

## Determinants of HIV/AIDS Awareness among Selected Garments Workers in Dhaka City

KHANDAKAR DELWAR HUSSAIN

Assistant Professor

United College of Nursing, Gulshan-2, Dhaka, Bangladesh

Md RUHUL AMIN

Assistant Professor

Department of Physiotherapy SAIC group of Medical Institutions

Dhaka, Bangladesh

Md. ZAKIR HOSSAIN

Lecturer, United College of Nursing, Gulshan-2

Dhaka, Bangladesh

Md SHAFIULLAH PRODHANIA

Consultant & Chairman

DPRC Specialized Hospital & Research Center

Md. ABUL HOSSAIN<sup>1</sup>

PhD (Research Fellow), Jahangirnagar University

MESBAH UDDIN AHMED

PRADIP KUMAR SAHA

Md MONOARUL HAQUE

SUMAN KUMAR ROY

Research Officer

Training & Research Institute of Medicine Acupressure and Nutrition

(TRIMAN)

### Abstract:

*This descriptive cross sectional study was conducted to find out the determinants of HIV/ AIDS awareness among the garments worker in a selected area of Dhaka city with a sample 150. Data was collected using an interviewer administered questionnaire. That was thoroughly pre-tested. Modification was done after pre-test. Study results showed that mean age of the respondent was 22.98± 2.10. Among respondents 58% were male and 42% were female. It was also observed from the study that out of the respondents 54.7%, 43.3% were*

---

<sup>1</sup> Corresponding author: dr.abulhossain76@yahoo.com

*married and unmarried respectively and only 11.3% can read and write. Mean income of the respondents was BDT 7320± 1516.442 with 30%. Among the study participants 66% knew about HIV and 34.7% were able to explain meaning of HIV/AIDS. Besides 42% respondents did not know about causative organism of AIDS but 40.7% knew that AIDS as a viral disease. Study further revealed that 35.3% thought of unsafe sex, 25.3% thought of using the infected needle could also transmit the disease. It was also observed that 47.3% respondents always used condom in sex but 51.35% used it sometimes. Significant association was found between education and use of condom during sex. Garment worker were at risk in Bangladesh of HIV/AIDS due to low education, lack of knowledge, STIs and risky behavior and adequate steps to be taken to create awareness about the deadly effects of this disease.*

**Key words:** Determinants, HIV/AIDS, Awareness, Garments worker

## **Background**

HIV stands for Human Immunodeficiency Virus. Different viruses attack different parts of the body; HIV is so dangerous, because HIV attacks the immune system itself. It particularly attacks a special type of immune system cell known as a CD4 lymphocyte. HIV has a number of tricks that help it to evade the body's defenses, including very rapid mutation. This means that once HIV has taken hold, the immune system can never fully get rid of it.<sup>1</sup> AIDS stands for Acquired Immune Deficiency Syndrome, it is a medical condition. People develop AIDS because HIV has damaged their natural defenses against disease.<sup>2</sup> AIDS (Acquired Immune Deficiency Syndrome) is the final and most serious stage of HIV disease, which causes severe damage to the immune system.<sup>3</sup> No one dies from AIDS or HIV; rather, a person with AIDS dies from some serious type of infections (Opportunistic infection) or conditions that his or her weakened immune system can no longer fight off. AIDS is

the fifth leading cause of death among persons between ages 25 and 44 in the United States, down from number one in 1995.<sup>4</sup>The impact of HIV/AIDS on countries in Asia and Pacific is expanding, and increasingly severe. Bangabandhu Sheikh Mujib Medical University (BSMMU) detected 182 (male:147, female: 35) individuals living with HIV/AIDS. In 2002, estimated HIV infected were 248(26 AIDS & 20 death), but WHO are estimating that 13,000adult are living with HIV in Bangladesh. In reality, HIV/AIDS epidemic in Bangladesh is not very well understood and data is only partly known as there ported data is only coming from national reference laboratory.<sup>5</sup> Bangladesh is still considered as a low HIV/AIDS prevalent country. However, it is at a critical moment in the course of its AIDS epidemic. Although it is estimated that there are 13,000HIV- positive people in the country and that HIV prevalence in the adult population is less than 0.01%; however, the country's vulnerability is very high. National HIV surveillance indicates that the rate of HIV infection among street-based sex workers in the central Bangladesh is high compared with sex workers in the parts of South Asia. With prevalence rate of less than 1% HIV/AIDS in Bangladesh may not look like a major threat.<sup>6</sup> The presence of covert multi-partner sexual activity and denial, the low level of knowledge and low condom use, unsafe professional blood donation, lack of desirable environment violation of human rights, lack of women empowerment and lack of negotiating power for safer sex among all contribute to the spread of HIV in Bangladesh. Commercial sex workers, men who have sex with (MSM) migrant workers and injecting drugs users (IDUs) are identified as the most at risk population.<sup>7</sup> One of the ways HIV can be introduced into a low prevalence country is through people returning from high prevalence countries where they have engaged in risky behaviors. Data from three voluntary counseling and testing units of ICDDR, B indicate that 47

(18.1%) of the 259 people tested between 2002 and 2004 were HIV positive. Of these, 29 were adult males who had returned from abroad, seven were wives of migrant workers; four were children of HIV positive migrant workers. In the last decade, around 20,000 Bangladeshi men were officially recorded as migrating out for work each year, mostly to the Middle East, and many more are known to leave informally. No previous data have been published on the association between separation from spouse and sexual risk behaviors.<sup>8</sup>

## **Materials and Methods**

This descriptive type of cross sectional study was conducted to find out the determinants of HIV/ AIDS awareness among the garments worker in a selected area of Dhaka city with a sample of 150 .The sample population consisted of male and female who were working in compliance and non-compliance garments from selected area of Dhaka city. The study was conducted at different garments in three selected areas of Dhaka city, North Badda, Khilkhet and Savar area. Study site was Fashion (1&2) Garments (BFL) Location – Hemayetpur, Rishipara. Shingair road, savar Dhaka.Worker—1500, Male-400, Female- 1100. Product-shirt export to USA. Kasual Garment Limited (BCL).Location- Hemayatpur, Rishipara, Shigair Road . savar. Dhaka,Worker- 3000+,Male- 500 , Female - 2500 ,Product- Woven Products (pants , shirts) export to USA. Abony Knightwear (BKL, Location – Hemayatpur, Shingair road, savar, Dhaka, Worker—4000+. Male- 1000, Female- 3000, Product- T- shirts export to USA Emperial Garments Limited, Location –15, Khilkhet. Nikunja-2, Dhaka -1229, Worker—1000+, Male- 200, Female- 800, Product- Jeans pentsexport to USA. Barakat Ullah Garments Industries Limited ,Worker – 1000 +,Male- 260, Female – 740,Location – Shatarkul main road , North Baddah, Gulshan, Dhaka—1212,Product- Trousers

export to Canada And USA ,Summer Garments industries Limited, Worker – 700 +, Male- 150, Female- 550 , Location – Cha – 164, North Badda, Gulshan , Dhaka—1212. Product – Children wears European countries and Middle East. This study was conducted from February 2013 to May 2013.

Inclusion Criteria was those who willing to give consent and participate for interview, irrespective of sex. Exclusion criteria were those who mentally and physically handicapped. Non randomized purposive sampling technique was applied. A pretested, modified, interviewer administrated, semi-structured questionnaire was used to collect the data. After collection of data of the respondents were organized. Data was entered into the computer into a data base in the software package. Statistical package for the social science (SPSS) Version 16.0 (Polar engineering and consulting, Chicago) using descriptive statistics. All scores and percentages was computed and presented in tabular form and graphs as appropriate. Further it was analyzed with the help of chi-square test and P-value. Finally the data was interpreted on the basis of study findings.

## Results

The study reveals that the mean age of the respondents were  $22.98 \pm 2.103$  years with a range from 18 to 27 years. It was found from table 1 that highest 45.33% respondents were belongs to the 24-27 years age group followed by 44.67% in 21-23 years age group.

**Table1: Socio-demographic of respondents by age (n=150)**

Items	Frequency	Percentage	
Age	18-20	15	10.0
	21-23	67	44.67
	24-27	68	45.33
	Mean $\pm$ SD	22.98 $\pm$ 2.103	
Sex	Male	87	58.0

Khandakar Delwar Hussain, Md Ruhul Amin, Md. Zakir Hossain, Md Shafiullah Prodhania, Md. Abul Hossain, Mesbah Uddin Ahmed, Pradip Kumar Saha, Md Monoarul Haque, Suman Kumar Roy- **Determinants of HIV/AIDS Awareness among Selected Garments Workers in Dhaka City**

	Female	63	42.0
<b>Marital status</b>	Married	82	54.7
	Unmarried	65	43.3
	Divorced/Separate	2	1.3
	Widow/Widowed	1	0.7
<b>Educational status</b>	Illiterate	33	22.0
	Can sign only	45	30.0
	Can read and write	17	11.3
	Class five	24	16.0
	SSC	23	15.3
	HSC	8	5.3
<b>Religion</b>	Muslim	108	72.0
	Hindu	34	22.7
	Christian	4	2.7
	Buddhist	4	2.7
<b>Monthly income</b>	5000- 7000 BDT	71	47.40
	7001- 10000 BDT	77	51.30
	More than 10000 BDT	2	1.30
	Mean $\pm$ SD	7320 $\pm$ 1516.442	

Table 1 shows that among the respondents, 58.0% were male and 42.0% were female. Of them 54.7% were married, 43.3% unmarried, 1.3% divorced and 0.7% were widowed. It was found that 30%, 22%, 16%, 15.3%, and 11.3% of the respondents belonged to the level of education had sign only, illiterate, class five, secondary and primary education respectively. Among the respondents 72% were Muslims, 22.7% Hindus and 2.7% Christian. Study shows that mean income was  $7320 \pm 1516.442$ . It was found from the table 1 that mostly 51.3% respondents earned 7001- 10000 BDT, 47.4% had 5000- 7000 BDT, 1.3% had more than 100000 BDT of their monthly income.

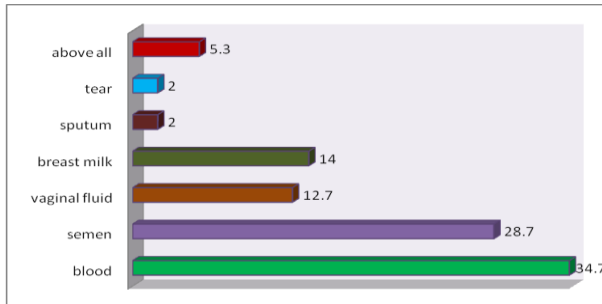
**Table 2: Distribution of respondents by meaning, knowledge and causes of HIV/ AIDS (n=150)**

Items		Frequency	Percentage
<b>Meaning</b>	Yes	52	34.7
	No	97	64.7
<b>Knowledge</b>	Yes	99	66.0
	No	51	34.0
<b>Causes</b>	Virus	61	40.7

Khandakar Delwar Hussain, Md Ruhul Amin, Md. Zakir Hossain, Md Shafiullah Prodhania, Md. Abul Hossain, Mesbah Uddin Ahmed, Pradip Kumar Saha, Md Monoarul Haque, Suman Kumar Roy- **Determinants of HIV/AIDS Awareness among Selected Garments Workers in Dhaka City**

	Bacteria	20	13.3
	Parasite	3	2.0
	don't know	63	42.0
	others mentioned	3	2.0
	<b>Total</b>	<b>150</b>	<b>100</b>

Table 2 found that knowledge on HIV/AIDS among the respondents, 66% replies that they had knowledge on HIV but 34% had no knowledge on HIV. Of the respondents 34.7% can explain meaning on HIV and 64.7% cannot able to explain. Among them 40.7% knew that HIV was a viral disease, 42% didn't know the proper information and 13.3% replied that bacteria was a transmission.



**Figure 1: Distribution of respondents by knowledge regarding body fluid contain HIV virus**

Figure no 1 reveals that highest 34.7% knew that blood mainly contains infected virus, 28.7% thought that semen should contain, 14% breast milk, 12.7% vaginal fluid and 2% respectively for tear and sputum.

**Table 3: Distribution of respondents by mode of transmission (n=150)**

Variables	Frequency	Percentage
Through breathing	2	1.3
Having unsafe sex	53	35.3
Unsafe or use of HIV/AIDS contaminated blood	19	12.7
Using the infected needle	38	25.3

Khandakar Delwar Hussain, Md Ruhul Amin, Md. Zakir Hossain, Md Shafiullah Prodhania, Md. Abul Hossain, Mesbah Uddin Ahmed, Pradip Kumar Saha, Md Monoarul Haque, Suman Kumar Roy- **Determinants of HIV/AIDS Awareness among Selected Garments Workers in Dhaka City**

Mother to child transmission	19	12.7
Don't know	19	12.7
<b>Total</b>	<b>150</b>	<b>100</b>

Table no. 3 shows that 35.3% thought that by unsafe sexual transmission is main way of transmission in human body, 25.3% using the infected needle, 12.7% mother to child transmission and unsafe or use of HIV/AIDS contaminated blood respectively

**Table 4: Distribution of respondents by sign and symptoms (n=150)**

Variables	Frequency	Percentage
Ulceration of genitalia	4	2.7
Discharge of pus per urethra	3	2.0
Body weight loss	41	27.3
Weaken of body's natural defense mechanism	46	30.7
Prolonged fever	1	.7
Others	1	.7
Don't know	54	36.0
<b>Total</b>	<b>150</b>	<b>100</b>

It has been showed in table no 4 that 30.7% respondent thought that weaken of body's natural defense mechanism, 27.3% body weight loss, 36% don't know the exact information and very less number of responds for other option.

**Table 5: Distribution of respondents by knowledge on prevention (n=150)**

Variables	Frequency	Percentage
Use of condom properly during sexual activity	36	24.0
Use of safe (sterile) syringe/needle	34	22.7
Taking HIV/AIDS free blood	19	12.7
Sex with safe partner	17	11.3
Others	10	6.7
Avoid sex with commercial sex worker	23	15.3
Follow the religious customs	5	3.3
Don't know	6	4.0
<b>Total</b>	<b>150</b>	<b>100</b>



Table no 5 showed that 24% respondents thought that use of condom properly during sexual activity, 22.7% use of safe (sterile) syringe/needle, 15.3% avoid sex with commercial sex worker, 12.7% taking HIV/AIDS free blood, 11.3% sex with safe partner can prevent HIV/AIDS transmission.

**Table 6: Distribution of respondents by source of information of HIV (n=150)**

Variables	Frequency	Percentage
Radio	22	14.7
TV	31	20.7
Newspaper	17	11.3
Bill board	22	14.7
Meeting	7	4.7
NGO worker	7	4.7
Friends	22	14.7
School/College/University	11	7.3
Poster	1	.7
Others	9	6.0
<b>Total</b>	<b>150</b>	<b>100</b>

Table no 6 showed that 20.7% heard HIV related information through television, 14.7% heard through bill board, radio and friends respectively.

**Table 7: Distribution and association of respondents between education and use of condoms during sex**

Education	Use of condom during sex			Total	P-value
	every time	only sometimes	never		
Illiterate	14	19	0	33	0.002
Can sign only	31	14	0	45	
Can read and write	10	7	0	17	
Class five	7	17	0	24	
SSC	6	15	2	23	
HSC	3	5	0	8	
<b>Total</b>	<b>71</b>	<b>77</b>	<b>2</b>	<b>150</b>	

P value obtained from Pearson Chi-square ( $\chi^2$ ) test

It was found from the table no. 7 that P- value was 0.002 which was less than 0.05 that was statistically highly significant association between education and use of condom during sex.

## **Discussion**

This descriptive type of cross sectional study was conducted in Dhaka city to find out the Determinants on HIV/AIDS Awareness among the garment workers in selected area of Dhaka city. Although the HIV prevalence is still below one percent among the general population in Bangladesh but as garments worker are using sharp instrument, so they are always vulnerable population for getting HIV/AIDS.

Present study found that the mean age of the respondents was  $22.98 \pm 2.103$  years with a range from 18 to 27 years, 45.33% respondents were belongs to the 27-27 years age group followed by 44.67% in 21-23 years age group, 32.67 were service holder, 28.67% respondents were business profession and 20.67%, 18% were farmer and others job respectively, mean income  $7320 \pm 1516.442$ . It is found from the table 7 that mostly 30% respondents earned 8000 taka, 18% had 6000 taka, 17.3% had 9000 taka, 16% had 5000 taka and 13.3% had monthly income 7000 taka. These findings were similar to the finding of the study carried out in Bangladesh by Sajeda amin.<sup>5</sup> Study findings also revealed that, 66% knows about HIV/AIDS, 34.7% can explain meaning on HIV, 40.7% knows that HIV is a viral disease, 42% don't know the proper information and 13.3% replies that bacteria are a transmission, this findings also similar with a case study of the garment workers in Bangladesh conducted by Khan.<sup>6</sup> The study showed that 50% don't know that whether AIDS is a curable disease or not, 48.7% thought that it was not a curable, 56% thought that HIV patient should kept in a isolated place, 34.7% knows that blood mainly contains infected virus, 28.7% thought that semen should

contain, 14% breast milk, 12.7% vaginal fluid and 2% respectively for tear and sputum. These findings were similar to the finding of Shakti project by care Bangladesh. <sup>7</sup>It was revealed from present study that, 35.3% thought that by unsafe sexual transmission is main way of transmission in human body, 25.3% using the infected needle, 30.7% respondent thought that weaken of body's natural defense mechanism, 27.3% body weight loss was the main sign and symptoms of HIV virus. These findings were similar to the finding of study carried out by Md. Alauddin in DFID funded project of HIV/AIDS.<sup>8-9</sup> Present study found that 24% respondents thought that use of condom properly during sexual activity, 22.7% use of safe (sterile) syringe/needle, 15.3% avoid sex with commercial sex worker, 12.7% taking HIV/AIDS free blood, 11.3% sex with safe partner can prevent HIV/AIDS transmission. These findings were similar to the finding of 5<sup>th</sup> round sero surveillance Report, ICDDR.B and MoH&FP.<sup>10</sup> Another study conducted in 1994 indicated that 72.6% people thought the diseases could be spread through kissing shaking and play, read, service together study finds out that mode of transmission about HIV/AIDS below half of the respondents 43.25% were knowledge of breast feeding. Respondents 43.5% were knowledge of IUD users could get infected with HIV/ 64.0% respondents were no knowledge of not transmission of HIV through mosquito bite.<sup>18</sup> Another study in 2000 conducted at South Africa showed that sixty nine (69%) Percent of young people used watch TV for five or more days in a week. This study difference might be due to the accessibility of different mass media to different groups of people in the society.<sup>19-20</sup>

## **Conclusion**

In present study as socio demographic, socio economic and educational status was very poor. Both are male and female

were approximately equal. In this present study on awareness regarding HIV/AIDS it was revealed that though maximum respondents had heard the name of AIDS, but they did not know the abbreviation (meaning) of HIV and AIDS. In this study observed that community people is very poor knowledge about cause, curable of disease, not spread of AIDS vaccine of HIV of AIDS and isolation of patients from the society. Respondent's knowledge on HIV/AIDS regarding mode of transmission, symptom, blood, screening, prevention and risk group of disease is also not too good. This study observed that source of knowledge about HIV of AIDS majority respondents is good knowledge from TV and followed by radio, newspaper, NGO workers and friends etc. Present study shows that their knowledge is good as an uneducated society, no access the enough information from the health programme.

### **Disclosure**

All the authors declared no competing interest.

### **REFERENCES**

1. USAID Bangladesh. HIV/AIDS HEALTH PROFILE [serial online][cited 2011 June 04]; Available from: URL: [Profile.http://www.usaid.gov/our\\_work/global\\_health/aids/Countries/asia/bangladesh\\_profile.pdf](http://www.usaid.gov/our_work/global_health/aids/Countries/asia/bangladesh_profile.pdf).
2. Female sex workers in Bangladesh, [serial online] Saturday May 3, 2008, [cited July 23, 2011]; Available from URL: <http://hiv-aidsawareness.blogspot.com/2008/05/female-sex-workers-in-Bangladesh.html>
3. Raihana Karim et al. Sex Workers and Condom Use-the Political Economy of HIV/AIDS in Bangladesh, Working Paper No. 4. Dhaka; BRAC; September 2008.
4. National AIDS/STD Programme, MoHFW, GOB, UNGASS 2010 PROGRESS REPORT Bangladesh;30

- March 2010, Dhaka, [serial online], [cited on July 23, 2011] Available from URL: [http://www.unaids.org/en/dataanalysis/monitoringcountryprogress/2010progressreportssubmittedbycountries/bangladesh\\_2010\\_country\\_progress\\_report\\_en.pdf](http://www.unaids.org/en/dataanalysis/monitoringcountryprogress/2010progressreportssubmittedbycountries/bangladesh_2010_country_progress_report_en.pdf)
5. UNAIDS and The World Bank. 20 Years of HIV in Bangladesh: Experiences and Way Forward. Dhaka, December 2009, [serial online], [cited on July 23, 2011], Available from URL: <http://www.unaidsbd.org/app/webroot/files/20.pdf>
  6. NASP, MOHFW, GOB. HIV/AIDS Bangladesh Situation. Dhaka December 2010. [serial online][cited on July 23, 2011], Available from URL: [http://www.bdnasp.net/index.php?option=com\\_content&view=article&id=1:national-aidsstd-programme-nasp&catid=1:latest-news](http://www.bdnasp.net/index.php?option=com_content&view=article&id=1:national-aidsstd-programme-nasp&catid=1:latest-news)
  7. NASP, MOHFW, GOB. Keynote paper presented in program of World AIDS Day 2010. Dhaka, Bangladesh. [serial online], [cited on July 23, 2011]. Available from URL: [http://www.bdnasp.net/index.php?option=com\\_content&view=article&id=1:national-aidsstd-programme-nasp&catid=1:latest-news](http://www.bdnasp.net/index.php?option=com_content&view=article&id=1:national-aidsstd-programme-nasp&catid=1:latest-news)
  8. NASP, DGHS, MoHFW. Prevention of HIV/AIDS among Young People in Bangladesh. Dhaka; National AIDS/STD Program and Save the Children - USA with ICDDR,B; June 2007.
  9. Mondol, A.H, Islam.Asadul. Policy Research on the Crucial Issues involved in Empowering and Mainstreaming the Socially Disadvantaged Women (Commercial Sex Workers) and their Children in Bangladesh. Dhaka; BIDS; 2006.
  10. David Fowler. The HIV/AIDS Prevention Program (HAPP) and HIV/AIDS Targeted Intervention Program (HATI): Documentation and Lessons Learnt in a Program

- of HIV Targeted Interventions for High Risk Groups in Bangladesh. Dhaka; UNICEF; 2009.
11. Alam Rabiul et al. Brothel-based and Floating Sex workers in Bangladesh: Living Conditions and Socio-Economic Status. Dhaka; Terre des hommes Italia; March 2005.
  12. Chowdhury MR Islam, M Nazrul, Rasul M Gulam: Meeting the challenges of HIV/AIDS Bangladesh 1996, Revised and reprint December- 1997-4-33.
  13. Arco E: Ariff M. Khan A: Ahmed R:- Zakir ATM: Sample survey on current awareness and attitude on HIV/AIDS in Bangladesh 1993 V HSS, November 1993, 23-33.
  14. AIDS, Prevention and control, Invited- prevention and paper from the world summit of ministry of health on program, for AIDS prevention, WHO, Geneva, 1988: 42.
  15. David J Nicholl, Sex and the modern medical student, the effect, of AIDS Publicity, health education Journal: 1988: 48 (1): 19:20.
  16. Khanom Khurshida, Zama M Mostafa, Khan Abdul Wadud, Islam, Islam M.M. group in Dhaka, 1990: 23-37.
  17. Edward G. Reader, Rossamund P Carter, Andrew Crawford, AIDS Knowledge, attitude and behaviors a study with university students, Health education Journal: 1988 47 (4): 125.
  18. A community perspective on young people's knowledge of HIV/AIDS in three African countries, file/1:/hivaids literature/ HIV AIDS 5.htm. 9/11/2011.
  19. Center for multilevel modeling: Bristol UK: (Retrieved mass: 24, 2007) from <http://www.comm.bristol.ac.uk/>
  20. James S reddy SP Taylor M. Jinabhai CC young people, HIV/AIDS/ STIS and sexuality in south Africa, The gap between awareness and behavior, Acta-Pediatric, 2004: 93: 264-269.

21. Ubane L, Faleyimu BL, Ajayl P.HIV HIV testing, positive and marriage counseling in a religious set up of a Macedonian Community, proceeding of the 13 the international conference on HIV/AIDS- 2000, Durban south Africa, Abstract D627.
22. Burgoyne AD, Drummond PD: Knowledge of HIV and AIDS in women in Sub-saharan Africa, African Journal of Reproductive health 2008, 12 (2): 14-31, pubmed abstract.
23. Chowdhury SGM, AIDS situation in Bangladesh Research information and communication of health BMRC, October, 1989, 2(2): 7-11.
24. Oladepo-O, Briger- WR, AIDS Knowledge attitude and behaviour pattern among university student's of Ibadan Nigeria-Afr-Med-Sci 1994 June: 23(2): 119-125.
25. 20 years of HIV in BD: Experiences and was forward UN AIDS, The world Bank, main Author- Tasnim Azim et all (ICDDR,B).
26. Mr. Rezwani-UL-Alam Bangladesh, Slam 3@ word Band org, Washington Dc Mr- Erik Nora Enora@ world Bank org December 20, 2007.
27. Brule cold well, Indrani Pieris, Continued high risk behaviour among the Bangladeshi males, Resistances to behavioural change to reduce HIV/AIDS infection- 1999, 183-196.
28. Fulton EL, Kamal M, Ahmed SM, Khan MI Determinant's AIDS Awareness and knowledge among Rural men and women in Bangladesh retrieved from <http://www.icddr.org/> pub on August 24, 2006 37.
29. Salam Abdus and yousuf Rabeya, AIDS awarness in Bangladesh AIDS-SSMC- Journal, 1995-3 (i): 31-1.
30. Swarup Sarkar, Nazrul Islam: Ziaya Uddin- Sushena Reza: Fazlul Karim: Golam Rabbani, Maurice, An Assessment of injection Drug user's in Dhaka City need of intervention for a vulnerable group, ICDDR B publication

- 2002, retrieved from <http://www.ICDDR.org> Pub on 24/06/2006.
31. Islam MT, Mostafa G, Bhuiya Au, Hawkes S.De Francisco A, 2002, Knowledge on Attitude Toward HIV/AIDS among the staff of an international organization in Bangladesh, *JHEATH, Popul- NUTR sep: 20 (3): 271-274.*
  32. White: David-G Phillips Keith C, Pits-Mourious et al, Adolescent, Perception of AIDS; *Health education Journal*, 1980, 48(4): 117-118.
  33. Bhuiyan M, Saidur Rahaman, A study, A study on knowledge regarding AIDS amongst Non medical personal in mohakhali Health complex NIPOSOM Dhaka-1980.