

Married men who have sex with men: the *bridge* to HIV prevention in Mumbai, India

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Received: 27 July 2009/Revised: 3 April 2010/Accepted: 11 July 2010/Published online: 3 August 2010
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Abstract

Objectives The present study compared the sexual behaviours of married and unmarried men, in Mumbai, India, who have sex with men.

Methods We conducted a cross-sectional analysis (comparing socio-demographic, behavioural and clinical data) of 88 married and 423 unmarried MSM.

Results Even though MSM are single at younger ages, they are more likely to be married later in life and carry their risky sexual behaviours to this changed social milieu.

Conclusions Married MSM had high-risk behaviours with both men and women; they form an important intervention group for HIV prevention. The interventions will not only reduce the transmission in the male-to-male sexual group, but will also have an effect on the male-to-female transmission of HIV.

Keywords Married MSM · Risk behaviours · HIV prevention · India

Introduction

Human immunodeficiency virus (HIV) infection prevention is an important public health programme in India: a country that is estimated to have about 2.5 million people currently living with HIV (World Health Organization 2007). The National AIDS Control Organization of India has recently added men who have sex with men (MSM) to its high-risk groups, the bulk of which was formed traditionally by groups such as female sex workers, injection drug users, sexually transmitted infection patients, migrants and long distance truck drivers. Though there were studies that discussed risk behaviours and HIV in the MSM population in India, relatively early in the epidemic (Kumar and Ross 1991; Nandi et al. 1994), it is only recently that they have been the focus of intervention programmes.

In general, there is little acknowledgement of male homosexuality in India; this is often reflected in the prevention of HIV and STI and the care of these patients. The prevalence of HIV in MSM was of the order of 6–19% in the past 5 years; thus, they form an important risk group for HIV in India (National AIDS Control Organization 2008). A recent study reported that several men who attended STI clinics in Mumbai were effectively ‘bisexual’ or ‘trisexual’, i.e., they had sex with men, women and *hijras* (male-to-female transgenders). They engage in risky sexual practices not only with multiple partners, but also with partners of different genders (Hernandez et al. 2006). Men often do not perceive anal sex as a risk factor for transmission of HIV and STIs. Even if they do, the prevalence of condom use is low during anal sex (Dandona et al. 2004). This may be particularly true of men who do not have any explicit MSM identity.

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Given the cultural and social compulsions, many of the MSM are likely to be married to women in India. The present study compared the sexual risk behaviours of married and unmarried MSM in Mumbai, India.

Methods

The present study is a cross-sectional analysis of anonymous data collected at an STI clinic at the *Humsafar* Trust (2003–2005), a community-based organisation that provides services to various groups of MSM. We compared the socio-demographic, behavioural and clinical characteristics of 88 married MSM and 423 unmarried MSM attending an STI clinic in an urban setting in India, Mumbai.

The clinical services include a voluntary HIV testing centre and an STI clinic. Basic demographic and clinical data were collected by the treating physicians, and detailed demographic and sexual behavioural data were collected by the counsellor on a structured interviewer-administered form. We used the following characteristics for our analysis: (1) demographic information: age, marital status (with women), education and occupation; (2) sexual behaviours

in the past 6 months: number of partners, type of partner, preference of sexual partners, place where they met their partners, type of sexual practices in the past (oral insertive or receptive, anal insertive or receptive, or vaginal); and (3) condom use in the past 6 months: always, sometimes or never (during oral sex, anal sex and/or vaginal sex). In addition, we included the results of HIV testing in our analysis.

Data were entered in EpiInfo 2000 and converted to Stata (version 10, StataCorp, College Station, TX, USA). Distribution of responses was calculated using means and standard deviations (SD), and proportions. We used *t* test to calculate the difference between the means of the continuous variables. Pearson's chi square tests were used to evaluate the association of categorical estimates. We calculated the odds ratio (OR) and the 95% confidence intervals (CIs) as a measure of association using a logistic regression model.

Results

The mean age (\pm standard deviation) of the married MSM [29.5 (6.3) years] was significantly higher than that of the

Table 1 Association of marital status (being married) of men who have sex with men and demographic characteristics, sexual behaviours, condom use and HIV in Mumbai, India (2003–2005)

	Total <i>N</i>	Unmarried MSM <i>n</i> (%)	Married MSM <i>n</i> (%)	Odds ratio (95% CI)	Age-adjusted odds ratio (95% CI)
Total	511	423	88		
Demographics					
Age					
18–24	355	337 (80)	18 (20)	Reference	
25–29	100	66 (16)	34 (39)	9.6 (5.1–18.1)	
≥ 30	56	20 (5)	36 (41)	33.7 (16.3–69.5)	
Income (in Indian rupees) per month					
<2000	87	71 (23)	16 (20)	Reference	Reference
2001–5000	245	195 (62)	50 (61)	1.1 (0.6–2.1)	1.1 (0.5–2.2)
>5001	65	49 (16)	16 (20)	1.4 (0.7–3.2)	0.8 (0.3–2.0)
Occupational category					
Unemployed	43	40 (10)	3 (4)	Reference	Reference
Unskilled	245	198 (49)	47 (55)	3.2 (0.9–10.7)	2.1 (0.5–8.1)
Skilled/professional	154	120 (30)	34 (40)	3.8 (1.1–13.0)	1.7 (0.4–6.8)
Student	37	37 (9)	0 (0)	–	–
Sex worker	11	10 (2)	1 (1)	1.3 (0.1–14.2)	0.6 (0.1–8.1)
Education					
Illiterate	29	19 (5)	10 (11)	Reference	Reference
Up to secondary	306	251 (60)	55 (62)	0.4 (0.2–0.9)	0.5 (0.2–1.6)
Higher secondary	108	96 (23)	12 (14)	0.2 (0.1–0.6)	0.3 (0.1–1.2)
College/graduate	62	51 (12)	11 (13)	0.4 (0.1–1.1)	0.2 (0.1–0.8)

Some of the columns may not add to 511 due to missing information on these variables

Table 2 Association of marital status (being married) of men who have sex with men, and sexual behaviours and condom use in Mumbai, India (2003–2005)

	Total <i>N</i>	Unmarried MSM <i>n</i> (%)	Married MSM <i>n</i> (%)	Odds ratio (95% CI)	Age-adjusted odds ratio (95% CI)
Total	511	423	88		
Sexual behaviours					
Type of partners					
Regular	86	62 (15)	24 (29)	Reference	Reference
Casual	338	291 (72)	47 (56)	0.4 (0.2–0.7)	0.4 (0.2–0.9)
Both	66	53 (13)	13 (15)	0.6 (0.3–1.4)	0.6 (0.2–1.5)
Preference of partners					
Male	188	164 (39)	24 (28)	Reference	Reference
Female	90	78 (19)	12 (14)	1.1 (0.5–2.2)	1.8 (0.7–4.3)
Both	221	171 (41)	50 (58)	2.0 (1.2–3.4)	2.2 (1.2–4.2)
TG	2	2 (1)	0 (0)	–	–
Meet partners ^a					
Friends/close contacts/partners	231	192 (48)	39 (47)	1.0 (0.6–1.5)	0.7 (0.4–1.3)
Public places	301	248 (62)	53 (64)	1.1 (0.6–1.8)	1.4 (0.8–2.5)
Commercial partner	109	100 (25)	9 (11)	0.4 (0.2–0.8)	0.4 (0.2–0.9)
Internet	16	16 (4)	0 (0)	–	–
Number of partners in the past 6 months					
None	17	13 (3)	4 (5)	Reference	Reference
Single	312	248 (60)	64 (73)	0.8 (0.3–2.7)	1.8 (0.5–7.2)
2–5	84	71 (17)	13 (15)	0.6 (0.2–2.1)	1.3 (0.3–5.9)
>5	90	83 (20)	7 (8)	0.3 (0.1–1.1)	0.5 (0.1–2.4)
Type of sexual activity in the past 6 months ^b					
Anal receptive	160	131 (31)	29 (34)	1.1 (0.7–1.9)	0.6 (0.3–1.2)
Anal insertive	366	306 (73)	60 (71)	0.9 (0.5–1.5)	1.0 (0.6–1.9)
Oral receptive	138	108 (26)	30 (35)	1.5 (0.9–2.5)	0.9 (0.5–1.6)
Oral insertive	364	305 (73)	59 (69)	0.8 (0.5–1.4)	0.9 (0.5–1.6)
Vaginal sex	321	254 (61)	67 (79)	2.4 (1.4–4.2)	4.0 (2.0–7.9)
Condom use in the past 6 months in individuals					
Anal sex					
Always	67	62 (20)	5 (10)	Reference	Reference
Sometimes	187	160 (51)	27 (54)	2.1 (0.8–5.7)	1.0 (0.5–2.0)
Never	112	94 (30)	18 (36)	2.4 (0.8–6.7)	0.4 (0.1–1.2)
Oral sex					
Always	36	34 (11)	2 (4)	Reference	Reference
Sometimes	116	102 (34)	14 (29)	2.3 (0.5–10.8)	0.6 (0.3–1.3)
Never	194	161 (54)	33 (67)	3.5 (0.8–15.2)	0.2 (0.1–1.2)
Vaginal sex					
Always	66	39 (18)	4 (15)	Reference	Reference
Sometimes	128	113 (51)	15 (44)	1.0 (0.4–3.0)	0.8 (0.3–2.0)
Never	80	66 (30)	14 (41)	1.7 (0.6–4.9)	0.6 (0.2–2.0)
HIV*	22	17 (7)	5 (13)	1.9 (0.7–5.6)	0.7 (0.2–2.5)

* We had information only on 280 individuals (241 unmarried and 39 married men who had sex with men)

^a The reference for each category are those that did not report having these partners; the total numbers in the column will be >511 because of multiple choices (multiple sites for finding partners) for this variable

^b The reference for each category are those that did not report having these sexual behaviours; the total numbers in the column will be >511 because of multiple choices (multiple types of sexual practices in individuals) for this variable

Some of the columns may not add to 511 due to missing information on these variables

unmarried MSM [22.3 (3.4) years], ($p < 0.01$). The majority of unmarried and married MSM had secondary school education (60 vs. 62%) and were unskilled workers (49 vs. 55%). Unmarried MSM had a higher proportion of casual partners compared with married MSM (72 vs. 56%, $p < 0.01$). Higher proportion of married MSM reported vaginal sex in the past six months compared with unmarried MSM (79 vs. 61%, $p < 0.01$).

Preference for both males and females as sexual partners (aOR: 2.2, 95% CI: 1.2–4.2) and reports of having vaginal sex in the past six months (aOR: 4.0, 95% CI: 2.0–7.9) were significantly associated with being married in these MSM. However, there were no significant associations between anal receptive sex (aOR: 0.6, 95% CI: 0.3–1.2) or oral receptive sex (aOR: 0.9, 95% CI: 0.5–1.6) in the past six months and marital status (i.e. being married).

We had information on the HIV status of 241 unmarried and 39 married MSM. The overall HIV proportion was 8%. Though the proportion was higher in married MSM (13%) compared with unmarried MSM (7%), the age adjusted OR was 0.7, with a 95% CI of 0.2–2.5. HIV proportion was highest in MSM older than 30 years (24%).

We have described the proportions and ORs for various socio-demographic and behavioural characteristics in Tables 1 and 2.

Discussion

MSM were only recently recognised as an important risk group in the HIV epidemic in India. Same sex behaviour continues to be stigmatised in India and many MSM are not open about their sexual identity. Male–male sex amongst “heterosexually” identified men is often not considered as “sex” per se. It is referred to as *masti* or fun between men (Sengupta et al. 1998; Dandona et al. 2005). We found, not surprisingly, that unmarried men were significantly younger than married MSM; our data show that MSM older than 25 years were significantly more likely to be married than those younger than 25 years. Thus, it is likely that many of these young unmarried men may eventually get married to women later in life. This may be due to the existing cultural norms in the society (Gurha 1998; Khan et al. 2000).

An important aspect of these risk behaviours is the type of sexual activity practised by these men. Married MSM were significantly more likely to have vaginal intercourse than unmarried MSM, i.e. in sexual contact with women they were the ‘penetrative partner’. However, they still continued to have anal receptive intercourse with other men; i.e. in the same-sex relation married MSM were as likely to be the ‘penetrated partner’ as being the ‘penetrative partner’. As observed in our data, ‘always use’ of a

condom was very low by married MSM during penetrative sex with these two different types of partners (men and women). This finding is supported by an earlier report, which suggested that being currently married to a woman was an important predictor of not using a condom during anal/vaginal sex (Dandona et al. 2005). These findings have important public health implications. On one hand, married MSM are at a higher risk of acquiring HIV, since unprotected receptive anal sex has the highest risk for HIV transmission. However, on the other hand because of unprotected vaginal sex, their wives are also at risk of acquiring infections.

Even though MSM may be single at younger ages, they may eventually get married later in life and are likely to carry their risky sexual behaviours with them to the changed social milieu. Thus, they do form an important ‘bridge’ between these two groups: men and women. Targeting them in preventive health programmes will not only reduce the risk of transmission in the MSM groups, but also reduce the chances of transmission to the low-risk general population of married women. However, one has to be sensitive to the issues of the community, disclosure and stigma, and devise individual strategies to deal with these delicate situations.

This was a clinic-based sample; hence, the findings cannot be generalised to the population at large. Many MSM may provide socially desirable answers for sexual practices and condom use in clinical settings; hence, we may have underestimated the risky behaviours in these men. Finally, we did not have information on some of the variables used in the analyses and we did not use any form of imputation for these missing data. This may be another potential limitation of the study.

In spite of the above limitations, the study provides important information on the socio-demographics, sexual risk behaviours and HIV in married and unmarried MSM in a clinic in Mumbai, India. Married MSM had high risk behaviours with both men and women; thus, they form an important intervention group. HIV prevention programmes in this specific subgroup will not only reduce the transmission in male-to-male sexual group, but may also have an effect on the male-to-female transmission of HIV, an important bridge for HIV prevention in India.

Acknowledgments We would like to acknowledge the services of the outreach workers for assistance with data collection. One of the co-authors (MSS) was funded by the CIHR-IHSPR Fellowship and CIHR-RRSPQ Public Health Training Programme for his doctoral studies at McGill University. The *Humsafar* Trust would like to acknowledge support from Mumbai Districts AIDS Control Society. We thank Dr. Abby Lippman for her editorial suggestions in a previous version.

Conflict of interest The authors declare that they have no competing interests.

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