Original Paper

Acquaintance on HIV/AIDS among the Higher Secondary Level Students of Manikgonj District, Bangladesh

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Abstract

Introduction: HIV (Human Immunodeficiency Virus) is a transmissible retrovirus that causes AIDS (Acquired Immune Deficiency Syndrome) in human, HIV infection gradually affects the immune system of human body and consecutively damages the cell. The result of HIV infection is relentless destruction of the immune system leading to the onset of Acquired Immunodeficiency Syndrome (AIDS). As young adults are one of the vulnerable groups for infection of HIV and studies regarding the awareness on HIV/AIDS among the young adults out of Dhaka are very few in numbers so this study was conducted outside of the capital among the higher secondary level students.

Objective: To assess the level of awareness on HIV/AIDS among the higher secondary level students of Manikgonj District, Bangladesh.

Materials and Methods: This observational study was carried out to observe the awareness of HIV/AIDS among the higher secondary level students of randomly selected urban and rural areas of Manikgonj District, Bangladesh. The total number of respondents was 246 and ages ranged from 16 to 25 years.

Results: A total of 246 respondents were interviewed and among them the majority of students were male and awareness was high among the male respondents. Majority of the respondents (98%) heard about HIV/AIDS. It also revealed 88.62% participants believed that it is a preventable disease and 78.50% of the respondents had knowledge about the unavailability of the vaccine. About the transmission, 93.90% respondents opined that it was due to infected blood transfusion; followed by 92.82% believed due to unprotected sex and 67.1% stated contaminated instruments cause transmission of HIV. In case of prevention of the disease, 88.21% believed health education as one of the preventive methods followed by using condom 86.59%, safe blood transfusion 80.49% and avoiding contaminated instrument 74.80%.

Conclusion: The level of awareness among the higher secondary level students in study area Manikgonj, Bangladesh was satisfactory. To maintain this adequate focus should be given on the need for the further information, education and communication programs to identify the barriers and to seek the ways to enlighten the population about HIV/AIDS knowledge.

Key-words: HIV (Human Immunodeficiency Virus), AIDS (Acquired Immune Deficiency Syndrome), Awareness, Attitude, UNAIDS (The Joint United Nations Program on HIV/AIDS).

Introduction

The Human Immune Deficiency Virus targets the immune system of the human body and weakens surveillance and defense system against infections. Since the virus destroys and undermines the function of immune system, infected individuals sequentially become immune-deficient. Frequently this immune function measured by CD-4 cell count[1]. Depending on the individual the most advanced stage of HIV infection is Acquired Immunodeficiency Syndrome (AIDS)[2]. HIV can take 5 to 10 years to develop AIDS[3]. People with HIV are diagnosed as AIDS when the CD4 cell count is below 200. Without treatment, an AIDS patient can typically survive up to 3 years[4]. HIV can be disseminated by permute of verity of body fluids from infected individuals, such as blood, semen, vaginal secretions, or breast milk. It is important to note various environmental factors also influence on the actual transmission risk, such as specific sexual practice, skin lesion, circumcision and mucosal trauma[5]. Studies indicate that lack of circumcision increases the rate of heterosexual

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transmission of HIV[6]. Typical day to day contact such as hugging, shaking hands or share personal objects, food and water cannot cause individuals to be infected[7].

According to the estimation of the Joint United Nations Program on AIDS (UNAIDS) more than 36 million people were living with HIV/AIDS in 2001 and about 21 million of people had died of AIDS since the disease was first discovered in the early 1980s, at that time nearly 15.6 million of children under 15 years had lost one or both of the parents as a direct result of AIDS[8].

Since it has discovered in 1981, HIV possesses a serious challenge to mankind, without any doubt, it has become the most deadly infectious disease[9]. UNAIDS globally estimated that 35.3 million people were suffering with HIV/AIDS. In 2012 global estimation showed that the number of newly affected patient was 2.3 million and 1.6 million people died due to AIDS related causes[10]. It also asserted that about 0.8 % of adults aged 15-49 years throughout the world were living with HIV[10]. Five countries namely India, Myanmar, Nepal, Thailand and Indonesia account for the majority of HIV infections[11]. As Bangladesh has border with India and Myanmar and proximity with Nepal where the epidemic is severe and in India more than half of the people of Asia about 2.5 million are living with HIV/AIDS[12]. So, Bangladesh is in a vulnerable situation for HIV/ AIDS.

In early 2010 the National AIDS and STD program (NASP) in Bangladesh asserted that there were 343 newly reported cases of HIV and 231 new AIDS cases, out of which 37 people had died already[13]. Thus the cumulative report of HIV cases in Bangladesh stands at 2088; AIDS cases stand at 850 and total 246 patients died. A very few studies have been carried out in Bangladesh regarding awareness on HIV/AIDS. Among them, one study stated that awareness of HIV/AIDS among the higher secondary level students was quite satisfactory[14]. However, another study conducted in Dhaka city revealed that awareness among the young adults about HIV/AIDS was average[15]. The rate of HIV/AIDS infection is more among injectable drug users which is progressing at a rapid pace among young people. So, the awareness of HIV/ AIDS among the young people need to frequently formulated very broadly in terms of communication, self-efficacy, critical thinking among others. However, practically most of the educational institutions still focus only on the knowledge dimension of HIV/AIDS[16].

Materials and Methods

This observational study was conducted from o1 June 2017 to 31 August 2017 in five randomly selected government and non-government higher secondary institutions, among them three of the institutions were in urban area and two of them were in rural area of Manikgonj District. A total 246 students of higher secondary level (Class-XI & Class-XII) were included in this study. Among them male students were 140 and female students were 106, age ranged from 16-25 years. In each institution out of two classes random sampling method was used. The total knowledge score was determined by three level indicated by poor (0-4), moderate (5-9), good (10 or more than 10). In order to find out the association between the awareness level with age, sex and monthly family income Chi square test was done. The level of statistical significance was set at $P<0.05$.

A pretested and predesigned questionnaire consisting of close ended question was used. Consent was taken from the institution management authority, after explaining the purpose of the study. The questionnaire was well explained to the students and queries were clarified. Data entry and statistical analysis was done by using SPSS17 and Microsoft Excel. Only students of higher secondary level of selected area of Manikgonj district who agreed to sign the consent form were included in this study.

Results

Among 246 of the respondents, more than fifty percent students (56.90%) were male and among only 25.61% students were between age ranges from 21-26 years. Majority (51.22%) students were in class 12. More than fifty percent of the student's family income was between 20,000-40,000 Taka/Month. Bulk of the students 89.43% were Muslim and the rest of them were non-Muslim. Only 4.47% students were married (Table-I). Association of awareness level with socio-demographic characteristics was found significant ($P<0.05$) and male respondent's awareness level was more than female. Again, the awareness level associated with the age differences were also found significant ($P<0.05$). But the association of awareness with monthly family income did not have statistical significance (Table-II).

Among the participants, 98% had heard about HIV/ AIDS and 89.84% students believed that HIV/AIDS is a preventable disease. Typical hugging and shaking of

hands do not transmit the disease was opined by 78.86% students. Most of the students (78.05%) were aware of the unavailability of HIV vaccine and 68.29% students thought homosexual behavior is a risk factor for causing HIV/AIDS (Table-III).

About the perception of transmission majority of the respondents (93.9%) said that infected blood transfusion may transmit the disease and 92.28% believed that unprotected sexual intercourse is one of the common causes of transmission. Again, regarding the use of contaminated syringe or sharp object 67.1% stated that it is one of the causes of transmission of HIV/AIDS, and 57.72% believed homosexuality followed by 41.46% who believed transmission from infected mother (vertical transmission) to her child might cause transmission of HIV/AIDS (Table-IV).

Among the study population, 88.21% believed health education, followed by 86.56% opined that using condom and 80.49% opined safe blood transfusion are the methods of prevention of HIV/AIDS. Again, 74.80% participants said that avoiding use of contaminated instruments can also prevent HIV/AIDS (Table-V).

Table-I: Distribution of respondents by their sociodemographic characteristics

	Characteristics	Frequency	Percentage
Gender	Male	140	56.90
	Female	106	43.10
Age	16- 20 years	183	74.39
	21- 25 years	63	25.61
Education	Students of class 11	120	48.78
	Students of class 12	126	51.22
Monthly family income	<20000	75	30.48
	20000- 40000	128	52.03
	>40000	43	17.48
Religion	Muslim	220	89.43
	Non-Muslim	26	10.57
Marital status	Married	11	4.47
	Un married	235	95.53

Table-II: Association of demographic characteristics with level of awareness

Characteristics		Level of awareness			P value (χ^2)
		Poor (0-4)	Moderate (5-9)	Good (≥ 10)	
Sex	Male	0 (0%)	16 (11.40%)	124 (88.60%)	0.032
	Female	3 (2.80%)	24 (22.60%)	79 (74.50%)	
Age in years	16-20	2 (1.10%)	23 (12.60%)	158 (86.30%)	0.025
	21-25	1 (1.60%)	17 (27.00%)	45 (71.40%)	
Monthly Family Income in BDT	<20,000	2 (2.70%)	11 (14.70%)	62 (82.70%)	0.489
	20,000-40,000	1 (0.80%)	24 (18.80%)	103 (80.50%)	
	> 40,000	0 (0%)	5 (11.60%)	38 (88.40%)	

Table-III: Respondents' knowledge on general awareness on HIV/AIDS

Response of the respondents	No of correct response	Percentage
Have you heard about HIV/AIDS?	241	98.00
Do you think HIV/AIDS is preventable?	218	88.62
Will hugging and shacking of hands with infected patient transmit HIV virus?	194	78.86
Do you know about unavailability of vaccine?	192	78.05
Do you know about risk of HIV/AIDS among the homo sexual?	168	68.29

Table-IV: Respondents' by their knowledge on the mode of transmission of HIV/AIDS

Mode of transmission of HIV/ AIDS	No of correct response	Percentage
Infected blood transfusion	231	93.90
Unprotected sexual intercourse	227	92.82
Sharing contaminated syringe or sharp object	165	67.10
Homosexual intercourse	142	57.72
From infected mother to her child (vertical transmission)	102	41.46

Table-V: Respondents' by their knowledge of the prevention methods of HIV/AIDS

Prevention methods of HIV/ AIDS	No of correct response	Percentage
Health Education	217	88.21
Using condom	213	86.59
Safe blood transfusion	198	80.49
Avoiding use of contaminated instruments	182	74.80

Discussion

Awareness can lead a person to prevention. Young adults are always regarded as a high-risk group for HIV/AIDS due to insufficient knowledge about the disease. The large population of adolescent group in the community due to a high level of social contact might have the potential to become the focus of epidemic. In this case, knowledge is very useful tool to assay the extent to which individuals or community is in a position to adopt risk free behavior[17]. The Ministry of Health and Family Welfare (MOHFW) of the Government of Bangladesh has launched a program, 'Prevention of HIV/AIDS among Young People in Bangladesh' with financial support of Global Fund to fight AIDS, Tuberculosis and Malaria (GFATM). The program aims at preventing HIV infection in young people by 1) providing HIV prevention information through mass and print media 2) offering life skills education through youth organizations and clubs, 3) making health services more youth friendly, 4) reviewing and updating social marketing strategies for accessibility of condoms targeted to young people, 5) integrating HIV prevention education and information into school curriculum, 6) designing advocacy and sensitization program targeting parents, religious and community leaders and policy planners and 7) generating evidence-based data to give strategic direction for interventions. In this study bulk of the students (98%) had heard about HIV/AIDS. A neglected number (2%) of the students had no idea regarding HIV/AIDS which is almost nearly similar to the report of the Ministry of Health and Family Welfare 2009[13]. So, the level is very high due to huge publicity by the Government sector, NGO and media. Studies conducted in India showed that all the respondents of their study had heard about HIV/AIDS, which is almost similar to this study[18,19]. This study revealed that awareness in the male is more than female (P value < 0.05) in association with awareness level and age. This study also revealed 88.62% students were aware that it's a preventable disease.

In this study, a good number (78.05%) of the students were aware of the unavailability of the vaccine of HIV/AIDS. One study conducted in Delhi, India stated more than half (59%) of the students were aware of the unavailability of HIV/AIDS vaccine[20].

It is revealed from this study that 78.86% of the participants were aware of typical hugging and shaking of hands with HIV/AIDS infected patient do not transmit the disease. In another study, 82.22% of the students were found aware that hugging or shaking hands with infected patients do not transmit the infection[21].

It was observed that in this study that 68.29% of the students believed that homosexuals were high risk group for HIV/AIDS. In one study conducted in a district of northern India stated that common mode of transmission was heterosexual intercourse (79.1%), whereas women (74.1%) of the same district thought that it was the homosexual intercourse which was the main risk factor for transmission[22].

Again, majority respondents of this study (93.91%) had the knowledge about transmission of HIV/AIDS through blood transfusion. Study conducted in India by Bhalla S et al showed 96.65% participants were aware of unsafe blood transfusion that caused the transmission of the disease[19].

In case of transmission, 92.82% of the respondents opined that unprotected sex may cause the transmission of the infection which is similar to another study where 92.1% stated that unprotected sex can transmit HIV/AIDS[23]. From this study, it was observed that 41.46% of the participants were aware of transmission of HIV/AIDS caused from infected mother to her child. Whereas a study stated 47.63% of the respondents were aware of transmission of HIV/AIDS caused from infected mother to her child[24]. The level of awareness about vertical transmission was lower than other awareness levels as most of those emphasis were given to creating awareness about transmission of the disease by unsafe blood transfusion, unprotected sex or using contaminated instruments or syringe.

In this study, 86.59% students were aware of using condom that is capable of preventing HIV/AIDS. The level of awareness of using condom was high as the awareness was created at school and community health level and Government sometimes also provide condom free of cost or at a very low price. A study by Yadav SB stated that 69.67% participants were aware of using condom as a preventive method of HIV/AIDS[25]. Again, this study showed that 80.49% students were aware of safe blood transfusion. The awareness of safe blood transfusion is high, as many organization related to blood transfusion like Sondhani are playing a great role to create awareness of safe blood transfusion among general people. A study mentioned that 82.75% students were found aware about safe blood transfusion[25]. This study revealed that 74.80% respondents were aware of contaminated instruments which can cause transmission of HIV/AIDS. Another study reported 50.35% and 44.40% of the respondents in their study were aware of transmission of HIV/AIDS by contaminated instruments[18,19].

Conclusion

The level of consciousness regarding HIV/AIDS among the students of Higher Secondary level in the selected area of Manikginj District, Bangladesh was found good for most of the variables like mode of transmission, vaccination and prevention. Since Bangladesh is surrounded by India where more than half (2.5 million) people of Asia are suffering from HIV/AIDS and injectable drug user are increasing rapidly. Bangladeshi people specially the young generation are in the vulnerable situation. Institution authorities and concerned should come forward to design awareness campaigns among students to help them in developing a proper understanding of HIV/AIDS, mode of transmission, prevention and to change their attitude.

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