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Behavioural risk factors for HIV/AIDS in a low-HIV prevalence Muslim nation: Bangladesh

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Summary

A review of published and unpublished data indicates the prevalence of high-risk behaviours for HIV transmission in segments of the Bangladeshi population. These include casual unprotected sex, heterosexual as well as between males, prior to and after marriage. Intravenous drug use (IVDU) exists though illicit drugs are more commonly inhaled. There is a fear, however, that inhalers may turn to injecting drugs, as is common in neighbouring countries. The lack of public awareness of HIV/AIDS, and misconceptions about the disease, may contribute to continued high-risk behaviours by segments of the population and, thus, to the spread of HIV. Bangladesh's proximity to India and Myanmar (countries with high HIV endemicity and a rapidly growing number of cases) increases fears of an epidemic in Bangladesh. This proximity will only be a risk factor, however, if high-risk contacts occur between nationals of these countries.

Keywords

Bangladesh; HIV; acquired immunodeficiency syndrome; sexually transmitted diseases; intravenous drug use

INTRODUCTION

Bangladesh, a primarily Muslim nation of approximately 120 million in South Asia, currently has a low prevalence of HIV but is considered to be at high risk for an epidemic due to biomedical and behavioural risk factors. This paper examines behavioural risk factors in the country for HIV transmission, i.e. sexual and drug use practices and reviews epidemiological data on HIV/AIDS. Due to the dearth of indexed publications on this topic, both formally published literature and unpublished studies (monographs by international organizations and local researchers) are reviewed. Inclusion of the latter is important given that in Bangladesh, as in many other developing countries, the individuals and organizations doing much of the most relevant research are not publishing their studies, thereby, preventing their findings and insights from being widely shared. The lack of peer reviews of many of these studies does, however, necessitate caution in interpreting their results.

PREVALENCE DATA ON HIV/AIDS IN BANGLADESH

The first HIV case (a foreign drug smuggler) was detected in Bangladesh in 1986. By December 1998, 102 cases of HIV/AIDS cases had been reported to the National AIDS Committee (NAC) (Nazrul Islam, personal communication, 1998), the committee established by the Government of Bangladesh in 1985 for the prevention of HIV/AIDS.

All HIV-positive cases to date have been infected by HIV-1. None have been positive for HIV-2. Of the 102 cases, 84 were male and 18 were female. Only 6 of the 102 were foreigners. Eleven of the HIV-infected individuals had gone on to develop AIDS (all males), and 7 had died. As Figure 1 illustrates, the highest number of HIV/AIDS cases by known occupation was emigrant workers (Bangladeshis who had previously worked abroad in the Gulf). Most of the reported cases have come from the districts of Sylhet (31.3%), Chittagong (25%), and Dhaka (17.5%).

The number of cases actually reported to the NAC is likely to be an underestimate given the problem of under reporting. Further, HIV/AIDS surveillance activities have been minimal. Since 1991 there has been irregular sentinel surveillance among patients with STDs, professional blood donors, injection drug users (IDUs) attending treatment centres and women attending gynaecology clinics. Sero-surveillance and ad hoc surveys have been conducted for commercial sex workers (CSWs), Bangladeshis who have worked abroad, and a few other high-risk groups, though little data have been published from those surveys.

Recognizing the problem of inadequate surveillance and under reporting, it does appear, nonetheless, that estimates made in the early and mid 1990s overestimated the prevalence of HIV/AIDS. A World Health Organization (WHO) statistical model projected that there could be 147,000 to 703,000 HIV-infected people in Bangladesh by the year 2000¹. Recent data suggest otherwise. A 1997 study of 466 female CSWs found none to be HIV-positive by ELISA², and a study initiated in 1996 to determine the prevalence of HIV seropositivity in Bangladeshi children with persistent diarrhoea and malnutrition admitted to the Clinical Research and Service Centre (ICDDR'B Hospital) in Dhaka reported that none of the 401 subjects were HIV-positive by Western blot (though 4 of the subjects were repeatedly positive by ELISA)³.

Yet, the number of HIV/AIDS cases in Bangladesh has been rising. As Figure 2 illustrates, there was a sizeable increase in the number of reported HIV/AIDS cases in Bangladesh from 1989 to 1997 (Nazrul Islam, NAC, personal communication). This rise in cases, coupled with the rapid spread of HIV/AIDS in India, has raised fears for Bangladesh because of its illustration of how rapidly a minor rate of HIV infection can turn into an epidemic in a country with sociocultural and economic similarities. Commercial sex workers in Bombay, India reportedly had a seropositivity rate of 2% in 1984; studies in 1992 indicated a rate of 54%⁴ or 40%⁵. In Manipur, India the seropositivity rate in IDUs was reported to have increased from 2% to 55% in just one year, from 1989–1990⁴ and by 1993 had reached over 70% of IDUs⁶. In a clinic for sexually transmitted diseases (STDs) in Pune, India the seropositivity rate amongst STD patients rose from 2.4% in 1988 to 40% in 1994⁷.

LIFESTYLE RISK FACTORS FOR HIV

A belief of some Bangladeshis is that their country will be protected from an HIV epidemic by what they perceive to be more conservative social and religious (Islamic) behaviours and customs. And, indeed, one custom that may offer some protection against the transmission of HIV is male circumcision, which is widely practised in Bangladesh (though the scientific evidence is not conclusive). A review of the behavioural literature as well as epidemiological studies of STDs in Bangladesh offer, nonetheless, a view of a society in which high-risk

behaviours for HIV are prevalent in segments of the population and complacency about HIV would be unwarranted.

Heterosexual risk behaviour

The prevalence of STDs in Bangladesh indicates that high-risk sexual activity is occurring outside marriage. Amongst CSWs, reported levels of STDs have been as high as 57.1% for syphilis, 20% for chlamydia, 20% for herpes, and 14.3% for gonorrhoea^{8,9}. STD rates in the general population are lower. One study of 1514 slum dwellers reported levels of syphilis of 11.5% for men and 5.4% for women, and for gonorrhoea and chlamydia 1%¹⁰. Other studies of women have found similarly low levels of STDs, though much higher rates of reproductive tract infections^{11,12} (as high as 68% in one study¹³). Few studies of STDs in men have been conducted.

Extramarital sexuality and premarital sexuality, for males especially, appears to be common in Bangladesh. In an anthropological study of 32 rural male respondents aged 30–39 years and 33 rural females aged 20–29 years, many respondents acknowledged engaging in premarital and extramarital sexuality, often despite their declaration of religious principles prohibiting these activities. Fifty-three per cent of males and 18% of females admitted to having premarital intercourse¹⁴. A survey of 1671 rural people from across Bangladesh and in-depth interviews with 38 subjects and 152 key informants, led researchers to conclude that in 1981 about half of Bangladesh's rural youths had premarital sexual relations, including a fair number of girls¹⁵. It is unclear whether this 50% includes activities other than intercourse (e.g. petting, thigh sex) or sexual activities with a partner of the same sex.

With respect to premarital intercourse specifically, a Population Council survey of adolescents and men married to adolescent girls in urban and rural areas found that 29% of women 19 years and older and 69% of married men had engaged in it¹⁶. And in a population-based study of 1541 slum dwellers the mean age at first sexual intercourse for men was 19 and for women was 14.75 years. In in-depth interviews with 120 of these respondents, most women reported their partners to be their husbands, while most men reported this as premarital sex for both partners and indicated that their premarital partners were CSWs, women whom they pretended to love, women whom they did love, and 8.5% of the 540 male survey respondents reported male sexual partners¹⁷.

The gender disparity may be due, in part, to females being reluctant to acknowledge engaging in premarital sex. Researchers found female patients at primary health clinics and female health workers to be more reluctant than men to discuss sexual behaviours and to acknowledge sexual activities¹⁸. However, the gender disparity is also undoubtedly due, in part, to males engaging in premarital sex more. The latter may be attributable both to the gender double standard in terms of acceptable or tolerable conduct, but also to the age of marriage being much higher for males than females. In the Population Council survey the mean age at marriage of married adolescent females was 14.9 years and the husbands of adolescent girls was 23 years. With the exception of married and unmarried adolescent females in rural areas, all categories of respondents had increasing prevalence of premarital sexual intercourse with increased age at marriage¹⁶. Yet, while a gender disparity exists, some girls are clearly engaging in premarital sexual activity. In interviews with 8 abortion practitioners in the Dhaka district in 1981, all claimed to have assisted unmarried girls induce abortions; one respondent reported having had hundreds of such girls in her practice¹⁹.

The evidence is mixed as to whether there is a class differential in premarital sexuality. One study found the incidence of premarital sex to be higher in the lower socioeconomic class than in the higher class. Most of the young men (predominantly from lower socioeconomic classes) were thought to have had sex with CSWs¹⁴. However, a 1997 Population Council survey

reported no major differences between people living in poor or well-off areas. There was, however, a large rural-urban differential; whereas 93% of married men aged 19 and over in urban areas had engaged in premarital sexual intercourse, only 58% of their counterparts in rural areas had¹⁶.

Extramarital relationships also appear prevalent. Life histories of 32 rural men in 1985 suggested that 17 had engaged in extramarital intercourse. None of the 33 rural women acknowledged extramarital relations, though the authors felt they might not have been forthcoming due to fear of the consequences of their infidelity becoming known¹⁴. The Population Council survey of adolescents and husbands of adolescent girls in rural and urban areas also found very few women admitting to having had an extramarital experience; 17% of men married 5 or more years did and this increased to 28% in intensive interviews. Surprisingly, the survey's results for men showed higher rates of extramarital sexuality in rural areas than in urban areas (the opposite of what was found for premarital sexuality). While 22% of the rural poor and 21% of the rural well-off acknowledged having engaged in extramarital sex, only 14% of the urban poor and 7% of the urban well-off did¹⁶. A lower overall figure of 7.3% for extramarital sex was reported in a study of 403 male condom users in urban, semi-urban and rural areas²⁰.

In many cases, the partner in extramarital and premarital sexual relations is a CSW. A study of 403 condom users reported that of the men who had engaged in extramarital sex 71% had CSWs as partners, 40% girlfriends and 15% other partners²⁰. Two surveys of truck drivers reported frequent visits to CSWs. A 1993 study of long-distance truck drivers found that 50% had extramarital sex with CSWs at an average frequency of about twice a month, mostly without the use of condoms (E Arco, personal communication, 1993). And a qualitative exploration of truck drivers' lifestyles, conducted at Aricha Ferry Ghat, a transit point, reported that the primary recreational activities of the drivers were consuming alcohol and visiting nearby brothels²¹. Though officially illegal, prostitution occurs throughout the country²². In 1995, Bangladesh had 50,000 registered female CSWs and women activists estimated the overall number of female sex workers to be 100,000²³. This estimate does not include females who occasionally have sex with men for gifts or cash; as in other countries, there appears to be great variety in sexual relations which do not always fit into a neat dichotomization of commercial and non-commercial sex.

Large cities like Dhaka and Chittagong have long had organized brothels, with 10–15 large brothels currently operating in Bangladesh²⁴. The Tan Bazar Brothel at Narayanganj just outside Dhaka is estimated to have between 3000–7000 CSWs. In addition to the brothels, CSWs procure clients in hotel lobbies and on street corners in business centres of the large cities. It has been suggested that this freer and clandestine type of prostitution is rising. The demolition in 1997 of the English Road Brothel in Dhaka, where around 500 CSWs had worked, reportedly increased the numbers of floating sex workers (Parwez Choudhury, personal communication, 1997). This is cause for concern as 2 studies have found much higher rates of STDs in free floating sex workers than in brothel-based CSWs⁸ (IEDCR, personal communication).

Male-to-male sexual activity

In addition to female CSWs, a qualitative study suggests that there are a considerable number of male sex workers in the country. In Dhaka alone, the study pointed to 30 specific sites, including parks, streets, brothels (guest houses) and religious sites where males sell sex. The author maintains, on the basis of interviews and observations with individuals contacted through 3 key informants and their friendship and sexual networks, that in both rural and urban areas men sell sex for cash, food, clothing or shelter. This includes full-time sex workers as well as rickshaw drivers, taxi drivers, truck drivers, hotel boys, tea/restaurant boys, and those

working in other service industries who offer sex for some form of payment as a supplement to their regular income. On the basis of interviews with 10 male sex workers in one park he estimated that between 200–300 men visit that particular park in the evenings looking for sex and 20–30 male sex workers work there every day. Married men are an important client group. Rarely do the sex workers ask their clients to use condoms²⁵.

The author of the study interprets his findings as an indication that male-to-male sexual activity, both before and after marriage, occurs at significant levels across religious, class, economic and age groups of Bangladeshi society. The same-sex sexual activity reported includes mutual masturbation, oral sex and anal sex. Anal sex is reportedly not a small minority behaviour in these same-sex relations but a significant, indeed predominant, sexual practice and is practised without condoms. Most men who have sex with other men reportedly began having such relations as adolescents, with their first partner often being a family member such as a visiting uncle, a cousin or an older brother. Many also had sex at that time with neighbourhood males of varying ages from 13 years upward. Of the males who continue having sex with other males beyond adolescence, almost all get married, and many continue to have sex with other males after marriage for pleasure or profit. Some have sex with their wives only occasionally for the purpose of procreation and, thus, obviously without the use of condoms²⁵. It should be noted, however, that this research was based not on a random and representative sample of males, but on a small convenience sample located through the author's network of contacts. As a result, caution must be used in interpreting the study's findings.

Data from other studies are supportive of the view that male-to-male sexual activity is not uncommon, though it remains a minority behaviour or at least a behaviour acknowledged by a minority. Findings from a study of life histories of 55 rural inhabitants in 1981 and a survey of 1671 rural dwellers in 1985, indicate that many male youths engage in isosexual activity, i.e. sexual activity with a partner of the same gender which involves exploratory play, mutual masturbation and, commonly, anal penetration^{14,15}, though this was not generally indicative of a continuing preference for sexual relations with the same sex. Two of the 32 men in the in-depth life histories did, however, continue to engage in sexual unions with other men even after marriage. In a 1996 population-based study of 540 male respondents, 8.5% acknowledged having sex with other males¹⁷. And a study of 15 male STD patients, noted the occurrence of sex with male friends. These patients provided evidence of practising anal and oral sex, sometimes in groups in the context of watching porn films, in addition to engaging in vaginal sex with females²⁶. Qualitative research in a rural area north-east of Dhaka suggested that homosexuality was prevalent in the area and was not considered a risky behaviour because it did not lead to pregnancy²⁷. And, finally, in a study of 288 professional blood donors it was reported that 8.8% had engaged in male-to-male sex²⁴.

There appears to be a variety of different reasons for engaging in male-to-male sexual activity. These include: simply wanting to discharge for the release of physical tension; preferring anal sex because it is tighter than vaginal intercourse (and as men are more willing to be penetrated anally than women, men engage in this activity with men); thinking that women are vectors of sexual diseases and therefore unsafe to have sex with or that vaginal sex is more risky than anal sex; preferring sex with men; preferring women but not having access to them because unmarried females' virtue is protected and female CSWs are too costly; and needing to earn money/gifts from sex with other males. According to one study males do not commonly consider male-to-male sexual activity to be sex. They think of such activity more as a release or play/fun rather than as real sex and while not ashamed of their male-to-male sexual activities, being caught would be shameful to them²⁵.

Migrant labour, forcing men to be apart from their spouse, may also be a factor promoting male-to-male sex. A 1981 study found that cities in North Bangladesh tended to have 139 to

140 men per 100 women because of migration for work¹⁵. Another group of workers apart from their families frequently are truck drivers. In a qualitative study of male same-sex behaviour, several male respondents indicated that they often went to truck stops to have sex with truck drivers. It was also reported that some truck drivers have sex with the helper in their truck. Anal sex is reportedly the normative behaviour in these relations, again with condoms rarely being used²⁵.

Condom use

Condoms are available in Bangladesh through government fieldworkers and are sold in shops and pharmacies, the latter mostly supplied by the Social Marketing Company. For most Bangladeshis, condoms are known as a means of contraception but are not widely used. In the Demographic and Health Survey of 1993–94, 3% of the women and 4% of their husbands reported currently using condoms as their method of family planning²⁸. The overall level of condom use for any purpose is low even amongst high-risk groups. In a study of 300 CSWs only 11.8% had ever used condoms²⁹; and in a survey of 7 target groups (including several high-risk groups) 28% had ever used condoms³⁰.

These studies illustrate that people engaging in higher-risk sexual activity are generally not using condoms even when, as a study of 403 condom users found, the majority of respondents are aware of STDs such as syphilis, gonorrhoea and AIDS and of the role of condoms in protecting users from these diseases. This study also demonstrated that there is more condom use in sexual relations outside marriage than within marriage²⁰. This may explain the low rates of reported condom use in the Contraceptive Prevalence and Demographic Health Surveys cited previously, as those surveys focused on sexuality within marriage.

In male-to-male sex in Bangladesh condom use seems to be rare. This may be in part because of the difficulty of using them in the settings where male-to-male penetrative sex is occurring (e.g. in parks, surreptitiously at home under the blanket when sharing a bed, or with clients who do not want to use them) and to the fact that condoms in Bangladesh are reportedly not thick enough to be appropriate for anal sex²⁵. The fact that condom use is so infrequent, and that some men who indulge in male-to-male anal sex also then have unprotected sex with their wives, is of obvious concern.

In addition, the ways in which condoms are used are problematic. In the study of 403 condom users, over 10% of the men sometimes used one overtop the other, sometimes only put a condom on at the point of ejaculation, and sometimes unrolled condoms before they put them on. Fortunately, the number of condoms lost to sources of wastage, such as drying out during storage or using as balloons or toys was insubstantial though some men did throw out condoms simply because they felt they 'smell bad'²⁰. In a condom use test in a workshop in Dhaka for middle-class men who have sex with men, only 2 participants out of 32 demonstrated condom usage correctly. This could account for the high levels of breakage during anal sex. Participants in this workshop who had used condoms indicated that a popular, inexpensive brand broke at least 60% of the time and a more expensive brand broke about 20–30% of the time during anal sex. Also noted was the use of butter, ghee, motor oil and other inappropriate lubricants in male-to-male sexual encounters (though no data were offered on its prevalence). These lubricants would clearly compromise the effectiveness of condom use in preventing transmission of disease²⁵.

Rates of condom breakage were lower in the study of 403 condom users (users of government distributed condoms and of condoms distributed by the Social Marketing Company). Over 40% experienced problems with condoms breaking, 17% with tearing, and 5% with leakage. However, analysis of the most significant problem, breakage, revealed that for users experiencing breaks, only about 1.6 condoms broke during the past 3 months, with little

variation among the sub-samples. This equated to an overall breakage rate of about 2% of condoms used in intercourse²⁰.

Injection drug use

Bangladesh is one of the conduits of the 'Golden Triangle'; hence, heroin is quite easily available³¹. Heroin and pethidine, a legal narcotic for therapeutic relief, and marijuana are the more commonly used drugs. In a study of 81 addicts in treatment centres, 27% were addicted to pethidine and 70% to heroin; 93% of all users used drugs one or more times a day³². Of 1640 addicts at a Dhaka treatment hospital, pethidine was used by 15% of those in the non-paying unit and by 41% of those in the paying unit. Heroin was used by 79% of those in the non-paying unit and by 47% of the patients in the paying unit³³.

The majority of addicts are thought to use by inhalation. However, no scientifically rigorous surveys have been done which could credibly project the number of people injecting drugs. The data available come primarily from treatment centres for addicts. In a study of 1640 patients at a Dhaka treatment hospital, in the non-paying unit of the hospital where 1489 of the patients were treated, only 15% were using drugs by injection (the drugs were pethidine and morphine), while 79% were smoking heroin and marijuana. However, in the paying unit where the patients were more affluent and educated, rates of injection use were higher; 42% were injecting pethidine or heroin while 48% were smoking heroin or marijuana³³. This corresponds to results of another study of 100 parenteral drug users in Dhaka, in which 92% were educated above Class VIII with 59% currently being students. Of particular concern with respect to these IVDUs is that 32% were sharing syringes and needles among themselves, 57% had extramarital sexual relations, and 64% were unaware of the role of such habits in the transmission of disease³⁴. In a qualitative study which conducted interviews with 10 male street children in 1996, the boys spoke of a number of older street boys sharing needles for drug use²⁵.

The NAC conducted a 1990 survey of 2824 persons in 7 target groups (groups considered at high risk for HIV and in the general population) in 4 divisions of Bangladesh. Of the survey respondents 8.42% had ever injected a drug, 17.2% knew of at least one person who used drugs by injection, and 24.8% of the students and 25.7% of the professional blood donors knew an addict who used drugs by injection. Further, a fifth of all sex workers and STD patients knew of people who were having sex with drug addicts³⁰. The data are suggestive of an IDU problem in Bangladesh.

With respect to HIV transmission, there is a fear that the addicts who are still inhalers might change their mode of addiction to injections since both heroin and pethidine, are injectable. In interviews with 10 IVDUs in Dhaka it was found that all the respondents, relatively affluent patients under treatment for intravenous drug use, had used non-intravenously administered drugs before becoming IVDUs³⁵. A study of 1640 drug addicts in treatment centres found a common history of cannabis and alcohol abuse before, during and after heroin and pethidine abuse. Quite a number of the drug addicts also had a tendency to use minor tranquillizers before being hospitalized with a history of heroin and pethidine abuse³³. Adding to fears that current and future heroin users in Bangladesh will convert from inhalers to injectors is the fact that most IDUs in the neighbouring Indian state of Manipur and the neighbouring country Myanmar (Burma) are heroin addicts. In Myanmar 90% of chronic heroin abusers are reported to practise injection, and the prevalence of IVDU appears to be spreading in Manipur³⁶. In 1992 the WHO reported that amongst IVDUs there was a seroprevalence rate of HIV of 71% in Myanmar and 54% in Manipur³⁷. Little data are available from Sylhet, the Bangladeshi city near Manipur, though this area of Bangladesh is thought to have one of the highest concentrations of IVDUs in the country.

PROXIMITY TO HIGH PREVALENCE AREAS

The behavioural risk factors for HIV transmission discussed above are prevalent in the neighbouring country India, which has experienced a rapid spread of HIV³⁸. The shared cultural and geographic features of the 2 countries give rise to fears that Bangladesh could experience a similar HIV epidemic. This fear is accentuated by the numerous types of contacts between Indians and Bangladeshis, making this a potential point of entry for HIV into Bangladesh. The northeast part of India borders Bangladesh on 3 sides. Types of contact which exist between Bangladeshis and Indians include cross-border travel to visit relatives. There are also anecdotal reports that CSWs from border towns in Bangladesh (Jessore and Khulna) cross the border to find clients in Calcutta (the largest city in the Indian state of West Bengal). Further, cargo ships go back and forth between Chittagong, the largest seaport in Bangladesh, and Calcutta and Bombay in India, and seafarers from these ships are reported to have sex with CSWs in both countries. This is alarming for Bangladesh given the high rates of HIV in CSWs in Bombay^{4,5}. Bangladesh also borders Myanmar (formerly known as Burma) where there is a high prevalence of HIV/AIDS; however, no information is available on the extent and nature of cross-border contacts between citizens of these 2 countries.

PUBLIC KNOWLEDGE

Limited knowledge about HIV/AIDS may also contribute to the spread of the HIV virus in Bangladesh. Numerous knowledge, attitudes and practice studies have found very low levels of awareness of HIV and even lower levels of knowledge of routes of transmission. In the general population studies have found levels of awareness ranging from 19%³⁹ to 40%³⁰. Particularly alarming have been studies showing that the highest risk groups appeared to have little awareness of HIV/AIDS, and, as illustrated in a 1990 survey, commonly had misconceptions about how AIDS is transmitted, perceived susceptibility to infection, and the consequences of having AIDS³⁰.

A 1992 study of 1561 CSWs reported that while women generally knew that STDs were transmitted by infected men, they also commonly believed that STDs could be avoided by washing and/or rubbing genitals with mustard oil. Further, most did not know that STDs could persist even after treatment⁴⁰.

This low level of public knowledge is likely due, in part, to the fact that there has been little information on AIDS and STDs presented in the mass media, and the information that has been presented has primarily been in the print media. In a 1990 survey of 2824 persons in 7 target groups, of those who had heard of AIDS ($n=1056$), 67% referred to the newspaper as the source, 53% mentioned magazines/books, and 27% mentioned mass media such as radio and television. Not surprisingly, awareness of AIDS was found to be positively related to literacy level³⁰. This was also found to be the case in a study of 3687 women and 2272 men in rural Bangladesh. Literacy was the most significant predictor of AIDS awareness⁴¹.

With the high rate of illiteracy in Bangladesh (in 1996 only 49% of adult males and 26% of adult females were literate⁴²), the majority of Bangladeshis are unlikely to become more aware of, and knowledgeable about, HIV/AIDS unless an effort is made to reach them through channels other than the written media. A survey of married and unmarried adolescents in rural and urban areas found that females preferred to receive sex education from traditional sources (e.g. the grandmother) and personal contacts or from written material, while men preferred the public electronic media¹⁶. This points to the need for a multi-faceted approach to disseminating information about HIV which targets different segments of the population.

CONCLUSION

The rate of HIV infection is clearly rising in Bangladesh, yet the WHO has predicted that 80% of future infections in Bangladesh would be preventable through a National AIDS education programme¹. To date no such programme has been launched. Despite the formation and reformation of the NAC and the articulation by NAC of the benefits of taking preventive action now to avoid the human and financial costs that would be incurred by the spread of the disease in the future, the government has done little apart from the formulation of short- and medium-term plans. Perhaps in response to governmental inactivity in HIV/AIDS education, many non-governmental organizations (NGOs) in the country are mobilized into taking action. As of 1995 there were more than 72 NGOs working in the field of STD/HIV/AIDS prevention and external organizations like the United Nations Development Programme, WHO, the British Overseas Development Assistance, United States Agency for International Development, NORAD and UNICEF are providing funds to the government and/or NGOs for AIDS prevention and control efforts³¹.

The very limited efforts by the Bangladeshi government with respect to HIV prevention to date may be attributable to a number of factors. One may be the enormity of other health problems in Bangladesh. It is one of the poorest countries in the world, with people suffering from the most basic preventable illnesses, and where the prevalence of HIV/AIDS is still so low that very few people in the country have ever come into contact with or even heard of an HIV-positive person. This may make it difficult to rationalize the use of limited resources on a disease that threatens to be a major problem in the future but is not currently claiming lives on anything close to the same scale as other basic illnesses such as diarrhoeal disease. Further, in a Muslim nation where there are certain social and cultural barriers to discussing problems related to sexuality, STDs and HIV, allocating significant resources to something that is not widely perceived as a problem (or understood as an important threat) and that may be controversial due to its association with high-risk sexual behaviour, could be perceived as risky to the government or at the least to offer limited political gain.

The prevalence of behavioural risk factors clearly points, nonetheless, to the potential for the spread of the disease in Bangladesh and suggests the importance of the following measures being incorporated in a national HIV prevention programme:

- regular quality sentinel surveillance of HIV/AIDS;
- support for behavioural and epidemiological research pertaining to sexuality and intravenous drug use, and for HIV intervention research to test promising prevention strategies. To improve the quality of the research being conducted by NGOs and medical practitioners, efforts should be made to encourage collaborations with trained researchers;
- implementation of targeted public information campaigns educating about HIV/AIDS/STDs and promoting safer practices (such as condom use) using diverse media forums rather than simply the print media to reach different sectors of the population;
- increased availability of a thicker type of condom appropriate to anal sex and of a water-based lubricant.

Parallel to efforts aimed at reducing high-risk behaviours, attention must be paid to reducing prevalent biomedical risk factors (the use of unscreened blood donated by professional donors and a high prevalence of STDs without adequate access to effective treatment). A view to the long-term benefits of HIV prevention, though considered within the reality of available resources and alternative social and health needs in the country, should guide consideration of national HIV/AIDS policies and programmes.

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Figure 1.
HIV/AIDS cases reported by December 1998 by occupation

Figure 2.
HIV/AIDS cases reported by June of each year