

Knowledge, attitude, and practice about HIV/AIDS among men who have sex with men in Belgaum: A cross-sectional study

Abstract

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Background: AIDS epidemic is major public health emergency and young people are bearing the main brunt of the new infection worldwide. MSM constitute a high risk group for sexually transmitted infections including HIV in many parts of the world. **Objectives:** To assess knowledge, attitude of HIV/AIDS and sexual practices among MSM residing in city of Belgaum. **Methodology:** Cross sectional study was conducted at Sweekar NGO for MSM. Based on the Sampling Procedure and inclusion Criteria 50% of MSM were selected for the study. Therefore the sample size for this study was 416. Data collection was done using pre-designed and pre-tested questionnaire. **Results:** A total of 416 MSM were interviewed by the trained peer workers. Majority of them (27.64%) were in 25-30 years of age. Majority of them had good knowledge of modes of transmission of HIV(90.38%), its prevention (98.09%), availability of treatment (89.66%). 61.30% were having good knowledge of symptoms. Friend was the first sexual partner for 67.89% participants. Half of the participants were performing both anal and oral form sex. **Conclusion:** Although the knowledge of modes of transmission, symptoms, investigations, treatment and prevention of HIV/AIDS has been good among the MSM but prevention was not been practiced by most. NGOs working with MSM need to organize some interventions aimed at changing the harmful sexual practices into healthy practices.

Key words: Condom use, HIV/AIDS, homosexual, knowledge, attitude and practice

INTRODUCTION

HIV/AIDS is one of the emerging infectious diseases all over the world. It has evolved from a mysterious illness to a global pandemic, which has infected tens of millions in >20 years.^[1]

It is estimated that there are 12.63 lakh female sex workers (FSW), 3.5 lakh men who have sex with men (MSM) with high-risk behavior and 1.86 lakh injecting drug users in India. Based on these data unprotected sex (87.4% heterosexual and 1.3% homosexual) is the major route of HIV transmission, followed by transmission from Parent to Child (5.4%) and use of infected blood and blood products (1.0%).^[2]

Men who have sex with men are a vulnerable population and need special attention in the fight against the global pandemic of HIV/AIDS.^[3] MSM constitute a high risk group for sexually transmitted infections including HIV in many parts of the world. Data on MSM are not routinely collected in India because of taboo, prohibition by law and often not recognized. Despite these restrictions MSM are prevalent in India. A better understanding of this group is required.^[3]

As per the 2007 estimate HIV prevalence in MSM in Karnataka was about 17.60%.^[4] MSM population is visible in some countries, but in India MSM are much less visible because they fear discrimination, stigmatization (being considerable socially unacceptable) or sex between men is illegal in India like other 85 countries. MSM are often under-represented in HIV surveillance systems and in prevention and care programs.^[5,6] To halt the epidemic of HIV/AIDS, it is necessary to understand the prevalence of disease in MSM.^[6] There are no similar studies carried out among MSM in the region of north Karnataka. This study is aimed to find out knowledge, attitude toward HIV/AIDS and sexual practices

among MSM. Study of this kind will help to develop strategies to prevent the spread of HIV/AIDS among MSM.

MATERIALS AND METHODS

This was an observational descriptive study, conducted over a period of 10 months, March-December 2011. Among all MSM of age group 18 years to 40 years who had registered in MSM's Sweekar — Nongovernmental organization (NGO) at Belgaum city that is the only NGO for MSM. About 800 members of different age groups were registered in Sweekar NGO. Based on systematic random sampling every alternate participant was selected; thus, the sample size became 416. Ethical clearance was obtained from Institutional Ethics Committee.

Pre-designed, pretested structured proforma was used to collect informations pretesting of the study proforma was carried out before starting the main study. Necessary changes were made in proforma based on pretesting. Information was collected on knowledge, attitude and practices toward HIV/AIDS, its causes, modes of spread, prevention, use of condom, etc. Information was also collected regarding demographic and socioeconomic characteristics of the study participants. All three peer counselors of Sweekar NGO were trained by the investigator to collect the information required to complete the questionnaire. Half day (3-4 h) training was given by the investigator to the peer workers. Peer workers also obtained the written informed consent before commencing the data collection. Information was collected by one-to-one conversation by peer counselor and the confidentiality was maintained.

Men aged between 18 and 40 years who were registered in Sweekar NGO and who had sex with men within past 12 months were included in the study. Transgender were excluded from the study. Data were entered into Microsoft Excel and percentages were calculated for every variable.

RESULTS

Out of 416 participants 27.64% were in 25-30 years of age. 41.59% were having their own business (pan shop, plastic utensil shop etc.), 1.44% was unemployed (who are not involved in the income generating activities for >6 months, but actively searching for a job) and about 7% were students involved in MSM activity. 13.22% were illiterate (a person can be considered literate if he/she can read and write with understanding in any language and he/she should be above 7 years of age) and rest were literate. More than 60% belonged to socioeconomic status classes IV and V (as per Modified B.G Prasad classification-2010). Of the total 141 were un-married, and most of them (82.45%) belonged to Hindu religion.

Table 1 revealed the knowledge of MSM regarding various aspects of HIV/AIDS. Majority of them had good knowledge of modes of transmission of HIV (90.38%), its prevention (98.09%), curability (97.36%), availability of treatment (89.66%).

Table 1: Knowledge of MSM regarding various aspects of HIV/AIDS (n = 416)

Knowledge regarding HIV/AIDS	Number (n)	Percentage
Modes of transmission		
Good (all correct answers)	377	90.63
Average (at least 50% correct answers)	35	8.41
Poor (<50% correct answer)	04	0.96
Knowledge of symptoms		
Good (all correct answers)	255	61.30
Average (at least 50% correct answers)	86	20.67
Poor (<50% correct answer)	52	12.50
No knowledge (no answer)	23	5.53
Spread of diseases through MSM act		
STD	17	4.09
HIV/AIDS	124	29.81
Both (HIV and STD)	235	56.49
Doesn't spread	40	9.62
Laboratory investigation		
Aware	414	99.52
Not aware	02	0.48
Treatment		
Available	373	89.66
Not available	43	10.34
Contagiousness of HIV/AIDS		
Contagious	06	1.44
Not contagious	410	98.56
Cure of disease		
Can be cured	11	2.64
Cannot be cured	405	97.36
Prevention		
Aware	410	98.56
Not aware	06	1.44

MSM = Men who have sex with men, STD = Sexually transmitted diseases

Laboratory investigations (99.52%), symptoms (61.30%) and contagiousness (98.56%). However, 9.61% were not aware of the fact that HIV and sexually transmitted diseases (STD) spread by MSM act. The main source of information was health workers for 42.55%

It was found from Table 2 that majority of them (97.60%) were sympathetic towards HIV/AIDS patient and almost all were against the removal of HIV/AIDS patient from job. 15.87% of the participants thought that it was not necessary to know the HIV status of their new partner. Majority of them said that MSM should be legalized.

Table 3 shows sexual practices of the study population. 56.49% of them had multiple partners. The age at first sexual intercourse was found to be between 10 and 15 age groups among 68% MSM. Friend was the first sexual partner for 67.89% participants. Majority of the married participants were not using a condom with their wives (94.18%) and FSW (72.97%) though they were using a condom with their male partner (99.28%). Half of the participants were performing both anal and oral form of sexes. 52.50% had either one or other habit.

Table 2: Attitude of MSM towards HIV/AIDS patient (n = 416)

Attitude	Number (n)	Percentage
Sympathy towards HIV/AIDS patient		
Sympathetic	406	97.60
Not sympathetic	10	2.40
Removal of HIV/AIDS patient from job		
Should remove	02	0.48
Should not remove	414	99.52
Willingness to know the HIV status of new partner		
Wants to know	350	84.13
Doesn't want to know	66	15.87
Marriage of HIV infected person		
With infected person	121	29.09
With noninfected person	03	0.72
Should not marry	292	70.19
Whether to have children (n=124)		
Should have children	57	45.97
Should not have children	67	54.03
Legalisation of MSM		
Should be legalised	410	98.56
Should not be	06	1.44

MSM = Men who have sex with men, STD = Sexually transmitted diseases

DISCUSSION

In the present study, slightly more than the quarters were in the age group of 25-30 years. As against this the age range of MSM was 16-65 years with a median of 27 years in Andhra Pradesh study.^[7] In the South Indian study majority of MSM were in the age group of 18-24 years; highest being from Maharashtra.^[4] In Kolkata study, the mean age of the participants was 22.1 years.^[5] The Hong Kong study revealed that majority of the participants (43%) were below 30 years.^[6] It appeared that the age group of 20-25 years is the most common age for MSM behavior. Perhaps this age group is not aware of hazards of MSM act.

In the present study majority of the participants 173 (41.59%) were having their own business, About 33.89% were engaged in various kinds of work involving daily wages. Thus, the majority of people were from the category where in every day brings out challenging situation with respect to income and other comforts of life forcing the individual to go for alternative modes of getting pleasure. Almost 7% MSM were students. As against this; in Kolkata study almost 3 times of the study population were students.^[8] At the tender age of teenage, the students are exposing themselves to abnormal sexual behavior without realizing the risks involved in it. In Mumbai study, 34% were skilled and 22% unskilled laborers.^[8] In Kolkata study 22.2% were drivers, 11.1% were businessmen, and 15.7% were professionals.^[5] In our study, 1.44% were unemployed. As against this in Kolkata study more than double (4.6%) were unemployed.^[5] Kolkata being metropolitan city majority were migrants.

In our study, majority of them (90.38%) were literate among whom 145 (34.86%) studied up to college or above. It was noted that 40

Table 3: Sexual practices of MSM (n = 416)

Sexual practices	Number (n)	Percentage		
Sexual partners				
More than one	235	56.49		
Single/one	181	43.51		
Age at first sexual act				
Below 10	19	4.57		
10-15	284	68.27		
15-20	109	26.20		
20 and above	4	0.96		
First sexual partner				
Friend	282	67.79		
Neighbor	22	5.29		
Family member	62	14.90		
Strangers	21	5.05		
Others	29	6.97		
Sexual activity				
Oral	58	13.94		
Anal	129	31.01		
Both	229	55.05		
Habits				
No habit	156	37.50		
Smoking	5	1.20		
Alcohol consumption	70	16.83		
Guthakha	16	3.85		
Tobacco chewing	19	4.57		
Multiple habits	150	36.06		
Condom users	Users	Nonusers	Users	Nonusers
By married MSM with FSW (n=37)	10	27	27.03	72.97
With wife (n=275)	16	259	5.82	94.18
MSM with FSW (n=78)	19	59	24.36	75.64
With male partner (n=416)	413	3	99.28	0.72

MSM = Men who have sex with men, FSW = Female sex workers

(9.62%) participants were illiterates. Similar results were found in the study conducted in four states of South India with literates being 77.9% in Andhra Pradesh, 90.9% in Maharashtra, 85.9% in Tamil Nadu, and 78.2% in Karnataka.^[4] In Kolkata study 13.9% were illiterate and 1/4th of MSM had completed secondary school.^[5] As per Sri Lankan study 1.8% never attended school, whereas 7.9% were graduate.^[9]

In the present study, >60% were from lower socioeconomic group (class IV [43.51%] and class V [20.91%]). These results are similar to Kolkata study where majority of the participants were from lower socioeconomic group.^[5]

In our study, 141 (33.89%) participants were unmarried and 275 (66.11%) were married to a woman. It appears that the sexual behavior that was inculcated during teenage has continued after marriage of a man with a woman. This bisexual behavior of MSM will expose the married female partner to great risk of HIV/AIDS. In Andhra Pradesh study, 2.3% were currently married to a man in a private ceremony although marriage amongst same sex is not legally recognized in India. In this study, 3.7% were previously married to a man. Six percent were currently living with a male sex partner. About 41% were currently

married to a woman. Almost 5% were separated/divorced from woman and 1.3% were widowed.^[7] In Sri Lanka study majority of the (60.3%) respondents were unmarried, whereas 9.3% were divorced and 6.3% of respondents were staying with male partners.^[9]

In the present study, majority (90.63%) of the participants had good knowledge about modes of transmission of HIV/AIDS. In Sri Lanka study 75% of MSM were aware of the modes of transmission of HIV/AIDS;^[9] in Vietnam study, it was 77%^[10] and in China study it was 86.6%.^[11]

In our study, good knowledge of symptoms of HIV/AIDS was seen among 61.30% participants. Although this was comparable with the figure of Karnataka (67.3%) it was low when compared with figures of other states like Andhra Pradesh, Maharashtra, Tamil Nadu where the figures ranged from 98.1% to 99.7%.^[4] In China study also the results were similar to that of our (59.7%).^[12]

About 56.49% MSM believed that MSM act spreads HIV, as well as other STDs, 4% believed that it spreads only STDs, and 29.81% believed that it spreads only HIV/AIDS. South Indian study revealed similar results.^[4] Ninety percent of MSM of this study were aware of availability of treatment of HIV/AIDS. All of them were aware that it is available in a civil hospital. As opposite to this the South Indian study revealed that the knowledge of availability of treatment was very low ranging from 6% to 18%.^[4]

Almost all participants of our study believed that HIV/AIDS is not a contagious disease while 97.36% believed that there is no cure for HIV/AIDS. Ninety-nine percent of the participants believed that HIV/AIDS can be prevented. These were comparable with the results of South Indian study.^[4] In Sri Lanka study, 85% believed that the use of the condom prevents HIV/AIDS.^[9] Health workers have been the main source of information regarding HIV/AIDS for 42.55% MSM in the present study. Other sources have been television, friends and newspapers. In order to make an effective source of information regarding HIV/AIDS it is necessary to strengthen the mass media like television to play an important role with respect to prevention of HIV/AIDS. However in Sri Lankan study newspapers (80%) and handbills (68.8%) were the major sources of information.^[9] and in Mumbai study the main source of information was television (33%), followed by doctors (33%).^[8]

Almost 98% of MSM were sympathetic towards HIV/AIDS patient. Almost all were against the removal of HIV/AIDS patient from job. About 16% felt that there was no need of knowing the HIV status of their new partner 70% participants were of the attitude that HIV-infected person should not marry. About 46% of participants felt that HIV patient should have children. Majority of participants believed that MSM should be legalized (98.56%). Similar findings were observed in Sri Lanka study.^[9]

In the present study, majority (68.27%) had the first MSM act in the age group of 10-15 years whereas in Kolkata study it was in

the age group of 15-19 years.^[5] There have been some participants having first MSM act even before 10 years in our study as well as in Kolkata study^[5] highlighting the importance of sex education to primary school children. Mass media, especially television may be playing an important role for children <15 years to become curious regarding sexual activity. The South Indian study also revealed that majority of the MSM had first sexual contact during the adolescent period.^[4] In our study friend has been a partner in almost 67% of participants. Family member, neighbor and even stranger has been a partner for remaining. These results are consistent with the results of Kolkata study.^[5]

In our study 18.75%, MSM visited FSWs. As opposite to this in Mumbai study more than the double (44%) of the MSM were visiting FSW.^[7]

In Andhra Pradesh study, one-fourth had anal sex without a condom and 84% during vaginal sex also.^[7] In Kolkata study, only 15% were using a condom during vaginal sex and 6% during anal sex.^[5] The low rate of condom use in this study was because of the fact that half of them felt that there is no need to use condom if the sexual partner was extremely attractive and if partner was clean and hygienic. The other reason was that anal sex is for fun. Hence condom should not be used.^[5] In China study, the use of a condom with MSM varied between 39.2% and 65.2%.^[12] In Beijing study 27.6% participants were always using a condom during vaginal and 36.4% during anal intercourse with women in the past 6 months, 40.1% MSM were always using a condom during active and 36.4% during receptive anal sex with men.^[7] In Vietnam study, 67% MSM had ever used a condom, but only 32% used during their last sexual encounter. Forty percent MSM used condom at their last anal sex. Among those who had vaginal sex 56% used a condom. Condom use with clients during anal sex was higher but not consistent, with 42% usually or always using condoms, 33% sometimes using condoms, and 25% never using.^[10] Sri Lanka study revealed that 6.1% MSM used condom every time and 5.9% never used during insertive anal sex while 6.6% were using a condom every time, 42.4% sometimes and 13.4% never used condom during receptive anal sex.^[9]

In the present study, majority of (55.05%) the participants practiced both anal and oral sexual activity with their partner while 31% participants practiced only anal sexual activity. Majority of them (87.26%) were involved in bisexual activity while 12.74% were involved in homosexual activity. Majority of the participants had multiple sexual partners (56.49%) highest being eight partners while 43.51% had single sexual partner. In Kolkata study the most common sexual act was receptive anal sex (83.3%) followed by vaginal sex, oral sex and insertive anal sex. Seven percent were practicing both insertive and receptive form of sex. The study population mostly had multiple partners with 58.2% having >1 partner in the last 1 month. Even in 5.6% of the cases, the number of partners in the last 1 month was alarmingly high in the order of six or more.^[8] In Andhra Pradesh study, 63.7% had anal sex with a man. About 45% had anal sex with >1 different man.^[7] In Zhejiang Province Study, 43.7% had multiple male sex partners, and half of them used

condom every time when having anal intercourse with a man.^[14] In Sri Lanka study, 30% of MSM were practicing anal insertive sex whereas 29.8% receptive anal sex and 36% were practicing both insertive as well as receptive anal sex.^[9]

In the present study, 1.20% participants were having the habit of smoking. The other habits were alcohol consumption (16.83%), Guthakha (3.85%), tobacco chewing (4.57%). Majority of them 150 (36.06%) had multiple habits. Among the alcohol drinkers majority (85.99%) had sex under the influence of alcohol. This is in contrast to Vietnam study where alcohol use was as high as 66%. While 15% reported usually or always drinking alcohol and 40% sometimes reported drinking alcohol before or during sex.^[10] In Sri Lanka study more than one-third of the men (35%) used alcohol prior to having sex with other men. Among these, 13.3% used alcohol every time and 63% sometimes before having sex. 30% of them were using ganja (marijuana) and 2% were injecting drugs.^[9]

CONCLUSION

Almost all MSM had good knowledge about the modes of transmission, prevention, treatment, and had a positive attitude toward the HIV patients, but the same was not true with their sexual behavior. All had sympathy toward them. Many had >1 partner and were bisexual. Among married men although they had knowledge about condom they used it during the MSM act, but not with their wives thus putting them into risk for HIV/AIDS.

Nongovernmental organization needs to organize some interventional programs aimed at changing the harmful sexual practices of MSM. More information education and communication activities related to preventive measures should be done in these NGOs.

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