

Knowledge, Attitudes and Practices Towards HIV Among College Students of Dhaka City, Bangladesh

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ABSTRACT

Objective: HIV/AIDS is one of the fast-growing epidemics and global public health problems experienced throughout the entire world. Inadequate knowledge and misconceptions regarding the mode of transmission is responsible for the spread of HIV infection. The purpose of this study is to assess the knowledge and raise awareness about HIV through health education among college students.

Methods: A total number of 300 college students voluntarily participated in this descriptive cross-sectional study. The data were collected through an online questionnaire, tabulated and analyzed in Microsoft Excel and SPSS version 25.0 (Chicago, IL, USA). The quantitative data of the study were expressed in terms of numbers and percentages. The questionnaire included Socio-demographic information, knowledge related to HIV exposure, causative agents, high risk groups, mood of transmission and preventive measure. Chi-Square tests were used to associate the variables.

Results: The study reveals that the majority of the respondents had significant knowledge about HIV exposure, causative agent, mode of transmission and preventive measures. 71.3% of respondents recommended using condoms, 52% respondents of urban areas insisted to avoid multiple sexual partners and 78.6% respondents preferred to screen blood before transfusion. The study has significant association between age and knowledge about mood of transmission ($p < 0.007$) as well as residence and attitude towards HIV patients ($p < 0.0001$). Therefore, few students showed negative attitudes towards HIV patients.

Conclusion: From this study results, it is recommended that awareness programs are needed for college students regarding HIV/AIDS transmission and prevention. It would be helpful to reduce the deficit of knowledge and attitudes regarding HIV/AIDS.

Keywords: HIV, AIDS, Sexual behavior, Sexually Transmitted disease, College students.

INTRODUCTION

Human Immunodeficiency Virus (HIV) /Acquired Immune Deficiency Syndrome (AIDS) has been introduced as a serious Global health challenge over decades. The World Health Organization (WHO) reported that the estimated number of people living with HIV was 37.7 million at the end of 2020 where over two thirds of people 25.4 million were in the African region. Approximately 1.5 million people attained

HIV and 480000-1 million people died due to HIV in 2020 [1]. UNICEF has reported that adolescents (aged 15-19 years) with HIV have risen by 420000 in 2000 globally and nearly two thirds of the new cases among adolescents (aged 15-19 years) were girls, [2]. Since HIV/AIDS was first detected in the USA in 1981, it has killed more than 25 million people. HIV/AIDS has a record as one of the destructive epidemics in history [3]. It is the most dominant cause

of death in Africa as well as the fourth major cause of death in the world [4]. In Bangladesh, the first case of HIV/AIDS was detected in 1989. However, the number of HIV/AIDS positive people was counted 2583 in 2011 whereas the number has dramatically risen within the last six years and stands at nearly 13000 infected people with 1700 new cases in 2017 and 34% of them are females aged 15 [5].

HIV has been introduced as a major public health concern in developing countries including Bangladesh. It is fortunate to have a low prevalence rate of HIV/AIDS in Bangladesh, less than 0.1% (UNICEF 2009) [6]. But the threatening factors of HIV is significant for Bangladesh, particularly geographical boundaries with India and Myanmar are severely infected countries of HIV and other considering factors like poverty, gender discrimination, literacy, huge number of populations with STD (Sexually Transmitted Disease) cases and particularly lack of appropriate knowledge about sex life among the people [7]. In 2018, around one million of Rohingya refugees have entered into Bangladesh through the border experiencing genocide in their homeland Myanmar where a good amount of people was HIV positive that increases the risk at a higher level [8].

Acquired Immune Deficiency Syndrome (AIDS) is a deadly clinical condition caused by Human Immunodeficiency Virus (HIV). The causative agent, human immunodeficiency virus (HIV) that makes destruction of helper T-lymphocytes that leads to the development of a cellular immunodeficiency disease which manifests the infected person susceptible to a wide range of opportunistic infections [9]. Adolescents and teenagers are the most vulnerable and at risk group of HIV/AIDS. Girls of pubertal age involve sexual intercourse has a greater risk of being affected by HIV/AIDS and STDs. Specially teenagers are sexually abused through sexual cruelty.

HIV/AIDS is transmitted by the body fluids of the infected person such as semen, blood,

saliva, breast milk, and vaginal fluid through unprotected sexual intercourse, heterosexuality or homosexuality, blood transfusion, organ donation, use of contaminated needles and syringes and vertical transmission from infected mother to her child [10, 11]. Misconceptions about HIV/AIDS transmission by hugging and kissing, mosquito bites, eating food, handshaking, studying in the classroom and sharing swimming pools were widely prevalent and show that students are not getting access to the right information about the transmission of HIV [12]. Misconceptions, social stigma, discrimination and lack of knowledge are the contributing factor for the rapid spread of HIV [13].

As there is no vaccine for HIV, education has served as a 'Social vaccine' and it works as a powerful preventive tool for AIDS. On the contrary, primary prevention was introduced as a single tool to control HIV infection. The fueling factor of spreading HIV/AIDS is believed to be lack of knowledge about how HIV is transmitted and how it can be prevented. Raising of awareness about HIV can be prevented by modifying sexual behavior, strict screening of blood donors, avoiding sharing needles and razors, using of sterile needles and syringes, strict screening of blood, and by the use of personal protective equipment of medical professionals [14]. A cross sectional study was conducted in China where around 30% (44/154) of male students did not even realize the severity of the HIV/AIDS epidemic among students whom were homosexual [15]. Another study was conducted in Oman where the majority of the students were aware of modes of transmission, diagnostic tests and preventive measures of HIV [16]. A descriptive correlation survey was conducted among adolescents in Bangladesh, where the level of knowledge was fair and the attitude level was neutral of the students and misconceptions about the non-transmittable routes and negative attitudes towards HIV/AIDS prevention were normal [17].

Another study reveals that the overall mean of HIV knowledge among students was 79.6% correct [18]. The majority of dental students in the study were unaware of the association between AIDS and the common oral manifestations such as oral candidiasis, leukoplakia and Kaposi sarcoma [19]. The majority of the students were aware of HIV/AIDS knowledge was 85.6% (5495/4698) in the recent study of China [20]. Students also had a positive attitude on HIV/AIDS infection and prevention measures shown in another study [21]. Another study revealed that nearly two-fifths of the students (36.98%) had a good level of knowledge about HIV [22].

The study has been conducted to ascertain the existing level of awareness about HIV/AIDS, including knowledge, attitude, mode of transmission and preventive measures among the college students and the evaluation of the relationship between the awareness level and different socio-demographic factors.

MATERIALS & METHODS

Study design:

A descriptive cross-sectional survey was conducted among the college students through an online Google form that was delivered to them via email and social media channels like Facebook, WhatsApp and Messenger. This study was conducted for statistical and observational approaches of qualitative factors such as knowledge, attitudes and practices towards HIV/AIDS.

Inclusion/exclusion criteria:

Only college students from different colleges were represented as the targeted population in this study. The respondents were informed about the purposes of this study and requested to participate willingly in the study upon receiving the link of the form.

Questionnaire:

A structured questionnaire was prepared to collect both qualitative and quantitative data among the college students in different

colleges in Dhaka city. The questionnaire was divided into three main sections and each section has its particular parts to continue the study. The questionnaires included different socio-demographic variables, knowledge, practices and opinions-based questions.

Statistical analysis:

The data set was imported into a spreadsheet and descriptive statistics like means, SD, Confidence Interval CI, frequencies and percentages were calculated. The values of the variables are considered as counts and percentages. Chi-square test was applied to determine the association between variables. Statistical analysis was performed using Microsoft Excel and SPSS version 25.0 (Chicago, IL, USA). The significance level was set ($p < 0.05$).

RESULT

Demographic Characteristics:

The number of 300 respondents participated from different colleges in Dhaka city through online based questionnaires on this study. The mean (SD) age of the respondents is 18 years and 95% confidence interval (CI), (17.9-18.1) (range, 17-19). The age of the respondents was categorized into 17 -18 years old 50.67% and 19 years old 49.33%. The majority of the respondents were male 167, (55.67%) and the rest of the respondents were female 133, (44.33%). The religion of the respondents was divided into Islam, Hindu and Cristian sequentially 137(79%), 51(17%) and 12(4%). Most of the respondents' residence belongs to urban areas 171(57%) and the rest of them semi-urban 91(30.3%) and rural 38(12.6%).

Mood of Transmission and Attitude and behavior with HIV patient

Human Immunodeficiency Virus (HIV) can be transmitted from an infected person to non-infected through body fluids like saliva, contaminated blood, vaginal secretions, semen and breast milk. HIV is effectively transmitted during unprotected sexual

intercourse, unscreened blood transfusion and sharing of contaminated niddle. HIV can also be transmitted from mother to baby via transplacental during pregnancy or childbirth due to exposure of blood or vaginal fluid or while breastfeeding. As shown in the Table:2, Respondents aged 19 years had significantly better knowledge

regarding the mood of transmission than 17-18 years old respondents ($p < 0.007$) whereas majority respondents aged 17-18 had a good attitude towards HIV patients 129 so there is a significant association between age and attitude towards HIV patients ($p < .0001$).

Table 1: Demographic data of the study respondents (n=300)

Variables	Number of Respondents (n=300)	Percentages (%)
Age		
17-18 years	152	50.67%
19 years	148	49.33%
Sex		
Male	167	55.67%
Female	133	44.33%
Religion		
Islam	237	79%
Hindu	51	17%
Christian	12	4%
Residence		
Urban	171	57%
Sami-urban	91	30.30%
Rural	38	12.60%
HIV/AIDS awareness		
Yes	211	70.33%
No	89	29.67%
HIV/AIDS comprehensive knowledge		
Yes	179	59.67%
No	121	40.33%

Table 2: Association between variables and knowledge about mood of transmission & attitude towards HIV/AIDS patient

Variables	Knowledge about mood of transmission		p value Chi-Square	Attitude towards HIV/AIDS patient		p value Chi-Square
	YES	NO		YES	NO	
Age						
17-18 years	105	47	0.007	129	23	<.0001
19 years	122	26		98	50	
Sex						
Male	119	48	0.04	138	29	<.001
Female	108	25		89	44	
Religion						
Islam	173	64	0.02	189	48	0.005
Hindu	46	5		31	20	
Christian	8	4		7	5	
Residence						
Urban	131	44	0.02	148	23	<.0001
Sami-urban	61	26		57	34	
Rural	35	3		22	16	

High risk group

HIV can be transmitted anyone regardless of age, sexual orientation, race, ethnicity, gender and the living area. Moreover, certain vulnerable groups of people are at

high risk and more likely to affect HIV than others due to particular factors with risky behaviors. People with more susceptibility are intravenous drug users, commercial sex worker or prostitutions, homosexual,

professional blood donor, long route truck drivers, tourists, immigrant and bisexual or transgenders.

Preventive measures

There is no single preventive method that can stop the spread of the HIV epidemic to its own. However, several preventive methods and intervention programs has proved highly potential in reducing and protecting against HIV infection including use of condom, avoid multiple sexual partners, use of disposable syringes, screening before blood transfusion, voluntary male medical circumcision

(VMMC) and use of antiretroviral medicine as pre-exposure prophylaxis (PrPE).

As shown in the Table:3, Most of the Male respondents 43% answered that use of condoms is an effective method of HIV prevention. Similarly, majority respondents 46% aged 17-18 years had agreed to avoid multiple sexual partners as a preventive method of HIV. However, 61% respondents belong to Islam religion answered screening before blood transfusion might be the potential prevention for HIV infection. Nearly, 16% of respondents living in the urban area were believed to follow religious norms for HIV prevention.

Table 3: Preventive measures of HIV/AIDS

Variables	Use of disposable syringes "YES" %	Screening before blood transfusion "YES" %	Follow religion norms "YES" %	Use of condom "YES" %	Raising awareness "YES" %	Avoid multiple sexual partner "YES" %
Age						
17-18 years	41%	44%	18%	39%	28%	46%
19 years	28.6%	34.6%	14%	32.3%	21%	29.6%
Sex						
Male	39%	46%	19%	43%	30%	39%
Female	30.6%	32.6%	13%	28.3%	19%	36.6%
Religion						
Islam	51%	61%	22%	54%	35%	58%
Hindu	15.6%	14%	8%	14.3%	12%	14.6%
Christian	3%	3.6%	2%	3%	2%	3%
Residence						
Urban	49%	51%	16%	47%	33%	52%
Sami-urban	14.3%	21.6%	9%	19%	13%	17%
Rural	6.3%	6%	7%	5.3%	3%	6.6%

DISCUSSION

The study has been carried out among the college students to assess the utmost knowledge and attitude towards HIV patients, including HIV exposure, causative agent, and mode of transmission, high-risk group and preventive measures. The study has identified that the respondents have sound knowledge about HIV/AIDS, which is an essential prerequisite for the awareness and to adopt preventive sexual behavior. It is obligatory for the college students to understand and be aware of the knowledge about HIV/AIDS and to receive satisfactory information about exposure to high-risk sexual behavior. As the vaccine for HIV is

still unavailable, adaptive behavior and raising awareness might be the possible solution to prevent the disease. Maximum respondents had comprehensive knowledge about HIV/AIDS. AIDS is the sexually transmitted disease and it destroys the human immune system. Half of the respondents believed that raising awareness can prevent HIV/AIDS.

Prevalence of HIV transmission mostly depends on the sufficient knowledge about the mood of transmission. College students belong to the adolescence group and deserve to have enough knowledge and awareness about HIV/AIDS. In this study, the majority of the respondents have significant knowledge regarding the mode of

transmission of HIV/AIDS. Respondents who lived in the urban area had higher knowledge about the mood of transmission compared to the semi-urban and rural area (131, 61, 35 respectively) so there is a significant association between residence and knowledge about the mood of transmission ($p < 0.02$). Almost one third of the female respondents 108 who participated in the study had assertive knowledge about the mood of transmission and nearly 138 male respondents favored good attitudes towards HIV patients. So, it is identifying a significant association between sex and knowledge about the mood of transmission and attitude towards HIV patients ($p < 0.04$ and $p < 0.001$ respectively). Majority of the respondents from different religions (Islam, Hindu, Christian) answered positively regarding knowledge about the mood of transmission (173, 46, 8 respectively). However, there is a significant relationship between Respondents' religion and knowledge about the mood of transmission ($p < 0.02$). Similarly, maximum respondents from different religions (Islam, Hindu, Christian) showed a positive attitude toward HIV patients (189, 31, 7 respectively) and there is a significant association between Respondents religion and attitudes towards HIV patients ($p < 0.005$). In the present study, respondents with urban residence had an assertive attitude toward HIV patients than the semi-urban and rural (148, 57, 22 respectively) Similarly, there is also a significant relationship between residence and attitude towards HIV patients ($p < 0.0001$). Many studies reported similarly with the high percentage of results about the knowledge of HIV transmission among the respondents [23, 24].

In the present scenario, it is good to notice that the majority of the respondents were concerned about the prevention measures of HIV/AIDS. The respondents had good knowledge about HIV prevention. In this study, the majority of the respondents recommended using condoms. Approximately 71.3% of respondents from

both sex (male & female) recommended that use of condom during sexual intercourse most effective measures for HIV prevention. However, 46% of male respondents preferred screening of blood before transfusion. HIV can be transmitted through sexual intercourse with a HIV positive patient. So, 52% of respondents in the urban residence answered to avoid multiple sex partner as a preventive measures of HIV infection. Contaminated needles and syringes used by the drug abuser is one of the reasons for HIV infection. Nearly 70% of respondents with different age groups (17, 18, 19 years) agreed to use disposable syringes. However, only few of the respondents believed that following religious norms would be helpful for HIV prevention. HIV/AIDS is not a vaccine-preventable or curable disease. The ultimate goal of HIV prevention can be achieved through awareness and health education.

CONCLUSION

The study has been conducted to focus the knowledge and attitude towards HIV patients among the college students. The findings of the study reported that the college students have significant knowledge related to HIV transmission, high risk group, attitude and preventive measures of HIV infection. Lack of access to appropriate knowledge, education and information regarding AIDS, sex and behavior together with misconception influences the teenager, youth and students towards risky behavior detrimental to health. It is recommended that raising awareness among students, including adolescent groups through proper counseling, training programs and health education. Health education is a mandatory approach to expected changes in human behavior. The world health plan, health administrators and health experts are convinced that health education may play a greater role in minimizing the magnitudes and prevention of the diseases than the traditional approaches. Health education regarding the cause, mode of transmission and prevention of AIDS may help to prevent

the disease in our country.

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