vi) Impotence | xii) No symptoms |
| xiii) Other (please specify)..... | xiv) Don't know |

3.6 (Only for male students) Now I would like to ask you some questions about your health in the last 1 year. During the last 1 year, have you had-

- | | |
|--|--|
| i) A discharge from your penis? | ii) A sore or ulcer on or near your penis? |
| iii) Pain or burning sensation during urination? | |

3.7 (Only for female students) In a woman, what signs and symptoms would lead you to think that she has such a disease?

- i) Lower abdominal pain
- ii) Foul smelling discharge
- iii) Redness/ Inflammation in genital area
- iv) Genital sores/ Ulcers
- v) Blood in urine
- vi) Impotence
- vii) Genital discharge
- viii) Burning pain on urination
- ix) Swelling in genital area
- x) Genital warts
- xi) Loss of weight
- xii) No symptoms
- xiii) Other (please specify).....
- xiv) Don't know

3.8 (Only for female students) Now I would like to ask you some questions about your health in the last 1 year . Sometimes women experience a bad smelling abnormal genital discharge. During the last 1 year, have you had a bad smelling abnormal genital discharge? i) Yes ii) No

3.9 During the last 1 year, have you had a genital sore or ulcer? i) Yes ii) No

3.10 If yes (questions 3.5, 3.6, 3.7, 3.8), did you seek any kind of advice or treatment?

- i) Sought advice from a health professional such as doctor, nurse in a clinic or hospital?
- ii) Sought advice or medicine from a traditional healer?
- iii) Sought advice or buy medicines in a shop or pharmacy?
- iv) Sought treatment from a homeopath doctor?
- v) Asked for advice from friends or relatives?
- vi) Other (specify).....

3.10 Do you know a place in your town where you can get STI testing? i) Yes ii) No

3.11 Have you had an STI testing? i) Yes ii) No

3.12 If no, why have you not had an STI test (can be many)

- i) I am not at risk
- ii) I am embarrassed to go for a test
- iii) I do not know where the place
- iv) I feel never had any symptoms
- v) Other (specify).....

3.13 What are the complications of STI if untreated?

- i) Still birth
- ii) Miscarriage
- iii) Neonatal death
- iiii) Ectopic pregnancy
- v) Cervical cancer
- vi) Premature birth
- vii) Don't know
- viii) Other (please specify).....

3.14 If a woman's husband has a sexually transmitted disease? Would it be acceptable for her to ask him to use a condom? i) Yes ii) No iii) Do not know

3.15 Are STIs Curable? Yes No

3.16 Are STIs preventable? Yes No

If yes, How STI can be prevented? (write briefly).....

4. Policy option

4.1 As an educated young person, what do you think about adolescent reproductive health condition in Bangladesh? (Write briefly)
4.2 What should be done by Bangladesh government to address adolescent reproductive health issues? (Write briefly)

Thank you very much for your answers!