

## **Three studies on HIV/AIDS**

- I. AIDS knowledge in rural Bangladesh**
- II. Providing AIDS awareness education through village based women's organizations**
- III. Communication network in reproductive health information dissemination to the adolescents**

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## **FOREWORD**

Empirical evidence point to a causal relationship between the socioeconomic status of individuals and communities and their health. Indeed improvement in health is expected to follow socioeconomic development. Yet this hypothesis has rarely been tested; at least it has not undergone the scrutiny of scientific inquiry. Even less understood are the processes and mechanisms by which the changes are brought about.

The Rural Development Programme (RDP) of BRAC is a multisectoral integrated programme for poverty alleviation directed at women and the landless poor. It consists of mobilization of the poor, provision of non-formal education, skill training and income generation opportunities and credit facilities. The programme is the result of 20 years of experience through trial and error. However evaluation of its impact on human well-being including health has not been convincingly undertaken.

The Matlab field station of ICDDR,B is an area with a population of 200,000, half of whom are recipients of an intensive maternal and child health and family planning services. The entire population is part of the Center's demographic surveillance system where health and occasionally socioeconomic indicators have been collected prospectively since 1966.

A unique opportunity arose when BRAC decided to extent its field operations (RDP) to Matlab. ICDDR, B and BRAC joined hands to seize this golden occasion. A joint research project was designed to study the impact of BRAC's socioeconomic interventions on the well-being of the rural poor, especially of women and children, and to study the mechanism through which this impact is mediated.

In order to share the progress of the project and its early results, a working paper series has been initiated. This paper is an important addition in this endeavour. The project staff will appreciate critical comments from the readers.

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# **AIDS knowledge in rural Bangladesh**

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## Abstract

Globally, AIDS is well documented as both a disease and a development problem. This study seeks to identify the determinants of AIDS awareness within a rural, agrarian population from data collected in 1995 as part of a panel survey under BRAC-ICDDR,B Joint Research Project at Matlab. Among a wide variety of questions on their well-being were three related to AIDS knowledge. Bivariate analysis and multivariate techniques were used to determine predictors of AIDS awareness in the selected population. In multivariate analysis, the knowledge of AIDS was regressed on several selected variables using logistic regression. Next, in-depth interviews were carried out with a randomly selected group of 22 women chosen from the "AIDS aware" population. The principal dependent variable examined was AIDS awareness (having heard of AIDS or not). Of the total population of 3834 women and 2272 men, only 7.4% (256) of the women and 16.0% (364) of the men had heard of the disease AIDS. Of the 256 women who said they had heard of AIDS, 72.6% (or 184 women) said they did not know how one gets AIDS. Only 22.8% (or 59 women) knew that AIDS is spread by unsafe sex and 3.8% (7 women) knew contaminated needles spread it. This amounts to a useful AIDS knowledge in only 66 of the 3834 women surveyed, or roughly 1.7%. 80.1% (or 205 women) said they did not know how one could prevent AIDS, whereas only 1.6% (or 4 women) mentioned the use of condoms. Of the 16% of the total male population who had heard of AIDS, 85.4% did not know how to prevent AIDS. Only 4.1% said that condoms help prevent the spread of AIDS while a greater number, 4.5%, thought that there is an AIDS preventing medicine. The final model in regression analysis finds literacy, occupation of women, male support in the use of family planning and discussing family planning with neighbours to be the most influential predictors of both men and women's AIDS awareness. Also, being from a male headed household was a strong negative predictor of AIDS awareness for both men and women. It nearly halved a woman's odds of being AIDS aware and more than halved a man's. The quotes from the in-depth interviews show the various misconceptions rural women carry about AIDS, its causes and effects. In conclusion, it appears that the goal of increasing the rural population's AIDS awareness in Bangladesh warrants programme, which improve literacy as well as male involvement in family planning discussion and decision-making. Programmes that increase community discussion of such taboo topics would also be useful. Finally, the community health workers should be trained to teach about AIDS, its risks, care and prevention.

## **CONCEPTUAL FRAMEWORK**

Globally, AIDS is well documented as both a disease and a development problem. However, it was originally seen as an African and American problem, and thus most efforts to understand AIDS' socio-epidemiology and demography were focused on these two continents (and particularly on certain "high risk" populations within them). Unfortunately, now as the pandemic continues, it is showing itself to be a worldwide risk, not isolated in any specific geographic locations or "high risk" populations.

It has recently become evident just how susceptible Asia is to the AIDS epidemic<sup>1</sup>. Although relatively late to feel the global epidemic Asia is now experiencing the worst spread of the disease of any continent. Many scientists predict that ultimately AIDS will affect more Asians than it does the population of any other continent (UNICEF 1993; Chin, 1995). In fact, it has been estimated that without effective prevention efforts now more than 55 million Asians could be infected by 2020 (Henry, 1994).

Asia does stand to benefit, however, from its relatively late entry into the struggle against AIDS. There have been many public health lessons learned in Africa, America and Europe (Choices, 1993). By acting on these lessons, Asia may be protected from some of the worst AIDS related tragedies that its neighbors have experienced and are experiencing still.

Since now cure or vaccine exists to combat AIDS its prevention and management must be carried out at the behavioral and social level. Thankfully, the behavior modifications needed to protect oneself from AIDS are clear, simple and well within the grasp of the majority of people worldwide. Why then is AIDS still being transmitted at a staggering rate? The knowledge, understanding, and motivating to change behavior clearly must be lacking.

To date Bangladesh, a country of 123 million people, has only 74 known HIV+ cases (Islam, 1996). However, there is no reason to assume that Bangladesh will be immune to the Asian AIDS threat. The location of Bangladesh between Thailand and India, with their recent AIDS explosions, points to its susceptibility. Such AIDS risk indicators as a high STD prevalence (Sabin, 1997), widespread sexual networking and a large market in commercial sex (Naved, 1996), untested blood supplies (Bhuiya, 1995), homosexual activities (Khan, 1997), and low condom use (Folamar, 1996) also point to a high risk of AIDS in Bangladesh.

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<sup>1</sup> *In fact, a recent study quoted by the Bangladesh Independent estimated 3000 new cases a day of HIV infection in Asia. (The Independent, October 9, 1996).*



Many decision-makers in Bangladesh see the immediate need for prevention efforts, mostly in the form of education for behavior modification (Chowdhury, 1992). Most of the current effort is focussed on high risk populations like commercial sex workers and truck drivers (as their main ‘targetable’ clients). While this may be expedient, it has been shown that the general public is also at risk, since many ‘untargetable’ people are exposing themselves to high risk behaviors, and must also be made aware of the high risk activities to avoid (Brown & Xenos, 1994). On the other hand, due to the Bengali tradition of shyness and modesty particularly about sex-related topics (Maloney, 1981), educating the general public about AIDS - a decidedly taboo topic - must be carried out carefully (Folamar, 1996). The analysis below was conducted with the education of the general public of Bangladesh in mind.

This study seeks to identify the determinants of AIDS awareness within a rural, agrarian population as a baseline analysis in a BRAC<sup>2</sup> intervention area. This information may be helpful in developing new policies for AIDS prevention education in similar traditional isolated communities, which make up the vast majority of Bangladesh’s population.

## **MATERIALS AND METHODS**

The data was obtained from the Joint BRAC-ICDDR,B<sup>3</sup> Research Project on Socioeconomic Development and Human Well- being in Matlab Thana. This is a deltaic agrarian region, typical of much of Bangladesh, in which both organizations are active. BRAC recently started providing economic development interventions while ICDDR,B provides health care services and has been monitoring demographic data for almost 25 years. Both organizations are interested in understanding the pathways through which socioeconomic development affects the health and well-being of the rural poor. Together they have been collaborating to study these pathways in a systematic, statistically valid manner since 1992.

As part of this study, data collection was carried out between April and August 1995 in Matlab Thana. A total of 3,687 households in 14 villages were sampled and the household heads, usually male, were interviewed with an economic questionnaire. If the household head could not be interviewed another married (or widowed or divorced) adult male was questioned. A more health-oriented questionnaire was later carried out on wives of the heads of households. Again, if the head wife was not

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<sup>2</sup> *Bangladesh Rural Advancement Committee (BRAC) is a non-government organization (NGO) in Bangladesh, which is active in 55,000 villages. It provides health and education services as well as credit and income generating programmes to the rural poor (BRAC Annual Report 1995).*

<sup>3</sup> *The International Centre for Diarrheal Disease Research, Bangladesh (ICDDR, B) is an research institution that also offers health and education services and conducting health related research.*

available another adult ever-married female was interviewed. Among a wide variety of questions on their well-being were three related to AIDS knowledge: Have you heard of AIDS? How does one get AIDS? and How can you protect yourself from AIDS?

After excluding about ten percent of the respondents for missing data 3450 female responses and 2272 male responses were used in this analysis (See Table 1). Bivariate analysis and multivariate techniques were used to determine predictors of AIDS awareness in the selected population. In multivariate analysis, the knowledge of AIDS was regressed on several selected variables using logistic regression.

Next, in-depth interviews were carried out with a randomly selected group of 22 women chosen from the AIDS aware population. These women explained what they understood about AIDS, how it is and is not spread and how it is manifest in people. It should be noted that these interviews were carried out in November of 1996, more than a year after the original data was collected. If anything, during this time, the respondents should have received more insight into the nature of the disease. Thus, the information from these interviews may reflect increased awareness and greater understanding than at the time of the questionnaires.

### **Variables Used**

The principal dependent variable examined was AIDS awareness (having heard of AIDS or not). It should be noted that this is quite distinct from useful AIDS knowledge because most of the AIDS aware population said they did not know how one gets AIDS, and did not know how to prevent AIDS (see results below). However, the percent of the population who had not only heard of AIDS but also had a working knowledge of AIDS as a sexually transmitted disease was too small to statistically analyze (1.5%).

Explanatory variables were chosen from the extensive questionnaire data based on prior knowledge of possible determinants and an exploratory data analysis. Variables were selected in four categories: demographic, socioeconomic, development access and communication.

Among demographic variables, only sex of head of household and whether or not the respondent was the head of household were considered in the final model.

Measures of women's socioeconomic status such as literacy and working outside the home versus at home were included. For men, literacy and agricultural labor versus business were selected. BRAC eligibility was also included as a measure of poverty. In order to be BRAC eligible, a person must own less than 1/2 an acre of land and must offer to hire out his or her physical labor for more than 100 days a year. Thus, BRAC eligible people are economically less well endowed than their non-eligible neighbors are. Only a small percentage of BRAC eligible people are actually BRAC members. Thus, this variable must not be confused with BRAC memberships or access to BRAC services.

Variables relating to access and choice of family planning were also included in this study. This is because family planning has been a primary target of many development efforts in the Matlab area (including ICDDR, B), as well as in most of Bangladesh. These variables were analyzed for statistical relationships with AIDS awareness as a means to see if these interactions have offered men or women any education in self-preservation against HIV. In consideration of the fact that HIV is usually transmitted sexually, a connection between family planning and AIDS awareness seems possible, if not probable. The specific variables examined were "using family planning or not". The latter variable was measured whether or not the woman (it was only asked of women) could correctly answer the question "What should one do if she misses two consecutive days of taking the pill?"

Communication variables were compared to AIDS awareness in order to elucidate potential pathways for discussing this taboo topic within a traditional Bangladeshi society. The variables "whether discussed family planning with spouse" and "whether discussed family planning with neighbors" were included in this category. Finally, based on the exploratory data analysis, a man's opinion of his wife's household contributions was compared to his AIDS knowledge. Because Bangladesh is a patriarchal society with most decision making roles played by the male spouse (Kamal, 1996), "Husband's approval of family planning" was also examined as a possible determinant for his wife's or his own AIDS awareness.

Development intervention access variables were included to assess whether any impacts on AIDS awareness could be credited to the development activities already in the area. Whether or not a woman lived in a village that was serviced by ICDDR, B or BRAC was investigated in the data analysis. Membership in an NGO (other than BRAC or ICDDR, B) was also included. Initial analysis was performed on whether or not a woman had recently visited a "qualified allopathic health practitioner" (a variable which included government health workers and ICDDR, B or BRAC health extension staff, as well as doctors). Since results were insignificant, this variable was not included in the bivariate or multivariate analysis.

## **RESULTS**

Table 1 presents the basic responses to the three AIDS related questions in the study. Of the total population of 3834 women and 2272 men, only 7.4% (256) of the women and 16.0% (364) of the men had heard of the disease AIDS. Roughly 10% of the population did not answer the question and were excluded from the analysis.

Of the 256 women who said they had heard of AIDS, henceforth-termed “AIDS aware”, 72.6% (or 184 women) said they did not know how one gets AIDS. Only 22.8% (or 59 women) knew that AIDS is spread by unsafe sex and 3.8% (7 women) knew contaminated needles spread it. (These answers were exclusive so that one woman could not give both of these responses). This amounts to a useful AIDS knowledge in only 66 of the 3834 women surveyed, or roughly 1.7%.

The next question asked of the AIDS aware women was “How can you prevent AIDS?” 80.1% (or 205 women) said they did not know, whereas only 1.6% (or 4 women) mentioned the use of condoms.

Of the 16% of the total male population who had heard of AIDS, henceforth called the AIDS aware men, 85.4% did not know how to prevent AIDS. Only 4.1% said that condoms help prevent the spread of AIDS while a greater number, 4.5%, thought that there is an AIDS preventing medicine. Even including “follow religious customs” and “refrain from doing immoral things” as AIDS prevention techniques (albeit two vague and value laden terms that may not really provide the behavioral protection needed) results still show a “useful AIDS knowledge rate” of less than 3%.

**Table 1: AIDS Aware Population**

	Women		Men	
	Number	Percent	Number	Percent
<b><u>Have heard of AIDS</u></b>				
Yes	256	7.4	364	16.0
No	3194	92.6	1908	84.0
Total valid cases	3450		2272	
<b><u>How one gets AIDS</u></b>				
Unsafe sex	59	22.6	109	31.4
Using unsafe needle	9	3.4	8	2.3
Using FP method	2	0.8	3	0.9
Don't know	191	73.2	232	65.9
Total valid cases	261		352	
<b><u>How to prevent AIDS</u></b>				
Use condom	4	1.6	11	3.1
Use medicine	10	4.0	13	3.7
Follow religious custom	8	3.2	19	5.4
Refrain from doing immoral patients	-	-	38	10.7
Keep distance from AIDS patients	20	8.0	5	1.4
Be tidy/wholesome	1	0.4	1	0.3
Don't know	207	82.8	268	75.5
Total valid cases	250		355	

Table 2 presents the bivariate distribution and chi-square statistics of selected variables against AIDS awareness. All the variables presented in Table 2 had significant differences in AIDS awareness between their sub-groups except whether or not a woman was herself the head of her household. The literate population of both men and women were significantly more likely to have heard of AIDS; the BRAC non-eligible population had a much higher AIDS aware population; housewives were less likely to be AIDS aware; men who were the head of their own households had a smaller AIDS aware percentage (probably due to the older age of the heads of household); and both men and women who came from a female headed household had a higher AIDS aware population than those from male headed households.

**Table 2: Distribution of AIDS aware men and women according to selected demographic and socioeconomic variables. Matlab 1995.**

Variable	Women		Men	
	% AIDS aware	Total population	% AIDS aware	Total population
<b><u>Literacy</u></b>				
Can read	16.5	1266	28.1	1070
Cannot read	2.0	2036	5.2	1198
Chi-squared significance	<.001		<.001	
<b><u>Socioeconomic status</u></b>				
BRAC eligible	2.5	1853	8.1	1243
Not eligible	13.3	1597	25.6	1029
Chi-squared significance	<.001		<.001	
<b><u>Occupation</u></b>				
Housewife	6.5	3150	-	-
Others	27.5	300		
Chi-squared significance	<.001			
<b><u>Relationship to Head of Household</u></b>				
Self	7.5	293	14.7	1964
Someone else	7.4	3155	24.7	305
Chi-squared significance	ns		<.001	
<b><u>Sex of Head of Household</u></b>				
Female	10.5	430	30.2	43
Male	7.0	3020	15.7	2229
Chi-squared significance	<.01		<.001	

In table 3, below, the access to development interventions were compared to AIDS awareness and it is shown that living in a BRAC rural development programme village is not highly significantly related to a higher chance of being AIDS aware. On the other hand, living in an ICDDR,B intervention area does significantly increase a person's chance of being AIDS aware. Being a member of another NGO, besides BRAC actually was a negative indicator of AIDS awareness in women but was insignificant in men. Being a contraceptive user was not significantly related to AIDS awareness in women, but men who said their wives were contraceptive users were more likely to be AIDS aware than men who said their wives did not use contraceptives.

**Table 3: Distribution of AIDS aware men and women according to selected development access variables. Matlab 1995.**

Variable	Women		Men	
	% AIDS aware	Total population	% AIDS aware	Total population
<b><u>Whether in BRAC area</u></b>				
Yes	8.2	1821	17.7	1205
No	6.5	1629	14.2	1067
Chi-squared significance	<.05		ns	
<b><u>Whether in ICDDR,B area</u></b>				
Yes	9.2	1818	19.6	1110
No	5.3	1632	12.5	1170
Chi-squared significance	<.001		<.001	
<b><u>Member of other NGO</u></b>				
Yes	5.3	37	19.3	145
No	8.0	2673	15.8	2119
Chi-squared significance	<.05		ns	
<b><u>Contraceptive user</u></b>				
Yes	8.1	1650	20.2	1077
No	6.0	1797	12.3	1195
Chi-squared significance	ns		<.001	

Table 4 lays out the univariate analysis of AIDS awareness against certain communications variables. It was found that both the sub-populations of men who approve of family planning and of women whose husbands approve of family planning had a higher percent of AIDS awareness than those who did not approve. Also, women were asked the question what a woman should do if she misses two consecutive days of taking the birth control pill; those who answered correctly are considered to have a useful understanding of the birth control pill's mechanism. These women are significantly more likely to be AIDS aware than the women who did not answer correctly. Next, men and women who discuss family planning with their neighbors and those who discuss it with their spouses were all found to have a higher AIDS aware subgroup than those who did not. Finally, men who stated positive attitudes about their wives' contributions to their household were significantly more likely to be AIDS aware than men who less valued their wives' contributions.

**Table 4: Distribution of AIDS aware men and women according to selected communications variables. Matlab 1995.**

Variable	Women		Men	
	% AIDS aware	Total population	% AIDS aware	Total population
<b><u>Husband (self) approves of FP</u></b>				
Yes	8.9	2395	18.0	1773
No	2.0	2036	9.1	349
Chi-squared significance	<.001		<.001	
<b><u>Understands Pill Mechanism</u></b>				
Yes	26.8	142	-	-
No	6.6	3306		
Chi-squared significance	<.001			
<b><u>Discuss F. P. with friends</u></b>				
Sometimes	15.3	308	43.2	88
Never	6.7	3129	14.9	2164
Chi-squared significance	<.001		<.001	
<b><u>Opinion of wife's contribution</u></b>				
Good	-	-	21.8	902
Reasonable	-	-	12.2	1066
Not mentionable	-	-	12.0	301
Chi-squared significance			<.001	

In order to measure each variable's specific contribution to a person's AIDS awareness, a logistic regression model was performed on the data. In table 5, the final results of the logistic regression analysis of AIDS awareness on selected variables are presented. The variables "whether lives in a BRAC intervention village", "whether head of household" and "whether member of an NGO" were excluded because they were found to be insignificant in earlier analysis.

The final model finds literacy to be the most influential predictor of both men and women's AIDS awareness. A man who can read has almost 4.7 times higher odds and a literate woman nearly 4.2 times the odds of being AIDS aware than do illiterate men and women respectively. For men, discussing family planning with friends or neighbors was the next strongest predictor. Men who said they had discussed family planning with neighbors were 2.5 times as likely to have heard of AIDS.



The next most important predictor of AIDS awareness for women in this model was her occupation. A woman who stays at home for her work, a 'housewife', has only 0.2479 times the odds of being AIDS aware compared to a woman who works outside her home. Another strong indicator of AIDS awareness was a correct knowledge of the mechanisms of contraceptive pill use. The women displayed a sound understanding of correct contraceptive pill use had 2.5 times higher odds of being AIDS aware than those who did not.

The model indicates that being from an ICDDR, B intervention area almost doubles a person's odds (both for men and women) of being AIDS aware. Women from lower socioeconomic status (as indicated by BRAC eligibility) had 0.28 times the odds and men had 0.41 times the odds of being AIDS aware. Both men and women who discussed family planning with their friends had higher odds of being AIDS aware than those who did not (for men their odds were increased by 2.5 times). But discussing family planning with a spouse was only found to be significant for men. Men who never discussed contraceptives with their wives had 0.73 times the odds of being AIDS aware than men who did. On the other hand, for women this variable was found to be insignificant. The actual use of contraceptives was found to be an insignificant predictor of AIDS awareness for both men and women.

Male support in the use of family planning was a positive contributor to increased AIDS awareness for both men and women. Further, men who valued their wives' contributions to the household were found to be significantly more likely to have heard of AIDS.

**Table 5: Results of logistic regression of AIDS awareness on selected socioeconomic variables.**

## ODDS RATIO

Variable	Men	Women
Total number of cases included in analysis	1802	2739
Literate Yes (No)	4.6944***	4.1802***
In ICDDR,B area Yes (No)	1.6286***	1.7606***
Discusses FP with spouse No (sometimes)	0.7259*	1.0365 ns
Wife (self) is a contraceptive user Yes (No)	1.2487 ns	0.8842 ns
Sex of household head Man (Woman)	0.4621*	0.6730**
Socioeconomic status BRAC eligible (non-eligible)	0.4112***	0.2821***
Husband (self) approves of FP Yes (no or don't know)	1.5881**	1.5933**
Discusses FP with friends Yes (No)	2.5218***	1.5805**
Opinion of wife's contribution to household substantial (reasonable or negligible)	1.2570*	-
Woman's Occupation Housewife (Other)	-	0.2479***
Understands Pill Mechanism Yes (No)	-	2.5252***

\*\*\* significance <.01, \*\* significance <.05, \* significance <.1, ns insignificant

Finally, being from a male headed household was a strong negative predictor of AIDS awareness for both men and women. It nearly halved a woman's odds of being AIDS aware and more than halved a man's.

### **Results of in-depth interviews of AIDS aware women:**

Twenty-two in-depth interviews were carried out during November of 1996 in order to ascertain the sort of understandings of AIDS that the aware female population possessed. Sixteen of the twenty-two respondents displayed misconceptions, as per our biomedical explanatory model, about the nature of AIDS

and/or its spread. Three of the respondents revealed that they had not knowledge of AIDS at all. The following are quotes from the respondents that illuminate these misconceptions. (Note that all these women had said they knew about AIDS and were included as among the AIDS aware population in the statistical analysis).

“AIDS attacks men, it does not attack the female.”

“It is a contagious disease (as in spread through casual contact) ... I heard from an ICDDR, B worker that if somebody dries menstrual cloth in an unprotected area and puts them on again that AIDS may attack. Because different insects may spread bad things on the clothes during drying.”

“AIDS is contagious and AIDS patients must be kept in a dark house with no contact with their wife or children, I saw this on TV.”

“It is coming. In the village the prevalence of this is low. If it doesn't happen in the villages why should we talk about it? By the blessing of Allah we have not seen this disease. God must protect us from it”.

“The patient should be isolated. I heard from a BRAC *shasthya shebika* (community health worker) of someone who got AIDS from abroad. He has come back to the village with spots on his body, fever and pain in the joints and reduced weight. He has been isolated in a room, all his utensils are separate. No one goes to his room or visits his house. Many Kobiraj (herbal doctors) and doctors have treated him but without result. He must dead by now.”

“There is no possibility of catching AIDS if you wash up the sex organs after sexual intercourse. It is curable if treated by a doctor.”

“It is an infectious disease. It spreads by sexual intercourse. The patients die within 24 hours. (It involves) infection in the ovary and itching in the vagina. I have heard that an AIDS injection has been invented to reduce sexual intercourse with other bad women or men.”

“AIDS is a dangerous and infectious disease. It is a sexual disease. It spreads with syringe, blood, flies and mosquitoes. It spreads from prostitutes’ houses.”

“It is a dangerous disease. It is spread from bad relations and due to illegal intercourse. It also spreads sometimes from intercourse with animals. It comes from prostitutes. It could be from used clothes from an AIDS patient. Before there was no medicine for AIDS, now some medicine has been invented.”

“(AIDS is) one kind of contagious disease. Very contagious, you develop blisters on the body. It comes from dogs, cats and rats. Be careful of dogs, cats and rats. Be neat and clean.”

“(To protect yourself from AIDS) your character should be good. You should obey the advice of a doctor and use condoms.”

“I have heard of AIDS, the stomach swells up. Can they diagnose AIDS in our country? Foreigners can diagnose it. I don’t know if it’s curable, I know it is preventable but I don’t know how.”

“There are no AIDS patients yet in our country. But it is attacking many abroad. There is no possibility of getting AIDS if sexual relation are limited to husband and wife ... AIDS patients cannot lead a normal life”.

“This disease is happening abroad. One gets it if one eats cockroach eaten foodstuff, or if one mixes with bad people... (to protect yourself from AIDS) do not accompany bad people and do not eat stale or cockroach eaten food.”

These direct translations and quotations of women’s explanations of what AIDS is, how it is spread, and how they can protect themselves are included to highlight that even the AIDS aware population in rural Bangladesh could benefit from a deeper understanding of the disease.

## **DISCUSSION AND CONCLUSION**

Many of the statistical findings in this study fall flatly into the realm of the expected: for example that BRAC eligible people are less AIDS aware than richer non-eligible people, and that ICDDR, B's health intervention (including health education) increases peoples' odds of being AIDS aware.

Some results, however, are particularly worthy of comment, either because of their policy implications and /or because of their uncertain causality. First of all, whereas AIDS awareness is measured at 7.4% of the female population and 16.0% of the male population, a useful understanding of AIDS as a sexually transmitted disease from which one can protect him or herself was exhibited by only about 3% of the men and 1% of the women in the study population. This is an extremely small proportion of the AIDS-aware population and underlines the fact that AIDS education must be given high priority in rural Bangladesh.

That literacy is an important indicator of AIDS awareness is not a surprising finding. However, it does highlight the importance of developing non-written messages on AIDS prevention in order to reach the vast majority of Bangladesh's population that is illiterate. This connection also adds more strength in support of adult literacy efforts in Bangladesh. Literate men and women have more power to gather useful information, like AIDS knowledge, than do illiterate their illiterate neighbor. Particularly, in the case of such a delicate topic as AIDS perhaps, those who have heard of AIDS are largely those who have read about it.

Further, employment outside the home was found to be an important indicator of AIDS awareness for women. This suggests that special efforts should be made to reach the homebound majority of rural women.

The causality behind the fact that a man's opinion of his wife's household contribution is a strong predictor of AIDS awareness is unclear. Perhaps the men who say their wives contribute highly to the household are more wordily, have a broader understanding of women's societal roles and with that a broader awareness of health issues including AIDS. This theory is supported by one study (A1-Sabir, 1997) which relates men's religious absolutism and restrictiveness with contraceptive acceptance rates.

The negative relationship between NGO membership and AIDS awareness in the univariate analysis indicates that NGO's have not educated their benefactors about the risks of AIDS. It should be pointed out, however, that NGO beneficiaries are often chosen from among the most economically disadvantaged members of the population, who might therefore be less likely to have heard of AIDS to begin with. That living in a BRAC intervention area proved to be insignificant to AIDS awareness is explicable due to the fact that BRAC had not yet developed any AIDS education programmes at the time of the survey and its intervention in Matlab is strictly economic in nature.

A strong correlation exists between understanding the subtleties of contraceptive use and AIDS awareness among women. This may imply an inclusion of AIDS education with the more extensive human reproductive health education. Or it may simply mean that some people are more inclined to collect knowledge, be it about contraceptive pills or about a new global epidemic.

That contraceptive use was a significant predictor of AIDS awareness for men in the univariate analysis but was insignificant in the multivariate regression for both men and women is intriguing. This data indicates that the men who know about their wives' contraceptive choices are more likely to also know about AIDS. Given that most family planning programmes have been female focused (Schuler, 95), perhaps women who accept birth control methods do so more passively than men who find out about birth control. This active involvement of men in family planning could be related with a higher AIDS awareness.

The fact that the second most important predictor of AIDS awareness for men was the discussion of family planning with neighbors (even given the small sample size of the subpopulation who do discuss) was a strong indicator of the importance of male involvement in family planning efforts for more than just lower birth rates. This male involvement in, and communication about, a taboo topic, previously seen as exclusively women's realm (and responsibility) may hold a key to changing men's knowledge and attitudes about their own sex roles, rights and responsibilities. Add to this the significance of the husband's approval of family planning and men's having discussed family planning with their wives and you are presented with rather strong evidence that communication about the taboo topic of family planning is an important predictor of AIDS awareness.

These relationships between discussing family planning with friends and AIDS awareness could have important policy implications. Diffusion of information through social networking is an important mode of transmission of knowledge of AIDS, especially in societies with low levels of literacy. The freedom to communicate about previously taboo topics allows people to spread the word. Given the size and effective isolation of Bangladesh's rural poor this word of mouth may be a necessary tool for AIDS education.

Both ICDDR,B and BRAC, as well as the government of Bangladesh and many other NGO's, already employ women to provide contraceptives and health services to poor women's doorsteps (BRAC presently does not employ these women in Matlab, but in many other parts of rural Bangladesh). These women's efforts have long been narrowly focused on promoting family planning. A paradigm shift is presently occurring to broaden this focus to include all reproductive health considerations. Within the realm of reproductive health, AIDS prevention education could be easily included. The only added cost to the system would be the cost of training the door to door health practitioners themselves.

In conclusion, it appears that the goal of increasing the rural population's AIDS awareness in Bangladesh warrants programme which improve literacy as well as male involvement in family planning discussion and decision making. Programmes that increase community discussion of such taboo topics would also be useful. Finally, the community health workers should be trained to teach about AIDS, its risks, care and prevention.

The quotes from the in-depth interviews show the various misconceptions rural women carry about AIDS, its causes and effects. Some of the quotes point to a certain judgementalism and a perception that only bad people get AIDS. This perception is counter-productive in a society where a lot of people may be unknowingly exposed to the risk of AIDS. If people believe that only 'bad' people get AIDS they will not feel that they personally at risk, and so will not feel the need to change their behavior in order to reduce their risk. Also they will be reticent to be tested or to find out if they are HIV positive, even if they suspect they may be, because they will not want to be labeled as 'bad'. This in turn will hinder the containment of the virus, as partners will not be able to be protected. All education campaigns that are to be carried out therefore must be clear, complete and non-judgmental in nature.

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**PROVIDING AIDS AWARENESS EDUCATION THROUGH  
VILLAGE BASED WOMEN'S ORGANIZATIONS**

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## Abstract

**Objectives:** This study aimed to test the effectiveness of a simple, inexpensive and basic AIDS awareness education module delivered through grassroots NGO network in rural Matlab, Bangladesh. It also explored the level of dissemination of knowledge gained by the BRAC members to their spouses and neighbours.

**Methods:** Some basics of AIDS awareness education was provided to the local BRAC staff, *shasthya shebika* (village health workers) and about 5,000 village women through a one-day training workshop, village organization meetings and campaign using a cascade with five key questions on AIDS i.e. what is HIV/AIDS, how it is transmitted, how it is not transmitted, how it can be prevented, and what are the high risk behaviours. Two surveys, one before (baseline), and another after, intervention were carried out in 10 villages of Matlab RDP area where BRAC is working either alone or jointly with ICDDR,B. A total of 788 BRAC members, their husbands and neighbours were surveyed. Pre- and post-intervention findings were compared. Appropriate statistical tests were done where needed.

**Results:** The analysis showed significant improvement in knowledge of BRAC members following intervention. This improvement was not seen in case of neighbours and husbands. The dissemination of knowledge from the BRAC members to their neighbours and husbands was found to be very poor.

**Conclusion:** Findings of this study would be helpful for the policymakers in formulating low-cost strategies for effective IEC on AIDS through grassroots NGO network in rural Bangladesh.

## INTRODUCTION

### *Background*

Acquired immunodeficiency syndrome or AIDS is a recent disease and was first reported in the USA in 1981 among the male homosexuals. Causative organism, human immunodeficiency virus (HIV), was discovered about two years later. It specifically ravages the human immune system, so that common curable infectious disease turned into incurable producing a invariably fatal condition. As of end 1996, global estimates of people living with HIV/AIDS infections stood at 22.6 million, 90% of whom are in the developing countries (Alabastro 1997). By now, more than 6 million are estimated to have developed full-blown AIDS. Every day more than 7,000 adults and about 1,400 babies are newly infected (UNAIDS 1996). By the year 2000, the global cumulative figure may rise to about 40 million infections. By then, Asia may have the most number of infections - about 10 million (UNAIDS 1996). Bangladesh is not out of this threat; all the determinants for an explosive outbreak exist here. So far, more than 350,000 individuals have been screened serologically. A total of 79 individuals (May 1997) had been found positive. The cumulative number of AIDS cases in Bangladesh now stands at 10, of which five already died (NAC 1997). If one AIDS patient is identified in an area, there might be 25 to 100 hidden HIV positive cases in that area (WHO 1989). The specialists think that unprotected and risky sexual behaviour, existent unawareness among people about the disease, poverty, lack of screening facilities and skilled manpower, and sociocultural factors are responsible for this.

AIDS is considered as one of the most dangerous disease condition ever recorded in the history of medicine. AIDS has 100% mortality rate. There is no drug to cure or to prevent AIDS. Another feature of HIV infection is that every infected person develops long carrier state before developing full-blown AIDS and during this time the carrier transmits HIV to others. HIV usually affects people aged 15-40 years, the most economically productive years (VHSS 1994), and thus poses a real threat to economic development of many countries.

Though there is no cure or vaccine for HIV infection, it can be prevented by raising people's awareness through massive public information and education campaign. Strategies for the prevention and control must be based on a better understanding of sociocultural domain, and on the people's current awareness of HIV/AIDS and reproductive and sexual behaviour.

In Bangladesh, there has not been any serious attempt to make people, particularly those in the rural areas, aware of the disease. To test the potential of BRAC's country-wide network of village organizations (VOs) in disseminating information on the disease, BRAC-ICDDR,B Joint Research Project took up a small pilot experiment in providing AIDS awareness to the villagers in Matlab thana. Several activities such as poster, rally, general discussion on AIDS and AIDS awareness education in different villages of Matlab were carried out in November-December 1996. This paper reports the activities carried out under the experiment as well as the resulting changes in knowledge of women and men before and after these activities were carried out. It is hoped that this experience will be helpful for the policymakers in formulating new policies to provide effective IEC (information, education and communication) on AIDS in rural Bangladesh.

### *Objectives*

The broad objective of the pilot experiment was to assess the effectiveness of basic AIDS awareness education delivered through grassroot NGO network in rural Bangladesh.

The specific objectives were as follows:

1. To carry out an AIDS awareness education campaign through village organizations (VOs) of BRAC and measure its effectiveness;
2. To measure the current level of knowledge on HIV/AIDS, its transmission, prevention, how it does not spread, high-risk behaviour and high-risk groups; and
3. To examine the level of dissemination of knowledge from the BRAC members to their neighbours and husbands.

## METHODOLOGY

The study was conducted in Matlab, a rural area in Bangladesh, where the International Centre for Diarrhoeal Disease Research, Bangladesh (ICDDR,B) has been operating a demographic surveillance system (DSS) since 1966. As in most of rural Bangladesh, the majority of the Matlab populations are poor. The dominant occupation is farming and almost all women are engaged in household chores. Farmers, in general, are in marginal economic situation owning less than two acres of land while 30% of the households are landless. About 39% of males and 53% of females have received no formal education (Ahmed *et al.*, 1997).

ICDDR,B divided the Matlab DSS field area into two -- an intervention or MCH-FP area (70 villages) and a comparison area (79 villages). In the intervention area, in addition to the regular government family planning programme, intensive maternal and child health care and family planning services have been provided by ICDDR,B since the late seventies. ICDDR,B provides only oral rehydration salt (ORS) free of cost in the comparison area but maintain a regular DSS. However, the comparison areas receive regular government health and family planning services.

BRAC extended its Rural Development programme (RDP) to Matlab in 1992. The RDP is targeted to the poorest of the society, especially women. The main objectives of the RDP are to empower the rural poor and to alleviate poverty through a variety of programme, namely institution building (village-based social organizations), functional education, skill and human development training, credit for income generating activities, legal education for females and non-formal primary education for children (Ahmed, 1994).

Both organizations are interested in understanding the pathways through which socioeconomic development effects the health and well-being of the rural poor. Together they have been collaborating to study these pathways in a systematic manner since 1992. A panel survey carried out in 1995 as part of the BRAC-ICDDR,B Joint Research Project found only 7% of the female population and 16% of the male population heard of AIDS; 23% of them mentioned that it could be contracted through sex with infected persons. When asked how AIDS could be prevented, 80% did not have any knowledge of it (Fulton *et al.*, 1997).

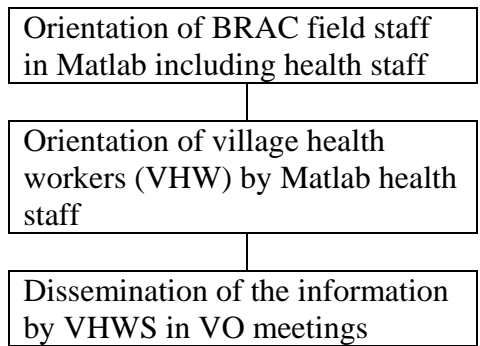
The methodology used in this experiment can be divided into two parts:

1. The education campaign, and
2. The study of campaign effectiveness.

*The education campaign*

A cascade of information dissemination was followed in this experiment. Figure 1 gives an idea of how this was done.

**Figure 1: Cascade of dissemination of AIDS related information in Matlab**



A one-day orientation to the health and other staff members of BRAC’s field office in Matlab was provided. The field office has one female programme organizer (PO) and two female programme assistants (PAs) who work exclusively on health, in addition to POs and PAs responsible for other sectors such as education and credit.

Next, the above health staff of Matlab gave two days orientation to the village health workers (VHWs) who are trained and supported by BRAC<sup>1</sup>. This orientation/training was also attended by staff from BRAC-ICDDR,B Joint Research Project.

Finally, the VHWs organized meetings of their respective VOs to disseminate the information. This was done in 70 villages and attended by a total of about 5,000 female VO members (see annex 1 for

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<sup>1</sup> VHWs are illiterate women who are members of BRAC's VOs. One member is trained per VO to provide-preventive health education and curative services for most common illness to treat VO members. She also sells selected essential drugs. She is called "*shasthya shebika*."



details of village-wise participation). Such meetings, lasting approximately 3 hours, also attracted individuals who were not necessarily VO members.

The agenda of the orientation and dissemination focused on five key issues:

### **What is AIDS?**

AIDS is a deadly disease, which has no treatment. It ravages the human immune system, so that common curable infections turn into incurable with fatal outcome. If anyone is affected by AIDS, s/he must die of it. Globally, thousands of people have been dying each year from this deadly disease.

### **How it is transmitted?**

It is transmitted through

- penetrative sex with AIDS patients;
- transfusion of HIV contaminated blood;
- sharing of HIV contaminated needle or other skin piercing instrument; and
- HIV infected pregnant mother to the infant.

### **How it is not transmitted?**

It can not be spread through the common activities of daily life, such as:

- sharing of clothes, beds and utensils;
- working or shaking hands with HIV infected persons;
- sharing food/water;
- through coughing, sneezing, air and excreta;
- through any insect bite, etc.

## **How it can be prevented?**

It can be prevented through

- use of condom during sexual intercourse;
- avoiding multiple sex partners, homosexuality and prostitution;
- transfusion of HIV screened blood;
- use of sterilized or disposable syringe, needle and other skin piercing instruments; and
- avoid pregnancies by HIV infected persons or AIDS patients.

## **What are the high risk behaviours?**

- sex with multiple partners and prostitutes, and homosexuality;
- frequent blood transfusion;
- sharing syringe, needle and other skin piercing instruments; and
- having any STDs.

An interactive process of training was followed rather than one-way information dissemination. A training module was developed for staff. At community level, posters and leaflets (produced by National AIDS Committee) and flip charts (produced by VHSS) were used. The education campaign was carried out during 17-30 November 1996.

In celebration of the 1996 World AIDS Day on 1 December, some additional activities were carried out. These included postering, rally by school children and a general discussion meeting attended by elites, VHWs and some VO members. As the latter activities were confined to Matlab town, their effect at the village level is expected to be minimal.

### *The study of campaign effectiveness*

The effectiveness has been measured through two surveys carried out before and after the campaign. The respondents for both the surveys were the same and included 788 persons representing VO members, their husbands and neighbours (Table 1).

**Table 1: Samples selected for before and after surveys**

Type of sample	Number
VO member	197
VO member's husband	197
Neighbours	
Wife	197
Husband	197
Total	788

Interviews were conducted employing a structured questionnaire covering the socio-demographic background of the respondents, whether they have heard the name of AIDS or not, what AIDS is, its transmission, prevention, how it does not spread, high-risk behaviour and high-risk population. The questionnaire was pretested, and modified. The McNemar test was employed to test the statistical significance of the difference found 'before' and 'after' giving the intervention.

The field experiment was carried out during the months of November and December 1996 (Table 2 gives the dates of the major events).

**Table 2: Timing of major events of the experiment**

Events	Period
'Before' survey	5-15 November
AIDS information campaign	17-30 November
	1 December
'After Survey'	23-30 December

## FINDINGS

### *General knowledge of AIDS*

Respondents' general knowledge of AIDS was measured by their ability to answer two questions: Have you heard of AIDS?, and What is AIDS? The first one is strictly a measure of recognition rather than a measure of actual knowledge. Before the intervention was provided, only 6% of BRAC members had heard of AIDS. Similar level of awareness was observed among their neighbours. A higher proportion of husbands stated that they had heard of AIDS. After intervention most of the respondents said that they had heard of AIDS (Table 3 & Annex 3). People who had not heard of AIDS were excluded from further questioning.

### *Specific knowledge of AIDS*

Respondents were asked what AIDS is and the responses were prompted. None had a completely correct knowledge. Majority of them knew that AIDS is a 'deadly disease'. After intervention, a slightly higher proportion of BRAC members said that AIDS causes loss of body's immune system and it is a contagious disease. On the other hand, a higher proportion of men (both VO's and neighbour's husband) mentioned that they didn't know what AIDS was (Table 3 and Annex 3). This may be because male respondents' would be unwilling to respond to the female interviewers, as sex is still a taboo subject in Bangladesh.

**Table 3. Level of general knowledge of VO members and their husbands about AIDS and source of knowledge before and after intervention.**

Characteristics	Vo member			Husband		
	Pre-intervention	Post-intervention	Pre vs. Post p value	Pre-intervention	Post-intervention	Pre vs. Post p value
<b>Have you heard of AIDS</b>						
Yes	5.9	95.5	<0.001	15.7	84.3	<0.001
No	94.1	4.5	<0.001	84.3	15.7	<0.001
<b>n</b>	<b>197</b>	<b>197</b>		<b>197</b>	<b>197</b>	
<b>What is AIDS*</b>						
A deadly disease	50.0	56.7	<0.05	54.8	66.5	<0.001
Loss of body's immune system	14.3	23.3	<0.01	7.1	9.2	ns
Contagious disease	7.1	21.6	<0.001	19.1	11.6	<0.01
Don't know	28.6	8.7	<0.001	19.1	22.2	ns
<b>n</b>	<b>12</b>	<b>189</b>		<b>32</b>	<b>165</b>	
<b>Source of information*</b>						
TV/radio	-	-	na	35.5	3.0	<0.001
Husband/wife	8.3	-	<0.01	3.2	16.8	<0.001
Neighbour/relative	66.7	5.2	<0.001	61.3	10.8	<0.001
BRAC workers	25.0	94.8	<0.001	-	59.3	<0.001
Rally/Posters	-	-	na	-	8.4	<0.01

\*Respondents are those who have heard of AIDS ('AIDS aware')

### *Sources of information*

Sources of information were categorized in the study in different ways: interpersonal communication, that is the communication of respondents with BRAC workers, spouses, neighbours and relatives; media communication through radio, television, newspaper and magazine; and through poster and rally. Before the intervention was provided, relatives and neighbours were the major source of information among VO members, their husbands and neighbours. Majority of the neighbours' husbands said that relatives, neighbours, radio and television were equally important source of information. Very small proportion of respondents mentioned other media as the source of information. After intervention, most of the respondents reported BRAC workers as the source of information on AIDS. It should be mentioned here that neighbours and husbands had heard of AIDS from the interviewers during the baseline survey. About 80% of BRAC members were found to have had attended the BRAC organized

meeting, such as VO meetings and general meetings, while a negligible proportion of neighbours and their husbands attended those meetings (Table 3 & Annex 3).

#### *Mode of transmission*

With regard to the route of transmission of HIV/AIDS, most of the respondents had no idea. After intervention, the knowledge of the BRAC members raised to some extent. Of different known mode of transmission of AIDS, unprotected sexual intercourse is more known compared to other means such as infected blood transfusion and use of unsterilized syringe or needle. Transmission through infected mother was largely unknown. There was no significant change of knowledge regarding mode of transmission between neighbours and husbands after intervention (Table 4 & Annex 4).

#### *How HIV is not transmitted*

HIV cannot be transmitted by any kind of social contact. Respondents had no knowledge about it. After intervention, some BRAC members could tell that HIV is not transmitted through shared food, plate and glass, from lavatory seats, from clothing etc. But the knowledge of neighbours and husbands did not change after intervention (Table 4 & Annex 4).

**Table 4. Knowledge of ‘AIDS aware’ VO members and their husbands about the mode of transmission of HIV and how HIV is not transmitted before and after intervention.**

Characteristics	VO member			Husband		
	Pre-intervention	Post-intervention	Pre vs. Post p value	Pre-intervention	Post-intervention	Pre vs. Post p value
<b>Mode of transmission</b>						
Penetrative sexual intercourse	12.5	32.4	<0.001	8.6	15.3	<0.01
Transfusion of infected blood	6.3	20.7	<0.001	2.9	5.3	ns
Sharing HIV contaminated syringe, needle or other skin piercing instrument	6.3	27.8	<0.001	2.9	9.5	<0.01
Infected mother to child	6.3	2.2	<0.05	2.9	0.5	ns
Others	6.3	0.3	<0.05	8.6	-	<0.01
Don't know	56.3	16.6	<0.001	71.4	69.5	ns
<b>How HIV is not transmitted</b>						
Mosquito or other insects bite	-	0.9	ns	2.9	-	ns
Playing, reading & living with AIDS patient.	0.5	19.4	<0.001	2.9	6.9	<0.05
Eating in same plate with AIDS pt.	0.5	22.6	<0.001	5.7	7.9	ns
Drinking water in same glass with AIDS patient.	0.5	20.7	<0.001	2.9	6.9	<0.05
Use of same latrine	0.5	16.9	<0.001	2.9	5.4	ns
Others	25.0	0.5	<0.001	2.9	2.0	ns
Don't know	75.0	18.7	<0.001	77.1	70.8	<0.01
n	<b>12</b>	<b>189</b>		<b>32</b>	<b>165</b>	

### *Prevention of AIDS*

The respondents had little knowledge of prevention of HIV/AIDS before the intervention was provided. After intervention, some 30% of the BRAC members could tell that using condoms during sexual intercourse, and using sterilized or disposable syringe or needle would prevent the transmission of HIV/AIDS. A few of them said that it might be prevented through transfusion of screened blood and obeying religious norms. The status of knowledge of neighbours and husbands was slightly increased after providing the intervention (Table 5 & Annex 5).

**Table 5. Level of knowledge of ‘AIDS aware’ VO members and their husbands about prevention of AIDS before and after intervention.**

Preventive measures	VO member			Husband		
	Pre-inter-vention	Post-inter-vention	Pre vs. Post p value	Pre-inter-vention	Post-inter-vention	Pre vs. Post p value
Use of condom	8.3	30.4	<0.001	-	7.1	<0.01
Transfusion of screened blood	-	9.7	<0.01	-	2.7	ns
Use of separate needle/syringe etc.	-	29.1	<0.001	3.2	7.6	<0.05
Living away from AIDS patient.	-	-	na	6.5	-	<0.01
Avoid sex with multiple partners	-	0.6	ns	3.2	0.5	<0.05
Obey religious rule	-	5.1	<0.05	-	4.9	<0.05
Don't know	91.7	24.9	<0.001	87.1	76.6	<0.001
<b>n</b>	<b>12</b>	<b>189</b>		<b>32</b>	<b>165</b>	

### *High risk population*

Before intervention was provided, some of the BRAC members and their neighbours' husband said that persons having multiple sex partners, prostitutes and their clients might be the potential source of HIV/AIDS. Some of them thought that population movement was also a problem as people who stay away from spouses over a prolonged period often visit commercial sex workers and therefore are at risk of acquiring HIV infection. After intervention, most of the neighbours and husbands said that they had no knowledge about the high risk population. But the level of knowledge among BRAC members was found to be raised. Besides their previous knowledge, BRAC members also said that homosexuality and professional blood donors may be the potential source of HIV/AIDS (Table 6 and Annex 6).



**Table 6. Knowledge of ‘AIDS aware’ VO members and their husbands about high-risk population of HIV/AIDS before and after intervention.**

High-risk population	VO member			Husband		
	Pre-intervention	Post-intervention	Pre vs. Post p value	Pre-intervention	Post-intervention	Pre vs. Post p value
Homosexuality		6.2	<0.01	-	2.0	ns
Multiple sex partner	15.8	29.1	<0.001	6.8	17.2	<0.001
Traveler	21.1	13.4	<0.01	9.1	8.6	ns
Prostitutes & their client	10.5	17.3	<0.01	6.8	7.1	ns
Truckdriver	-		na	4.5	-	<0.05
Intravenous drug abuse	5.3	0.6	<0.05	4.5	3.5	ns
Professional blood donor	-	10.6	<0.001	2.3	2.0	ns
Infected mother to child during pregnancy and breast feeding	5.3	1.1	<0.05	4.5	-	<0.05
Others	5.3	3.4	ns	11.5	6.1	<0.05
Don't know	31.6	18.4	<0.001	50.0	56.0	<0.05
<b>n</b>	<b>12</b>	<b>189</b>		<b>32</b>	<b>165</b>	

*Unit of cost of AIDS awareness campaign*

The unit cost of AIDS awareness campaign was calculated on the basis of total amount spent per VO member and neighbour. The findings showed that the unit cost of AIDS awareness campaign is TK. 5.48 only, which is inexpensive.

**Table 7. Total cost of AIDS awareness campaign (From 1 November to 31 December, 1996)**

**SALARY**

Salary of investigators, supervisor, field researchers and programme assistants = Tk. 63,500

**EDUCATION MATERIAL**

Flip Chart (Tk. 200 per flip chart) = Tk. 1,000  
 Book/Booklets = Tk. 3,000  
 Poster/Leaflet = Tk. 2,000  
 Typing/Photocopy the training module = Tk. 3,000

**TRAINING COST**

Transport = Tk. 6,000  
 Food = Tk. 2,000

**AIDS DAY**

Decoration = Tk. 1,000  
 Food (rally+general meeting) = Tk. 4,000  
 Poster/Banner = Tk. 1,500  
 Transport = Tk. 4,000

**PHOTOGRAPHY**

= Tk. 500

**RESEARCH**

Questionnaire printing and photocopy = Tk. 3,500  
 Data coding = Tk. 2,000  
 Computer = Tk. 10,000  
 Data collection (salary, food and transport) = Tk. 20,000  
 Transport = Tk. 10,000  
 Miscellaneous = Tk. 2,000

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**Total** = **Tk. 137,000**

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AIDS awareness information disseminated among 5,000 VO members

About  $(5,000 \times 4) = 20,000$  neighbour received messages on HIV/AIDS from VO members

Total cost of AIDS awareness campaign = 137,000 Taka

Unit of cost of this campaign =  $137,000/25,000 = 5.48$  Taka

## DISCUSSION

This paper tested the effectiveness of a low-cost, simple and short AIDS awareness campaign using the widely available NGO network at the grass root level in rural Bangladesh. We have measured the level of HIV/AIDS knowledge among three groups of people: BRAC members, their husbands, and the neighbours.

Some studies were conducted to provide some baseline data on knowledge and awareness of HIV/AIDS among general population and some selected high-risk group in Bangladesh. The level of awareness is still very low (National AIDS Committee, 1990; Fulton et al, 1997 & Bhuiya *et al.*, 1997). Only a small proportion of these people have heard of AIDS with very little knowledge about the details of the disease such as causes, susceptibility, fatality, prevention and care. In Matlab, similar level of awareness was observed in 1995 (Fulton *et al.*, 1997). Only a small proportion of people were found to be aware about HIV/AIDS. After conducting the basic AIDS awareness campaign, we found that the level of knowledge was raised significantly in some respect among the BRAC members but not as much among their neighbours who were the indirect targets of the campaign. The study findings showed that BRAC members' knowledge on the mode of transmission and 'how it does not spread' had increased after intervention but not to a satisfactory level. For prevention and care and alleviation of the anxiety of the care givers, people need to know that HIV is not spread by day to day social interaction.

Knowledge about high risk behaviour is essential for AIDS prevention. Since no cure or vaccine exists to combat AIDS, its prevention and management must be carried out at the behavioural and social level. After AIDS awareness campaign, respondents' knowledge particularly of the BRAC members, had raised substantially. A similar study conducted in Chakaria revealed that after AIDS awareness campaign, a significantly higher proportion of respondents reported to have heard of AIDS (Bhuiya *et. at.*, 1997). The impact of the campaign on two other groups, viz, the husbands and neighbours of the VO members, was less satisfactory. It may be deduced that short and simple campaign could only familiarize some very superficial facts about AIDS but cannot raise effective knowledge. For this, a long term campaign process could be carried out. The AIDS awareness information could be discussed in monthly meetings of VOs. There should be refresher training of the VHWs as well. The World AIDS Day may be celebrated every year to attract more non-BRAC members.

In a conservative society like Bangladesh where open sexual discussion is prohibited, innovative ways of information dissemination such as VO meetings and campaign would be very useful. This type of awareness campaign can greatly reduce the barriers in discussing taboo topics like AIDS. Subsequent follow-up training of the relevant individuals and village organization meetings can facilitate interpersonal communication to raise awareness about AIDS. Disseminating AIDS awareness through VOs is also inexpensive. The unit cost of this campaign is Tk. 5.48 only.

The study findings provided deeper insights into the peoples' knowledge on HIV/AIDS in selected villages of Matlab thana. Their knowledge seemed very low as demonstrated by various elements. Bangladesh is on the verge of an imminent epidemic. Now the time have come to take concerted action against the spread of HIV. This study demonstrated how a basic, short and low-cost AIDS awareness campaign could work in rural community. BRAC is developing a programme to cover all its 50,000 villages through a similar AIDS awareness campaign, with specific emphasis on promoting the use of condom.

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## Annexures

### *Annex 1: Village wise participation*

Phase I About 30 field staff (both RDP & NFPE including health POs and PAs) received one-day orientation.

|

Phase II About 30 VHWs were trained

|

Phase III each VHW conducted 5 VO meetings (about 30-35 members/VO meeting)

|

Phase IV 4 to 5 neighbours received message from each VO member

Annex 2: Level of general knowledge of neighbours about AIDS and source of knowledge before and after intervention.

Characteristics	Neighbour Husband			Neighbour wife		
	Pre-intervention	Post-intervention	Pre vs. Post p value	Pre-intervention	Post-intervention	Pre vs. Post p value
<b>Have you heard of AIDS</b>						
Yes	25.8 (51)	72.2 (132)	<.001	8.2 (14)	78.5 (153)	<.001
No	74.2 (146)	27.8 (55)	<.001	91.8 (183)	21.5 (44)	<.001
<b>n</b>	<b>197</b>	<b>197</b>		<b>197</b>	<b>197</b>	
<b>What is AIDS*</b>						
A deadly disease	40.9	38.8	ns	34.2	50.0	<.001
Loss of body's immune system	11.8	15.2	ns	13.6	9.8	ns
Contagious disease	19.5	20.0	ns	13.6	11.4	ns
Don't know	39.4	48.8	<.001	46.9	44.6	ns
<b>N</b>	<b>51</b>	<b>132</b>		<b>14</b>	<b>153</b>	
<b>Source of information*</b>						
TV/Radio	38.8	17.1	<.001	31.3	6.5	<.001
Newspaper/Magazine	12.2	4.3	<.01	-	0.7	ns
Husband/Wife	2.0	0.7	ns	6.3	1.3	<.05
Neighbour/Relative	46.9	20.7	<.001	62.5	18.3	<.001
BRAC workers	-	51.4	<.001	-	72.5	<.001
Rally/Poster	-	5.7	<.05	-	0.7	ns

\*Respondents are those who have heard of AIDS ('AIDS aware')



Annex 3: Knowledge of AIDS aware neighbours about the mode of transmission and how HIV does not transmitted before and after intervention.

Characteristics	Neighbour Husband			Neighbour wife		
	Pre intervention	Post intervention	Pre vs. post p value	Pre intervention	Post intervention	Pre vs. post p value
<b>Mode of transmission</b>						
Penetrative sexual intercourse	13.0	17.5	<.05	5.6	13.5	<.001
Transfusion of infected blood	9.1	9.9	ns	-	5.4	<.05
Sharing of HIV contaminated syringe, needle or other skin piercing instrument	9.1	9.4	ns	5.6	7.6	ns
Infected mother to child during pregnancy & lactation	9.1	9.0	ns	-	-	na
Others	2.7	2.5	ns	11.1	-	<.001
Don't know	49.4	52.0	ns	72.2	73.0	ns
<b>How HIV is not transmitted</b>						
Mosquito or other insect bite	11.1	10.5	ns	5.0	-	ns
Playing, reading & living with AIDS pt	9.5	8.5	ns	5.0	-	ns
Eating in same plate with AIDS pt.	11.1	9.5	ns	5.0	4.8	ns
Drinking water in same glass with AIDS patient	6.4	10.1	<.05	5.0	5.7	ns
Use of same latrine	7.9	7.4	ns	5.0	5.4	ns
Others	7.9	-	<.01	-	6.9	<.05
Don't know	61.9	60.0	ns	75.0	74.0	ns
<b>n</b>	51	132		14	153	

Annex 4: Level of knowledge of AIDS aware neighbours about prevention of AIDS before and after intervention.

Preventive measure	Neighbour Husband			Neighbour wife		
	Pre intervention	Post intervention	Pre vs. Post p value	Pre intervention	Post intervention	Pre vs. Post p value
Use of condom	-	6.3	<.01	-	4.4	<.05
Transfusion of screened blood	2.0	5.1	<.05	-	0.6	ns
Use of separate syringe/needle etc.	3.9	8.2	<.01	-	5.0	<.01
Living away from AIDS patient.	2.0	-	ns	6.3	-	<.01
Cleanliness	3.9	-	ns	6.3	-	<.01
Education about AIDS	5.9	-	<.01	-	-	na
Avoid sex with multiple partners	2.0	0.7	ns	-	0.6	ns
Obey religious rule	2.0	4.7	ns	-	3.7	ns
Don't know	80.4	74.7	<.01	87.5	85.7	ns
<b>n</b>	<b>51</b>	<b>132</b>		<b>14</b>	<b>153</b>	

Annex 5: Knowledge of AIDS aware neighbours about high risk population of HIV/AIDS before and after intervention.

Preventive measure	Neighbour Husband			Neighbour wife		
	Pre intervention	Post intervention	Pre vs. Post p value	Pre intervention	Post intervention	Pre vs. Post p value
Homosexuality	4.7	1.1	ns	-	0.6	ns
Multiple sex partners	9.3	16.0	<.01	4.3	13.6	<.001
Travelers	12.8	7.4	<.05	4.3	4.4	ns
Prostitutes and their clients	15.1	15.4	ns	4.3	8.2	<.05
Truck drivers	3.5	0.6	ns	4.3	2.2	ns
Intravenous drug abuse	7.0	2.3	<.05	4.3	3.1	ns
Professional blood donors	5.8	2.9	ns	4.3	5.6	ns
Infected mother to child during pregnancy and breastfeeding	7.0	5.9	ns	4.3	2.3	ns
Others	7.0	2.9	<.05	8.7	1.2	<.01
Don't know	57.5	59.4	ns	60.9	61.0	ns
<b>n</b>	<b>51</b>	<b>132</b>		<b>14</b>	<b>153</b>	

**COMMUNICATION NETWORK IN REPRODUCTIVE  
HEALTH INFORMATION DISSEMINATION TO THE  
ADOLESCENTS**

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1998

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## VOCABULARY

### Local term

Babostha  
Batcha Pete Asha  
Batcha Hoya  
Buk otha, bukpani otha  
Buk betha  
Bhabi  
Jouno Anuvuti  
Jounomilon, shohobash  
Jouno Shomossha  
Jounorog  
Maiya Boro Hoya, Joubon shuru hoyo  
Mashik, sharir Kharap  
Shadasrab, meho, Dhatuvanga

### English

- Contraceptive Method  
- Pregnancy  
- Childbirth  
- Development of breast  
- Pain in the breast  
- Sister-in-law  
- Sexual Feelings  
- Intercourse  
- Sexual Problem  
- STD  
- Puberty  
- Menstruation  
- White discharge

## **Abstract**

This paper aims to explore the existing communication network on transmission of reproductive and sexual health information in rural Bangladesh and to identify appropriate person(s) who can be utilized for providing education on sex, sexuality, gender, sex abuse, high risk behaviour and RTI/STD/AIDS to people of different age groups. A baseline survey was conducted with adult married women and men as subjects regarding initial source(s) of information on physical changes during puberty, menstruation, sexual feelings, sexual intercourse, marriage, sexual problem, contraception, pregnancy and child birth, and with whom they usually shared their feelings. The study findings revealed the major source of reproductive and sexual health information dissemination among teenage girls as the sisters-in-law and friends, and among teenage boys as the friends and elder brothers. Thus for effective dissemination of reproductive and sexual health messages to the teenagers, sisters-in-law and peers could play an important role. They can be adequately trained on reproductive and sexual health, so that they are better able to meet the needs of the adolescents.



## INTRODUCTION

As of end 1996, the global estimates of people living with HIV/AIDS infections stood at 22.6 million (UNAIDS, 1997). By the year 2000, experts assume that there would be about 40 million infections around the world, probably half of those in Asia. Because Asia has many injecting drug users and a lot of unsafe sex and sexually transmitted diseases, the potential for an epidemic is enormous (Alabastro, 1997). Most of the Asian's future depends on how seriously its governments confronted the disease.

In Bangladesh, all risk behaviors for an explosive outbreak exist (Hussain *et. al.*, 1996; Naved, 1996 & unpublished result of BRAC-ICDDR,B, 1997). Moreover, people's knowledge on HIV/AIDS is very low (National AIDS Committee, 1990; Fulton *et. al.*, 1997; Nasreen *et. al.*, 1997 & Bhuiya *et. al.*, 1997). Earlier, we demonstrated how a basic, short and cost-effective AIDS awareness education module could work effectively in rural Bangladesh (Nasreen *et. al.*, 1997). But the problem is — what communication strategies should be undertaken in disseminating AIDS knowledge to the adolescents (age 13-19 years). In developed and many developing countries, peer educators were found to be effective through school-based programmes for young people. For a conservative society like Bangladesh it is a problem as sex is still a taboo subject. This study was carried out to explore the existing communication network among the teenagers on reproductive and sexual health. This information in turn, will help the policy planners in formulating appropriate strategies for dissemination of reproductive and sexual health related issues to this particular age groups.

### Objectives

The objectives of the study were as follows:

To identify the persons from whom the teenage boys and girls learned about sexual and reproductive health matters.

To identify the persons with whom they shared their feelings about these matters.

To find out the appropriate persons who can effectively educate the adolescents on reproductive and sexual health related issues.

## **METHODOLOGY**

The study was conducted in Matlab, a rural area in Bangladesh, where the International Centre for Diarrhoeal Disease Research (ICDDR,B) has been operating a demographic surveillance system (DSS) since 1966. As in most of rural Bangladesh, the majority of Matlab population is poor. The dominant occupation is farming and almost all women are engaged in household chores. Farmers, in general, are in marginal economic situation owning less than two acres of land while 30% of the households are landless. About 45% of males and 73% of females have received no formal education (Bhuiya, 1992; Fauveau, 1994).

ICDDR,B divided the Matlab DSS field area into two - an intervention or MHC-FP area (70 villages) and a comparison area (79 villages). In the intervention area, in addition to the regular government programme, intensive maternal and child health care and family planning services have been provided by ICDDR,B since the late seventies. ICDDR,B provides only oral rehydration salt (ORS) free of cost in the comparison area but maintain a regular DSS. However, the comparison areas receive regular government health and family planning services.

BRAC extended its Rural Development Programme (RDP) to Matlab in 1992. The RDP is targeted to the poorest of the poor, especially women. The main objectives of the RDP are to empower the rural poor and to alleviate poverty through a variety of programme, namely institution building (village-based social organizations), functional education, skill and human development training, credit for income generating activities, legal education for females and non-formal primary education for children (BRAC & ICDDR,B, 1994).

Both organizations are interested in understanding the pathways through which socioeconomic development effects the health and well-being of the rural poor. Together they have been collaborating to study these pathways in a systematic, statistically valid manner since 1992.

The in-depth interviews were carried out on twelve married women, aged between 21-30 years and ten married men, aged between 25-35 years with an education level ranging from illiteracy to secondary school standard; and had 1-4 children. Out of respondents/interviewees, seven women and six men were

from “target group”<sup>1</sup> (TG), and five women and four men were from non-target group (NTG). The interviews were conducted in BRAC office; so that an atmosphere of privacy prevails and also to ascertain confidentiality.

## FINDINGS

The information extracted from the interviews are summarized under the following headings: 1) Physical change during puberty; 2) Menstruation; 3) Marriage; 4) Sexual intercourse; 5) Sexual feelings; 6) Sexual problem; 7) Contraception; and 8) Pregnancy and childbirth.

### *Physical changes during puberty*

Puberty is locally known as *maiya boro hoyo*, *joubon shuru hoyo* or *boyosh kal*. Respondents said that girls start to develop their breast (*buk otha* or *bukpani otha*) and experience pain in the breasts (*buk betha*) during that period. This is soon followed by menstruation (*mashik*). Six respondents said that they had heard beforehand about this physical changes from their sisters-in-law (*bhabis*). Three of the women said that they had heard it from their friends. A woman said, “*My friends and I discussed together what actually happen during puberty. We discussed about development of breast, menstruation and marriage. I could not understand everything but I tried to keep pace with them.*” A couple of the respondents had heard it from their grandmother; the rest, one had come to know about it from a cousin, and the other from an older sister. However, when they had experienced physical changes during puberty, it frightened them. Citing her own experience a woman said, “*my breast started to develop when I was 10-12 years of age. It was a very painful feeling. I thought it is an abscess. It was shameful as well as frightening for me. I discussed this with my friends.*” At the same time it also invoked pleasure. During puberty some women felt an intense desire to talk with boys/men, but modesty and social restrictions prevented them from doing so. Most of the women shared their feelings with friends, and discussed which boy is good or bad. Six of them shared with their sisters-in-law, and the rest shared it with her grandmother. In this regard, the sisters-in-law and grandmothers advised them to restrict their movements, to wear cloths at all times and especially not to mix with boys/men. Usually boys can perceive a physical change at the age of 14/15 years. During this period (*joubon*), they start to grow beard and hair in some areas of body and to start masculine development. One man said, “*at this stage, a tide of a new river rises in the mind, which causes boys*

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<sup>1</sup> The criteria for BRAC eligibility is that the household owns no more than half an acre of land including homestead land and at least one member of the household sells at least 100 days of manual labour in a year to earn a livelihood (BRAC & ICDDR,B 1994).

*and girls to meet intimately and freely.*” Five of the men said that they had heard about this physical changes from their sisters-in-law. Four of the men said that they had heard about it from friends and older cousins. According to a man, *“boys discussed this subject in a group to make fun and they enjoyed.”* A couple of them came to know it from books. Generally, they feel an excitement inside the body during puberty. Some men felt vicious urge to make love with girls. Another man said, *“when I felt a desire for sex, I did masturbation for relief and I told my experience to my friends.”* Some respondents said that they got pleasure when they experienced these physical changes. Almost all of them shared their feelings with their friends. During puberty, some of the respondents had encountered nocturnal emission (*shawpnodosh*). All of them shared about it with their sisters-in-law. In this regard, sisters-in-law advised them to get married. According to a sister-in-law, *“shawpnodosh is a disease, it weakens the body severely. Chronic nocturnal emission damages the penis (purushango) and also leads to white discharge (shadasrab, meho). For cure, one should get married as early as possible.”*

### *Menstruation*

The local term of menstruation is *mashik or sharir kharap*. They defined it as discharge of blood that comes out of the genital tract, usually starting at the age of 10-12 years and persisting for 4-7 days. Six of the respondents said that they heard about menstruation from sisters-in-law. Four said that they came to know about menstruation by observing others like an older sister, a sister-in-law, a cousin, etc. Two of the women had heard it from grandmothers, one from a cousin and one from an older sister. One woman said, *“My friends said that menstruation would be started at the appropriate age and would occur in every month. After hearing this I thought what it is and I became frightened.”* Moreover, the actual experience left them with a feeling of guilt, as most of them thought that they were moral before menarche. In most cases, this frightened them. Some of the women shared their feelings with friends (four) and sisters-in-law (four). A couple of the respondents shared this experience with cousins, and another two respondents admitted to sharing it with their grandmothers. One woman said she discussed it with her mother, and another with an older sister. The sisters-in-laws, mothers and grandmothers assured them that it is a normal physiological condition and taught them how to use pads. They advised them, *“to move very cautiously and not to mix with boys/men, because the capacity to conceive is started with the onset of menstruation. One said, After the onset of menstruation, my sister-in-law told me that it is a private condition, so you should move very carefully so that even your father and brother do not know it.”* Another said, *My cousin advised me not to take any fish during the menstrual period as fish created bad smell in the blood.”*

The men came to know about menstruation mostly by observing the sister-in-law, older sister or cousin. Some of the respondents said that they heard about menstruation from friends. When they came to understand about menstruation, almost all of the men dislike it. One man said, "*Menstruation created a feeling of hate inside my mind, because it is a dirty matter.*" Another man said, "*During menstruation, it is prohibited to do sexual intercourse, it is bad.*" A couple of men interpreted menstrual blood as infected blood, so that it is healthy for women when this blood go out from the body. Some of the respondents discussed that a woman become pregnant only after menstruation. Most of the respondents shared their feelings with their friends. A couple of respondents admitted to sharing it with their sisters-in-law.

### *Marriage*

Marriage was explained as a common social occurrence between men and women at the appropriate age, and women would go to their fathers-in-laws house. Most of the women had heard about marriage at the age of 8-10 years from their grandmothers. One woman said, "*My grand mother told me that I had reached the appropriate age, so that I would be married very soon. Then I started thinking all the time about my marriage and my prospective husband. If my parents had wanted to marry me off to a bad man, I would never marry him. I shared my feelings with my friends.*" Five of the respondents came to know of marriage through observation of actual ceremony. Five had heard it from their sisters-in-laws and four from peers. Two of the women said that their mothers and sisters had told them about it. All respondents had admitted of dreaming of their own marriages. A woman mentioned her dream as "*I dreamt I would be married at the appropriate age. Then my husband will love me and I can do sex with my husband. I would like to discuss this with my friends.*" A man is good is judged by appearance and by wealth; a good husband would always love his wife. Some of the women voiced their feelings of fear. For example, "*After hearing about marriage I became afraid. I thought how it would be possible to live with an unknown man in father-in-law's house. Before my marriage some of my friends told me that I was free because I could move freely. After marriage everything would be controlled with the husband's wish. After hearing this I became frightened.*" Five of the women did not express their feelings to anyone else because of shyness, but four shared this with their sisters-in-law, and three with peers. Only one woman said that she shared her feelings with her cousin.

Most of the men had heard about marriage from grandmothers and some from sisters-in-law at the age of 7-9 years. A couple of respondents came to know it through observation of the actual ceremony. During puberty, men felt an intense desire for marriage and sex. All of the men had admitted of dreaming

fair and good wives. Some men had made the relationship of love with some women during puberty. A majority of men shared their feelings with friends. Five of the men admitted of having shared it with their sisters-in-law.

### *Sexual intercourse*

Sexual intercourse is locally known as *jownomilon*, *shohobash*, or *shami-istrir melamesha*. Eight women acknowledged that they knew about it before their marriage from their sisters-in-law. According to a woman: *“My sister-in-law had told me that after marriage your husband would do sexual intercourse with you and it is a normal physiological matter. She also advised me not to be afraid of it. After knowing all, I became afraid but sometimes I felt an intense desire to do sexual intercourse with my lover. I never did it because there would be a chance of pregnancy. I did not share these feelings with anyone.”* About four of the respondents admitted to have heard about it from friends, two from cousins and one each from grandmother and lover. Citing her own experience one woman said, *“In my bridal bed, during my first sexual intercourse with my husband, I became afraid but delighted at the same time.”* The married ones shared their experiences with friends. One of the women informed that her cousins discussed why women became pregnant after marriage, and that she had inadvertently found out that one of her class friends had become pregnant after marriage. Four of the respondents thought that sexual intercourse was a fact of life and essential for mental and physical pleasure including childbirth. One woman said, *“for this pleasure husbands provide food, cloths and shelter to their wives.”* A number of women informed that their first intercourse was painful and became frightened when it persisted for 2 to 3 days. However, they found that it was essential for enjoyment in life. Five women shared their feelings with their sisters-in-law. A couple of women could not share their feelings with anyone. One woman explained the reason as, *“I always discussed about others; I never discussed my own sexual experience with anyone else. I thought it was a private matter and it should not be discussed with anyone.”*

Men considered sexual intercourse as good religiously. A few said that it is bad for health. Most of the men had heard about sexual intercourse from their friends in school at the age of 13/14 years. About four of the respondents admitted to have heard about it from their sisters-in-law. The sisters-in-law said, *“After getting married you will have sexual intercourse with your wife and your wife would be pregnant.”* Following this, some waited for marriage and some of the men felt an intense desire to have sex with women. A man said, *“when I read in class VI, I went to Dhaka for an excursion. There I made friendship with a Pakistani boy. I saw his sister and entranced. Gradually, I made love with her and had sexual intercourse. I had new feelings. I shared this feelings*

*with my friends.*” The married ones shared their experiences with friends. A couple of men had experiences with the prostitutes. Most of them suffered from STDs. They said that they contracted STDs from the prostitutes. Some men had experience of masturbation and got pleasure. Most of the men shared their experience with their friends. Only a few shared their feelings with their sisters-in-law.

### *Sexual feelings*

Sexual feeling is locally known as *jouno anuvuti*. Generally women felt a thrilling sensation in their bodies and mind at the age of 12-13 years when they were fantasizing about intimate association with boys or even when talking to a boy. Citing her own experience a woman said, *“I asked my husband why this kind of feelings happened, he told me it is normal, it is a inebriation.”* Seven of the women admitted to have had learned about sexual feelings from sisters-in-law, who would in turn reciprocate their own feelings with them. Two women had learned about it from peers and one from cousin. Most of the women said that they expressed their feelings to their husbands and five of the women said that they shared their feelings with their sisters-in-law. Four of the respondents were too shy to share their feelings with anyone. Five women said that though they experienced sexual urge, they could not express it to anyone due to shyness. Another one said, *“I felt the urge many times. But only occasionally I can tell it to my husband. At other times I kept it in my mind silently.”* However, some of the women admitted to have disclosed their feelings of sexual urge to their husbands and also, some of them admitted to have fantasized in the absence of their husbands. But one mentioned, *“It is not needed to tell my husband about my sexual urge. He reads my mind at all times.”* Another woman said that when she felt sexual urge, she would mention it to her husband and if her husband did not respond to her at that time, she forced him to have sex. Two respondents said that women never have an urge for sex, and it is entirely an experience exclusive to men.

Men expressed both enthusiasm and moral indignation at being questioned about sexual feelings. For example, they said things like, *“sex means youth, I heard and had sexual feelings and in my opinion, because of this, bad deeds are done.”* Most of the men had heard about sexual feelings from their friends. Usually friends are joking about sex and sexuality with their lovers. One man said, *“It is not necessary to discuss about sexual feelings with anyone, because it is matter of prestige.”* A majority of the men admitted to have disclosed their feelings of sexual urge to their wives after marriage and before marriage to their friends. Some of the men said that, though experiencing sexual urge, they could not express it to anyone out of modesty.

### *Sexual problem*

Sexual problem is locally known as *jouno rog* or *kharap rog*. Sexual problem is said to exist if a woman have no desire for sex though her husband desires it and, if she does not get any pleasure out of sexual intercourse and feels weak and no sensation. A majority of the women experienced pain during sexual contact with their partners and difficulties in walking, sitting and lying down. Other common problems like ulceration, lower abdominal pain, pain in the groin, burning pain during micturation, itching (*chulkani*) and white discharge (*shadasrab, meho*) were mentioned as a consequence of sexual contact. Almost all the respondents, excepting one woman, admitted sharing their problems with their husbands; and some were even advised to see a doctor. The husbands of two of the women assured them that it was normal and would heal spontaneously. The husbands of three of the respondents took their wives to the doctors. One of the respondents could not tell her husband due to shyness. Five women said that they shared their problems with sisters-in-law. The sisters-in-laws of some of the women advised them to wash the pelvic region with warm water. A woman said, “*I discussed my problems with my grandmother. She told me It is normal for all women. When the symptoms would be severe, then these are diseases.*”

Men mentioned bleeding from penis, burning pain during micturation and white discharge as common problems in the village. They interpreted these problems as the consequence of bad characters (*charitra kharap*). Some of the men had experienced these problems at least once in their life. Most of the respondents could not tell their problems to anyone out of modesty. A couple of respondents admitted to share their problems with their friends.

### *Contraception*

The local term for contraception is *babostha*. A majority of the respondents had heard about contraception from the village health workers and five from the neighbors, relatives or friends. A couple of women had also heard about it from the radio. When women using any contraceptive method, experienced any side effects, they discuss this with the doctors or the village health providers.

Most of the men had heard about contraception from their neighbors, relatives or friends. A couple of respondents came to know about it from their wives. About half of the men supported contraception. Some mentioned, “It is harmful for health.” They discussed with their friends about it.



### *Pregnancy and childbirth*

Most of the respondents had heard about pregnancy and childbirth from their grandmothers before marriage, at the age of 7-12 years; five heard it from sisters-in-law, four from their cousins, and two of them from their aunts. Four of the women had learnt about it from observing other women getting pregnant. When they were aware of being pregnant, they would inform their husbands first. Some also shared this with their sisters-in-law. They were delightful at that time. Though, some became afraid as they learned from other about the process of delivery, which was very painful. For example, “*My mother is a traditional birth attendant (dai). When She went to attend the delivery cases, sometimes I accompanied her, and observed the whole process. After hearing about the pains of pregnancy and childbirth from my cousins, I became frightened thinking that I would be pregnant after marriage.*” They would share any pregnancy-related complications with their husbands. The women told their grandmothers, aunts or other guardians about their problems only when asked. In this case their grandmothers, sisters-in-law and neighbors advised them on some aspects of movement, *din khon bechhe cholo*. According to a woman, “*During my pregnancy, my mother told me ‘don’t go out of the house in the evening.’ She also advised me about eating and drinking.*”

Men’s perception is “*If anyone would do sexual intercourse after menstruation is established, the woman may become pregnant.*” Most of the men came to know about pregnancy and childbirth at the age of 10-12 years from their friends. A couple of respondents had heard about it from their sisters-in-law and some from their wives. When their wives became pregnant, they became delightful and informed their friends, sisters-in-law and guardians. Some did not share it with anyone due to shyness.

## **DISCUSSION AND CONCLUSION**

This paper addressed the existing communication network among teenagers regarding reproductive and sexual health. This needs attention for designing an integrated reproductive and sexual health programme for the teenagers.

Some studies were conducted to provide some baseline data on risky sexual behavior among general population in Bangladesh. Several dimensions of sexual behavior that are considered risky do exist in the area (unpublished data of BRAC-ICDDR,B, 1997; Naved *et al.*, 1996; National AIDS Committee, 1990 & Aziz *et al.*, 1985) and people were unaware of it. But knowledge about high-risk behavior is essential for

AIDS prevention among rural people including the teenagers. We sought to identify the persons from whom the teenage boys and girls had heard about sexual and reproductive health and with whom they shared their feelings. It is essential to identify 'these persons for appropriate and effective communication and success of interventions to reduce the risk of STD/HIV infection.

In Thailand and other countries, both women and men talked about AIDS and risky behavior primarily with friends and siblings (Nishino *et. al.*, 1997; Antunes *et. al.*, 1997). Our study findings showed that both men and women felt free to talk about the physical changes during puberty, marriage, sex, sexuality, sexual problems, pregnancy and childbirth with their friends and sisters-in-law. Boys usually discussed on these issues in a group to make fun and enjoyed. Within the household, they are joking with their sisters-in-law regarding these subjects. When girls reached near puberty, their sisters-in-law cracked joke with them about their physical change, marriage, sex and sexuality. Practically when girls had experienced the physical change during puberty and menstruation, it frightened them and they shared their feelings with their sisters-in-law. Whilst some events invoked pleasure and excitement, then girls would like to discuss their feelings with their friends.

Grandmothers would also play an important role in communicating the reproductive and sexual health information. The study findings revealed that they provided some important advice to the girls regarding menstruation, pregnancy and childbirth.

The study findings provided deeper insights into the major source of reproductive and sexual health information dissemination among teenage boys and girls are their sisters-in-law and friends. For proper dissemination of reproductive health messages to the teenagers, their sisters-in-law and peers could play an important role. However, they must be adequately trained on reproductive and sexual health, so that they are better equipped to meet the needs of the adolescents.

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