

Male sex workers: Are we ignoring a risk group in Mumbai, India?

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ABSTRACT

Background: Male sex workers (MSWs) have recently been recognized as an important risk group for sexually transmitted infections (STIs) including human immunodeficiency virus (HIV) infection. Although there are global studies on MSWs, few such studies describe the behavioral patterns and STIs among this population in India. **Methods:** MSWs were evaluated at the Humsafar trust, a community based organization situated in suburban Mumbai, India. We report on the demographics, sexual behaviors, and STIs including HIV of these sex workers. **Results:** Of the 75 MSWs, 24 were men and 51 were transgenders. The mean age of the group was 23.3 (+ 4.9) years. About 15% were married or lived with a permanent partner. Of these individuals, 85% reported sex work as a main source of income and 15% as an additional source. All the individuals reported anal sex (87% anal receptive sex and 13% anal insertive sex). About 13% of MSWs had never used a condom. The HIV prevalence was 33% (17% in men vs 41% in transgenders, $P = 0.04$). The STI prevalence was 60% (58% in men vs 61% in transgenders, $P = 0.8$). Syphilis was the most common STI (28%) in these MSWs. HIV was associated with being a transgender (41 vs 17%, $P = 0.04$), age > 26 years (57 vs 28%, $P = 0.04$), more than one year of sex work (38 vs 8%, $P = 0.05$), and income < Rs. 2000 per month (62 vs 27%, $P = 0.02$). **Conclusions:** The MSWs have high-risk behaviors, low consistent condom use, and high STI/HIV infections. These groups should be the focus of intensive public health interventions aimed at reduction of risky sexual practices, and STI/HIV prevention and care.

Key words: Human immunodeficiency virus, male sex workers, men having sex with men, sexually transmitted infections

INTRODUCTION

The organized sex trade has been a focus of intense discussion within the context of the human immunodeficiency virus (HIV) epidemic in Maharashtra as well as in India.^[1] The female sex workers and their clients represent a high-risk group for acquisition of sexually transmitted infections (STIs) including HIV. Maharashtra's, and especially Mumbai's, organized brothels and various commercial sex sites are frequently visited by men native to the city, and also by the massive number of individuals migrating to the highly developed state in search of employment. Also, the sex workers themselves come from both within and outside the state.

Since the first case of HIV/AIDS was identified,

prevention programs have recognized the importance of understanding the sex work industry. This included collecting systematic and reliable data on sex work, and contextual issues around selling of sex.^[2-4] While research on female sex workers is extensive, comparatively less information exists on male sex work. Yet we cannot simply assume that the pattern and characteristics of the female sex industry will be the same as that of the male sex work industry. Coupled with sex trade and industrialization, social marginalization of groups such as male sex workers (MSWs) which include men who have sex with men (MSM) make prevention efforts with these extremely vulnerable groups all the more difficult.^[5]

MSM are a diverse and often hard-to-reach group, spanning all age groups and socioeconomic

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backgrounds.^[6-8] MSM in India can be divided into various subgroups: self-identified MSM (gay identified, *kothis*, *panthis*), behaviorally MSM with no identity, bisexual men, and male-to-female transgenders (*hijras*). Other groups include subpopulations who are vulnerable because of their occupations/profession, and often engage into 'survival sex'; work is often intermittent and irregular for these men and they may actually have to offer sex in exchange for money.^[9]

This study aims to understand the prevalence of sexual behaviors and STIs including HIV in MSWs. We further aim to understand the association of sociodemographics and HIV in this risk group.

METHODS

The present study is a cross-sectional analysis of unlinked anonymous secondary data. We assessed the sociodemographic, behavioral, and clinical characteristics of MSWs attending an STI clinic in an urban setting in India, Mumbai.

The study was approved by the Institutional Review Board at the *Humsafar* trust as a secondary data analysis project.

Study site

The data were collected from men attending an STI clinic at the *Humsafar* trust, a community based organization that provides services to various groups of MSM. The clinical services include a voluntary HIV testing centre and an STI clinic. About 100 new individuals access the services of the clinic every month. These individuals are from all socioeconomic strata of the society; a large number of them are self-identified gay men reporting for STI/ HIV testing and counselling.

Subjects

All individuals presenting at the STI clinic above the age of 18 years were eligible for the present analysis. We defined MSWs as men or transgenders who engaged in sexual activities with individuals in return for benefits either in cash and/or in kind, and included them in the analysis.

Measurements

Data were collected on a structured interviewer-administered questionnaire. We used demographic information: age, marital status, education, employment

other than male sex work if any, and income, for our analysis. We also used specific information on sex work: age at first sexual exposure, number of clients per day, meeting place for clients, preference of clients, type of sexual practices (oral insertive, anal insertive, vaginal, anal receptive, or oral receptive) in the past six months, in the present analysis. In addition, we included information on other behaviors: condom use, alcohol use, injection drug use, and any past history of blood transfusion, in our analysis.

Clinical evaluation

Subjects were clinically evaluated by trained physicians for the presence of any STIs. Blood was collected for VDRL testing, *Treponema pallidum* hemagglutination assay, hepatitis B surface antigen, HSV 2 IgG, hepatitis C, and HIV. Urethral discharge, if present, was evaluated with Gram stain to identify white blood cells and Gram negative intracellular diplococci. Patients with genital ulcers were treated clinically for syphilis, chancroid, and/or herpes. Patients with symptoms of proctitis underwent anoscopy. All the subjects were treated according to the guidelines laid down by National AIDS Control Organization, India. Subjects were evaluated for HIV after consent and adequate pre-test counselling by trained counsellors. They received their results at the clinic after one week; they were post-test counselled during this visit. Clinicians evaluated the response to medications in the subjects, and treatment was modified according to the response to the previous medications.

Data analysis

Data were entered in EpiInfo 2000 and converted to Stata (version 10) for analysis. Distribution of responses was calculated using means and standard deviations (SD), medians, and proportions. Continuous variables were visualized using histograms. We used *t*-test to calculate the difference between the means of the continuous variables. Pearson's chi square tests and Fisher's exact test (low expected cell counts) 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.

RESULTS

Data from 75 consecutive MSWs, 24 men and 51 male-to-female transgenders, were analyzed. The HIV prevalence in the whole group was 33%; it was

significantly higher in transgenders compared with men (41% vs 17%, $P = 0.04$).

Characteristics of sex workers

The mean age (SD) of sex workers was 23.3 (+ 4.9) years. There was no significant difference between the mean ages of men and transgenders, 22.2 (+ 4.0) vs 23.7 (+ 5.2), $P = 0.20$. Majority of the sex workers were single (85%) and were educated up to secondary or higher secondary school (55%). In our population, we found that transgenders were more likely to be illiterate compared with men (43 vs 25%), although the difference was not statistically significant ($P = 0.15$).

About 13% of the sex workers reported having anal insertive sex and about 87% of them reported having anal receptive sex in the past six months. Men were more likely to report anal insertive sex compared with transgenders (38 vs 2%, $P < 0.00$); the vice-versa was true for anal receptive sex (63 vs 98%, $P < 0.00$). About 83% (62/75) of sex workers reported having oral sex in the past six months; men were less likely to report oral sex compared with transgenders (75 vs 86%, $P = 0.22$). In addition, three men reported having vaginal sex in the past six months. None of the transgenders reported having vaginal sex.

About 33% (25/75) of the sex workers had always used a condom, about 53% (40/75) had sometimes used it, and about 13% (10/75) had never used it; there was no statistical difference in condom use by men and transgenders. The most common reason for not using a condom was nonavailability (43%), followed by refusal of condom use by the partner (20%). About 15% (11/75) sex workers had tattoos, of these six were HIV infected. Only one transgender reported injection drug use.

About 32% (24/75) of the sex workers were diagnosed with a clinical STI at the time of presentation to the clinic. Among these STIs there were – seven cases of perianal warts and genital scabies; four cases of perianal herpes infection; and one case each of urethral gonorrhoea, rectal gonorrhoea, penile wart, perianal molluscum contagiosum, primary syphilis, and secondary syphilis.

We have described certain demographic characteristics and STIs including HIV in these sex workers in Table 1.

Characteristics of sex work

About 80% (60/75) of our population identified sex work as their primary occupation. All the transgenders stated that sex work was their primary occupation. About 77% (58/75) of the MSWs met their clients at public places. However, 67% (50/75) of the sex workers reported having sex in a private environment (clients home, their home, or a hotel). About 85% (64/75) of them reported sex work to be their primary source of income for survival. These MSWs were more likely to be HIV infected compared with those that reported sex work to be an additional source of income (39 vs 0%, $P = 0.01$). All the transgenders had reported sex work to be their primary source of income. MSWs whose primary source of income was sex work were more likely to report anal receptive intercourse with their clients compared with others (92 vs 55%, $P < 0.00$).

We have described certain select sex work characteristics and association with HIV in these sex workers in Table 2.

DISCUSSION

This is one of the few reports that provides data on the characteristics of MSWs and male sex work in India. HIV infection in this group was significantly higher in male-to-female transgenders, in sex workers >26 years of age, in those whose total income was less than 2000 rupees per month, in those who reported sex work to be the primary source of income, and in those who have been a sex worker for more than a year. About 15% of the sex workers were married to a woman or lived with a male partner, and 45% of these sex workers were HIV infected. Only 33% of these sex workers had always used a condom. About 60% of the sex workers had an STI (clinical and/or serological) at the time of presentation. Only 48% of the sex workers perceived that they were at risk for HIV infection.

Coleman recommends using Maloney's definition of an MSW as 'any male who engages repeatedly in sexual activities with persons with whom he would not otherwise stand in any special relationship and for which he receives currency and/or the provision of one or more of the necessities of living (food, clothing, and protection)'.^[10] The groups commonly involved in male sex work in Mumbai are masseurs, transgenders, young migrant men practicing male sex work for survival, or men with other occupations practicing male sex work for extra money.^[11]

Table 1: Select sociodemographic characteristics and sexually transmitted infections in male sex workers at a clinic in Mumbai, India, 2003

Characteristics	n (%)		HIV infected (%)		Odds ratios (95% CI)
All	75	(100)	25	(33)	
Gender					
Males	24	(32)	4	(17)	1.00 (reference)
Transgenders	51	(68)	21	(41)	3.5 (1.0–11.7)
Age (years)					
18–20	24	(32)	5	(21)	1.00 (reference)
21–25	37	(49)	12	(32)	1.8 (0.5–6.1)
>26	14	(19)	8	(57)	5.1 (1.2–21.5)
Income (rupees/month)					
<2000	13	(17)	8	(62)	1.00 (reference)
2001–5000	37	(59)	10	(27)	0.2 (0.1–0.9)
>5001	25	(33)	7	(28)	0.2 (0.1–1.0)
Marital status					
Single	64	(85)	20	(31)	1.00 (reference)
Married*	11	(15)	5	(45)	1.8 (0.4–8.1)
Education					
Illiterate	28	(37)	11	(39)	1.00 (reference)
Secondary/Higher secondary	41	(55)	13	(32)	0.7 (0.3–1.9)
Graduate/Post graduate	6	(8)	1	(16)	0.3 (0.1–3.0)
Sexually transmitted infections					
Any STI					
No	30	(40)	8	(27)	1.00 (reference)
Yes	45	(60)	17	(38)	1.7 (0.6–4.6)
Syphilis serology					
No	54	(72)	15	(28)	1.00 (reference)
Yes	21	(28)	10	(48)	2.4 (0.8–6.7)
Hepatitis B surface antigen					
No	68	(91)	22	(32)	1.00 (reference)
Yes	7	(9)	3	(43)	1.6 (0.3–7.6)
HSV 2 IgG					
No	55	(74)	19	(34)	1.00 (reference)
Yes	20	(26)	6	(30)	0.8 (0.3–2.5)
Risk perception for HIV					
Are you at risk for HIV?					
Yes	36	(48)	8	(22)	1.00 (reference)
No	17	(23)	6	(35)	1.9 (0.5– 6.8)
Do not know	22	(29)	11	(50)	3.5 (1.1–11.0)

*Married to a woman or living with a male partner

Among the sex workers, *kothis* are effeminate MSM who may have sex with men and/or women. Though they are MSM, they nevertheless can turn their feminine behavior on or off as the situation demands. This fluid behavior potentially helps them to ‘play with gender’ in the context of sex work. However, in the case of transgenders or *hijras*, the issue is compounded by their cross-dressing and ‘crossing over’ to the female gender. They may be seen as objects for penetration because of their cross over into the female gender. The noncastrated transgenders have the option of being

the insertive partners for other males; their sexual behavior may still be fluid. Castrated transgenders can only offer receptive sex; this ‘fixed’ gender identity and sexual behavior potentially makes them most vulnerable for HIV/AIDS within the context of male sex work.^[11–13]

MSM are at a high risk for acquiring STIs including HIV.^[14] The HIV prevalence in our sample of MSWs was higher compared with other global studies.^[15–18]

Table 2: Select sex-work characteristics in male sex workers at a clinic in Mumbai, India, 2003

Characteristics of sex work	n (%)		HIV infected (%)		
Main occupation					
Sex worker	60	(80)	24	(40)	
Other	15	(20)	1	(7)	<i>P</i> = 0.02
Reason for sex work					
Main source of income	64	(85)	25	(39)	
Additional income	11	(15)	0	(0)	<i>P</i> = 0.01
Types of clients					
Unskilled laborers	45	(60)	20	(44)	
Skilled laborers	16	(21)	1	(6)	
Professionals	7	(9)	2	(29)	
Others	7	(9)	2	(29)	<i>P</i> = 0.03
Number of clients per night					
1	12	(16)	1	(8)	
2–5	51	(67)	20	(40)	
>5	13	(17)	4	(31)	<i>P</i> = 0.12
Duration of being a sex worker					
<1 year	12	(16)	1	(8)	
>1 year	63	(84)	24	(38)	<i>P</i> = 0.05

Although, we did not find any published studies on HIV prevalence in MSWs in India, Dandona and coworkers have reported that the probability estimates for acquiring HIV by men who sell sex were 6.7 (95% CI: 4.9–9.2) times higher compared with women who sell sex.^[19] Thus, MSWs are an important risk group in the context of the HIV epidemic, and adequate attention should be accorded to them. Though sex work *per se* is not a risk factor for HIV; sharing drug-injecting equipment, condom use that varies between types of partners, unsafe sexual behaviors, and inconsistent condom use increase MSWs' vulnerability to STIs including HIV.^[20]

Stigmatization of same sex behavior often results in hurried sex in the dark. In our population, we found that although the common venues to access clients were public places, the most common venue for the sexual act was a private venue. The private space may potentially help in increasing condom use with clients. However, condom negotiation may depend on various factors: economic considerations, physical and/or emotional attraction toward the clients, types of sexual practices (oral vs anal sex), and type of sexual partners.^[12,21] In our sample, we found that individuals reporting sex work as the primary source of income were more likely to be HIV infected. This observation was potentially confounded by the type of sexual activity; majority of the sex workers who reported sex work as main

source of income were transgenders and reported anal receptive sex. However, the role of economic factors in sexual activity and condom negotiation by these sex workers should not be ignored. Clients of MSWs form a heterogeneous group; broader understanding of the interaction between the client and the sex worker may help us design effective public health strategies.^[22]

One of the limitations of the study was its sampling – it was a clinic-based convenience sample, and hence may not be representative of the sex work in the population. However, the *Humsafar* trust has a good peer outreach program and provides information to various sections of the sex worker community. Our study was conducted in an MSM STI/HIV clinic. Although there is a category of MSWs who indulge purely in heterosexual sex trade, our study population did not include these men. Thus, these findings may not be applicable to that population. Since our data were collected in clinical settings, sex workers are more likely to report socially desirable behaviors of safe sex practices; hence, we may have underestimated risky sexual behaviors.

In spite of the above limitations, this is an important study which provides information on MSWs in Mumbai. Unlike female sex work, where all other identities of a woman are superseded and the primary identity becomes that of a sex worker or woman in

prostitution, in male sex work, they can hide under various labels like masseurs, bar boys, etc. They can get away with these 'other' identities and still practice sex work without the stigma attached to it. These groups should be the focus of intensive behavioral intervention – safe sex and condom use, and STI/HIV prevention and care programs.^[23] Qualitative research would be an important tool to identify social aspects of sex work and negotiation skills. Issues related to STI care access by these groups need to be explored for effective public health interventions.

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