

KNOWLEDGE REGARDING AIDS AMONG ADOLESCENTS IN BANGLADESH

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ABSTRACT

Adolescents constitute a growing number of people living with AIDS worldwide. Aim of the study is to assess the relationship between knowledge regarding AIDS among adolescents in Bangladesh. Study was descriptive cross-sectional and using convenient sampling technique 120 adolescent were recruited from two Govt. high Schools at Dhaka city. A self- structured questionnaires (1) Demographic Questionnaires, (2) Adolescents' Knowledge regarding AIDS Questionnaires were used to collect the data. Correlation (r), t- test and ANOVA were used for the data analysis. From the study we found that mean age of the adolescents were 14.95 ± 0.732 years and the total mean score of knowledge regarding AIDS among adolescents were 20.41 ± 2.39 respectively. Participants has accessed information about AIDS 35% from mass media, 12.5% from friends and family, 23.3% from school teacher and 29.2% from others sources Among the participants 70% possess good knowledge, 22.5% possess fair knowledge and 7.5% possess poor knowledge.

Keywords: AIDS, Adolescents, Knowledge, Secondary school and Bangladesh.

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I. INTRODUCTION

HIV is a virus that attacks cells in the immune system (the body's natural defence against illness). The virus destroys a type of white blood cell in the immune system called a T-helper cell – also referred to as a CD4 cell – and uses these cells to make copies of itself. As HIV destroys more CD4 cells and makes more copies of itself, it gradually weakens a person's immune system. This means that someone who has HIV, and isn't taking treatment for it, will find it harder and harder to fight off infections and diseases. If HIV is left untreated, it may take up to 10 or 15 years for the immune system to be so severely damaged that it can no longer defend itself. However, the rate at which HIV progresses varies depending on age, general health and background.

The infection of human immunodeficiency virus (HIV) is responsible for an incurable infectious disease named "Acquired immune deficiency syndrome (AIDS)", one of the biggest global health challenges in recent years. After identifying the first case of this chronic life-threatening ailment in the USA in 1981, the HIV/AIDS infection has permeated quickly to many countries.¹ According to World Health Organization, 36.9 million people were living with HIV in 2017, especially, women are in greater risk constituting 51% of all adults living with HIV, increasing at a rate of 7000 young women become infected per week.^{2,3} Besides, South-East Asian countries contain 2nd highest amount of HIV infections, 3.5 million people, right after the Africa.³ The first case of HIV/AIDS was reported in Bangladesh in 1989. In 2011, the number of HIV-positive people was 2,533 but the amount has dramatically increased in last six years and stand at around 13000 infected people with around 1700 new cases in 2017.^{3,4} and 34% of which are females aged 15 and over.² HIV/AIDS can transmit person to person through sexual contact with an infected person and through infected blood transmission.⁵

Though Bangladesh is not in such an alarming state of HIV epidemic, the country has greater risk because of several factors: the geographical imminense with India and Myanmar, top two severely HIV infected countries

in this region,^{6,7} gender disparity and poverty, drug trafficking and abuse, poor health-seeking behavior and specifically, poor knowledge and awareness about HIV/AIDS.^{7, 8} In 2018, nearly a million of Rohingya have eluded to Bangladesh after experiencing genocide in their native land Myanmar and a good amount of them were HIV positive which increases the risk at high level.⁹ The infection proportions inside the susceptible clusters are growing, foremost, to an almost half likelihood that the worm will feast on the overall people.¹⁰⁻¹² The circumstances have elevated thoughtful anxieties among management, government and policy makers and they are looking forward to the community knowledge and awareness on the transmission and deterrence of HIV.¹³

Worldwide, a wide range of researches have been conducted regarding the epidemiology, etiology and community knowledge and awareness of HIV/AIDS. Females from the growing age (<25 years) are the most vulnerable to HIV knowledge.^{8, 14} Couple's education is also vital influencing factor to have good HIV knowledge.^{15, 16} Besides, prior studies have demonstrated that level of HIV knowledge tends to be higher in societies where people enjoy greater degree in freedom of communication, seek health advocacy, and engage in peer communication.¹⁶

There was a little research regarding knowledge and attitude regarding AIDS in Bangladesh. Therefore, the entire situation around the country and diminishing the risky behaviours among Bangladeshi adolescents. In order to diminish the risky behaviours among Bangladeshi adolescents, we need to understand and develop knowledge about AIDS, routes of transmission, prevention methods, treatment information. In order to take any initiative to enhance knowledge regarding AIDS among adolescent's base line data is necessary. Moreover, inconsistent findings are present in the existing literatures. The findings of the research may provide information which help nurses in helping will adolescents in Bangladesh.

II. METHODOLOGY

This descriptive cross-sectional study took place from June 2017 to July 2018. The participant of this study was adolescents in Bangladesh. The study was conducted at two high schools Motijheel Govt. Boys high School and the Motijheel Govt. Girls high School at Dhaka city. Adolescents students were purposively recruited who currently read in class ten (x). The approximately sample size was estimated by using G-power analysis. The sample size was calculated for an accepted level of significance (α) of 0.05 and power of 0.80 ($1-\beta$), and an effect size of 0.30 (γ). By considering 20% attrition rate the total participant of this study was 120. The inclusion criteria of the study participants were students who were 14-18 years of age; study in class ten. This study was approved from the Institutional Review Board (IRB) of NIANER, BSMMU, and study settings. Participants were informed that they can withdraw from their participation at any time. The subjects were assured that the anonymity and confidentiality will be protected. The data will be kept in a locked cabinet for three years. The instruments of this study were based on the previous literature and developed by the researcher.

The instruments consisted of two questionnaires. (1) The Demographic Questionnaire, (2) Adolescents Knowledge regarding AIDS Questionnaire. The Demographic Questionnaire was developed by the researcher based on the literature review. It consisted of eleven items including age, gender, religion, monthly family income, family member, education level of father and mother, participate any training /programme of AIDS, sources of the AIDS information, have accessed anyone who was diagnosed AIDS among people known, and ever heard of AIDS. Adolescents Knowledge regarding AIDS Questionnaire consisted of 28 items dichotomous type of questions. A 17 item of positive and 11 negative "correct or incorrect" for each question based on their knowledge. One point was given for each "correct" and zero point for each "incorrect" on negative items. A total score of Adolescents Knowledge regarding AIDS Questionnaire was 28 rating from 0 - 28 and it was then converted into percentage. The practice scores were categorized into good ($\geq 80\%$), fair (59-79%), and poor ($\leq 59\%$).¹⁷ The validity of the instruments was assessed by five panels of experts. One expert from Yonsei University, Korea, two experts (nursing area), and two medical doctors from Bangladesh. The original instrument of this study was developed by the researcher into English. Then English version was translated into a Bengali version. The translation of the instruments was based on the back translation process. After approval from the Institutional Review Board (IRB), NIANER and BSMMU and taking verbal consent, the researcher distributed the questionnaires to the participants by the help of the teacher. The researcher was

asked individual participants to fill up the questionnaires independently. Questionnaires were collected by the researcher one by one. Then the researcher separated the top sheet of the questionnaires from original questionnaires though removing identification of the participants. Descriptive statistics such as frequencies, percentages, means, and standard deviation were used to describe the demographic characteristics of study subjects and study variables.

III. RESULTS

This was a descriptive study Participants included 120 adolescents at Motijheel Gov. Boy’s high School and Motijheel Gov Girls high School, Dhaka.

Table 1: Distribution of The Respondents According to Demographic Characteristics.
(n=120)

Traits	Categories	Frequency	Percentage
Age M±SD = 14.95 (.732)	≤ 15	95	79.2
	≥ 16	25	20.0
Gender	Male	60	50
	Female	60	50
Education	secondary	120	100
Religion	Muslim	112	93.3
	Hindu	8	6.7
Monthly family income	≤ 33000	36	30.0
	≥ 33000	84	70.0
Family member	≤5	106	88.3
	≥6	14	11.7
Father’s Education	≤Secondary	12	10.0
	≥ Secondary	108	90.0
Mother’s Education	≤Secondary	33	27.5
	≥ Secondary	87	72.5
Sources of the AIDS information have accessed	Mass Media	42	35.0
	Friends and Family	15	12.5
	School Teacher	28	23.3
	Others Sources	35	29.2
Do you have anyone who was diagnosed AIDS among you know.	Yes	00	00
	No	120	100
Have you ever heard of AIDS	Yes	119	99.2
	No	1	8

Table1 presents the characteristics of the adolescents. The average age of adolescents was 14.95± .732. Approximately, half of the adolescents were male (50%) and female (50%). One hundred percent (100%) of adolescents was secondary education. Approximately, 90.0% of adolescents were Muslim. Majority of

adolescents (70%) monthly family income was 33000 Taka. The majority of adolescents' family member had less than five (88.3%). Approximately, 90% of adolescent's fathers education had more than SSC. The majority of adolescents (72.5%) mothers education had more than SSC. All the adolescents responded that they don't know any person diagnosed as AIDS. Almost all of the adolescents (99.2%) had responded positively about ever heard of AIDS.

Table-2: Distribution of The Respondents According to Correct Knowledge Regarding AIDS (n=120)

Items	Traits	Correct	
		Frequency	Percentage
1	AIDS is caused by a virus	120	100%
2	AIDS is a great public health threat for Bangladesh	118	98.3%
3	AIDS is diagnosed by a blood test	120	100.0%
4	There is a vaccine for AIDS	----	----
5	AIDS is a curable disease	-----	-----
6	AIDS decrease body immunity	108	90%
7	AIDS is transmitted by sexual intercourse	119	99.2%
8	AIDS is transmitted by sharing infected shaving razor blades	117	97.5%
9	AIDS is transmitted by receiving blood transfusion from infected person	118	98.3%
10	AIDS is transmitted by shaking hand with infected person	115	95.8%
11	AIDS is transmitted by mosquito bite	104	86.7%
12	AIDS is transmitted by sharing utensils of an AIDS person	64	53.3%
13	. AIDS is transmitted through coughing and sneezing	100	83.3%
14	AIDS is transmitted by sharing clothes of an AIDS-positive person	102	85.0%
15	AIDS is transmitted from infected mother to child through delivery	114	95.0%
16	AIDS is prevented by properly using condom during sexual intercourse	99	82.5%
17	AIDS transmission can be avoided to a single sexual partner	69	57.5%
18	AIDS is prevented by blood screens	52	43.3%
19	AIDS is transmitted from infected mother to children through breastfeeding	116	96.7%
20	AIDS is transmission by sharing bath ponds	105	87.5%
21	AIDS is transmitted by sharing a toilet with an AIDS affected person	104	86.7%
22	AIDS is prevented by using condoms	109	90.8%
23	AIDS is prevented by using not reusing needle	98	81.7%
24	AIDS is prevented by blood test for AIDS before transfusion	55	54.2%

25	AIDS is prevented by abstaining from unprotected sexual relationship	117	97.5%
26	AIDS is prevented by obeying religious rules	110	91.7%
27	AIDS can be transmission by deep kissing.	67	55.8%
28	Every homosexual and heterosexual is a high risk behavior spread of AIDS	115	95.8%
Total M±SD =20.41 ±2.39			

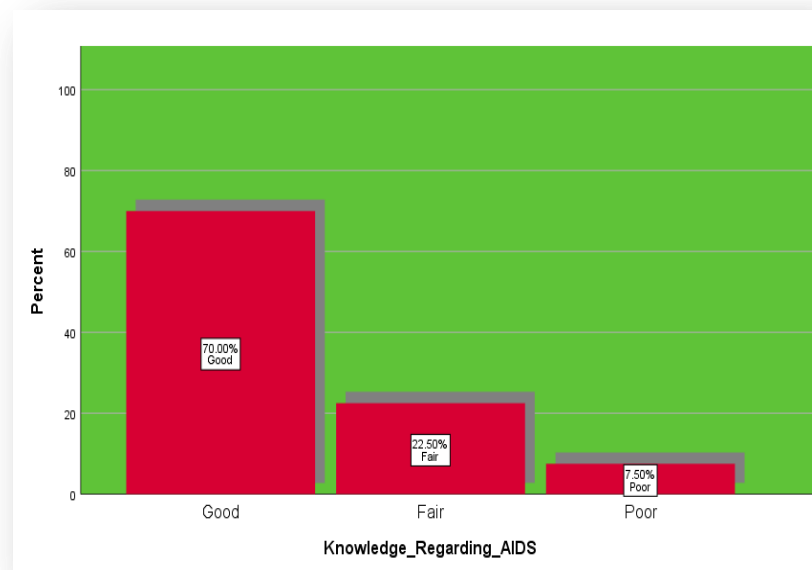


Fig-1: Distribution of The Respondents According to Knowledge score About AIDS. (n=120)

Figure 1 demonstrate that 70% participants scored good knowledge, 22.5 % participants scored fair knowledge and only 7.5% participants scored poor knowledge respectively.

Table 3: Distribution of The Respondents According to Highest five Correct Statement regarding AIDS(n=120)

Items	Highest five Correct Statement	Frequency	Percentage
1.	AIDS is caused by a virus.	120	100
2.	AIDS is a great public health threat for Bangladesh.	118	98.3
3.	AIDS is transmitted by sexual intercourse	119	99.2
4.	AIDS is transmitted by sharing infected shaving razor blades.	117	97.5
5.	AIDS is transmitted by receiving blood transfusion from infected person	118	99.2
Total M±SD =4.93 ±.360			

Table 3 shows that the (AIDS is caused by virus) 100% adolescents were responded correctly item number (01). Majority of adolescents 90% responded correctly item number 2 (AIDS is a great public health threat). One hundred percent of adolescents had mentioned that AIDS is transmitted by sexual intercourse. Majority of Adolescents 99.2% were given right answer item number 9 (AIDS is transmitted by receiving blood transfusion

from infected person). One hundred percent of adolescents answered correctly item number 8 (AIDS is transmitted by sharing infected shaving razor blades).

Table 4: Distribution of The Respondents According to Descriptive Statistics among Demographic Characteristics and Knowledge of AIDS (N=120)

Related Factors	Categories	Knowledge of AIDS	
		M ± SD	t/F(p)
Age	<15	20.47±2.177	.166(.581)
	>16	20.16±3.132	
Gender	Male	20.78±1.923	1.729(.058)
	Female	20.03±2.755	
Religion	Muslim	20.38±2.417	-.569(.775)
	Hindu	20.88±2.167	
Monthly family income	<33000 Taka	2056±2.557	.439(.823)
	>33000 Taka	2035±2.336	
Family Member	<5	20.44±2.281	.440(.617)
	>6	20.14±3.231	
Father's education	≤Secondary	20.75±1.765	.519(.404)
	≥ Secondary	20.37±2.459	
Mother's education	≤Secondary	2015±2.694	-.722(.753)
	≥ Secondary	20.51±2.282	
Sources of the AIDS information have accessed	Mass Media	20.67±2.638	1.402(.246)
	Friends and Family	20.07±2.120	
	School Teacher	20.93±1.762	
	Others sources	2.584±2.584	
Who was diagnosed AIDS among you know.	No	20.41±2.39	4.740(<0.001)
Have you ever heard of AIDS	Yes	20.50±.00	4.740(<0.001)
	No	10.00±.00	

Table 4 bivariate analysis was performed by using T-test and ANOVA, the table showed that there was a significantly difference between adolescents knowledge of AIDS and anyone who was diagnosed AIDS among you know ($p < 0.001$), as well as have ever heard of AIDS ($p < 0.001$). While no statistically relationship was observed between adolescents knowledge of AIDS and age, gender, sex, religion, monthly family income, family member, fathers' education, mothers' education, sources of aids information of adolescents.

IV. DISCUSSION

The purpose of the study was to assess the relationship between knowledge and attitude regarding AIDS among adolescents. One hundred and twenty (120) participants were recruited from two Government high Schools. According to the findings of the present study, the mean age of adolescents was 14.95 (SD = .732) ranging 14-17 years, similar to the study conducted by (Uddin et al., 2010)¹⁸ knowledge, attitude and prevention regarding

AIDS and found that the age group was 14 -19 years with the mean age 15.8 (SD =.8) years (Mulu, 2014; Nipa, 2016)^{19,20}. Majority of adolescents' (70.0%) monthly family income was more than 33000 Taka.

Almost all participants knew about AIDS could correctly answered questions on AIDS transmission, which indicated that they had a good basic awareness of the issue. The findings of the present study indicated good knowledge about AIDS is a major public health threat and the mode of transmission of AIDS. For example, 98.3% adolescents were known that AIDS is a great public health threat for Bangladesh and above 90% of them known AIDS is transmitted by sharing infected shaving razor, blades, and receiving blood from infected person. Similar to the study of McManus and Dhar (2008)²¹ found that majority of had good awareness about mode of HIV transmission. On the other hand, the finding was dissimilar to the study of Indian Council of Medical Research found that only 13% of adolescent knew that multiple sex partners increased the risk of HIV infection. However, there is a lack of knowledge about AIDS is prevented by blood screens among adolescents (43.3%). The possible reason may be due to the absence of AIDS among the family members 100% (n=120) of adolescents family members had not affected by AIDS. This may not much influence them to know this issue.

We collected the data by question through to the adolescents. Where four to five (4-5) students sited together in one bench, this may violet the study results. the study conducted only in two high School in central Dhaka, therefore, the result will not may not be represent the total students of Bangladesh. Adolescents ages from 10 to 12, they could not be included in the study due to cultural barriers. The out of school adolescents could not be addressed due to time and resource constraints.

V. CONCLUSION AND RECOMMENDATION

In this study findings, adolescents had a good level of knowledge regarding route of transmission prevention methods on AIDS. Based on the study result Government of Bangladesh can provide AIDS topic in their curriculum to improved knowledge. Ministry of Health implements awareness creation on access and use of condoms among students in secondary schools in the district.

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