

Socio-demographic covariates play a tremendous role in mounting HIV/AIDS awareness, knowledge among slum women in Bangladesh

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Abstract

This study aimed to identify socio-demographic correlates of knowledge, awareness about AIDS among slum women of Bangladesh. Chi-square test statistics and logistic regression models were used for analyzing the data. This analysis pertains to 600 ever married women in the reproductive age group (10-49). The finding of the both techniques show that female age at marriage, couple education, occupation, access to health worker, and mass-media exposure have significant ($p < 0.001$, $p < 0.005$) contribution in determining HIV/AIDS knowledge, awareness level. It also reveals that media particularly TV, couples education and visit of family planning health worker play the leading role regarding this issue while others have indirect relationship.

Keywords: HIV/AIDS – Bangladesh slum women – Bivariate analysis – Logistic analysis – Odds ratio.

INTRODUCTION

Acquired Immunodeficiency Syndrome (AIDS) is the name of a disease that has a devastating effect on human body consequently definite death of human being. HIV (human immunodeficiency virus) is the most popular virus in the world that causes AIDS. HIV/AIDS were recognized as a global crisis by the mid-1980s (KIRAGU, 2001). In India the number of HIV/AIDS infected people is increasing at an alarming rate. Bangladesh is still considered as a low HIV/AIDS prevalent country but it is at a critical moment in the course of its AIDS epidemic (WORLD HEALTH ORGANIZATION, 2005; AZIM et al., 2000; SHAH; KRISTENSEN; KHAN, 2000; GIBNEY et al., 1999; UNITED

NATIONS HUMAN SETTLEMENTS PROGRAMME, 2003).

Khan and Kraemer (2008) divulged that a significantly higher percent of women living in slums had a poorer status, had less access to mass media, and had less education than women not living in slums of Bangladesh. Knowledge of AIDS indicated by ever heard about AIDS, knowledge of avoiding AIDS by condom use were significantly lower among women living in slums than those women living in other areas.

The country's vulnerability is very high compared to other parts of South Asia and infection rates within the vulnerable groups are increasing, leading to an ever-greater possibility that the virus will spread to the general population (AZIM et al., 2000; SHAH; KRISTENSEN; KHAN, 2000;

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KHAN et al., 1997). In this critical situation, public awareness can play a dominating role preventing HIV/AIDS epidemic (MITRA AND ASSOCIATES, 2004). But awareness level with knowledge of correct ways to avoid HIV/AIDS among the general people in Bangladesh is quite low. According to Mitra and Associates (2000), 40% ever-married women never heard HIV/AIDS, 19% ever heard but don't know any correct ways and only 41% knows one or more correct ways to avoid the disease

It is true that very few studies have been conducted in slum people. It is with the background, the present study has design to examine the factors that are associated with level of awareness regarding AIDS prevention. The main objectives of this study are to examine the background characteristic of the study population; and then to identify the interaction effects of factors which influenced knowledge, and awareness of HIV/AIDS among married slum women.

MATERIAL AND METHODS

The data for this study were collected under the collaboration of Population Science department, University of Rajshahi, Bangladesh from 600 ever-married women aged 10-49 in 2009 who were living in the slum areas of Rajshahi city corporation (RCC), Bangladesh through purposive sampling technique. The primary database provides information on various possible background as well as age, age at marriage, couples education and occupation, monthly income and others. Moreover, for assessing the knowledge and awareness level of HIV/AIDS some specific questions were pointed out such as – how and where you heard about HIV/AIDS?, have you listen or watches TV about HIV/AIDS related programmes?; do you ever visit to health worker or doctors for acquisitions of correct knowledge about HIV/AIDS and its preventive methods? Interviewers have quite knowledge about HIV/AIDS because they are fourth years honors student in the department of Population Science. Before collecting data five to 7 days discuss and provides necessary information about questionnaire. The dependent variables 'ever heard AIDS used to determined the status of HIV/AIDS awareness, 'knowledge about

HIV/AIDS' and lastly 'condom prevent HIV/AIDS', were coded as 1 yes as 0 for not at all. Both bivariate and multivariate techniques have been performed to assess the factors associated with AIDS awareness and knowledge in Bangladesh. The Chi-square test statistic is used to determine the association between dependent and explanatory variables as bivariate techniques. Logistic regression was carried out as multivariate techniques to assess the net effects of explanatory variables on AIDS awareness, knowledge and condom prevention level. In the logistic regression analysis all the explanatory covariates are coded as categorical variables and dummy coding scheme was also used.

RESULTS AND DISCUSSION

Background characteristics of the study population

Table 1. Background characteristics of the study slum population, Bangladesh.

Characteristic's	Frequency	%
Age at Marriage(years)		
<15	537	89.5
15 and above	63	10.5
Respondent education		
illiterate	303	50.5
primary	233	38.8
secondary and higher	64	10.7
Husband education		
illiterate	303	42.2
primary	233	28.6
secondary and higher	64	29.2
Respondent's occupation		
Not working outside	215	35.8
Work in out side	385	64.2
Religion		
Muslim	561	93.5
Non-Muslim	39	6.5
Watch TV		
No	171	28.5
Yes	429	71.5
Visit health worker		
Regularly	165	27.5
Irregularly	319	53.2
No	116	19.3

Table 1 revealed that majority of the respondents (about 90%) are get married at very young age (i.e. <15 years) and a small proportions (about 10%) of them at age 15 years and more. About half of the respondents are illiterate, about 39% have attained primary level of education and very small proportions (10.7%) are reported to have gone for secondary and higher education. Majority of the respondents (71.5%) show TV at least once a week. In slum areas, around 28% health workers visit regularly and 53.2% irregularly

and at the same time a mentionable percent don't visit to at all.

Bivariate analysis

Bivariate results showed that all explanatory variables like age at marriage, both respondent and husband education, respondent occupation, religion, visit of health worker, watch TV are highly ($p < 0.000$) statistically significant relation with the response variable heard about HIV/AIDS, knowledge about HIV/AIDS and condom prevent AIDS/HIV.

Table 2. Chi-square test of slum population with respect to socio-demographic characteristics, Bangladesh, 2009.

Variables	Heard about AIDS/HIV	Knowledge about AIDS/HIV	Condom prevent AIDS/HIV
Age at marriage	$\chi^2_{cal} = 86.21, df=1,$ $\rho = 0.00, \chi^2_{tab} = 3.841$	$\chi^2_{cal} = 235.30 df=1,$ $\rho = 0.00, \chi^2_{tab} = 3.841$	$\chi^2_{cal} = 257.171 df=1,$ $\rho = 0.00, \chi^2_{tab} = 3.841$
Respondent's education	$\chi^2_{cal} = 137.692 df=2,$ $\rho = 0.00, \chi^2_{tab} = 5.991$	$\chi^2_{cal} = 469.529 df=2,$ $\rho = 0.00, \chi^2_{tab} = 5.991$	$\chi^2_{cal} = 476.630 df=2,$ $\rho = 0.00, \chi^2_{tab} = 5.991$
Husband's education	$\chi^2_{cal} = 63.77 df=1,$ $\rho = 0.00, \chi^2_{tab} = 3.841$	$\chi^2_{cal} = 135.832 df=1,$ $\rho = 0.00, \chi^2_{tab} = 3.841$	$\chi^2_{cal} = 154.646 df=1,$ $\rho = 0.00, \chi^2_{tab} = 3.841$
Respondent's work status	$\chi^2_{cal} = 77.840 df=1,$ $\rho = 0.00, \chi^2_{tab} = 3.841$	$\chi^2_{cal} = 232.671 df=1,$ $\rho = 0.00, \chi^2_{tab} = 3.841$	$\chi^2_{cal} = 253.475 df=1,$ $\rho = 0.00, \chi^2_{tab} = 3.841$
Religion	$\chi^2_{cal} = 5.087 df=1,$ $\rho = 0.024, \chi^2_{tab} = 3.841$	$\chi^2_{cal} = 12.329 df=1,$ $\rho = 0.00, \chi^2_{tab} = 3.841$	$\chi^2_{cal} = 14.507 df=1,$ $\rho = 0.00, \chi^2_{tab} = 3.841$
Watching TV	$\chi^2_{cal} = 51.241 df=1,$ $\rho = 0.000, \chi^2_{tab} = 3.84$	$\chi^2_{cal} = 111.244 df=1,$ $\rho = 0.00, \chi^2_{tab} = 3.841$	$\chi^2_{cal} = 119.748 df=1,$ $\rho = 0.00, \chi^2_{tab} = 3.841$
Visit health worker	$\chi^2_{cal} = 11.653 df=2,$ $\rho = 0.003, \chi^2_{tab} = 5.99$	$\chi^2_{cal} = 14.491 df=2,$ $\rho = 0.01, \chi^2_{tab} = 5.991$	$\chi^2_{cal} = 13.586 df=2,$ $\rho = 0.01, \chi^2_{tab} = 5.991$

Multivariate analysis

A well-known statistical technique named logistic regression model has been used as multivariate technique. The coefficients and odds ratios of the three models by different characteristics of the respondents are presented in Table 3.

Table 3, it is seen that age at marriage is significantly associated with awareness about HIV/AIDS, having knowledge about HIV/AIDS and consistency of condom in preventing HIV/AIDS. The relative odds for those respondents whose age at marriage 15 years and above are found to be 1.994, 3.964 and 6.602 respectively. These clearly indicate that the likelihood of heard about HIV/AIDS having knowledge about HIV/AIDS and consistency of condom in preventing HIV/AIDS among slum dwellers are 1.994, 3.964 and 6.602 times respectively higher than that of dwellers whose age at marriage is <15 years (reference category). The effect of the level of education (both the respondents and their husbands) is found to highly significant factor influencing the respondents in listening about HIV/AIDS, having knowledge about HIV/AIDS and consistency of condom in preventing HIV/AIDS. The logistic coefficients indicate that the women and their husbands with the higher level of education are more likely to the level of HIV/AIDS awareness, having knowledge about HIV/AIDS and consistency of condom in preventing HIV/AIDS than their illiterate counterpart. Thus it is cleared that HIV/AIDS related awareness would be increased as the level of education would increase sufficiently and rapidly as they realize the devastating impact of HIV/AIDS on human beings.

Occupation is also an important factor that may strongly affect women heard about HIV/AIDS, having knowledge about HIV/AIDS and consistency of condom in preventing HIV/AIDS. The results show that the women who work outside have 1.828, 4.732 and 10.821 times respectively more probability in listening about HIV/AIDS, having knowledge about HIV/AIDS and consistency of condom in preventing HIV/AIDS respectively than the women who do not work out side.

Mass media like TV can play a strong role for creating awareness among the people about HIV/

AIDS and its life threatening effecting on human beings. The results indicate that the women who watch TV are 2.317, 4.709 and 9.447 times more likely to listening about HIV/AIDS, having knowledge about HIV/AIDS and consistency of condom in preventing HIV/AIDS respectively. The results also indicate the significant (statistically) effect of TV among the respondents. Therefore the role of TV as a part of mass media should be enhanced to reduce the overall risk of HIV/AIDS in the country.

As shown in Table 3, visit of FP health workers is significantly and positively related to listening about HIV/AIDS, having knowledge about HIV/AIDS and consistency of condom in preventing HIV/AIDS. It is likely that the frequent visit of FP health workers provide opportunities to motivate people by providing regular counseling about various health related issues and the necessary services and their availability. Religion is another factor having the effect on listening about HIV/AIDS, having knowledge about HIV/AIDS and consistency of condom statistically significant effect.

CONCLUSIONS AND RECOMMENDATION

The main points to emerge in the slum areas about 90 percent respondent married before 15 years of age, 10 percent with secondary and higher education and most of the respondent work outside of the house. It is notable that below 30 percent health worker visit in slum areas regularly and the remaining portion are irregular or not visit ever at all. Bivariate results suggested that all the included variables in this analysis had statistically significant relationship with the level of HIV/AIDS awareness and knowledge. Nonetheless, the logistic regression results identified couples education, respondent's occupation and age at marriage, visit of health worker, electronic media like radio and TV as having statistically significant relationship with AIDS knowledge and awareness. Knowledge and awareness regarding HIV/AIDS was the highest among higher educated women and lowest among the illiterate women. Awareness and knowledge level varies with their working status. This study also reveals that visit of health worker and the electronic media like radio and TV play leading role in

Table 3. Logistic regression results of AIDS awareness and knowledge of slum women, Bangladesh, 2007.

Characteristic's	Heard about HIV/AIDS		Knowledge about HIV/AIDS		Condom prevent HIV/AIDS	
	Coefficient (B)	Odds ratio	Coefficient (B)	Odds ratio	Coefficient (B)	Odds ratio
Age at marriage						
15 and Above	0.690*	1.994	1.377*	3.964	1.887*	6.602
<15(r.)	...	1.000	...	1.000	...	1.000
Respondent's Education						
Primary	2.516**	12.382	1.230	3.421	2.052*	7.780
Secondary and higher	4.066**	58.296	6.035**	417.638	7.623**	2043.8
Illiterate(r.)	...	1.000	...	1.000	...	1.000
Respondent work status						
Work out side	0.603*	1.828	1.554*	4.732	2.382**	10.821
Not Work out side(r.)	...	1.00	...	1.00	...	1.00
Husband Education						
Literate	1.045**	2.842	0.896***	2.451	2.105**	8.207
Il-literate (r.)	...	1.00	...	1.00	...	1.00
Religion						
Muslim	-0.529	0.589	-1.504	0.222	-2.802*	0.061
Non-Muslim(r.)	...	1.00	...	1.00	...	1.00
Mass Media (TV & Radio)						
Yes	0.840**	2.317	1.550**	4.709	2.246**	9.447
No(r.)	...	1.00	...	1.00	...	1.00
Visit Health Worker						
Regularly	0.977*	2.657	1.432*	4.185	1.852***	6.372
Ir-regularly	0.685*	1.984	0.730	2.076	0.730	2.076
Not Visit(r.)	...	1.00	...	1.00	...	1.00

Notes: (r) indicates reference category; *** p < 0.01; ** p < 0.05; * p < 0.10

building awareness and knowledge about HIV/AIDS. TV watching have direct impact on awareness and knowledge of women. In relative sense, the odds of consciousness and acquisitions of knowledge were 2.317 times and 4.709 times among women who watch TV compared to those women who never watch TV.

In context of Bangladesh, high education indicates better occupation, better income pursue

standard of living but in slum people are deprived from all kinds of modern facilities. Although some NGO works for creating concussions in slum areas that it not quite for minimum development. At this moment it is crown priority to give emphasis on education, alleviation of poverty, ensuring electronic media exposure, campaigning head to head all over the country particularly in vulnerable areas like slum dwellers.

Covariantes sócio-demográficas desempenham um enorme papel na sensibilização sobre o HIV / AIDS, o conhecimento entre as mulheres de favelas em Bangladesh

Este estudo teve como objetivo identificar correlatos sócio-demográficos do conhecimento na conscientização sobre a AIDS entre as mulheres de favelas de Bangladesh. Estatísticas do teste do

qui-quadrado e modelos de regressão logística foram utilizados para analisar os dados. Esta análise referiu-se a 600 mulheres que nunca casaram na faixa etária reprodutiva (10-49). As duas técnicas mostraram que a idade das mulheres no casamento, a educação do casal, ocupação, acesso a profissionais de saúde e a exposição da mídia de massa tem significativa ($p < 0,001$, $P < 0,005$) contribuição para a determinação dos níveis de consciência e conhecimento sobre HIV / AIDS. As técnicas também revelaram que a mídia (TV especialmente), a educação dos casais e a visita do trabalhador de saúde à família desempenham papel principal sobre este assunto, enquanto outros tem relação indireta.

Palavras-chave: HIV/AIDS – Mulheres de favelas de Bangladesh – Análise bivariada – Análise logística – Odds ratio.

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