Determinants of HIV/AIDS Awareness among Garments Workers in Dhaka City, Bangladesh

Authors:

Md. Nazrul Islam Mondal[1], Nazrul Hoque[2], Md. Rafiqul Islam[1], Md. Obaidur Rahman[1], Md. Shafiur Rahman[1]

[1]Department of Population Science
and Human Resource Development
University of Rajshahi
Rajshahi-6205, Bangladesh

[2]Department of Demography
Institute for Demographic and Socioeconomic Research
The University of Texas at San Antonio
One UTSA Circle
San Antonio, TX 78249
Email: nazrul.hoque@utsa.edu

Field of study: HIV/AIDS and Garments Workers in Bangladesh

Correspondence Author:

Dr. Md. Nazrul Islam Mondal
Department of Population Science
and Human Resource Development
University of Rajshahi
Rajshahi-6205, Bangladesh
E-mail: nazrul_ru@yahoo.com
Phone: +88-0721-751217
Fax: +88-0721-750064

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Abstract

This paper examines the determinants of HIV/AIDS awareness among garments workers in Dhaka City, Bangladesh. Two hundred garments workers were interviewed through a structured questionnaire using purposive sampling technique. The logistic regression model has been used for predicting of the probability occurrence of the events. The results revealed that the majority of garments workers (63.5%) are very young (18-27 years of age), almost all (97.5%) are literate and most of them (57.0%) used contraceptives. Importantly, most of the respondents (84.5%) knew that HIV/AIDS is a dangerous and life threatening disease. The logistic regression model identified that the respondents' education level, contraceptive usage, mass media and HIV workshops have statistically positive significant effects on HIV/AIDS awareness. Various media campaigns are strongly suggested to increase the level of knowledge and awareness so that the spread of HIV as well as STDs among garments workers in Bangladesh can be controlled.

Key words: HIV/AIDS, STDs, garments workers in Bangladesh, logistic regression model

Introduction

Acquired Immune Deficiency Syndrome (AIDS) is known as the killer disease caused by Human Immunodeficiency Virus (HIV). AIDS is the late clinical stage of HIV infection, a serious health condition in which human body's defenses against some illnesses breakdown and subsequently get many kinds of disease and normally fight off quite easily. HIV is a parasite virus that attacks the immune system's soldiers- the CD4 cells (T-cells) and makes body susceptible to and unable to recover from other opportunistic diseases of human body. The virus is generally transmitted through sexual contact, infected women to their unborn children, or through contaminated needles (infections) or blood. HIV/AIDS has become global problem. Many countries around the world are experiencing an epidemic of that sexually transmitted disease (STD). The first recognized cases of AIDS occurred in the USA in June 1981 [1]. Since then it is increasing tremendously. At the end of 2010, an estimated 34 million people were living with HIV worldwide, up 17% from 2001 [2].There were 2.7 million new HIV infections in 2010, including an estimated 390000 among children, this was 15% less than in 2001, and annual new HIV infections fell 21% between 1997 and 2010 [2]. Clearly, the number of people becoming infected with HIV is continuing to fall. The number of people dying of AIDS-related causes fell to 1.8 million in 2010 and the proportion of HIV affected women has remained stable at 50% globally [3].

Bangladesh is one of the few countries in the South Asia region with a low HIV prevalence. In Bangladesh, the first case of HIV/AIDS was detected in 1989 [4], and since then the number of HIV/AIDS patients have been steadily increasing. The number of HIV infected person has been increased in this country faster since 2002 (Figure 1)**.** Till December 2010, there were 2088 reported cases of HIV and 850 cases of AIDS, among them 241 died [4]. But, at the end of 2008, there were only 1495 HIV cases and 476 cases of AIDS [5]**.** Though this is not a large number but it is a sure threat for the country. Bangladesh, it is still considered as a low prevalence country. The 9th Round National HIV Serological Surveillance, 2011 identified prevalence less than 1%, but there are significant levels of risky behaviors that make Bangladesh vulnerable to HIV/AIDS. While analyzing from the first round of national HIV

Serological Surveillance conducted in 1998-1999 to the 9th round conducted in 2010-2011, HIV prevalence among most at risk population (MARP) were always found higher than that of total population (Figure 2). Though HIV prevalence among MARP have remained <1%, but the trend is increasing over the year 1998-2011 (Figure 3), especially from 1999 to 2007 (Round II to Round VII). The most vulnerable groups for HIV/AIDS in Bangladesh are: commercial sex workers (CSW), men who have sex with men (MSM), male sex worker (MSW), transgender and injecting drug users (IDU) [6]. In this regard, it has been identified that male migrants is also as a high risk group for HIV [7]. The 9th Round HIV serological surveillance added that the clients of sex workers, dock workers, rickshaw pullers and truckers with the aforesaid group as risky groups [8]. In Bangladesh, some other groups may also be considered as vulnerable to HIV due to their risky sexual behaviors which are professional blood donors, garment workers, smugglers, fishermen etc. Significantly, Bangladesh is vulnerable to an expanded HIV epidemic due to the prevalence of behavioral patterns and risk factors including large commercial sex industry, low rate of condom use, needle-sharing among IDUs, lack of knowledge that facilitate the rapid spread of HIV [9].

Garments workers play an important role in the economy as this sector brings in about 76.00% of the country's total merchandize export earnings [10]. Because of cheap labor, pressure for globalization of production based on location economies as well as the favorable treatment from developed countries, Bangladesh and some other developing countries have gradually become the global players in international trade for Ready Made Garments (RMG). In Bangladesh, garment workers constitute 40% of the total industrial workforce [11], and 2 million workers are working; among them 80% are women. The pathetic seen is that the average working hour for garment worker is about 10 hours, but they are still neglected in our Bangladesh [10]. They are little paid comparing with their contribution, and they are still deprived of their basic rights. They are not higher educated and they inhabit in lower conditions. But the mass media did not focus them despite their miseries. These workers do not make enough time for any type of entertainment like reading daily news papers, watching television (TV), participating seminars etc.

On the other hand, sometimes they are involved with unprotected sex, needle-sharing with IDUs and taking drugs. The garment workers left behind their husbands/wives in their home towns or villages, which fuel to the extra marital sex. Government of Bangladesh (GoB) and other non-government-organizations (NGOs) have not identified them as a vulnerable group to HIV acquisition and transmission. Therefore, it is important to explore and identify the relations of those factors for which AIDS awareness modifies significantly in the context of Bangladesh among garments workers. Thus the purposes of the preset study are to find out the level of awareness and to identify the determinants of awareness on HIV/AIDS regarding its prevention and control among garments workers in Bangladesh.

Data and Methods

In this study, data taken from a total number of 200 (male 100 , female 100)garments workers were interviewed during 15 may 2010 to 30 November 2010 from three garments namely "The Silver Garment (BD. Ltd.)", "Islam Garment (a Group of Industries)" and "Fahami Garment" in Dhaka City, Bangladesh. Respondents were interviewed using a standard questionnaire through purposive sampling technique. Univariate and logistic regression analysis have been used to analyze the collected data. At first, univariate analysis has been used to explore the current situation of the respondents. And finally, logistic regression analysis has been carried out to identify determinants of level of awareness on HIV/AIDS among the respondents. The dependent variable used in logistic regression analysis as a dichotomous binary variable, which was of the following form:

$$Y = \begin{cases} 1, & \text{if the respondent is aware about HIV/AIDS} \\ 0, & \text{otherwise} \end{cases}$$

The independent variables in logistic analysis were educational status, contraceptive use, aware from radio, aware from TV, participation of HIV workshop, and aware about HIV by anybody.

Results

Background characteristics of the garments workers

Table 1 shows the socio-demographic characteristics of respondents which highlights that, more than half of the respondents (63.50%) are young aged (18-27 years). Approximately, one-third (32.50%) of the respondents are aged between 28-37 years and the rest are in higher age groups. Almost all of the respondents are Muslim (94.00%). The study result also focused that, 64.00% respondents are married and 35% are unmarried and only 1.00% belongs to widowed group. Almost all (97.50%) respondents are educated, of them 21.50% completed primary education, 53.50% completed secondary education and 22.50% completed higher secondary education. Among the total respondents, 75.00% have monthly income <5000TK, 21.50% have between 5000-10000TK and only 3.50% have monthly income >10000TK. Also nearly the same is found in case of their monthly expenditure. Among these respondents 72.00% have monthly expenditure <5000TK, 20.50% have between 5000-10000TK and only 7.50% have monthly expenditure >10000TK.

The frequency distributions of different HIV/AIDS related variables of the respondents are presented in Table 2. The study results revealed that around half of the respondents (43.00%) did not use contraceptives. Almost all of the respondents (93.50%) known the contagiousness about HIV/AIDS, though most of the respondents (64.00%) were not participated the HIV/AIDS related seminars. On the other hand, almost all (90%) participated to the company programs about HIV. Most of the garment workers (88.50%) have had knowledge about treatment of HIV and almost all (94.50%) have had knowledge about remediable of HIV. Most of the respondents (84.50%) known that HIV is a dangerous and life threading disease and almost all of the respondents (76.50%) known that HIV losses disease preventing power and increasing physical weakness. With help of other persons a higher percentage of respondents (89.50%) are aware about HIV/AIDS. In case of media, the study findings showed listening radio programs, a large proportion of respondents (57.00%) became aware, and most of the respondents (70.00%) became aware through TV programs about HIV/AIDS related issues.

Determinants of awareness about HIV/AIDS

In the logistic regression model, the respondent's educational status, contraceptive use, radio program, TV program, HIV workshop, and aware about HIV by anybody have been considered as the predicator variables. All these predictor variables significantly associated with the awareness of HIV/AIDS among garments workers. The results of logistic regression analysis included regression coefficients (β-values), p- values and odds ratios (OR), and 95% level of confidence interval (CI) which are presented in Table 3. The study results showed that education has statistically positive significant effect ($p<0.001$) on awareness about HIV/AIDS. The regression coefficient is 0.56 and OR =1.75 (95% CI=1.241-2.474), which indicates that literate garment workers are 1.75 times more likely to have awareness about HIV/AIDS than that of illiterate counterpart. In case of contraceptive use, it has a positive significant effect ($p<0.012$) on HIV/AIDS awareness. The regression coefficient is 2.245 and OR=9.44 (95% CI=1.640-66.705), which imply that there is a positive relationship between contraceptive use, and HIV awareness and the garments workers who use contraceptives are 9.44 times more likely to have awareness about HIV/AIDS compared to those who do not use contraceptives. Mass-medias programs about AIDS play an important role in raising the awareness level in all sections. In case of media, the study findings revealed that the garment workers who watch TV are 7.12 times more aware about HIV/AIDS than those who did not watch TV (β=1.963, and OR= 7.12, 95% CI=1.278-39.644). Thus TV program is a strong media which has significant impact ($p<0.025$) in raising the awareness about HIV/AIDS. Similarly AIDS related radio programs also have positive effect ($p<0.094$) on awareness about HIV/AIDS. The regression coefficient and OR for garment workers who listen radio programs about AIDS are 1.857 and 6.41 (95% CI=0.727-56.407) respectively. It indicates that garment workers who listened radio programs about AIDS are 6.41 times more likely to have awareness about AIDS than that of their counterpart. It has found that participation in HIV/AIDS workshop has a positive significant effect ($p<0.019$) on their awareness. The regression coefficient is 2.216 and OR is 8.38 (95% CI=1.419-49.489) for garment workers who participated in HIV/AIDS workshop, which imply that garments

workers who participated in HIV/AIDS workshops are 8.38 times more aware about HIV/AIDS than that of who do not participate in HIV/AIDS workshops Generally, the garments workers who participate in HIV/AIDS workshop acquire a greater knowledge about HIV/AIDS and they are conscious about this disease. The study findings also revealed that the regression coefficient of the respondents who are aware about HIV/AIDS by anybody is 2.184 and the corresponding OR is 8.88 (95% CI=1.311-60.157), which implies that the respondents who are aware about HIV/AIDS by anybody has a significant impact ($p<0.025$) and has 8.88 times more likely to have awareness about HIV/AIDS than that of the respondents who are not aware about HIV/AIDS by anybody.

Discussion

HIV is not only an epidemic, today it is a global concern. The results from this study provide evidence of higher proportion of young aged garments workers in the respective study area. Because of poverty, high growth rate and shortage of job, the young people are being forced to involve in any types of work for their livelihood. Most of them are not highly educated. So, they cannot get any good job with better salary. But, to get a job in the garment sector, as a low level worker, required less educational qualification and less experiences (sometimes no experiences), they easily get a job over there. These workers get low salaries. The present study shows an evidence of their low income (≤5000 TK monthly) and low expenditure (≤5000 TK monthly) represents low living standard. Consistent with other studies [12, 13,14] the findings that education predicts the level of HIV/AIDS awareness and reiterates the importance of education in Bangladesh. The findings of the study also suggest that the respondents are not sufficiently conscious about contraceptive use, but contraceptive usage was found to be an important factor for HIV/AIDS awareness [15]**.** Almost all are known that HIV/AIDS is a contagious disease, though their participation in HIV workshop is not satisfactory. It is a good sign that most of these respondents have participated in HIV awareness program organized by their respective garment industry. Though, the helps of other persons, such as, health workers, friends, parents, etc were found the important predicators for the awareness among respondents. This is also consistent with the findings of

[13]**.** Mass media programs (electronic and print media) show positive sign in case of increasing the awareness level among each group of people, consistent with [13, 16]. This study found that, radio programs and TV programs about HIV/AIDS, both are most important predicators of HIV/AIDS awareness and both has positive effects on HIV/AIDS awareness. In this study, participants of HIV/AIDS workshops were more likely to aware compared to those who have not participated in such workshops which indicate the effectiveness of such programs.

Conclusion

HIV/AIDS awareness has become one of the burning issues across the world. HIV/AIDS awareness in Bangladesh has long been a topic of interest in research including each sector of population because it has a direct relationship with the prevalence of HIV. The analyzed results show large proportions of respondents are in very young aged, most of them are secondary educated and unmarried. It also shows that almost all garments workers are aware about HIV/AIDS, though their knowledge regarding prevention is not satisfactory. HIV/AIDS awareness depends on respondent's education, contraceptive usage, radio programs and TV programs on HIV/AIDS, their participation in HIV/AIDS workshop and assist of any person to make them aware about HIV/AIDS. Though Bangladesh has a low prevalence of HIV, but there remain a number of factors that make the country at high risk in acquisition and transmission of HIV. Therefore, it is the time to give more emphasize on education, mass-media exposure, workshops, and campaign.

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Table 1: Background Characteristics of Socio-Demographic Characteristics (n=200)

Characteristics	Frequency (%)	Characteristics	Frequency (%)
Age (in Years)		**Educational Status**	
18-27	127 (63.50)	Illiterate	5 (2.50)
28-37	65 (32.50)	Primary	43 (21.50)
38-47	7 (3.50)	Secondary	107 (53.50)
≥48	1 (0.50)	Higher Secondary	45 (22.50)
Religion		**Monthly Income (Tk)**	
Muslim	188 (94.00)	<5000	151 (75.50)
Non Muslim	12 (6.00)	5000-10000	41 (21.50)
Sex		>10000	7 (3.50)
Male	100 (50%)	**Monthly Expenditure (Tk)**	
Female	100 (50%)	<5000	144 (72.00)
Marital Status		5000-10000	41 (20.50)
Married	128 (64.00)	>10000	15 (7.50)
Unmarried	70 (35.00)		
Widow	2 (1.00)		

Note: The numbers indicated within the parenthesis represent the percentages

Table 2: Background Characteristics of HIV/AIDS Related Attributes (n=200)

Characteristics	Frequency (%)	Characteristics	Frequency (%)
Contraceptive Use		**Dangerous and Life Threading Disease**	
No	86 (43.00)	No	31 (15.50)
Yes	114 (57.00)	Yes	169 (84.50)
Is it Contagious Disease		**Loss preventive power and increasing physical weakness by HIV**	
No	14 (7.00)	No	47 (23.50)
Yes	186 (93.50)	Yes	153 (76.50)
Participation of HIV workshop		**Awareness about HIV**	
No	128 (64.00)	No	19 (9.50)
Yes	72 (36.00)	Yes	181 (90.50)
Company Programs about HIV		**Awareness about HIV by anybody**	
No	19 (9.50)	No	21 (10.50)
Yes	181 (90.50)	Yes	179 (89.50)
Knowledge about treatment of HIV		**Aware from radio**	
Yes	177 (88.50)	No	114 (57.00)
No	23 (11.50)	Yes	86 (43.00)
Knowledge about remediable of HIV		**Aware from TV**	
yes	189 (94.50)	No	60 (30.00)
No	11 (5.50)	Yes	140 (70.00)

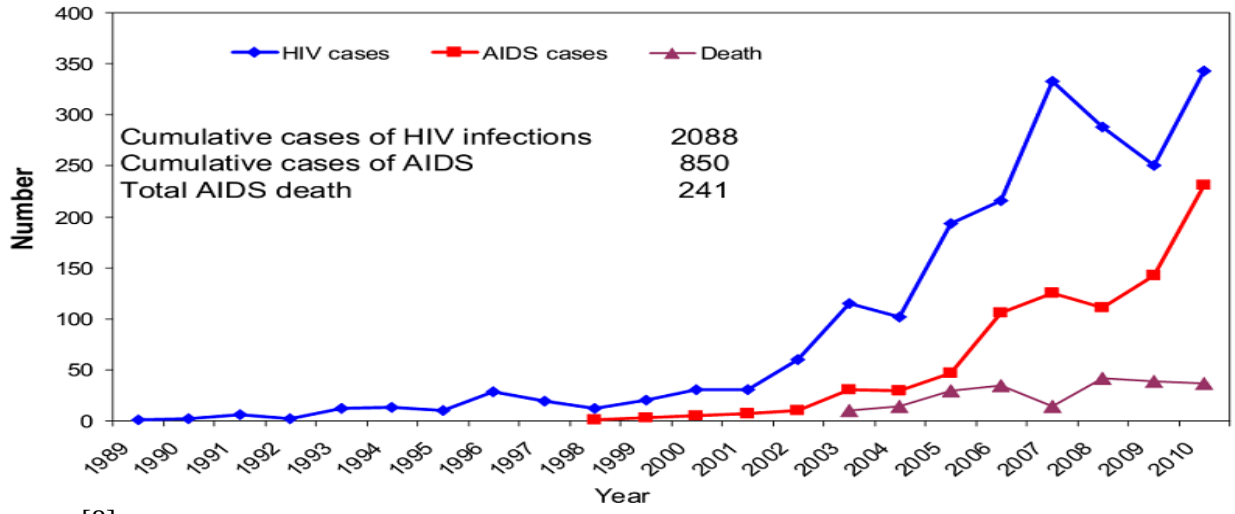
Note: The numbers indicated within the parenthesis represent the percentages

Table 3: Determinants of the HIV/AIDS Awareness of the Garments Workers

					95% CI	
Predicators	**Co-efficient of β**	**S.E of β**	**P- value**	**OR**	**Lower**	**Upper**
Educational status						
Illiterate (r)	--	--	--	1.00		
Literate	0.561	0.176	0.001	1.75	1.241	2.474
Contraceptive use						
No (r)	- -	- -	- -	1.00		
Yes	2.245	0.893	0.012	9.44	1.640	66.705
Radio program						
No (r)	- -	- -	- -	1.00		
Yes	1.857	1.110	0.094	6.41	0.727	56.407
TV program						
No (r)	- -	- -	- -	1.00		
Yes	1.963	0.876	0.025	7.12	1.278	39.644
Participation of HIV workshop						
No (r)	- -	- -	- -	1.00		
Yes	2.126	0.906	0.019	8.38	1.419	49.489
Aware about HIV by anybody						
No (r)	- -	- -	- -	1.00		
Yes	2.184	0976	0.025	8.88	1.311	60.157

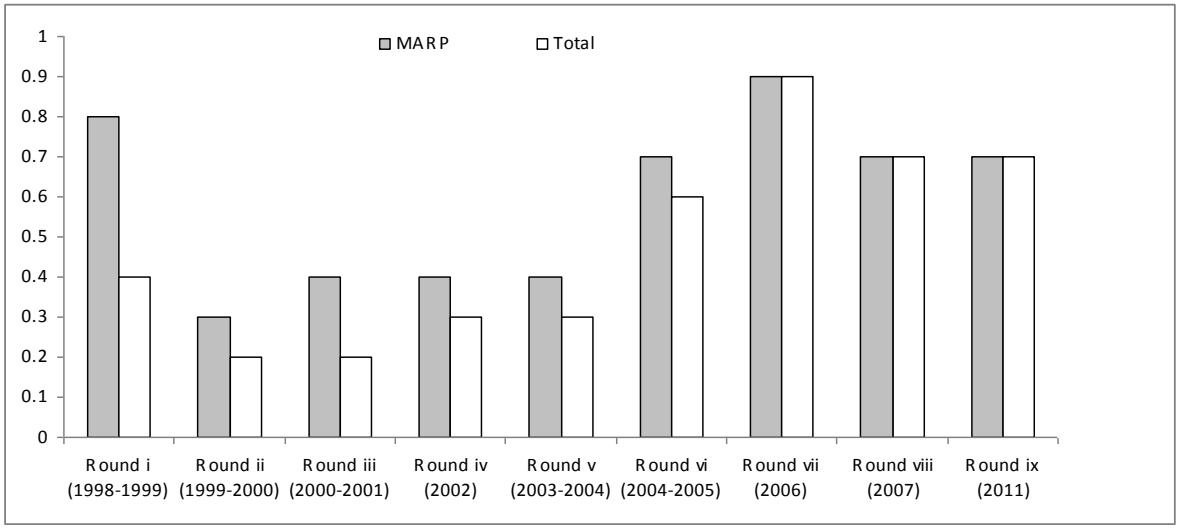
Note: *r* represents the reference category

Figure 1: Reported HIV and AIDS Cases and Deaths in Bangladesh from 1989 to 2010



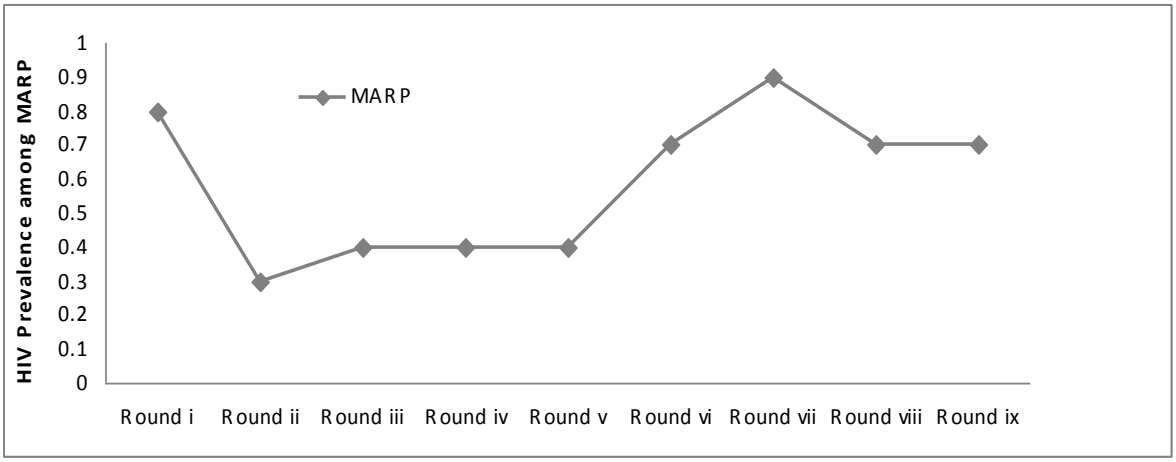
Source: [8]

Figure 2: HIV/AIDS prevalence over the rounds of surveillance



Source: [8]

Figure 3: Trends of HIV among Populations Most at Risk over the Rounds of Surveillance



Source: [8]