

**Integrated Biological and Behavioral Surveillance Survey
(IBBS) among Men who have Sex with Men (MSM) in the
Kathmandu Valley**

Round III - 2009

SUMMARY REPORT

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July, 2009

Background

Under the National Surveillance Plan for HIV and AIDS, the National Center for AIDS and STD Control (NCASC) has been conducting the Integrated Biological and Behavioral Surveillance Surveys (IBBS) among the most at-risk populations (MARPs) at regular intervals. These surveillance studies are aimed at measuring the prevalence of HIV and sexually transmitted infections (STIs) among MARPs and assessing their health risk behaviors as well. Since 2004 such surveillance survey is being conducted regularly among men who have sex with men (MSM) also, who have been identified as a core risk group because of their high-risk sexual behavior with low levels of condom use and a high turnover of both male and female partners.

The first two rounds of IBBS among MSM in Kathmandu Valley was conducted in 2004 and 2007. This document summarizes the findings of the third round of the IBBS conducted among 400 MSM in the Kathmandu Valley in 2009.

Objectives

In line with the objectives of the previous rounds of the IBBS, this survey was conducted primarily to determine the prevalence of HIV and STIs (syphilis, chlamydia trachomatis (CT) and neisseria gonorrhoea (NG)) among MSM in the Kathmandu Valley and to assess their HIV/STI-related risk behaviors, including their sexual behaviors.

The survey also aimed to measure their exposure to the intervention programs targeted at MSM in the valley. At the same time, it has analyzed trends through the comparison of data on selected variables obtained from the first, the second and the third rounds of the IBBS.

Study Methodology

This study was conducted among 400 MSM (135 male sex workers (MSWs) and 265 non-MSWs) from the three districts of Kathmandu, Lalitpur and Bhaktapur.

For the purposes of this study the participants were divided into two categories; MSWs and non-MSWs. MSWs were defined as :*‘Those males of 16 years or above who have had sexual relations, (either oral or anal) with another male in the 12 months preceding the survey in exchange for money or other commodities.’*

Non-MSWs were defined as: *‘Those males of 16 years or above who have had sexual relations (either oral or anal) with another male in the 12 months preceding the survey without receiving cash payment or other commodities.’*

As in the previous round of the IBBS conducted in 2004 and 2007, the respondent-driven sampling (RDS) methodology, which is a relatively new adaptation of chain-referral sampling, where subsequent respondents are recruited by the previous respondent through their network of acquaintances was used to recruit participants to the study. In RDS the sampling process begins with the selection of a set of people in the target population who serve as ‘seeds’. After participating in the study, these seeds are each provided with a fixed number of unique recruitment coupons, which they use to recruit other people they know in the target population.

In line with the RDS methodology, a total of four MSM were recruited as 'seeds' from different age group, ethnicity and MSM type. After their recruitment in the survey, each seed received three recruitment coupons which they passed to their peers in the net work selecting randomly. These peers who were eligible and successfully participated in the study were again given three coupons each to recruit other MSM from their network to participate in the study. In this way the recruitment process continued until 400 MSM (135 MSWs and 265 non-MSWs) were recruited.

In this round of IBBS, although the sample was drawn using RDS method, data analysis is not done using the Respondent Driven Sampling Analysis Tools (RDAST) software. The study team analyzed the data on the network size reported in the survey, which is one of the key data needed for adjusting the sample proportions, and decided not to go for RDSAT analysis. The network size was asked twice in the questionnaire, which leads to substantial difference in reported network size that could not be reconciled and lead to substantial differences in prevalence estimates. Technical experts from FHI/Nepal and FHI Asia Pacific Regional Office (APRO) also were consulted while making this decision. In this perspective the sampling methodology used in the survey may be considered as "convenient sample obtained using RDS methodology".

A centrally located study center was set up at Jamal in Kathmandu. After obtaining verbal and witnessed consent from the study participants, a structured questionnaire was administered to them to collect behavioral data relating to sexual behavior, sex partners, and use of condoms as well as demographic and social characteristics of the respondents. In order to draw up a comparative analysis of behavioral changes over the years, the same questions asked during the previous two rounds were repeated.

The fieldwork started on March 12, 2009 and was completed on April 21, 2009.

The research was conducted in compliance with both ethical and human rights standards. As this study was done with individuals who are often stigmatized, ethical as well as technical approvals was obtained from Family Health International's ethical review body, the Protection of Human Subjects Committee (PHSC) and the Nepal Health Research Council (NHRC) prior to the fieldwork. Moreover, no personal identifier was collected and the study team maintained the confidentiality of the data collected throughout the survey.

Clinical and Laboratory Procedures

The study participants were clinically checked for STI-related symptoms by a health assistant who also filled in a checklist with the information provided by the respondents. They provided symptomatic treatment to the respondents in accordance with the National STI Case Management Guidelines. Over-the-counter medicines such as paracetamol, alkalising agents and vitamins were given as necessary.

After pre-test counseling, the lab technician briefed the respondents about the HIV/STI testing. Blood samples for testing HIV and syphilis testing were drawn from a vein from each of the study participants using a 5 ml disposable syringe. For DNA amplification testing for NG and CT, 20 ml of first catch urine, at least two hours since the last void was collected. At

the same time, the Health Assistant also collected anal swabs by inserting the swab stick about 2.5 cm into the anal canal.

While the blood samples were sent to SACTS laboratory for HIV and syphilis testing, the urine and swab samples were processed at National Reference Laboratory (NRL) for detecting anal CT and NG, and urethral CT and NG antibodies.

HIV was detected using Determine HIV 1/2 (Abbott Japan Co. Ltd.) as a first test to detect antibodies against HIV. If the first test was negative, no further test was conducted, but if the first test was positive, a second test was performed using Uni-Gold (Trinity Biotech, Dublin, Ireland). In case of a tie between the first two tests, a third test was performed using SD Bioline HIV 1/2 (Standard Diagnostics, Inc., Kyonggi-do, South Korea) as a tie-breaker test.

Syphilis was tested using the *BD. Micro-Vue RPR* test card. All the samples negative for RPR were recorded as negative. All the positive samples for RPR were retested with serial serum dilution up to 64 times and the test record was recorded with dilution factor. All the RPR positive serums were also tested by Treponema Pallidum Particle Agglutination (TPPA) test using Serodia TPPA as a confirmatory test. On the basis of titre of RPR, all the specimens with RPR/TPPA- positive results were divided into i) history of syphilis- TPPA-positive with RPR-negative or RPR-positive with titre < 1:8 and ii) Active syphilis TPPA-positive with RPR titre of 1:8 or greater .

For DNA amplification testing for gonorrhoea and chlamydia, ELISA detection procedure was performed separately for NG and CT using Roche Amplicor Detection Kit NG and Roche Amplicor Detection Kit CT respectively. The detection method was conducted along with internal control kit of NG and CT which contributed substantially for validation of test performed and interpretation.

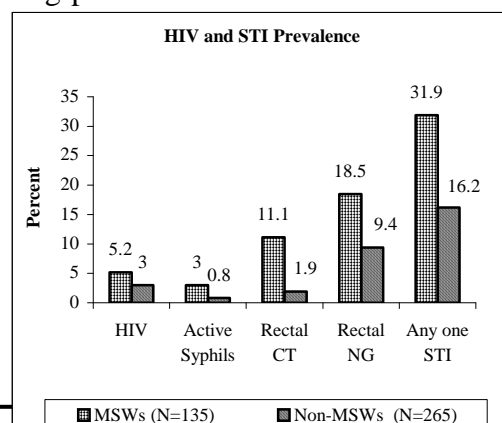
HIV and syphilis test results were provided along with post-test counseling by a trained counselor at Parichaya Samaj, Cruiseaids or the SACTS VCT centers to all those respondents who came with their ID cards. Written results were also provided to those who asked for it.

Quality Control

Quality control was strictly maintained throughout the process of specimen collection, handling and testing. All the tests were performed using internal controls. These controls were recorded with all the laboratory data. For quality control assurance, a 10 percent sample of the total serum collected (all positive samples and randomly selected negative samples to make 10% of total sample) was submitted to the National Public Health Laboratory (NPHL) to test for HIV and syphilis. The same test kit and testing protocols were used in NPHL for quality assurance. For the quality control test for GC and CT, 10 percent of urine and anal swab samples were sent to Y R Gaitonde Centre for AIDS Research and Education (YRG CARE) Chennai, India.

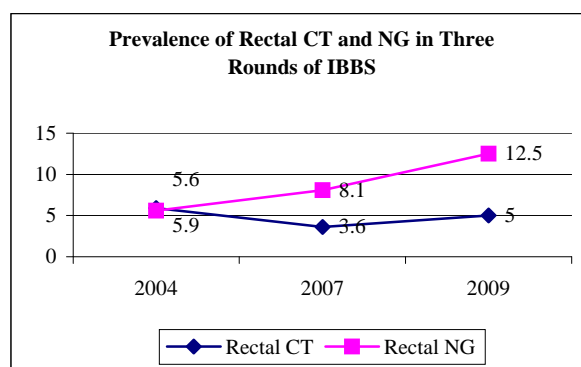
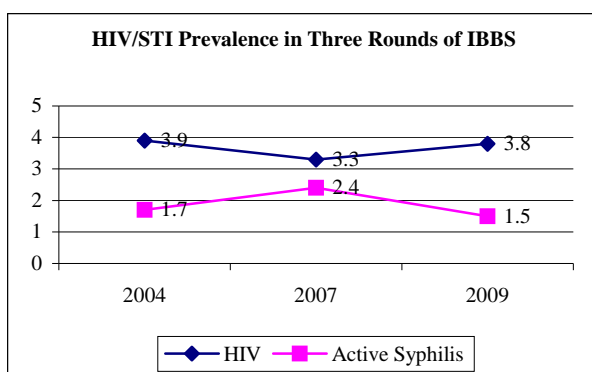
Study Findings

HIV/STI Prevalence



Of the 400 MSM, 3.8 percent were HIV positive. MSWs had a slightly higher prevalence of HIV) than non-MSWs — 5.2 percent (7 out of 135 MSWs) and 3 percent (8 out of 265) non-MSWs tested HIV positive. The prevalence of active syphilis was 3 percent among MSWs and 0.8 percent among non-MSWs. Likewise, more MSWs had a history of syphilis (4.4%) compared to non-MSWs (1.5%). Five percent of MSM had anal CT, with a relatively higher prevalence among MSWs than non-MSWs (11.1 percent and 1.9 percent respectively). At the same time, 12.5 percent of MSM in the Kathmandu Valley had anal NG, with 9.4 percent prevalence among non-MSWs and 18.5 percent among MSWs. The overall prevalence of any one STI was significantly high among MSWs (31.9%) than non-MSWs (16.2%).

HIV prevalence among the MSM has not changed much over the three rounds of the survey (3.9% in 2004, 3.3% in 2007 and 3.8% in 2009). Prevalence of active syphilis (1.7% in 2004, 2.4% in 2007 and 1.5% in 2009) and syphilis history (8.9% in 2004, 2.8% in 2007 and 2.5% in 2009)

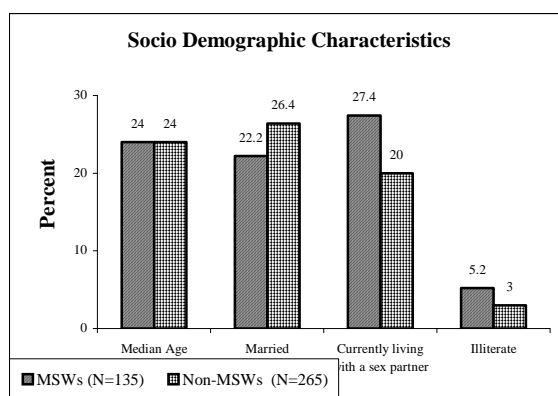


in 2009) have decreased in the third round than first and second rounds of the survey. On the other hand, the prevalence of anal NG has significantly increased from 5.6 percent in the first round in 2007, to 8.1 percent in the second round and further to 12.5 percent in the third round.

The prevalence of other STI did not show significant difference since the first round of the survey.

Socio-Demographic Characteristics

On the basis of their gender identity, 35.5 percent of MSM identified themselves as third gender while 63.5 percent preferred to be identified as males. Four in ten of the MSM (42.5%) belonged to the Brahmin, Chhetri or Thakuri castes, around three in ten (25.8%) were from the mongoloid ethnic community (Rai/Limbu/Gurung/Tamang/Magar).



The median age of the respondents was 24 years; 79 percent of MSM were less than 30. Twenty-five percent of the MSM were currently married (22.2% MSWs and 26.4% non-MSWs). A relatively higher proportion of MSWs (23.3%) than non-MSWs (2.9%) were married to a male partner.

Overall, 22.5 MSM (27.4% MSWs and 20% non-MSWs) had been living with a sex partner at the time of the survey. Over two-fifths of the MSM (42.5%) had passed SLC or a higher level of studies, while 3.8 percent of MSM were illiterate (5.2% MSWs and 3% non-MSWs).

The age characteristics of the MSM indicate a similar pattern throughout the three rounds of the survey. More than half of the study participants (60.3% in 2004, 57.3% in 2007 and 56% in 2009) in all of the three rounds were made up of young respondents below 25 years of age. The median age of the MSM was 24 years in all three rounds of the survey. Caste/ethnicity background of the respondents also did not change much since the first round.

Sexual Behavior

The sexual behavior of the MSM did not show notable changes over the three rounds of the survey. The majority of the respondents had their first sexual contact before the age of 21 (90.8% in 2004 89% in 2007 and 94.3% in 2009).

However, a relatively high proportion of MSWs than non-MSWs had their first sexual experience with a male partner in the second (68.5% MSWs and 31.5% non-MSWs) and third round of the survey (89.6% MSWs and 43.8% non-MSWs) . On the contrary, more non-MSWs than MSWs had reported so in the first round (21.7% MSWs and 58.5 non-MSWs).

Sexual Behavior of MSM by Surveyed Years

Sexual Behavior	First round (2004)			Second round (2007)			Third round (2009)		
	SPSS (%)			RDS EPP (%)			SPSS (%)		
	MSW (N=83)	Non-MSW (N=275)	MSM (N=358)	MSW (N=135)	Non-MSW (N=265)	MSM (N=400)	MSW (N=135)	Non-MSW (N=265)	MSM (N=400)
Age at first sexual intercourse									
Up to 16 years	79.5	52.0	58.4	62.8	48.2	51.5	82.2	50.6	61.3
17 – 20 years	14.5	37.8	32.4	31.0	39.7	37.5	17.0	41.1	33.0
21 and above	4.8	9.8	8.7	6.2	12.1	11.0	0.7	8.3	5.8
Can't remember	1.2	0.4	0.6	0.0	0.0	0.0	0.0	0.0	0.0
Mean age at first sex	14.2	16.4	15.9	14.8	16.6	16.0	14.2	16.7	15.9
First sexual contact person male or female									
Male	21.7	58.5	50.0	68.5	31.5	36.1	89.6	43.8	59.3
Female	78.3	41.5	50.0	31.5	68.5	63.9	10.4	56.2	40.8

Types of Sex Partners in the past month

The predominant sex practice among MSM is anal sex, followed by oral sex. Overall, 85.8 percent of MSM had practiced anal sex and 73.3 had performed oral sex in the past month. At the same time, 71.8 percent of MSM had performed both oral and anal sex in the month preceding the survey.

The sex partners of MSM comprised of non-paying, paying as well as partners paid by the respondents. The mean number of non-paying male sex partners that MSM had in the past month was 5.5 compared to the mean of 0.4 non-paying female sex partners.

Among 135 MSWs, on average they had 9 one-time paying and 11.1 regular paying male sex partners in the past month.

Nineteen percent of MSM had paid for sex with male partners, while 8.3 percent of them had paid for sex with female partners in the past month. On average, non-MSWs had 1.2 paid

male sex partners and 0.2 paid female sex partners in the past month, while MSWs had in average 0.4 paid male sex partners and 0.2 paid female sex partners in the past month.

Sexual Role in the Past Month

Comparatively, more non-MSWs than MSWs (57.7% non-MSWs and 11.1% MSWs) had performed an exclusively insertive role, while more MSWs than non-MSWs (65.9% MSWs and 7.2% non-MSWs respectively) had practiced an exclusively receptive role in anal sex in the month preceding the survey.

Condom Use Behavior

Twenty-three percent of MSM had used condom at their first sexual debut. However, more MSM (71.3%) had used condom in their last sexual contact. Condom use was highest in last sex with paid male sex partner among MSWs (100%) and with paid female sex partner among non-MSWs (85.2%) compared to other partners.

Overall, 50 percent of the MSM (62.2% MSWs and 43.8% non-MSWs) had used a condom the last time they had oral sex with their male partners.

MSWs and Consistent Condom Use in Past Month

Consistent condom use by MSWs with different types of male sex partners was as high as 100 percent with paid male partners. The consistent use of condoms was lowest at 50 percent each for non-paying female sex partner and paid female sex partner. Furthermore, around eight in ten MSWs (85.1%) had used condoms consistently with one-time paying male partners, while around seven in ten (75.8%) had consistently used condoms with regular paying male partners in the past month. Additionally, 65.4 percent of MSWs had been consistent condom users with non-paying male anal sex partners in the month preceding the survey.

Non-MSWs and Consistent Condom Use in Last Month

Partner-wise, 85.2 percent of non-MSWs had used condoms consistently with paid female partners, compared to 73.8 percent of them who had used condoms consistently with paid male anal sex partners in the past month. At the same time, 65.1 percent of those non-MSWs who had had sex with non-paying male sex partners in the last month had used condoms consistently with them. However, consistent condom use was relatively low with non-paying female sex partners (37.1%) in the past month.

The trend of consistent condom use with different type of partners showed some changes over the three rounds of the survey. The proportion of MSM reporting consistent condom use with a non-paying male partner increased from 44.3 percent in 2004 to 70.1 percent in 2007, but again went down to 65.2 percent in 2009. This is still a significant increase since the first round. Likewise, reported consistent condom use with a paid male anal sex partner in the month preceding the survey increased from 50 percent in 2004 to 89.3 percent in 2007 but went down to 77 percent in 2009. However, this too is statistically a significant increase since the first round.

The consistent use of condom with non-paying female sex partners, however improved all through the three rounds of the study (19.2% in 2004, 33% in 2007 and 40% in 2009); statistically too this is a significant change since the first round.

The trend of consistent condom use specifically among MSWs with their paying partners (one time paying and regular paying) however did not show significant changes since the first round of the study.

Consistent Use of Condom with Different Sex Partners in the Past month in Three Rounds of IBBS

Consistent Use of Condom	First Round (2004)			Second Round (2007)			First Round ((2009)		
	SPSS (%)			RDS EPP (%)			SPSS (%)		
	MSW	Non-MSW	MSM	MSW	Non-MSW	MSM	MSW	Non-MSW	MSM
With non-paying male anal sex partner	N=54	N=140	N=194	N=108	N=193	N=301	N=104	N=186	N=290
Always	57.4	39.3	44.3	71.8	70.9	70.1	65.4	65.1	65.2
Not always	42.6	60.7	55.7	28.2	29.1	29.9	34.6	34.9	34.8
With one time paying male anal sex partner	N=48			N=92			N=94		
Always	68.8	NA	NA	94.6**	NA	NA	85.1	NA	NA
Not always	31.2	NA	NA	5.4**	NA	NA	14.9	NA	NA
With regular paying male anal sex partner	N=36	NA	NA	N=101			N=99	NA	NA
Always	50.0	NA	NA	97.2	NA	NA	75.8	NA	NA
Not always	50.0	NA	NA	2.8	NA	NA	24.2	NA	NA
With paid male anal sex partner	N=12	N=34	N=46	N=21	N=35	N=56	N=9	N=65	N=74
Always	58.3	47.1	50.0	100.0**	82.9**	89.3	100.0	73.8	77.0
Not always	41.7	52.9	50.0	0.0**	17.1**	10.7	0.0	26.2	23.0
With non-paying female sex partner	N=15	N=63	N=78	N=28	N=86	N=114	N=20	N=70	N=90
Always	40.0	14.3	19.2	69.2	33.8	33.0	50.0	37.1	40.0
Not always	60.0	85.7	80.8	30.8	66.2	67.0	50.0	62.9	60.0

Note: Estimated population proportion (%) of the variables with double asterisks (**) did not meet the required numerator to be calculated with RDSAT and therefore represents unadjusted proportion
 NA- Not applicable for non-MSWs

Availability of Condoms and Brand Names

All the MSM could identify a condom. The majority of them (94.8%) said they could get a condom when they needed one.

Regarding the source of their most recent condom, 26.5 percent of MSM had received it from Cruiseaids, 21.3 percent had bought it from a pharmacy, while another 15.5 percent got it from Blue Diamond Society (BDS) field staff.

Use of Lubricant

Overall, 86.8 percent of the MSM had used lubricant at least once during anal sex and 96.5 percent of them had used it during their last act of anal sex. A slightly higher proportion of MSWs (97.8%) than non-MSWs (81.1%) had ever used lubricant. The most common lubricant used by them was water based lubricants (74.1%), distributed by organizations providing services to MSM.

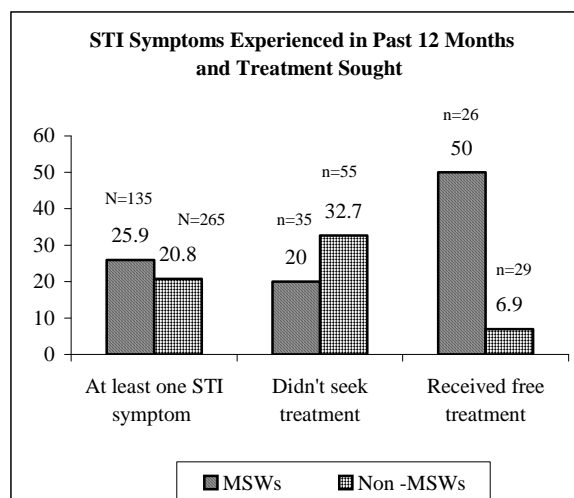
Eighty-three percent of the MSM had heard about specially made lubricant (branded lubricant) for use with condoms. Comparatively, more MSWs (73.1%) than non-MSWs (54.5%) had heard of branded lubricant. Over one-half those MSM (53.3%) who had heard of specially made lubricant had used lubricant in anal sex consistently during last month.

Knowledge of STIs and Reported Prevalence of STIs

The majority of the MSM (90.8%) mentioned that they were aware of at least one of the STI symptoms. The proportion of respondents reporting to be unaware of any symptoms of STIs was higher among non-MSWs (12.5%) than MSWs (3%).

Most of the MSM (86.8%) cited genital ulcers as an STI symptom. The other most commonly cited symptoms were genital discharge (73.5%), burning during urination (51%), and itching in genital area (34.3%).

Altogether 22.5 percent of the MSM (25.9% MSWs and 20.8% non-MSWs) said that they had experienced at least one symptom of STI in the past year. Among those MSM who had reported experiencing STIs in the past year, 27.8 percent (32.7% non-MSWs and 20% MSWs) had never sought any treatment. Among those who had sought treatment from different sources, 50 percent of MSWs had accessed free treatment, only 6.9 percent of non-MSWs had been able to do so.



Knowledge about HIV/AIDS

The respondents' understanding of the major HIV/AIDS prevention measures was assessed, including abstinence from sex (A); being faithful to one sex partner (B); and consistent condom use (C). Nearly all of them knew that consistent use of condoms (C) (99.5%) and being faithful to one sex partner (B) (97.8%) reduce the risk of HIV/AIDS. Eight in ten (84.5%) stated abstinence from sexual contact (A) was one of the ways of preventing HIV. Additionally, nine in ten respondents (95%) knew that a healthy-looking person can be infected with HIV (D); and HIV can not be transmitted while sharing meal with an HIV-infected person (F) (92.8%). However, a relatively smaller proportion of MSM (68.8%) agreed that a person cannot get the HIV virus from a mosquito bite (E).

Overall, 83.3 percent of MSM (84.4% MSWs and 82.7% non-MSWs) were aware of all three major modes of transmission, i.e. 'ABC' (A- abstinence from sex, B- being faithful to one sex partner, and C- consistent condom use). On the other hand, 64.3 percent of them (80.7% MSWs and 55.8% non-MSWs) were aware of all of BCDEF (D-a healthy looking person may have HIV, E - a person cannot get HIV from mosquito bite and F- HIV cannot be transmitted while sharing a meal with an infected person)-

More MSWs (70.4%) than non-MSWs (51.3%) knew someone living with HIV/AIDS or who had died of an AIDS-related illness.

Eighty-nine percent of respondents were also aware about the risk of pregnant women with HIV/AIDS transmitting the virus to their children in the womb. Among those who were aware of the risk, 40.7 percent knew about antiretroviral therapy.

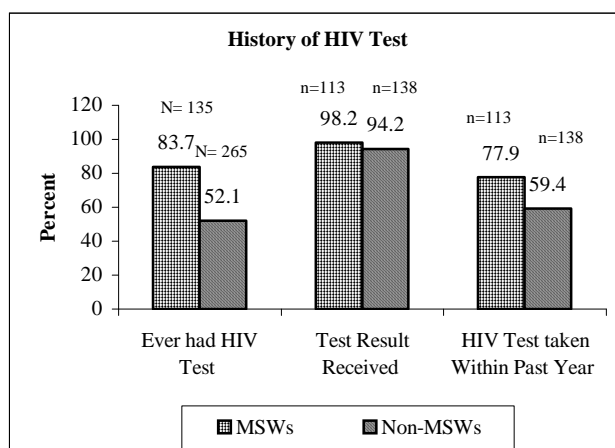
Knowledge about HIV Testing Facilities

Eighty-three percent of the MSM (90.4% MSWs and 79.3% non-MSWs) knew about the existence of a confidential HIV testing facility in their community. Among these, more MSWs (83.7%) than non-MSWs (52.1%) had ever taken an HIV test. Ninety-six percent of them (98.2% MSWs and 94.2% non-MSWs) had received their HIV test results.

Two-thirds (67.7%) of MSM had their most recent HIV test within the last one year (77.9% MSWs and 59.4% non-MSWs). Others had been tested more than one year before.

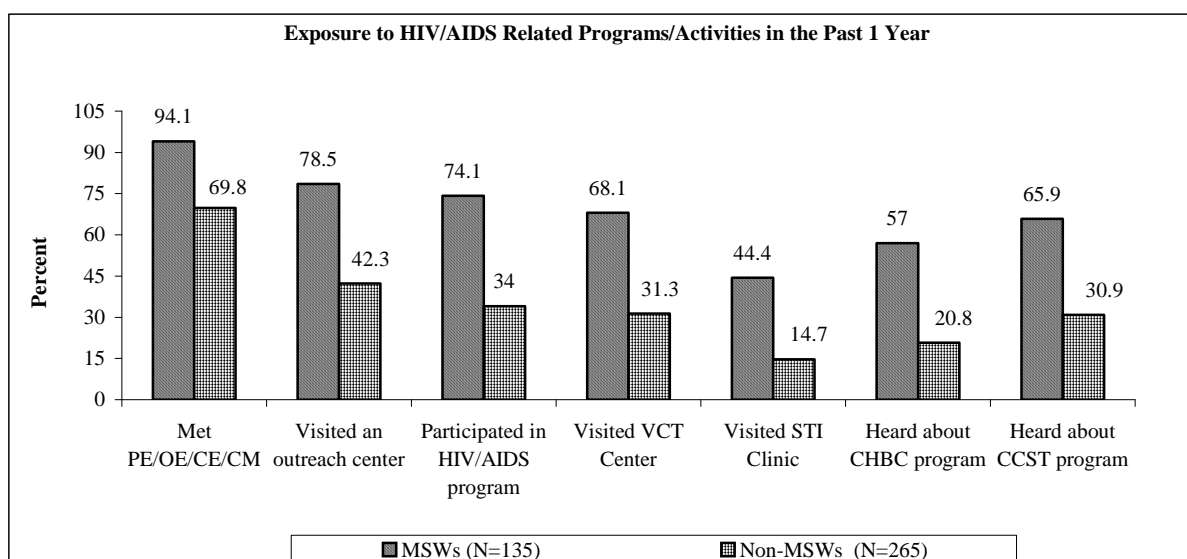
Physical/Sexual Violence Faced

More MSWs than non-MSWs had been subjected to physical/sexual violence such as beatings (25.9% of MSWs and 1.9% of non-MSWs), forced sex (32.6% of MSWs and 7.9% of non-MSWs), blackmailing (50.4% of MSWs and 6.4% of non-MSWs) and discrimination at job or daily life (44.4% of MSWs and 9.1% of non-MSWs) in the past year.



Exposure to HIV/AIDS Awareness Programs

Of the different components of ongoing HIV/AIDS-related programs/activities, 78 percent of the respondents (94.1% MSWs and 69.8% non-MSWs) had interacted with a Peer/Outreach educators (PE/OE/CE/CMs), 54.5 percent (78.5% MSWs and 42.3% non-MSWs) had visited a drop-in center (DIC)/information/counseling center, 47.5 percent (74.1% MSWs and 34% non-MSWs) had participated in HIV/AIDS-related programs and 43.8 percent (68.1% MSWs and 31.3% non-MSWs) had visited a Voluntary Counseling and Testing center in the past year. Comparatively, a smaller proportion of MSM (24.8%) had visited an STI clinic in the past year (44.4% MSWs and 14.7% non-MSWs).



Furthermore, 42.8 percent of the MSM (65.9% MSWs and 30.9% non-MSWs) had ever heard about Community Care, Support and Treatment program (CCST) that provide ART (Antiretroviral therapy) services and information related to the therapy to HIV – positive people while 33 percent of them (57% MSWs and 20.8% non-MSWs) had heard about Community Home Based Care services (CHBC) provided to HIV – positive people.

Recommendations

Based on the findings of this study, some specific recommendations are as follows:

Comprehensive program catering to MSM and their sexual networks (that consist of female partners too), should be designed. Advocacy, behavioral change programs, and health promotion intervention should be further scaled up. The contents of the messages should be improved further and disseminated widely. The study findings indicated that interventions can target locations like bus parks, cinema halls, temples and their surrounding areas, dance restaurants, discotheques which are frequented by the study groups.

Specific education program activities that target school children, college students, youth, and adolescents should be designed to impart HIV/AIDS awareness and sex education. Information can be disseminated through printed as well as on line education materials.

Client-friendly HIV counseling and testing facilities should be expanded further to cover more of the MSM population and they should also be made aware of the location and of the availability of such services.

Outreach education programs should be continued and geographically expanded to cover more of the target population. Ongoing programs should be expanded geographically and capacity building of local NGOs should be focused on to increase access to more of target population.

Necessary information related to sexuality and to the rights of sexual minorities should be provided at a larger scale through awareness campaigns such as street drama and radio and television programs to change the negative attitude of the society. Emphasis should be put on the availability of health services to MSM who are subjected to sexual violence.

New strategies need to be considered to cover unexposed MSM including clients of MSWs and non-MSWs. Different mediums of communications such as hotlines, websites, PEs/OEs, pamphlets, posters and radio/television could be used to reach these groups.