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# Non-marital sexual behaviour of men in Bangladesh: implications for HIV transmission

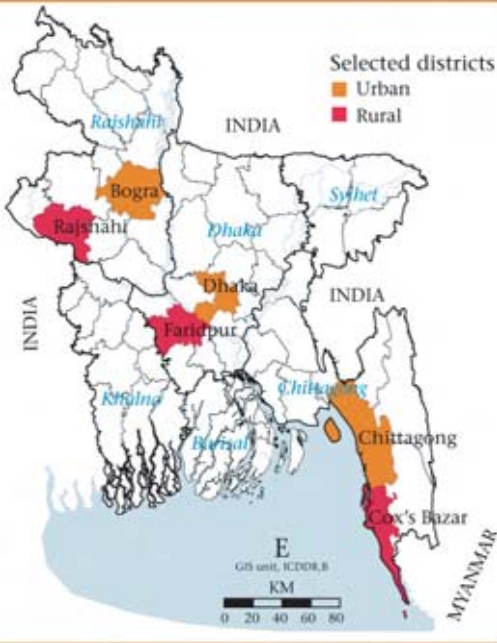
A survey on sexual behaviour was conducted among 7122 males (aged 18-49 years) in six districts (3 urban and 3 rural) in Bangladesh. Overall 18% of the respondents reported ever having sexual intercourse outside of marriage (10% with female sex workers, 9% with casual female partners and 2% with males/transgenders) in the past year. Among the respondents who had non-marital sex in the past year, 35% used a condom during their last episode of such sex and the majority (56%) had more than one partner. Non-marital sex was more frequent among those <30 years (24%) of age, never-married (27%) and with <10 years of formal schooling (20%). Condom use rate was low among those ≥40 years (24%) of age, ever-married (30%), with low knowledge of HIV infection (15.4%), with no formal education (22%) and in low socio-economic status (23%). Non-marital sex with high-risk partners (i.e. female sex worker) is common among the general male population in Bangladesh. Low condom use and sex with multiple partners further augments the risk of HIV transmission in the community. To limit a generalized epidemic, effective behaviour change activities focused on reducing rates of sexual partner change and increasing condom use are urgently needed.

In Bangladesh, HIV prevalence is still low (<1%) among all the most-at-risk populations (sex workers, males who have sex with males, transgenders, heroin smokers, transport workers etc.) except among injecting drug users (1.5%) (1). So far, almost all intervention programmes for HIV prevention have been targeted to these groups. There are limited data on the sexual behaviour and sexual networks of males in the general population and understanding these behaviours and networks may help identify potential trends and patterns of HIV transmission in the country. This study aimed to estimate the prevalence of various non-marital sexual behaviours of males in the community. It also investigated variation of such behaviours among different socio-demographic groups.

A survey was conducted during February-August 2005 among men aged 18-49 years in three purposively selected urban (Dhaka metropolitan, Chittagong metropolitan, and Bogra town) and rural areas (Faridpur, Rajshahi, and Cox's Bazar districts) of Bangladesh (Figure 1). In each study area, a multistage cluster sampling technique was employed for selecting subjects. In urban areas – ‘mahallas’ (the smallest identifiable areas within city corporation/municipality), and in rural areas – ‘mouzas’, (a revenue village with a jurisdiction list number) were considered as clusters.

In each study area, 30 clusters were selected by probability-proportional-to-size. In each of the selected cluster among all the eligible respondents (males, aged 18-49 years, who were resident in the area for at least the last one year or visited home at least once in the last one year) were identified through household listing; 50 were systematically selected for interview. Respondents who provided their informed consent were interviewed by one of two interview techniques--conventional face-to-face interview or confidential ballot-box method with audio support. For simplicity of this article, only pooled estimates are presented. Method-wise variation in sexual behaviour is described elsewhere (2). Trained male interviewers conducted the interviews using structured questionnaires.

Figure 1: Study areas (selected districts)



## Operational definition of various high-risk sexual behaviours:

'Non-marital sex' was defined as vaginal or anal penetrative sex with a person the interviewee was not married to. 'Female sex workers' were defined as females who participated in vaginal or anal penetrative sex in exchange for money. 'Casual female partners' was defined as a female neighbour, friend or relative with whom the respondent participated in vaginal or anal penetrative sex without exchange of money. 'Males/trans-genders' were defined as either actively or passively participated in anal sex with another males or transgenders.

Among 9,000 potential study subjects, 7,122 (79%) were successfully interviewed. (3623 face-to-face and 3499 by the ballot-box method). The most common reasons for not completing the interview were internal migration (12%) and inability to contact the respondent after five visits to the home (8%). Only 38 subjects (0.4%) refused to participate.

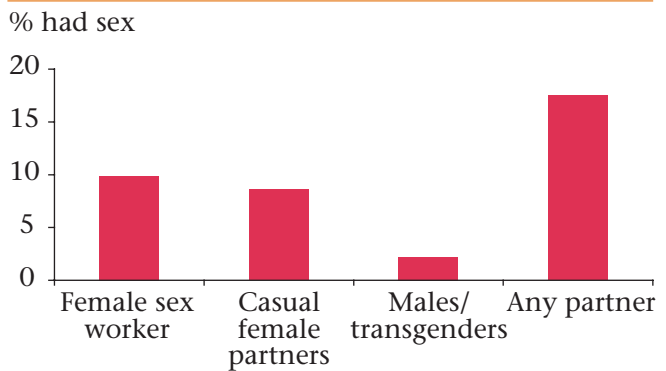
## Background characteristics of respondents

Fifty-two percent of the respondents were from urban areas. About three-fourths of the respondents were aged 20-39 years, and less than 10% were aged less than 20 years. Twenty-two percent of the respondents never attended school and 30% had more than 10 years of schooling. About one-third (32%) of the respondents were never-married. The study population was predominantly Muslim. More than half (59%) of the respondents had monthly family expenditure of Tk. 5000 or less. However, 30% of the respondents spent Tk. 5000-10,000 per month. More than three-fourths of the respondents were from four professional categories which included general services, business, farming, and transportation workers.

## Prevalence of non-marital sex by type of partner

Overall 18% of the respondents reported having non-marital sex in the past year, 10% with female sex workers, 9% with casual female partners and 2% with males/transgenders (Figure 2.)

Figure 2: Percentages of males (aged 18-49 years) who had non-marital sex in the last one year by type of partner\*



\* Multiple response possible

## Variation of non-marital sex by socio-demographic characteristics

The proportion of men reporting non-marital sexual activity was similar in the 6 settings (Table 1). Of the respondents  $\leq 19$  years of age, 25%

reported at least one episode of non-marital sexual intercourse in the last year; this proportion decreased with increased age. Only about 9% of the respondents aged 40 years or above had such a relationship in the last one year (Table 1). More never-married men reported non-marital sexual activity (27%) than ever-married respondents (13%). Men with  $< 10$  years of schooling were more likely to report non-marital sexual intercourse (20%) compared to men with  $\geq 10$  years of schooling (13%). Muslims reported higher non-marital sexual exposure (18%) than the respondents of other religion (13%). Men whose monthly family expenditure was less than Taka 10,000 (US\$ 141) more commonly reported having non-marital sex (18%) compared to men who spent more than Taka 10,000 per month (12%).

### Prevalence of condom use

Men reported using a condom in their last episode of penetrative sex 40% of the time with a female sex worker, 30% of the time

Table 1: Percentage of respondents who had non-marital sex in the last one year by selected socio-demographic characteristics

Socio-demographic characteristics	n	% of respondents
<b>Study area</b>		
Dhaka metro	1,227	17
Chittagong metro	1,244	17
Bogra town	1,203	20
Faridpur town	1,055	17
Cox's Bazar town	1,197	21
Rajshahi town	1,196	17
p value		0.01
<b>Age (years)</b>		
$\leq 19$	677	25
20-29	2,750	23
30-39	2,154	13
$\geq 40$	1,541	9
p value		$< 0.01$
<b>Marital status</b>		
Never-married	2,246	27
Ever-married	4,876	13
p value		$< 0.01$
<b>Schooling (years)</b>		
0	1,722	18
1-4	1,178	21
5-9	2,230	20
$\geq 10$	1,992	13
p value		$< 0.01$
<b>Religion</b>		
Islam	6,419	18
Others*	703	13
p value		0.02
<b>Monthly family expenditure</b>		
$\leq 3,000$	2,599	17
3,001-5,000	2,231	18
5,001-10,000	1,813	19
$> 10,000$	479	12
p value		0.02

\* Hinduism/Christianity/Buddhism

with a casual female partner and 9% of the time with a male/transgender (Figure 3).

**Variation in condom use by socio-demographic characteristics of respondents**

Men in urban areas reported using condoms more frequently than men in rural areas (Table 2). Among men who reported non marital sexual

intercourse in the last year, those with  $\geq 10$  years of formal education (49%), with monthly family expenditure of > Taka 10,000 (US\$ 141), or never-married (40%) were more likely to use condoms. Increased knowledge level of the respondents about prevention of HIV infection was associated with increased condom-use.

**Distribution of number of non-marital sexual partners**

Of the respondents who reported non-marital sex in the last one year, the majority (56%) had more than one non-marital partner. One-third (36%) of the respondents had 2-3 and another one-fifth (20%) had >3 non-marital partners.

When segregated by type of non-marital partner, of the respondents who had sex with female sex workers, about 62% had sex with more than one female sex worker. Similarly, 35% and 49% had sex with more than one casual female partner and male/transgender respectively (Figure 4).

Figure 3: Condom-use rates among males during last sex with different types of non-marital partners

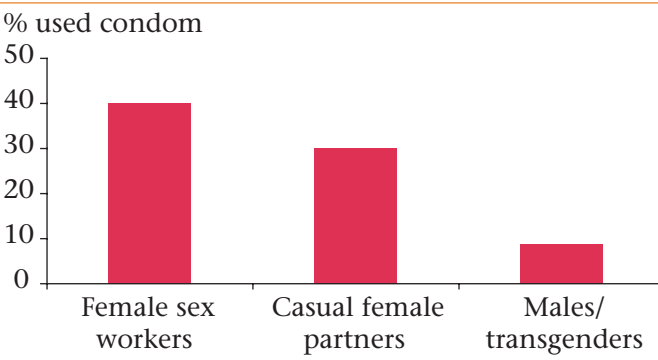
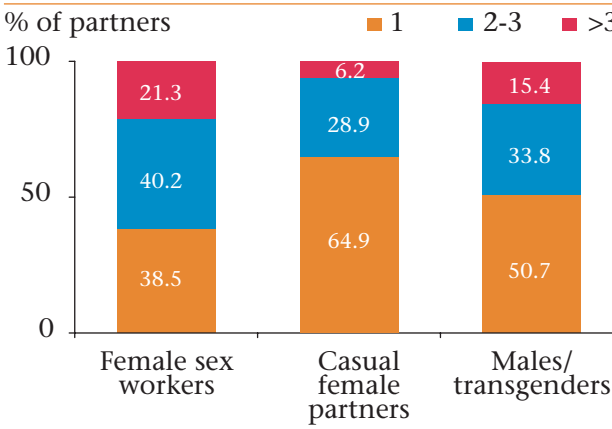


Figure 4: Distribution (%) of the number of different types of non-marital sexual partners in the last one year



Reported by: Public Health Science Division, ICDDR,B

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*Table 2: Percentage of respondents who used a condom during last non-marital sex in the past one year by demographic characteristics*

**Comment**

The major strength of this study is that in each district we enrolled a large representative sample of the general male population and thus the estimates are reliable for modelling the HIV epidemic in the country. In this survey 27% of never-married men, and 13% of ever-married men reported having non-marital sex in the past one year. In Bangladesh only a few studies reported non-marital sexual behaviour of males in the community. Several studies found prevalence of life-time non-marital sex in the general male population ranging between 8% and 24% (3). Two other small sub-national surveys reported 47% (4) and 56% (5) of males ever had pre-marital and extra-marital sex respectively. A recent large study among adolescents in Bangladesh found 22% of males having a history of pre-marital sex (6). But all the previous studies were either too small or not nationally representative or did not cover a wide range of age group and therefore not appropriate for modelling

Socio demographic characteristics	n	% of respondents
<b>Study area</b>		
Dhaka metro	203	40
Chittagong metro	213	36
Bogra town	237	35
Faridpur rural	170	33
Cox's Bazar rural	249	24
Rajshahi rural	194	27
p value		<0.01
<b>Age (years)</b>		
≤19	176	42
20-29	687	35
30-39	275	36
≥40	128	24
p value		0.08
<b>Marital status</b>		
Never-married	641	40
Ever-married	625	30
p value		<0.01
<b>Schooling (years)</b>		
0	293	22
1-4	258	31
5-9	444	37
≥10	271	49
p value		<0.01
<b>Monthly family expenditure</b>		
≤3000	439	23
3001-5000	418	34
5001-10000	352	39
>10000	55	62
p value		<0.01
<b>Religion</b>		
Islam	1155	35
Other*	111	40
p value		0.55

\* Hinduism/Christianity/Buddhism

potential HIV transmission.

Assuming our studied populations are nationally representative of men their age, then extrapolation to the general male population in Bangladesh suggests there are some 44.2 million non-marital sexual contacts, annually, involving men age 18 – 49 years (19.2 million with female sex workers, 14.8 with casual female partners and 10.2 with males/transgenders). This survey did not include representatives from all age-groups of the general male population, but did, however, cover what is believed to be the most sexually active age-groups.

A finding, which should be of concern, is that among the sexual contacts reported in this survey, some three-fourths (31.2 million) were unprotected by condoms (estimated based-on condom use rate during the last sex act). Of these unprotected sexual acts, about 11.4 million were with female sex workers, 10.6 millions with casual female partners and 9.2 millions with males/transgenders. This behaviour clearly places not only a large number of young men at risk of HIV but also their partners.

The combination of high levels of commercial sex and multiple sexual partners, combined with very limited condom protection, points to a potentially explosive situation. There are two usual approaches for responding to this situation. One is to encourage men to limit their number of sex partners. The other one is to increase condom use during sex with non-spousal partners (7,8,9). This suggests that to prevent a generalized epidemic, there is an urgent need to implement an effective behaviour change communication programme with males to reduce rates of sexual partner change and increase condom use.

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## Chronic disease burden among people over 60 years of age in rural Bangladesh

As the population of Bangladesh ages, greater numbers of people are likely to be living with chronic illnesses. We assessed population-based data on prevalence of chronic disease and causes of death from two rural sub districts in Bangladesh. Overall, 73% of those surveyed in Mirsarai and 44% in Abhoynagar reported being diagnosed with at least one chronic condition. Arthritis (37%) and hypertension (27%) were the most common chronic conditions reported. Verbal autopsy data show that at least 42% of all deaths in these areas in this age group were due to chronic conditions. In contrast, hospitalizations of persons aged over 60 in the upazila health complexes were rare. In order to improve the lives of older people in Bangladesh, the national health system should allocate resources and design strategies to prevent and treat chronic disease.

The age structure of Bangladesh's population is changing markedly. Rapid fertility declines in the 1980s have decreased the proportion of young persons (1), and reductions in child mortality have increased life expectancy from 44 years in 1975 to 60 years in 2001 (2). The population aged over 60 years currently represents about 7% of the 140 million population of Bangladesh (1) and is projected to represent 16% of the total population by 2050 (3). As the older population grows, the prevalence of chronic disease is also likely to grow. Understanding the burden of chronic disease in